

Progress and Problems: Government Scientists Report on Scientific Integrity at Four Agencies

Appendix D: Open-ended Responses

Below are all open-ended responses received on the survey. Responses have not been edited for grammar or spelling errors. They are displayed as respondents wrote them, with identifying information redacted to protect anonymity. In some cases, large portions of responses had to be concealed to protect the identities of respondents.

Question 39. How do you think the mission of the [AGENCY] and the integrity of the scientific work produced by the [AGENCY] could best be improved?

The below open-ended responses are sorted by agency and categorized by subject, in order of frequency. The percentages in each category represent the proportion of coded text on that topic, rather than the proportion of respondents.

CDC

Twenty-six percent (467) of the 1,764 CDC survey respondents provided written responses.

Management and Leadership

(Mentioned in 26% of coded responses)

- Reduce/relax the beaurocratic procedures especially regarding publication of scientific work
- As a leading federal government agency, CDC should pay more attention to avoid nepotism within the same unit (branch or maybe division). This is especially a problem in the leadership level. It created unfair situation to other employee. People who enjoy these advantage often tend to chose their own favorite colleagues in important tasks, or assignments. This in turns created more opportunities to promote people of their own circle. The best man/woman for the particular task could therefore sacrifice because of this established culture of nepotism.
- OMB is a pain in the ass - the Paperwork Reduction Act is a joke. It significantly hampers CDC's ability to quickly assess emerging situations, including outbreaks, due to its imposition of burdensome requirements for approval of assessment tools. The IRB exists to ensure that CDC staff conduct research that is in line with scientific core values (Justice, Autonomy, Beneficence). OMB seems to exist solely to make work more difficult.
- Would be good to remove some of the Associate Director of Science barriers to publishing recommendations as the science suggests - rather than how the ADS wishes them to be published.
- The bias of senior management toward epidemiology and toward graduates of the Epidemic Intelligence Service Training Program as it all time high levels. Many senior managers (from Branch level up) have minimal laboratory science training but they are tasked with directing the work of laboratory staff. This is an old issue that originated with the origination of the CDC from laboratory and epidemiology parts of the public health service. It has proceeded to the point that few senior managerial hires come from institutions outside the CDC and it is almost considered a right of passage for EIS staff to move from training to team leads, then to branch chiefs, then to Division

Directors, then Center Directors, and even to CDC director. Many bench scientists often wonder if it is possible to do science at the CDC and competitive projects and postdoctoral positions that are approved must pass through a heavy handed application of "public health" qualifications.

- Support and strengthen (regain CDC's status in) experimental laboratory research.
- Integrity, I can't imagine, but maybe removal of ILB's top management.
- I work in a small office. The delay or release of our science is due to the fact that managers are so overloaded and unable to delegate. The lack of trust between them makes them very "possessive" of their scientific projects which impedes cooperation and creativity.
- TRUST: trust the scientists to do their jobs. There is a pervasive feeling of distrust from above among the scientists. This is evidenced by the programs being implemented such as the Laboratory Safety Committee (How many millions of man-hours have NOT resulted in accidents? How many millions of dollars have been spent making new rules when the issue came from a couple of people who did not follow established rules?), and the nonsensical time-drain, QMS.
- Speed up approval procedures on urgent work and remove unnecessary bureaucratic hurdles of which there are many
- The administrative tasks have increase significantly over the last 5 five and are affecting the research effort.
- More interagency intrac
- Structuring the organization where scientists can maximize their scientific expertise and assistance while diminishing the administrative load. Also, leadership appears generally to consist of medical officers with little to no competence-based training in leadership, management, and work-force ethics. This, in my experience, produces tension due to the lack of understanding or appreciation of staff, and inhibits support of scientific integrity.
- The CDC management need to engage them selves and support the the scientific community in all process of scientific work
- To diversify scientific directions across CDC laboratories while keeping priorities for some research problems
- I think the best way for improvement is getting back to doing science and staying out of politics. This is best accomplished by hiring the smartest person available to do the job. Many years ago this was the practice and it is why the US was so strong technically that peaked in the 1960's. But since that time politics has eroded this hiring practice as the current people being promoted have political skills and are far less technically educated but can enforce the wishes of the boss. It has become corrupt. There is no fairness. For any new promotion a person has already been selected by management. It is a power game where the objective is to keep it and gather more. The people needed to solve the technical problems are just a task that needs to make some progress. Keeping power, just like in politics, is management's major concern. So small numbers of technical people are kept to do the bare minimum of work. Lip service is given to the importance of this scientific work but the reality is that the engineers and scientists are not promoted. I am a PhD research engineer with ■ years of experience and have published dozens of papers and I am still a GS-12 step ■ but I am not the only one like this at my office. The newest job opening here is for a branch

chief. It will be a GS-14. The applicant has already been selected by the boss via the grapevine news and will be my new supervisor with a B.S. degree in engineering. It happens all the time..

- Apply disciplinary action equally to the managers and the perpetrators. Have all the Directors for Science and the Human Subjects Reviewers under the supervision of the Associate Directors for Science at each organizational level. For example, The center ADSs are supervised by the Center directors, and not by the Agency ADS. the Division ADS reports to the Division director and not to the Center ADs. The country based ADSs report to the Country Director and not to their home based ADS.
- Decreasing the pushing down of administrative duties to the subject matter experts and let them get back in the lab with the junior scientists. In the prior decades, jr. scientists were trained by the Sr. scientists in the labs or epi offices. Now we hire contractors and fellows, give them an online training safety course and turn them loose because we are so tied up with surveys and paperwork to actually do science. The safety issues of late were ALL inexperienced scientists not the long term ones. The reason, the long term scientists were trained by Sr. scientists in the lab with them. Now they are on their own.
- reduction of the myriad of other agency requirements like OMB that essentially create incredible hurdles that require the agencies to expend their resources on internal bureaucracy instead of doing the work of public health. Greater understanding and support of CDC leadership for ALL agencies that make-up CDC. Eliminate the Atlanta centric thinking of CDC leadership and operations to greater recognize and support CDC components that are not located in Atlanta or the state of Georgia.
- There is a overwhelming trend at CDC to make the laboratories conform to one size fits all protocols and procedures and software packages. I am retired now, but the mandated systems that are being forced upon my former lab were unworkable and irrelevant to the actual laboratory mission. Mandates from HHS and the Director are interpreted by supervisory staff in a multiple ways, leaving the branch with 5 to 6 different interpretations of what we are being told to do. This results in bench level laboratory personnel reaching the obvious conclusion that the supervisory chain is hopelessly inept, confused or incompetent. We have spent so much time writing and re-writing documents due to "wishy washy" and contradictory directions, that our moral has literally hit the toilet.
- Cut the bureaucracy, and stay focused on the mission of public health.
- Empowering senior and other level scientists with more influence on management policy and decisions; management and leadership structure and bias are too hierarchical and industry like. Survey scientists on how to recruit and retain scientific talent.
- I would recommend improving timely and accurate assistance with administrative tasks when coming on board at CDC. There is a huge communication gap between HR and security in Atlanta and other CDC sites. The process is extremely disorganized and dysfunctional. Lots of time was wasted (repeatedly emailing, calling, etc.) when coming on board which hinders the scientific work CDC hired me to do. On the Division and Branch level scientific work is completed with upmost integrity and diligence.

- By looking at all the moving pieces that influence the mission and scientific work of the CDC. Those moving pieces involve the facilities that house the science, as well as the people involved in ensuring facilities are operational, secure and safe.
- Address lack of leadership qualities in some branches.
- The mission of the CDC could best be improved by lessening or removing administrative burdens regarding hiring, travel, security and visitation.
- The clearance process through Division ADS offices needs to become more efficient and be monitored. There should be consistent standards across CDC, regardless of Division, of the steps in the clearance chain, the maximum time required for each step, and this should be monitored for adherence. Monthly Divisions should report to their Centers and then up to the CDC Director, the number of manuscripts submitted, the average time to clear (including range from maximum to minimum).
- Improve tracking of the review process
- The requirement for Office of Management and Budget (OMB) for most projects delays them by a year or more, and is unhelpful and duplicative, and a waste of precious resources. OMB review has even now been extended to emergency situations, and to well-established routine communicable disease surveillance.
- not sure, that's tough but the lower level persons are not being heard
- Minimizing red tape, allowing more flexibility with hiring and promotion,
- Reduce red tapes
- Too many administration duties are being push down on to the researches to do.
- Change in leadership.
- Focus on the science and not the Bureaucracy. Take care of good scientists. Management needs to learn some basic management skills such as: if someone is doing a good job then make sure they are compensated. That way they are more likely to have a good attitude and stick around. The managers at CDC have yet to figure this out.
- There are now so many bureaucrats and midlevel managers who control "the Message" at CDC in Atlanta who are making decisions on subjects way out of their sphere of knowledge. CDC should allow its scientists "freedom of Speech" -- we have actually been told that ALL Ebola-related material has to be vetted by a Speakers Bureau Group -- and we have no idea about the qualifications of this group, and what they are afraid their scientists will do. We have been told that CDC is responding to HHS, and HHS is responding to the White House...it all sounds as if politics is trumping the science. They only want a positive message to come out of the CDC Experience, which portrays CDC in some shining light... which may not be scientifically accurate nor helpful -- if one cannot have a "Lessons Learned" talk or a timely talk -- the message is lost, and the opportunity to provide public health is lost. Through the years there has been MORE and MORE control. CDC needs to trust its scientists and loosen the grips on scientists communicating with other non-CDC scientists...
- Improve the clearance process. Currently all items funnel into one spot and then they get backed up at the branch level. It would be better to have more experts be able to provide clearance more quickly. Also, have people with managerial or organization experience be in charge. Scientists aren't always the best organizers.

- The bureaucratic structure stifles the ability to produce timely and quality work. "Diversity" requirements are held on a pedestal above science and protected groups are given preferential treatment through the agency, even if science is sacrificed during the process. Most statistical work is completed by non-statisticians or scientists ill-qualified to perform the analysis. Information system security teams often have little to no training and do not understand how to properly weigh security concerns against the need to execute the agency's mission. Furthermore, information system security policies and decisions are applied in a non-uniform manner across the agency leading to delays, confusion, and increased costs.
- listen to everyone's ideas.
- More participation of scientists in decision making process
- Get rid of the Public Health Commissioned Corps. Do not allow retired Commissioned Corps to come back and double dip forever in management positions. There is no new blood and no career path for civil servants. Cronyism in the agency is a deterrent to production of quality work. Management appointments are made to people who do not ask questions. The emphasis on bean-counting (number of pubs--quantity over quality)--does not help the research mission. The current emphasis on winnable battles means we are only supposed to focus on issues that fall under internal locus of control. No need to deal with environmental contamination, occupational exposures (except under the rubric "total worker health"--which means have the workers exercise on the job and ignore what they're exposed to at work), etc. The organization is way too hierarchical.
- Hire the right person that have the correct knowledge and NOT based on "the good old boy system"
- There are too many layers, decision-makers, and personal interests. Too many layers of over-site caused by rare occurrences or abuses of employees. Too much political grand-standing by Congress.
- Commit to progressive discipline for non performers. Train supervisors and managers on how to work with non performers. Upper management back this move. Management not "fold" as soon as someone utters "grievance" or "lawsuit." We are reaching a tipping point where the non performers outnumber the performers in some areas of CDC.
- The bureaucracy has greatly increased at CDC. The amount of required annual and ongoing training has grown over the years, creating a significant burden. It seems it will only increase in the future. Efforts are needed to put the scientific staff (the strength of the agency) first and work to help streamline work. The Paperwork Reduction Act of OMB is a significant resource drain on the agency and the purpose/justification seems ill conceived and slows the responsiveness of CDC and other federal agencies.
- Making LES more interested in research and reducing the red-tape involved in publications
- Term limits should be enforced. The Director of NIOSH is in his second term. He had a break in service between the first and second terms - and that lapse in service apparently enabled him to qualify for the second term. I suspect when term 2 is up, he'll do the same thing. He spends his time globe trotting - giving keynote addresses in a remarkably frequent basis. His schedule is free to globe trot because he has created multiple new high-level "deputy" positions in DC head quarters and his deputies run the place. Ergonomics is the "third rail" at NIOSH, despite work-related musculoskeletal disorders remaining among the leading workplace injury and illness categories and a major source of worker disability. Ever since Congress rescinded the ergonomics rule that OSHA

established at the end of the Clinton era, intramural and extramural funding on research related to ergonomics and work-related musculoskeletal disorders evaporated except for a couple legacy efforts. The quagmire of ergonomics research that began with the Bush administration continues to this day - midway through President Obama's second term. For details, see <https://www.osha.gov/archive/ergonomics-standard/archive.html> .

- Over time, the increase the requirements in administrative processes and restrictions in funding seem to have increasingly impeded scientific work, specifically, the ability to start and complete scientific studies in a timely way. The removal of some of these administrative requirements could go a long way in helping CDC to accomplish more and in a more timely manner. One example of administrative barrier is the OMB - PRA review process, which is becoming overwhelmingly burdensome. In at least one instance, data collection for a study was delayed more than 1 year due to this onerous process. Also, the interpretation of OMB-PRA regulation has become such that more and more activities are now required to undergo OMB-PRA review than ever before (e.g., progress reports from grantees). Despite the increase in requirement, the review process at the OMB office seems to have slowed. I expect that this will only become worse as the requirement for more OMB-PRA review increases. OMB seems to have a great deal of authority and control, in regards to scientific work, and there is no channel for voicing concerns that would lead to a meaningful response.
- Management not getting too involved with decision making in research and outputs, - let the experts do their work.
- More input from young scientists Fewer demands from management
- Make sure that competent people are promoted to a place of authority. Focus on science (strong research principals, the scientific method) and less on cursory / passing issues.
- Switch the focus from administrative growth and power at the CDC back to a science drive workplace. There is no motivation for better science if you have to be in administration to advance your career. This will also resolve the integrity of the scientific work.
- their should close and regular monitoring from the top to see if scientific principles are being followed and staff are free to conduct studies and share findings.
- In the context of global health, CDC scientist will greatly benefit from having more exposures to international health issues and their complexity.
- Allow more clearance for some types of research at the Center level Streamline as many clearance processes as possible.
- Better leadership
- Everyone should be encouraged to write a scientific work. Not only those who are directly involved in activities of higher impact. Each branch should be encouraged to write at least two works per year however, every member of the branch should be involved in writing.
- Better leadership, managers who are better qualified to supervise scientists, better qualified and trained scientists, and better organization of administrative requirements and work flows. Most time is devoted to administrative issues and little to no time left to do science, which can jeopardize scientific integrity.
- quicker turnaround on studies and operational research, and more field implementation

- Administrative and procedural barriers delay the release/dissemination of important findings. CDC does extremely thorough, good quality science, but is always "behind" in disseminating findings or adopting new approaches and technologies.
- Streamline the clearance process for abstracts and papers, it takes too long.
- streamline IRB review processes and pre-publication clearance.
- Remove unrealistic and detrimental/harmful restrictions on professional meeting attendance and work-related travel restrictions, the latter of which severely impacts program implementation and evaluation.
- Reduce bureaucracy, and make decisions independently of political interests.
- The DGHA associate director of science is a barrier to scientific work. The science office routinely delays approval of protocols and manuscripts without clear reasons given or because they disagree with scientific conclusions consistent with international norms or guidelines.
- Big questions! Overall, and with less thought than I would like, but principally assessing "mission" (were I writing this question, I do not think I would lump "mission" and "integrity of scientific work" together--a "double-barreled question!": 1. Bureaucracy is overwhelming. Multiple layers of review are needed of simple things, e.g., conference attendance or, even worse, being able to put on a conference (however that is defined). What was once a flat organization is now a paragon of vertical. 2. Contractors, and many are good, do not have the dedication to the mission of CDC that FTE's do. That said, the average FTE at CDC now does not have the dedication that they did 10 or more years ago. More self-interest and less "selflessness," less desire to be dedicated to the organization and its goals, more of an 8-5 job and "then I'm home." Yes, I know that many persons such as myself who have been with an organization for a long time harken for "the good old days." In the case of CDC, it is true. 3. We are bloated with infrastructure. This hurts the mission because I do not think decisions are any better than without such a process (and this relates to my first comment, above, also), and the infrastructure and review are clearly frustrating for staff--all staff. 4. Scientific integrity at CDC is good. I have few complaints here. I think the Agency does stand up for what it thinks is right.
- Administrative procedures and requirements for deployments, general training requirements, and other similar recurring activities have become overly burdensome. It greatly detracts from the amount of time that can be spent doing science. It doesn't really affect integrity but it does impede overall efficiency.
- CDC should work with the host countries to improve integrity
- Currently the CDC has developed a layer of bureaucracy so thick that it has paralyzed its ability to work within the organization as a scientist. This is due to all of the safety measures that were initiated due to a single incidence with anthrax. This "one-shoe fits all approach" to safety is slowly but surely causing us to be less responsive to the public and our partners and eventually will be our demise. The public will no longer have any confidence that we can work because we put in so much unnecessary safeguards to to work in the lab with our pathogens that we will eventually become irrelevant.
- The folks reporting to the CDC Director must be willing to hear, respond to, and pass on up messages from front line scientists about challenges they are facing with resources, work load,

bureaucracy, rules, and barriers. Instead, they try to manage away the problems rather than face them. 2) OMB PRA approval is severely broken. The guidance and reviews from ICRO and OMB are unconscionably slow, inconsistent, contradictory, unhelpful, and not scientifically sound. The 1999 draft OMB PRA Guidelines have never been published. The OMB ICR "pipeline" restricts the number of that can be submitted at one time, is technologically antiquated, and is just a way for OMB to delay the work load. Research and program funding cannot be spent before it expires because of the 6-12 months required for the entire OMB PRA process. The "streamlining" offered by OMB--e.g. generics and clinical exemptions--does not apply to most of CDC's data collections. When generic ICRs are proposed by CDC, OMB often says they are too broad--but if they have to be narrow and not cover a range of data collections, why bother? Even generic approvals can take 4-6 months. The poster child for generics at CDC--the OSTLTS generic--takes an incredible amount of staffing, staffing that most programs do not have for just one data collection. And even it has gotten overwhelmed. OMB Desk Officers are overworked, covering too many agencies. The chain of command at CDC prevents scientists from speaking directly to the OMB Desk Officer to ask questions, provide information, and clear up confusion. ICRO and Center PRA Coordinators prevent communication with OMB because they are scared of annoying our OMB Desk Officer and Statistician and then getting retribution. OMB does not provide its Desk Officer with assistance when CDC has to increase its ICR submissions, e.g. because of the new EEI Generic and Ebola-related ICRs. Instead, CDC is supposed to "prioritize" a list of ICRs which, even in normal times, is too long for the Desk Officer to handle efficiently. This unworkable system is costly to the agency in terms of dollars allocated but not able to be spent, delays, staff morale, and lack of credibility with our partners who cannot understand why we cannot fulfill our scientific obligations on time. Critical projects that require short timelines are abandoned in the planning stages because they do not qualify for OMB's emergency approval. I have yet to see a benefit. OMB has overreached in expanding its mission from preventing burden on the public to include changing the science and looking for policy implications, all without having the staff and resource commitment to do any of those missions well. The incredible drain on staff time, morale, funding, and productivity that ensues from scientists dealing with OMB PRA approval will not improve until CDC leadership does an in-depth review of the problem and its impacts, then is proactive in communicating it to HHS, OMB, and Congress. do not know

- Reduce needless paperwork and control admin staff reach into scientific affairs. There are too many admin staffers who believe that passing around and signing documents is our mission.
- Incentivize publishing scientific research in high-impact peer-reviewed journals. The current system fosters a climate of 'quantity over quality'.
- Scientist are forced to follow protocols that were written by non-scientists (QMS). These protocols often adhere to strict regulations but do not follow a practical laboratory approach that leads to the misconduct or taking short cuts- and thus to the recent lab incidents. Inventory of reagents and consumables takes away valuable work time from scientists and does not contribute to the mission of CDC. Scientific data should be the highest value of the agency to rebuild the good reputatation it has lost over lab incidents, but right now all scientists are discouraged through strict regulations. Scientists that are performing great should not become supervisors/managers just because they are

entitled to (not all scientists are great managers). Scientists should be encouraged to spend time on creative projects that interact with different divisions/groups to benefit from broad knowledge at CDC. This increases the engagement of people and use resources more wisely. Scientists should not be reproached for errors, but supervised when they are first hired, and over the course of their work. Just because you earned a degree it does not mean that you should not be supervised.

- I think focusing more attention on the actual work of public health rather than the politics would improve our work, which includes research and financially supporting the state health departments. Decreasing the layers of administrators and management would be helpful. Also, it would be nice if the layers of bureaucracy could be peeled back instead of increased. The paperwork reduction act (OMB) has REALLY hindered us from doing public health research; it will take 1-2 years to get a new questionnaire approved before you can start collecting data. It would also be nice if Congress would let us spend the money the way it needed to be spent instead of telling us how to spend it.
- Expand the base of expertise in CDC OD beyond the infectious disease oriented view of public health.
- ADS system is badly dysfunctional - used to limit scientific inquiry and publication
- Streamlining the ADS process. There is a lot of discouragement to doing any sort of evaluation work. There is some very good data that has been produced that will not be presented to the public or CDC because people find the process far too cumbersome. And even demeaning. It is very difficult to know if you are working in the correct direction without the ability to meet with scientists from outside CDC at conferences and other forums. This ties back in with the comment above, it is too difficult to get approval for abstracts and journal articles. Maybe that office is understaffed. Maybe the oversight has gone too far.
- Better personnel management of Senior Scientists - the Agency struggles with a career development pathway for Scientists not interested in moving into management positions as a means to continued career development. If one is not a Physician, Veterinarian, Dentist, or other doctoral level healthcare provider, the Agency does not know what to do. And they have little appreciation for the distinction between doctoral level healthcare providers, and doctoral level research scientists who differ greatly in their skill sets and technical capabilities.
- Turn around time for ADS to review manuscripts/abstracts should be shortened
- Process for clearance of proposed scientific study protocols is onerous and very severely slow, to the extent that badly needed information from operational research studies can be delayed so long that the value of doing the study is lost. This happens most often probably with applied research such as operations research where results directly apply to programs. Another good example however would be trials of new vaccines for unusual conditions to be conducted during an epidemic; there are examples where by the time the study protocol was approved, there would no longer be enough cases to do the trial. There would clearly be ways to speed this process significantly without compromising maintenance of research quality.
- The CDC clearance process is broken. For example, about a year and a half ago I put two manuscripts into the clearance process on the same day. One manuscript reported the results of a very complex economic model and was cleared to circulate for publication within three months. The other manuscript was a simple mathematical calculation of the costs to respond to an imported case

of measles. The clearance process took eleven months and I was forced to remove the sensitivity analysis from the manuscript because one of the cross clearance reviewers did not like it and felt I should only do a costing manuscript without the contextualization of sensitivity analysis. In contravention to CDC written clearance policies that call for lead author consent and consultation for cross clearance and blinded review by the person doing the cross clearance, I was not consulted about the cross-clearance reviewer and the review was not blinded. I am still sitting on the manuscript because I refuse to publish it without the sensitivity analysis.

- I think that the CDC has been hypersensitive regarding past infractions and public embarrassment. Makes it difficult to move time sensitive protocols with limited funding for non-research determination through the ADS process. There should be
- Investigate the management of those DLCs that have low-performing managers, where 'low-performing' means having low regard from the non-managers.
- Paperwork requirements and AMS are deteriorating the ability of scientists to do science. There is less and less time to work in labs and more and more time required to fulfill paperwork on everything from time keeping to travel to ordering, not to mention all the new QMS and data validations processes.
- Provide more safe/anonymous opportunities (like this survey) for folks at all levels to provide input on what is happening without fear of retaliation.
- Remove or loosen restrictions on travel, particularly for conferences. As a result of the IRS and GSA travel scandals, we are now severely restricted in our ability to travel for conferences. This has not reduced our budget, just restricted how we could spend our funds.
- Less administrative stuff
- Provide more efficient and timely processes and care for employees better.
- New, nearly insurmountable barriers to doing any study: 1) extensive and meaningless OMB application and review of surveys given to people who have already consented to interview--often delaying more than a year the start of any work; 2) excessive top down management of subject matter experts who are often bewildered and frustrated by decision-making made by those who are not versed in the field; 3) inability to hire anyone in a timely manner and then through a centralized, inefficient, and inappropriate system (USAJobs); 4) hiring of an army of more reviewers and policy people, without similar staffing of the people actually doing work (studies, programs, etc); and 5) a determination to not do anything that could be remotely criticized by anyone. Improvement in any of these areas would make CDC more like the faster moving, more relevant Agency it used to be.
- the laboratory monitoring programs have ballooned far out of proportion to any perceived safety or quality issues. major hinderance
- Administrative duties have increased to a point where too much time is spent trying to comply with CDC's scientific regulatory policies than trying to perform science in the form of experiments and data analysis.
- CDC used to be a "bottoms-up" organization. That is, scientific information generated in Activities, Branches and Divisions was used to generate questions of public health importance that needed to be addressed. In some cases, this occurred as part of an epidemic aid response or consultation provided to a state/local health department - a situation unique situation only found at CDC and

pretty much akin to investigator initiated research funded by NIH. Unfortunately, CDC went through a period following 911 and the anthrax letters where a politically driven public health agenda was often presented to the agency, and programs were asked to derive the data to support this agenda. One example was smallpox vaccination where the administration wanted every person in the US vaccinated. Luckily, this was not the end-result, and data won out primarily because of CDC's strong data from its previous leadership in the eradication of this disease, and partnerships with professional societies / organizations which could take the science-based messages forward since CDC scientists were often prevented from speaking or publishing. Luckily things have changed but there still seems to be undo pressures from inside and outside CDC to circumvent the development of good public health recommendations / policy which are not strongly underpinned by strong evidence. Amazingly, this occurs in the face of an ever growing group of experts in evidence-based policy development in the CDC Offices of the Associate Director for Science. In addition, there is the continual addition of regulations that do not "pass-the-laugh-test", particularly those from OMB, which make it extremely difficult to conduct studies and surveillance in a timely manner. All of this makes it very discouraging for smart, young scientists who want to consider a career in the agency.

- Mandate Term Limits for career civil servants/commissioned corps management positions. Suggest that be 5 years for team leaders, 7 for branch chiefs, 9 for division directors. The harm to the organization occurs when leaders and management have been in their same positions for an excessive number of years. At some point it changes the manager, jades them, or otherwise causes them to be hesitant to make a decision or to act based on the organization's mission. Their ability to make decisions are paralyzed and they become fear-based driven instead of being customer service oriented or science based or business case based, or mission based. Essentially, everyone loses. At the root of this could be "fiefdom building and preservation". Time and time again, in various government organizations (CDC (NIOSH), IRS, VA, GSA, DoD, etc.) we see nonsensical (and illegal in many cases) activities based on management decisions made to build, preserve, or enhance their personal fiefdoms within the government agency. Term Limits would naturally correct this. Other benefits of Term Limits would be to limit single-mindedness of an organization, prevent an organization from keel-towing to the prevailing and long-term manager for their own survival in the workplace, promote a more diverse management team in both thought and structure, provide more advancement opportunities to existing labor force, allow for good managers to incrementally rise to the top within a career's typical lifetime, naturally deselect unsuitable managers, and lastly provide an organization that is more versatile and capable to implement management/organization/agency policies in the most efficient fashion as a function of previous up/down and lateral mobility/diversity of the workforce.
- Aggressive delayering. More layers more timidity, more layers more delay. One supervisor per 10 subordinates would be the correct ratio all the way from the bottom to the top. Should be an easy sell since it not only improves effectiveness but saves money. (2) Aggressive elimination of non-scientific management personnel. In the military, there's a term called the 'tooth-to-tail' ratio -- the number of fighting forces compared non-fighting forces. It's said that the desirable ratio is 75-25, but when it reaches 50-50 there's a tipping point (equivalent to a casualty rate) at which the unit can no longer carry out its mission. This 'tooth-to-tail' criterion might well be applied to CDC activities. (3) Allow CDC scientists to publish either: (1) with the CDC imprimatur, indicating that it was edited

and cleared by the organization, in which case the persons in authority who take responsibility should be named; or (2) on their own authority, indicating that it represents the position of the authors and not necessarily of CDC. In no case, should scientific publications be substantively altered by anonymous persons in authority for which the individual scientists are required to take involuntary responsibility. (4) Eliminate the current rule that each employee is allowed to attend only three-quarters of one scientific conference per year, with attendance is subject to a zillion levels of approval by non-scientists all the way to Washington. Public health is done in public places. No communication of findings, no public health. No interactions, no science. Lethal rule. (3) Renew the primary CDC mission outlined by a previous director: "The generation of good science to guide public health policy."

- Downsize the workforce, eliminate the "permanent" nature of full time employee (FTE) positions, and retain the best employees possible.
- There should be better coordination between human resources and management, and support for employee and management training needs. Improve supervisor training; implement programs to develop supervisors' ability to lead and manage- often, scientists are promoted and supported for doing good science but these skills do not necessarily translate in appropriate human resources management practices. Morale can be improved by better training and accountability of supervisors; by creating flexible opportunities to change positions and work on detail. Currently, these opportunities must be sought out by staff. optimally, there would be a mechanism for employees to have HR support for finding a better position fit, and consequences for poor employee management. The records of employee grievances, even those that have been successfully resolved, should be reviewed to determine patterns among individual supervisors or for patterns of poor management practices, such as excessive reprimands by supervisors (this writer has never received one). there is extensive evidence throughout CDC of fear based decision making that is directly related to fear based management practices. outcomes of this fear based management are evident in staff being unwilling to report their errors or those of their subordinates, or superiors.
- Involve forward thinking scientist with public health advisors that handle day to day operations to come up with the right formula for CDC to follow.
- Hire employees who are dedicated to the mission of CDC and unwilling to compromise on publishing controversial evidence
- The CDC's mission and integrity of work can continue to improve through employee collaboration and leadership flexibility.
- Hire competent management. Look for leadership instead of credentials.
- The science should be driven, to a large extent, by the stakeholders at the state and local level whose programs benefit from the science. All too often CDC scientists and leadership are disengaged from public health at the state and local level and tend to pursue research that is not as "applied" as it should be towards encouraging practice improvements at the local level. I have not been involved in issues where folks are trying to interfere with the findings or interpretation and it is more often the difficulty of making decisions on limited resources when many PIs are focused in pursuing their particular area of interest and expertise. This latter is a difficult situation since it can be perceived as interfering when in fact CDC is a public health agency and should constantly review

our portfolio of work and determine priorities along with external reviewers. Too often the "integrity" issue is more about independence.

- Remove the ridiculous restrictions on travel and attending conferences. I am unable to go to important conferences with junior staff, which I feel is critical for junior staff to develop into subject matter experts. These restrictions also mean that CDC's point of view is not represented at these conferences. In my field, others who are outside CDC, intentionally distort and misinterpret information. I feel CDC has the power to minimize the damage from these distortions by presenting sound descriptive studies that make it difficult for the distorters to continue their misinformation.
- If management would listen to the employees that are doing the work and stop thinking they always know best, I think that the moral and productivity will increase.
- By putting CDC corporate and leadership emphasis on letting objective science drive the search for truth rather than personal or corporate beliefs driving the use of science to "prove" convictions. 2) By questioning "politically correct" public health suppositions since they are very likely to be influenced by people's opinions rather than true science. 3) Start trusting CDC scientists a little bit more. The amount of review of CDC products (abstracts, presentations, papers) is getting to ludicrous and unmanageable levels which inhibits presentation of useful material in a timely fashion. 4) If CDC continues to require extreme product review policies, then take off the requirement that all materials have to have a disclaimer. This diminishes the scientific integrity of material that CDC puts out for the scientific community.
- Reduce the dependence on narrow authorizations from Congress and restrictions imposed by Office of Management & Budget (OMB). Isolate the management from their historical dependence on "Guidelines" for clinical and public-health practices that were frequently drafted and promulgated by "experts" or "advisory bodies" with ties to industry and clinical specialties. (In this sense, I could not easily answer the question #13 posed by this survey. In my view, some of the "scientific advisory bodies" are tainted.)
- Some of the team leads and branch chiefs in CDC do not have rigorous scientific research background. The unfortunate fact is they work for an agency that relies on science, so by working in CDC they assume they have adequate knowledge on science, its methodology etc. For example I have team lead and branch chief think a descriptive paper on data collected and published in MMWR to be considered research. Not realizing that it is just a description of what the data is. Promotion in CDC is based on seniority and being male. When these individuals get promoted they assume they know enough about science and they will make decision that reflect that they don't have a clue. You can't say anything because it is their identity you will be challenging because they think they adhere to good science.
- People should live to work and not work to live. Many employees seem as if they are stuck in this job, although it is not where they want to be. Part of their frustration is derived from the Quality Management paperwork that seems redundant or unnecessary, which interferes with their productivity in terms of their scientific work.
- CDC leadership has been strongly influenced by pressure from the highest levels at the Department of Health and Human Services over the past 6 years. This has resulted in extraordinary clearance requirements for any sensitive topics. Unfortunately, it seems like everything is sensitive. This has

resulted in a level of caution that means everything is very slow to come out and everything is very cautiously worded (which can reduce the clarity and impact of the message). While I have not experienced any sort of overt scientific misconduct, it has created an environment where this level of caution trickles down through the agency and people start questioning whether they should even work on something because it might not get cleared. It is creating a very difficult situation with morale among scientists. The science on certain things is clear and we should not be afraid to say it plainly. My observation is that this pressure is largely political in nature.

- Change in administration and management
- My problems are at the Center Level and are mainly issues of lack of leadership, but these problems do not necessarily exist across the agency.
- CDC used to lead with science and was always able to fall back on the science in the face of scrutiny or questions. Politics have increasingly become part of the landscape at CDC. The political landscape is important, but when it begins to govern too much of the work, the interests of the public and public health are compromised. The agency's brand and credibility also suffers when politics and advocacy take a front seat over science. There has been a significant increase in "monitoring" and "review" processes and other system-level bureaucracies over the last few years. This has made the agency an increasingly "micromanaged" organization from the top down. It is all part of "issues management" -- a whole chain of folks from the top on down -- who scrutinize, censor, and otherwise compromise science.
- We need to invest more in our current staff - many are retiring and taking institutional knowledge with them. There needs to be more cross-mentoring. Additionally, I see a lot of scientific work in silos. We'd be more efficient if we worked together more, and if people were working more to their strengths. There also needs to be more accountability. Finally, I've noticed administrative processes such as grants and cooperative agreement management becoming increasingly bureaucratic and complex, too much for scientists to manage and do scientific work. CDC would benefit from having more business management (trained, like MBA) staff in our workforce to help us run more efficiently and utilize staff skill sets better. Also, to help with management of staff, Many scientists become managers with no training or skill set in management.
- I think CDC should focus more on public health and serving the American people. When it takes a group (Enteric Diseases) 6 months to get data back to a state health lab, but in that same time the group has published 5 papers - what is their priority? If they have time to do research, then they have the time to run biochemical tests on a sample and let the state and ultimately the tax paying patient know what disease he or she may have. I think the CDC and government agencies' hiring policies have lost focus and the inability to cut dead weight and fire employees hurts its productivity and integrity overall. The CDC was loud and proud about a Culture of Safety after the Anthrax exposure, but what about a Culture of Accountability? Why is the woman who exposed 80+ CDC employees to a deadly bacteria still working at CDC? From my experience, the hardest workers I've seen are typically contractors where as FTE's once they are converted feel they have a free ride and there is nothing you can do about their complacency other than to "shift responsibilities" and make them someone else's problem. The hiring is based more on degrees and less on experience. You rule

out a lot of very great employees with years of experience because they don't have a Master's or higher. Why punish an individual because he or she was able to secure a job right out of college?

- I have seen situations in which a testimony or Q&A document is written for a CDC leader, but then altered due to Congressional or political implications. I believe that, although it is important to take political outcomes into consideration, CDC's job is to present the best available science. This starts with leadership and filters down through the ranks. The less concerned the CDC Director is, the less concerned other are.
- Currently the administrators want to manage, and frequently don't understand the science, and the scientists want to research, and don't understand the administration, but each side has no stake in the other's interests. Therefore there is a disconnect between management and worker. To help this a provision of administrative teams or persons, assigned to each group, which understands the administrative and also the science are required. The equivalent of a scientific office manager at the NIH. These are people, with technical expertise, e.g. current lab workers, who understand the science and actively contribute to and have personal interest in the conception and completion of experiments (e.g. get a bonus or are unable to advance unless they coauthor a MMWR, scientific papers, professional report etc) but who deal primarily with the administrative efforts such as making sure all documents are up to date.
- Scientists in CDC need more chance to try different roles in public health and also need have a effective system to get awarded and promoted. Thanks,
- Encourage innovative ideas and projects.
- Develop integrated work flows and reviewing processes in which specific scientific sub-committees can be chosen based on the topic that should be address. Having only one multi-purpose multidisciplinary scientific committee may severely compromise adequate decision making processes, because those will always be based on consensus only, not necessarily on expert opinion.
- Less red tape, bureaucracy, and more focus on scientific endeavors as opposed to spending time ad nauseam on refining processes.
- Those involved in decision making around the use of science should have adequate scientific training. There are many people in the pipeline with MD and MPH degrees that do not have the depth of training or experience to make the decisions they make. This slows the clearance process and, at times, allows undo external factors to influence clearance and review. More importantly, these factors impact what gets funded and what doesn't. The politics of appropriations is perhaps one of the most damaging factors influencing the integrity of science these days. The funding does not come or is not consistent enough over the time period it takes to answer critical questions (baseline data collection with no follow-up, data collection with no time for analysis and dissemination). OMB is also a critical factor in the mission of CDC and the integrity of the scientific work. The process is long, delayed for non-scientific reasons, and the clearance officers are not always familiar with public health methods. Finally, the time frame of OMB clearances does not align with appropriations time frames which can impact whether a study gets done or what the final data collection period is for a study.
- CDC, NIH, NASA, portions of DOD, and probably other agencies all suffer from the same problems which are two-fold. First, the top and near-top jobs are filled with job-seeking politicians, not the

highest-tier scientists or engineers. Secondly, the setting of priorities, even down to the staff level, is based on an ever-present effort to associate whatever science people "want" to work on with whatever the latest funding craze is, be it Ebola or anthrax. This is no way to run a country.

- We are a science agency and yet it is increasingly difficult to get high qualified scientific staff in my branch, division, and center. However, there continues to be a growing number of policy and communication staff. They seem to increasingly see their job as directing/determining the science agenda for various high profile programs. Yet, they have no training and it is clear in talking with them they have no knowledge of the existing literature on the topics in which they consider themselves expert. I also see an increasing level of corruption. I have no hard proof, but I see administrators increasingly taking money that was designated for scientific programs and spending it on their own pet projects -- these projects are often ill defined and have little if any scientific merit. I recommend the following: More transparency on budget issues -- I am a team lead and don't get to inform most decisions on budget. We are a public agency and honestly I don't see any reason where all monies spent should not be readily accessible to all staff (and the public for that matter). The people making decisions about the budget should have to justify how they are spending the money. A scientific agency/HHS ombudsmen office -- and this should be staffed by individuals who have worked as scientists in the agency. There needs to be a mechanism to bring concerns forward without fear of reprisal -- but also in a way that does not escalate to the whistleblower stage.
- better management
- Improving the review process within CDC so that it is more streamlined and efficient.
- Promote scientists work in the labs. Scientists always work harder, but be promoted more slower than any other employee.
- Let the scientists and programs do their work and realize that they are the subject matter experts. Too often, policy, communications, and leadership try to define, lead, and interpret. They should support the programs. 2) Let the Agency and Divisions decided what needs funding. Too often, advocacy groups and congress decide which programs should be funded or de-funded. 3) Reduce administrative burden and layers; there are too many people in clearance and review chains- it causes redundancy and inefficiency.
- Continue with efforts to improve the turnaround time from data collection to the availability of raw data for analysis
- The scientific work at CDC can be improved by working on balancing speed with integrity. In addition, perhaps too much attention has been placed on getting CDC into the media. I think if we do good work there is no need to advocate to be in the media. Additionally, there has been a trend in my division for only a handful of persons to address the media using the work of others. This may be a bit unfair as the person who actually did the work should be offered media training so they can also address the media.
- agency is too top heavy - too many chiefs everyone in management is not qualified to manage people managers manage with their feelings instead of logically rules and regulations are not followed there is no accountability management does not listen to the concerns of the staff, they

feel like the staff is disgruntled just to be disgruntled and view concerns or complaints as whining. As a result, people don't voice their concerns and the air is thick with unhappiness and anger.

- I believe that improvement lies between the scientist and manager. Many managing positions are filled with scientists who would rather be in the lab and do not have the proper management skills. There should be a better way for scientists to be promoted and move up in positions than a one sided track system.
- The process of review and approval of documents, web sites and other products has become onerous over the years and requires higher levels of review for routine documents at the CDC OD and HHS levels. Quite frankly, the CDC OD is one of the biggest barriers to efficient decision making and dissemination of information.
- Improving hiring processes and simplifying some of the bureaucratic red tape. The CDC is not attracting new talent because of the USA Jobs system and its policies. They are also wasting millions on training and employing fellows to do the work of FTEs but then never hiring those fellows on. There are two knowledge leaks currently: when fellows and contractors leave, and when employees retire. Plugging that first leak by fixing the hiring system would, in effect, plug the second leak (by replacing the retired employees with new talent).
- Hire people that know the topics they are involved.
- Reduce micromanagement and increase research funding
- Higher Management standing behind and supporting their team and associates 100%
- A leadership team that valued research that CDC scientists are trained and capable to do.
- I have worked with some at the level of the Center Office of Science who are completely incompetent -- and were when they were promoted, having done sloppy scientific work at the level they were in previously. There appears to be no way to get rid of these people, and their level of scientific rigor is lacking.
- More focus on science, less on politics. Also, more focus on science, and less on administrative activities, Better-enforced guidelines regarding authorship.
- My center has too many people in leadership positions that quite frankly despise science. Research is undervalued and derided as a waste of time and scientists are not invited or encouraged to contribute to the decision making process. This is certainly not the case agency-wide, but we scientists have considerable skills to contribute to emergency preparedness. I would like to see our skills valued.
- Return human resource staff to the control of the individual agencies instead of centralizing them. The central staff do not appreciate the skill sets that would most benefit the work of the agency and hence it is harder to hire the skilled people most needed for the work.
- In my topic area, unfortunately Science takes a back seat to interpersonal difficulties among bickering managers at the upper level. My supervisor is an extremely poor communicator and a non-scientist put in charge of a scientific activity. The net results are, predictably, a train wreck. Good survey.
- Faster, more efficient approval of materials for public dissemination.
- Better balance between investments in health care and public health. Public health includes research.

- Remove the relatively new policy reviews of scientific products from the scientific clearance process.
- 2. Dr. Frieden has created a culture of fear by firing a large number of senior leaders who disagreed with him. This culture of fear has made the scientific review process such a burden that many of the scientists, myself included, have stopped working on important research and manuscripts for peer reviewed publications. Dr. Frieden needs to resign or be removed.
- Scientific integrity might be improved by re-doubling efforts to regain identity an an essentially scientific agency. This might be accomplished by restructuring or altogether removing some (non-scientific) administrative levels -several inserted in the past 10-12 years - that have weakened scientific interconnectedness, diluted scientific programs, and distance scientists from one another and from leadership. Restructuring might also well include less fervent emphasis on 'branding.'
- By ensuring that performance and program evaluation not only meets the needs of the audiences that require information from us, but also meets basic public health and scientific standards for good evaluation and good quality programs.
- OMB regulations and the increasingly broad interpretation of those regulations has severely limited both the scope of public health activities and the timeliness of CDC's response to emerging public health threats. In order to allow CDC to respond to public health needs of Americans, the OMB process needs to be streamlined and more information exchange among the agencies should be encouraged.
- There are too many administrators involved in decision making that understand policy, but not the science. There needs to be better peer representation for the scientists doing the actual work.
- Fewer levels of internal review before external peer review; Freedom to study any topic of interest instead of limitations on some topics that are controversial; Easier access to others in my scientific community (conferences, training, etc)
- Huge long clearance processes make it very difficult to be timely or be involved in cutting edge science
- I believe there are very few Distinguished Consultants/SBRS professionals who do research full time and that these individuals, though scientifically very well regarded outside of CDC, are often put in positions low in the hierarchy within CDC. These individuals then have little say about anything unless they give up research to become a manager or an ADS. But I think the quality and quantity of work that managers and ADS's have to review is declining. And the satisfaction levels of high-level (DC/SBRS) researchers who are well regarded outside of CDC is fast declining within CDC, Appropriate roles for them have not been developed. They often report to individuals with limited research backgrounds who influence the approval of their topics and papers. Although I believe that CDC wants to increase the policy-relevance of this work, I believe this problem is particularly severe for senior researchers in under-represented disciplines such as economics which should probably be playing a strong role in developing this work.
- less review by non-experts/non-scientists (other agencies frequently comment on work and their knowledge of the area is often limited. Often staff with lower levels of education and experience are making the comments.
- Reduce the amount of clearance review for products by highest levels, e.g. White House

- Congress and White House should stay out of scientific matters. 2. News Media, though it would be difficult to control, should cease witch hunts when a mistake is made or an accident occurs. Dangerous pathogens and dangerous chemicals are by nature the work of CDC. In laboratory work, as in any endeavor, there is the human element. Scientists have training on handling dangerous chemicals and dangerous pathogens. Though rare, occasionally a mistake is made, or an accident occurs, as they occur in private industry or in academia. The people best able to handle such issues are right here in CDC, not congress, not the White House. I have seen during my time as a CDC scientist, congress get involved in CDC property system issues; and blow them out of proportion. Nevertheless, CDC had to make a fix for the problem, buy costly software so that accountants in Washington can account for every bean. The software was and is so complicated and unwieldy, that unless one uses it full time, it is a fight every time a property officer has to use it. After a reorganization of CDC around 10 years ago, support people who could place orders with credit cards, and do property officer work were diminished at branch level. As a result, scientists have to divide time from science to do administrative work such as this. I have seen during my time at CDC, one agency make a poorly considered statement publicly. As a result, a fix had to be made, because congress got involved. Divisions where no such mistakes or poor decisions had been made already had a document approval process prior to submission of a document to a scientific or medical journal for peer review prior to publishing. Now there are additional redundant steps prior to even getting the documents into our approval system. The additional steps accomplish nothing except waste of time and productivity. 99.9% of CDC scientists and physicians are highly capable and competent. If congress, White House, news media would leave us alone to handle problems that arise, and which we are good at handling, we would be a more efficient organization.
- Increased accountability and supervisory oversight of staff scientists. Improved documentation and implementation of quality management systems measures at all levels of scientists, within labs and outside labs. Increased training in laboratory science management and leadership. Too many quality indicators have been ignored in the name of "productivity" but the consequence may be questionable scientific findings. Senior leadership needs to support improved quality practices for all scientists and managers.
- We are very bogged down with all kinds of administrative requirements that eat into the time my staff could spend on science. Our upper management has a hard time setting a science agenda and sticking to it. They often change their minds, based on pressure from CDC OD or advocacy groups.
- Improvement is slow following substantial erosion of the science base and workforce during the Gerberding era. Re building the workforce requires rebuilding the mentoring chains and starts at the top. Turnover of management placed at the top under Gerberding has changed in limited ways.
- Current processes to protect scientific integrity are inefficient, causing delays in the release of findings. Simplification of these processes would be welcome.

Respect for Science/Scientists

(Mentioned in 18% of coded responses)

- Aggressive delayering. More layers more timidity, more layers more delay. One supervisor per 10 subordinates would be the correct ratio all the way from the bottom to the top. Should be an easy sell since it not only improves effectiveness but saves money. (2) Aggressive elimination of non-

scientific management personnel. In the military, there's a term called the 'tooth-to-tail' ratio -- the number of fighting forces compared non-fighting forces. It's said that the desirable ratio is 75-25, but when it reaches 50-50 there's a tipping point (equivalent to a casualty rate) at which the unit can no longer carry out its mission. This 'tooth-to-tail' criterion might well be applied to CDC activities. (3) Allow CDC scientists to publish either: (1) with the CDC imprimatur, indicating that it was edited and cleared by the organization, in which case the persons in authority who take responsibility should be named; or (2) on their own authority, indicating that it represents the position of the authors and not necessarily of CDC. In no case, should scientific publications be substantively altered by anonymous persons in authority for which the individual scientists are required to take involuntary responsibility. (4) Eliminate the current rule that each employee is allowed to attend only three-quarters of one scientific conference per year, with attendance is subject to a zillion levels of approval by non-scientists all the way to Washington. Public health is done in public places. No communication of findings, no public health. No interactions, no science. Lethal rule. (3) Renew the primary CDC mission outlined by a previous director: "The generation of good science to guide public health policy."

- A more streamlined scientific review/clearance process.
- A literal balance between opposing viewpoints when researching and analyzing data sets. To be more specific, to investigate not only the direction for which the research is directed, but also things that would contradict the premise of the research. This way the scientific process is fully followed and provides the vetting of results.
- CDC used to be a "bottoms-up" organization. That is, scientific information generated in Activities, Branches and Divisions was used to generate questions of public health importance that needed to be addressed. In some cases, this occurred as part of an epidemic aid response or consultation provided to a state/local health department - a situation unique situation only found at CDC and pretty much akin to investigator initiated research funded by NIH. Unfortunately, CDC went through a period following 911 and the anthrax letters where a politically driven public health agenda was often presented to the agency, and programs were asked to derive the data to support this agenda. One example was smallpox vaccination where the administration wanted every person in the US vaccinated. Luckily, this was not the end-result, and data won out primarily because of CDC's strong data from its previous leadership in the eradication of this disease, and partnerships with professional societies / organizations which could take the science-based messages forward since CDC scientists were often prevented from speaking or publishing. Luckily things have changed but there still seems to be undo pressures from inside and outside CDC to circumvent the development of good public health recommendations / policy which are not strongly underpinned by strong evidence. Amazingly, this occurs in the face of an ever growing group of experts in evidence-based policy development in the CDC Offices of the Associate Director for Science. In addition, there is the continual addition of regulations that do not "pass-the-laugh-test", particularly those from OMB, which make it extremely difficult to conduct studies and surveillance in a timely manner. All of this makes it very discouraging for smart, young scientists who want to consider a career in the agency.
- Provide more efficient and timely processes and care for employees better.

- Scientists need more input in the policies that regulate their day to day work (inventory, etc.) and made aware of intellectual property issues regarding new science. Young scientists need to be grown and encouraged within the agency. There are many postdoctoral fellowships but very few opportunities to transition out of training positions to semi-permanent positions and fewer still to full time. If you do manage to transition to a semi-permanent ("term limited") position, as I have, the opportunities to attend conferences are limited and frequently co-opted by senior scientists/supervisors. This limits potential for collaboration, training, and exposure to new ideas. On top of all of this, many of us in term limited positions become discouraged watching permanent employees who slack off and decide to leave CDC for positions with greater growth potential. Some sort of bridging program and scientists-mentoring scientists programs might help but it many require a culture change.
- The Chief Science Officer of CDC should be much more involved in the policy decisions that impact the agency as well as public health. This used to be the case under Dr. Dixie Snider and the feeling was very much that CDC was a scientific agency.
- Streamline the 'clearance' procedure and limit its oversight to scientific issues rather than political concerns and fears about criticism
- Incentivize publishing scientific research in high-impact peer-reviewed journals. The current system fosters a climate of 'quantity over quality'.
- I believe that if political pressure on our leadership were to be lightened, our leadership would feel greater ease in allowing the scientists to recommend courses of action that are most consistent with scientific evidence.
- All members of the scientific community, including educators, researchers, and public servants, need to be advocates for science. It is not enough to just quietly putter along in our labs, conferences and journals while the opponents of science shout loudly to a much larger audience. It requires the ability to communicate effectively, but also the willingness to communicate, to stand up to those who don't have the public good at heart, and who reject the basic egalitarian principles of the scientific method. Unlike them, we don't need to be afraid to be wrong, because that's how science works. We celebrate wrong answers, because everyone we find reduces the list of wrong answers by one and increases our chances of finding the right answer. Our opponents will cling like grim death to their answer, even when it is wrong, and so be revealed as disinterested in facts, truth, and ultimately, progress.
- Fewer levels of internal review before external peer review; Freedom to study any topic of interest instead of limitations on some topics that are controversial; Easier access to others in my scientific community (conferences, training, etc)
- I think the CDC has great scientists but also really bad ones. It really depends on the division. Some divisions are preventing scientists to do their work correctly while other divisions are doing an amazing job! I started at CDC in a division that was not research-oriented at all unlike what they claim, and who didn't recognize the work of their employees so I moved to another division which is 100% research-focused and doing a great scientific job. I think the CDC should look into the scientific production of each division, and do a survey of employees for each division to make sure the missions of CDC are reached.

- Scientific works done in all branch offices of CDC should be build. Capacity building in the overss should be strengthened. There should be a way that emerging and young scientists to build their potential.
- CDC review of scientific manuscripts/ abstracts have discouraged many of our partners to engage CDC employees , ways to delegate review process at in country level should be sought
- Better balance between investments in health care and public health. Public health includes research.
- Should be science-based
- Many bench scientists often wonder if it is possible to do science at the CDC and competitive projects and postdoctoral positions that are approved must pass through a heavy handed application of "public health" qualifications. There is very little clinical science, drug or vaccine development at the CDC, unfortunately. It is not an accident that the NIAID director is asked to comment to the media on science issues that are largely those assigned to CDC and involve the CDC public health mission. Similarly, it is no accident that the CDC had no therapeutics or vaccines in development for the recent Ebola outbreak. More laboratory scientists and more people with external business and regulatory experience need to be hired in senior positions at the CDC and
- Trusting employees more instead of increasing regulations upon them.
- Improved approval procedures for publications
- I think that the work of the CDC could be best improved by letting the science dictate where the CDC moves its recommendations and not congress. I know this is not a reality that can be easily controlled, but it is something that I wish would work.
- Making LES more interested in research and reducing the rad-tape involved in publications
- Congress and White House should stay out of scientific matters. 2. News Media, though it would be difficult to control, should cease witch hunts when a mistake is made or an accident occurs. Dangerous pathogens and dangerous chemicals are by nature the work of CDC. In laboratory work, as in any endeavor, there is the human element. Scientists have training on handling dangerous chemicals and dangerous pathogens. Though rare, occasionally a mistake is made, or an accident occurs, as they occur in private industry or in academia. The people best able to handle such issues are right here in CDC, not congress, not the White House. I have seen during my time as a CDC scientist, congress get involved in CDC property system issues; and blow them out of proportion. Nevertheless, CDC had to make a fix for the problem, buy costly software so that accountants in Washington can account for every bean. The software was and is so complicated and unwieldy, that unless one uses it full time, it is a fight every time a property officer has to use it. After a reorganization of CDC around 10 years ago, support people who could place orders with credit cards, and do property officer work were diminished at branch level. As a result, scientists have to divide time from science to do administrative work such as this. I have seen during my time at CDC, one agency make a poorly considered statement publicly. As a result, a fix had to be made, because congress got involved. Divisions where no such mistakes or poor decisions had been made already had a document approval process prior to submission of a document to a scientific or medical journal for peer review prior to publishing. Now there are additional redundant steps prior to even getting the documents into our approval system. The additional steps accomplish nothing except

waste of time and productivity. 99.9% of CDC scientists and physicians are highly capable and competent. If congress, White House, news media would leave us alone to handle problems that arise, and which we are good at handling, we would be a more efficient organization.

- Administrative duties have increased to a point where too much time is spent trying to comply with CDC's scientific regulatory policies than trying to perform science in the form of experiments and data analysis.
- Clearer and more consistent review criteria for scientific papers.
- By getting rid of scientific kingdoms. When you've been here for several decades, it's time for you to hand-off research to the next generation of scientists.
- Reduce the emphasis on process and return to evidence based science.
- Some of the team leads and branch chiefs in CDC do not have rigorous scientific research background. The unfortunate fact is they work for an agency that relies on science, so by working in CDC they assume they have adequate knowledge on science, its methodology etc. For example I have team lead and branch chief think a descriptive paper on data collected and published in MMWR to be considered research. Not realizing that it is just a description of what the data is. Promotion in CDC is based on seniority and being male. When these individuals get promoted they assume they know enough about science and they will make decision that reflect that they don't have a clue. You can't say anything because it is their identity you will be challenging because they think they adhere to good science.
- The CDC should also consider to US resident scientists expertise. Sometime, just because of not being a US resident may be an handicap
- Administrative and procedural barriers delay the release/dissemination of important findings. CDC does extremely thorough, good quality science, but is always "behind" in disseminating findings or adopting new approaches and technologies.
- Allow scientist to publish their results more freely, without elaborate multi-level review processes and accompanying censorship.
- I think that we do not have the systems in place to manage all of the data/inventory that we have and that scientists will be asked more and more to use manual processes which will disallow doing real science. There is not reason that the CDC should not have a manufacturing type system for inventory of all viruses especially select agents. Every time a vial is touched something should trigger and event in the software. Scientists are not perfect and need technology too.
- More respect should be given to scientific research results.
- CDC leadership has been strongly influenced by pressure from the highest levels at the Department of Health and Human Services over the past 6 years. This has resulted in extraordinary clearance requirements for any sensitive topics. Unfortunately, it seems like everything is sensitive. This has resulted in a level of caution that means everything is very slow to come out and everything is very cautiously worded (which can reduce the clarity and impact of the message). While I have not experienced any sort of overt scientific misconduct, it has created an environment where this level of caution trickles down through the agency and people start questioning whether they should even work on something because it might not get cleared. It is creating a very difficult situation with

morale among scientists. The science on certain things is clear and we should not be afraid to say it plainly. My observation is that this pressure is largely political in nature.

- People should live to work and not work to live. Many employees seem as if they are stuck in this job, although it is not where they want to be. Part of their frustration is derived from the Quality Management paperwork that seems redundant or unnecessary, which interferes with their productivity in terms of their scientific work.
- By allowing scientific evidence to drive key decisions
- The lack of trust between them makes them very "possessive" of their scientific projects which impedes cooperation and creativity.
- Right now I don't think it's a matter of integrity but outright access--the limited budget and worse the travel and conference attendance rules imposed after the GSA and IRS conference scandals that misused taxpayer funds has seriously crimped CDC scientists and others from attending biomedical / scientific conferences in adequate numbers and forcing the withdrawal of presentations and posters for those who can't get travel approval (remember, if one gets something accepted for presentation but fails to show up, then usually the presenter is barred from submitting future material for a set period). From what I can tell, the travel procedure is arbitrary and not directed at any particular office or department or topic. It is adversely affecting networking, information sharing and continuing education opportunities. As something to check in the future, there may only be 25 approved attendees for the upcoming International Conference on Emerging Infectious Diseases (ICEID) in August, 2015. A conference in Atlanta (where CDC is), which CDC is a co-sponsor, and the number one topic will undoubtedly be Ebola Viral Disease. Twenty-five--that's how many were approved to go to the American College of Preventive Medicine (ACPM) national meeting (out of over 200 wanting to go). I could go, but I have to pay my own way, take vacation time off, and I'm not allowed to represent CDC in any way. Ridiculous.
- No pressure on scientists to alter findings or reports or publications generated by valid research
- Senior leadership has a focus on clinical expertise - at the impact of other highly trained professionals from other disciplines with equally important experience yet are overlooked because of bias towards being an MD. Improve integration - HIV and STD are prime examples of how staff working along similar areas have incredible challenges by the two divisions not working together, sharing staff resources etc. With the national health plan and health department accreditation - cities are trying to model something the CDC hasn't even done themselves well. this lack of experience (and the feeling of, "do as I say, not as I do") has devalued the role and impact the CDC is making.
- ENCOURAGING AND FACILITATING THE SCIENTIFIC WORK OF EMPLOYEES
- CDC Director should speak for the agency based in science, not for the administration based on policy.
- By putting CDC corporate and leadership emphasis on letting objective science drive the search for truth rather than personal or corporate beliefs driving the use of science to "prove" convictions. 2) By questioning "politically correct" public health suppositions since they are very likely to be influenced by people's opinions rather than true science. 3) Start trusting CDC scientists a little bit more. The amount of review of CDC products (abstracts, presentations, papers) is getting to

ludicrous and unmanageable levels which inhibits presentation of useful material in a timely fashion. 4) If CDC continues to require extreme product review policies, then take off the requirement that all materials have to have a disclaimer. This diminishes the scientific integrity of material that CDC puts out for the scientific community.

- for the structure of laboratory science to be promoted over traditional outbreak investigations and surveillance activities that do not improve the health of the public.
- My center has too many people in leadership positions that quite frankly despise science. Research is undervalued and derided as a waste of time and scientists are not invited or encouraged to contribute to the decision making process. This is certainly not the case agency-wide, but we scientists have considerable skills to contribute to emergency preparedness. I would like to see our skills valued.
- Would be good to remove some of the Associate Director of Science barriers to publishing recommendations as the science suggests - rather than how the ADS wishes them to be published.
- Allow the subject matter experts in a field to provide credible information to customers (decision makers, public media, etc.) without the interference of multiple reviewers whose expertise has nothing to do with the information requested. The whole process of REVIEW places an enormous burden on the scientific community. Results of this relationship can be seen in the so-called "settled" science of climate change. the majority of the data about this subject show that MAN MADE effects upon climate change do not exist. Yet, because of POLITICAL pressure, the "louder" voices in the "scientific" realm indicate the opposite. The chair person of the IPCC (the "go-to" source for "scientific" data on this subject) was an ECONOMIST; not a scientist! The furor of climate change is merely a ruse to distribute the income from the wealthy nations to the poor nations. Wealth distribution is not motivated by science, it is rather motivated by socialist policies which have at their heart little science. Mankind is not the scourge of this planet; the progressive liberal thinking of academics is. Thank you.
- Rethinking the regulations. Ethical approvals need not be duplicated, and scientists within CDC from Uganda have less opportunity to publish, unlike those outside CDC- including those in agencies technically supported by CDC.
- Making sure the science is translated into action
- The scientific work produced by CDC can improve if simple and expedited review system is put in place. Furthermore, training of staff on this issue would be of paramount importance.
- Reduce time to review and approve research protocols
- Should be checked for accuracy before publication. 2. Recruitment of staffs by their responsibilities.
- Scientists are reduced to working for ratings on their performance evaluations as opposed to building products or writing publications that have impact. The work has gotten very reductionistic and individual motivation has gotten warped.
- Involve forward thinking scientist with public health advisors that handle day to day operations to come up with the right formula for CDC to follow.
- I have seen situations in which a testimony or Q&A document is written for a CDC leader, but then altered due to Congressional or political implications. I believe that, although it is important to take political outcomes into consideration, CDC's job is to present the best available science. This starts

with leadership and filters down through the ranks. The less concerned the CDC Director is, the less concerned other are.

- Improvement in the timeliness of review and approval of CDC projects
- I think the research needs to be updated. We use studies from 80 years ago as scientific fact, yet do not examine the biases and social issues that may have influenced the health outcomes we use to justify current health conditions. I also think we need to discard junk science, like BMI. It is meaningless, yet it is constantly used to monitor health and justify recommendations. BMI was not determined scientifically and provides no insight into health. Instead, weak correlations are used to justify decisions. Things like this undermine the integrity of the agency and the public's trust.
- Reduce the massive amount of paperwork and trainings needed to do our work, and instead let us do our work.
- Working at the CDC is like trying to work with one hand tied behind your back. The scientists are good, knowledgeable, and ethical from my experience, but it is hard to stay motivated when non-scientist administrators continue to add ridiculous requirements to appease congress or whomever has decided they want to take an interest in how highly trained scientists get their work done. I mean ridiculous - they implement "safety" protocols that don't really address safety as much as they imply that scientists are untrustworthy and can't be expected to follow rules. Why would I want to continue to work somewhere where I am treated like a kindergartener when I have spent so many years getting a PhD and doing valuable science.
- By allowing greater opportunities for new ideas based on experience to be considered as part of the decision and policy making process.
- There should be CDC statistical review of every manuscript with quantitative elements.
- Improving the review process within CDC so that it is more streamlined and efficient.
- Report thr unvarnished scientific facts and never stating that the science is "set".
- New, nearly insurmountable barriers to doing any study: 1) extensive and meaningless OMB application and review of surveys given to people who have already consented to interview--often delaying more than a year the start of any work; 2) excessive top down management of subject matter experts who are often bewildered and frustrated by decision-making made by those who are not versed in the field; 3) inability to hire anyone in a timely manner and then through a centralized, inefficient, and inappropriate system (USAJobs); 4) hiring of and army of more reviewers and policy people, without similar staffing of the people actually doing work (studies, programs, etc); and 5) a determination to not do anything that could be remotely criticized by anyone. Improvement in any of these areas would make CDC more like the faster moving, more relevant Agency it used to be.
- The bureaucratic structure stifles the ability to produce timely and quality work. "Diversity" requirements are held on a pedestal above science and protected groups are given preferential treatment through the agency, even if science is sacrificed during the process. Most statistical work is completed by non-statisticians or scientists ill-qualified to perform the analysis. Information system security teams often have little to no training and do not understand how to properly weigh security concerns against the need to execute the agency's mission. Furthermore, information system security policies and decisions are applied in a non-uniform manner across the agency leading to delays, confusion, and increased costs.

- Let the scientists and programs do their work and realize that they are the subject matter experts. Too often, policy, communications, and leadership try to define, lead, and interpret. They should support the programs. 2) Let the Agency and Divisions decide what needs funding. Too often, advocacy groups and congress decide which programs should be funded or de-funded. 3) Reduce administrative burden and layers; there are too many people in clearance and review chains- it causes redundancy and inefficiency.
- Paperwork requirements and AMS are deteriorating the ability of scientists to do science. There is less and less time to work in labs and more and more time required to fulfill paperwork on everything from time keeping to travel to ordering, not to mention all the new QMS and data validations processes.
- The most powerful group at the CDC are medical doctors. Unfortunately, medical doctors have poor understanding of data and statistical science (statistics, math, computer science, etc.). Scientific work at CDC requires proper and an in depth understanding of data analytic skills and unfortunately medical doctors don't have it as a result the state of science at CDC is very poor.
- Allow and encourage EVERYONE to go to major conferences such as ASM and ICAAC. By limiting the number of total participants from the organization you stymie cross pollination from other scientists in other fields. No, it is not effective to participate remotely, because many of the best collaborations come about through informal brainstorming between sessions, over dinner, etc. This is especially true for junior scientists that need to build up their scientific networks. Focus more time on evaluating projects and programs rather than individuals. It's been my experience after 19+ years at CDC, that very rarely do you encounter someone who is incompetent here, and they tend not to stay long. You're also not going to increase my effectiveness as a business administrator (for instance) because that is not my primary interest and the most annoyingly mundane part of my job. Please stop rating me that way. It doesn't tell you anything important about my contribution to the agency. It would be better to focus on how I contribute to the mission of my program, which hasn't had a significant review and revision from senior management for about a decade. This confuses me as to what parts of my job duties should be prioritized. I can't do everything I think is interesting and important because of lack of resources (personnel and money) and limited time (outbreak support, training, administrative duties, and labwork never all fit into a 40 hour week!)
- The CDC's Director's response to the Ebola could have been much better and a quicker and more scientifically sound response may have prevented the deaths in the U.S. and adherence to public quarantine rules. The CDC came off as weak and bumbling, which is very out of character for the agency.
- The CDC clearance process is broken. For example, about a year and a half ago I put two manuscripts into the clearance process on the same day. One manuscript reported the results of a very complex economic model and was cleared to circulate for publication within three months. The other manuscript was a simple mathematical calculation of the costs to respond to an imported case of measles. The clearance process took eleven months and I was forced to remove the sensitivity analysis from the manuscript because one of the cross clearance reviewers did not like it and felt I should only do a costing manuscript without the contextualization of sensitivity analysis. In contravention to CDC written clearance policies that call for lead author consent and consultation

for cross clearance and blinded review by the person doing the cross clearance, I was not consulted about the cross-clearance reviewer and the review was not blinded. I am still sitting on the manuscript because I refuse to publish it without the sensitivity analysis.

- Ensure coauthors and those working on projects contribute proportionate to their level of acknowledgment . This is especially true when dealing with foreign colleagues who may be used to being named co-PI or co-author based on their rank or position.
- I believe that CDC takes every precaution to make decisions carefully, however, the agency is sometimes portrayed in a negative light by the media. The CDC should always stick to the science and make the best possible decision based on knowledge and experience. I think we should always share what we know upfront and continue to make decisions the best way we know how.
- Policy and programmatic decisions regarding scientific works need to be less influenced by politics and business interest. CDC needs to give value to the staff morale and motivation
- More employees should be given an opportunity to publish the work carried out in their departments
- Turn around time for ADS to review manuscripts/abstracts should be shortened
- Streamlining the ADS process. There is a lot of discouragement to doing any sort of evaluation work. There is some very good data that has been produced that will not be presented to the public or CDC because people find the process far too cumbersome. And even demeaning. It is very difficult to know if you are working in the correct direction without the ability to meet with scientists from outside CDC at conferences and other forums. This ties back in with the comment above, it is too difficult to get approval for abstracts and journal articles. Maybe that office is understaffed. Maybe the oversight has gone too far.
- Support and strengthen (regain CDC's status in) experimental laboratory research.
- The scientific work at CDC can be improved by working on balancing speed with integrity. In addition, perhaps too much attention has been placed on getting CDC into the media. I think if we do good work there is no need to advocate to be in the media. Additionally, there has been a trend in my division for only a handful of persons to address the media using the work of others. This may be a bit unfair as the person who actually did the work should be offered media training so they can also address the media.
- ADS system is badly dysfunctional - used to limit scientific inquiry and publication
- Concentrate more on the science needed to improve public health. CDC should not let industry or advocacy groups such as health-care influence its recommendations.
- TRUST: trust the scientists to do their jobs. There is a pervasive feeling of distrust from above among the scientists. This is evidenced by the programs being implemented such as the Laboratory Safety Committee (How many millions of man-hours have NOT resulted in accidents? How many millions of dollars have been spent making new rules when the issue came from a couple of people who did not follow established rules?), and the nonsensical time-drain, QMS.
- Scientists are forced to follow protocols that were written by non-scientists (QMS). These protocols often adhere to strict regulations but do not follow a practical laboratory approach that leads to the misconduct or taking short cuts- and thus to the recent lab incidents. Inventory of reagents and consumables takes away valuable work time from scientists and does not contribute to the mission

of CDC. Scientific data should be the highest value of the agency to rebuild the good reputation it has lost over lab incidents, but right now all scientists are discouraged through strict regulations. Scientists that are performing great should not become supervisors/managers just because they are entitled to (not all scientists are great managers). Scientists should be encouraged to spend time on creative projects that interact with different divisions/groups to benefit from broad knowledge at CDC. This increases the engagement of people and use resources more wisely. Scientists should not be reproached for errors, but supervised when they are first hired, and over the course of their work. Just because you earned a degree it does not mean that you should not be supervised.

- Increased Budget. Increased scientific literacy of Congress and the public at large. More effective scientific communication. Increased understanding and communication of our role to the media and public at large. Scientist here are careful, precise and understated. This does not go over well in the 24 hour media cycle, no one gets credit for disasters that do not happen.
- By being less driven by POLITICS, and more by actual true, proven SCIENCE.
- The folks reporting to the CDC Director must be willing to hear, respond to, and pass on up messages from front line scientists about challenges they are facing with resources, work load, bureaucracy, rules, and barriers. Instead, they try to manage away the problems rather than face them. 2) OMB PRA approval is severely broken. The guidance and reviews from ICRO and OMB are unconscionably slow, inconsistent, contradictory, unhelpful, and not scientifically sound. The 1999 draft OMB PRA Guidelines have never been published. The OMB ICR "pipeline" restricts the number of that can be submitted at one time, is technologically antiquated, and is just a way for OMB to delay the work load. Research and program funding cannot be spent before it expires because of the 6-12 months required for the entire OMB PRA process. The "streamlining" offered by OMB--e.g. generics and clinical exemptions--does not apply to most of CDC's data collections. When generic ICRs are proposed by CDC, OMB often says they are too broad--but if they have to be narrow and not cover a range of data collections, why bother? Even generic approvals can take 4-6 months. The poster child for generics at CDC--the OSTLTS generic--takes an incredible amount of staffing, staffing that most programs do not have for just one data collection. And even it has gotten overwhelmed. OMB Desk Officers are overworked, covering too many agencies. The chain of command at CDC prevents scientists from speaking directly to the OMB Desk Officer to ask questions, provide information, and clear up confusion. ICRO and Center PRA Coordinators prevent communication with OMB because they are scared of annoying our OMB Desk Officer and Statistician and then getting retribution. OMB does not provide its Desk Officer with assistance when CDC has to increase its ICR submissions, e.g. because of the new EEI Generic and Ebola-related ICRs. Instead, CDC is supposed to "prioritize" a list of ICRs which, even in normal times, is too long for the Desk Officer to handle efficiently. This unworkable system is costly to the agency in terms of dollars allocated but not able to be spent, delays, staff morale, and lack of credibility with our partners who cannot understand why we cannot fulfill our scientific obligations on time. Critical projects that require short timelines are abandoned in the planning stages because they do not qualify for OMB's emergency approval. I have yet to see a benefit. OMB has overreached in expanding its mission from preventing burden on the public to include changing the science and looking for policy implications, all without having the staff and resource commitment to do any of those missions well. The

incredible drain on staff time, morale, funding, and productivity that ensues from scientists dealing with OMB PRA approval will not improve until CDC leadership does an in-depth review of the problem and its impacts, then is proactive in communicating it to HHS, OMB, and Congress.

- Remove or relax scientific regulatory procedures (e.g., OMB PRA, research determinations, clearance extending beyond science [e.g., communications, policy]). These processes have gone way too far for us to see added value to the integrity of scientific work at the agency. We need to get back to science and let that float above all these other distractions.
 - Having individuals who are in the review process who are actually aware of the methodologies and theoretical parameters of the work they are reviewing or obtain the knowledge or recuse themselves.
 - Because of this, there is low morale and lack of incentive about sharing and learning about work from other scientists that impact the public. The scientific work produced could be boosted by acknowledging and listening to the scientists and not partisan politics.
 - Flexibility on publication rules.
 - Big questions! Overall, and with less thought than I would like, but principally assessing "mission" (were I writing this question, I do not think I would lump "mission" and "integrity of scientific work" together--a "double-barreled question!): 1. Bureaucracy is overwhelming. Multiple layers of review are needed of simple things, e.g., conference attendance or, even worse, being able to put on a conference (however that is defined). What was once a flat organization is now a paragon of vertical. 2. Contractors, and many are good, do not have the dedication to the mission of CDC that FTE's do. That said, the average FTE at CDC now does not have the dedication that they did 10 or more years ago. More self-interest and less "selflessness," less desire to be dedicated to the organization and its goals, more of an 8-5 job and "then I'm home." Yes, I know that many persons such as myself who have been with an organization for a long time harken for "the good old days." In the case of CDC, it is true. 3. We are bloated with infrastructure. This hurts the mission because I do not think decisions are any better than without such a process (and this relates to my first comment, above, also), and the infrastructure and review are clearly frustrating for staff--all staff. 4. Scientific integrity at CDC is good. I have few complaints here. I think the Agency does stand up for what it thinks is right.
 - Lessen the pressure on scientists to "self edit". For example, I've been involved in developing a paper that has some pretty clear implications for disability policy--but what we'll say to that effect is likely to be minimal.....we'd never get the paper out of clearance if we didn't water down any conclusions or even informed discussion that could be seen as criticizing extant SSA policy. In other words, we can usually present the facts--but we're highly constrained with respect to interpretation and conclusions (they're often so constrained as to be positively vapid).
 - The DGHA associate director of science is a barrier to scientific work. The science office routinely delays approval of protocols and manuscripts without clear reasons given or because they disagree with scientific conclusions consistent with international norms or guidelines.
 - Remove the relatively new policy reviews of scientific products from the scientific clearance process.
2. Dr. ██████ has created a culture of fear by firing a large number of senior leaders who disagreed with him. This culture of fear has made the scientific review process such a burden that many of the

scientists, myself included, have stopped working on important research and manuscripts for peer reviewed publications. Dr. [REDACTED] needs to resign or be removed.

- allow equal rights to authorship
- making clearance requirements clear Allowing for science to be published for the sake of science Including scientists and subject matter experts in meetings and communications with legislative and policy makers
- Everyone should be encouraged to write a scientific work. Not only those who are directly involved in activities of higher impact. Each branch should be encouraged to write at least two works per year however, every member of the branch should be involved in writing.
- leadership that stands their ground against political whims-- the data is what the data is. leadership that supports and backs their scientists against political and industry groups-- follow the data, not the money.
- Much of the research is driven by 'political' ends - there are certain policies (e.g. encouraging salt restrictions) that the research had better support otherwise there can be trouble.
- By allowing scientist to tell publish actually true data rather than skewed data.
- Switch the focus from administrative growth and power at the CDC back to a science drive workplace. There is no motivation for better science if you have to be in administration to advance your career. This will also resolve the integrity of the scientific work.
- Make sure that competent people are promoted to a place of authority. Focus on science (strong research principals, the scientific method) and less on cursory / passing issues.
- More input from young scientists Fewer demands from management
- Management not getting too involved with decision making in research and outputs, - let the experts do their work.
- Timely process. Continuing to allow scientists to publish independently under their own name regardless of political party in power. Not squashing scientific findings that relate to policy change or putting them under political review.
- There are too many administrators involved in decision making that understand policy, but not the science. There needs to be better peer representation for the scientists doing the actual work
- More focus on science, less on politics. Also, more focus on science, and less on administrative activities, Better-enforced guidelines regarding authorship.

Political and/or Corporate Interference

(Mentioned in 16% of coded responses)

- The mission should not be reactive to congress. The mission should remain the same, with a greater emphasis on prevention.
- Separate CDC from FDA, which are both under HHS, so that CDC recommendations can be released with autonomy.
- Stop the practice of having the CDC Director being a political appointee.
- Hire employees who are dedicated to the mission of CDC and unwilling to compromise on publishing controversial evidence

- Allowing for science and proven public health strategies to lead out work without politicians and special interest groups interfering.
- Agency head should not be a political appointee.
- Too many people in the top echelons of CDC (CDC/OD, some Center offices) pay attention to the supposed political ramifications of sensitive public health work, such as sexual behavior or gun violence. Other than the ethics, I don't even think most of them are competent to understand the actual likelihood of political blowback - such decisions are often delivered in an opaque and vaguely threatening manner.
- Term limits should be enforced. The Director of NIOSH is in his second term. He had a break in service between the first and second terms - and that lapse in service apparently enabled him to qualify for the second term. I suspect when term 2 is up, he'll do the same thing. He spends his time globe trotting - giving keynote addresses in a remarkably frequent basis. His schedule is free to globe trot because he has created multiple new high-level "deputy" positions in DC head quarters and his deputies run the place. Ergonomics is the "third rail" at NIOSH, despite work-related musculoskeletal disorders remaining among the leading workplace injury and illness categories and a major source of worker disability. Ever since Congress rescinded the ergonomics rule that OSHA established at the end of the Clinton era, intramural and extramural funding on research related to ergonomics and work-related musculoskeletal disorders evaporated except for a couple legacy efforts. The quagmire of ergonomics research that began with the Bush administration continues to this day - midway through President Obama's second term. For details, see <https://www.osha.gov/archive/ergonomics-standard/archive.html> .
- Reduce the amount of clearance review for products by highest levels, e.g. White House
- Eliminate the whole ADS process. Stop interfering. Welcome controversy rather than shunning it. And find some way to shield yourself from Congress & the White House.
- My experience is CDC adheres to the highest integrity of science and policy. But we too feel the pressures of the political sphere. In my experience working in HIV, it is conservative pundits who pressure top management to refrain from really controversial activities - like, among gay men and drug users. We do the science but we are always looking over our back to see if we will get some outlandish criticism by these groups. But I can honestly say my senior management has always fought the good fight, except in a few cases where they knew that someone in positions even higher than they (e.g., the white house) wouldnt be able to defend us. Get the conservative pundits off our back.... can you do that??
- Congress and White House should stay out of scientific matters. 2. News Media, though it would be difficult to control, should cease witch hunts when a mistake is made or an accident occurs. Dangerous pathogens and dangerous chemicals are by nature the work of CDC. In laboratory work, as in any endeavor, there is the human element. Scientists have training on handling dangerous chemicals and dangerous pathogens. Though rare, occasionally a mistake is made, or an accident occurs, as they occur in private industry or in academia. The people best able to handle such issues are right here in CDC, not congress, not the White House. I have seen during my time as a CDC scientist, congress get involved in CDC property system issues; and blow them out of proportion. Nevertheless, CDC had to make a fix for the problem, buy costly software so that accountants in

Washington can account for every bean. The software was and is so complicated and unwieldy, that unless one uses it full time, it is a fight every time a property officer has to use it. After a reorganization of CDC around 10 years ago, support people who could place orders with credit cards, and do property officer work were diminished at branch level. As a result, scientists have to divide time from science to do administrative work such as this. I have seen during my time at CDC, one agency make a poorly considered statement publicly. As a result, a fix had to be made, because congress got involved. Divisions where no such mistakes or poor decisions had been made already had a document approval process prior to submission of a document to a scientific or medical journal for peer review prior to publishing. Now there are additional redundant steps prior to even getting the documents into our approval system. The additional steps accomplish nothing except waste of time and productivity. 99.9% of CDC scientists and physicians are highly capable and competent. If congress, White House, news media would leave us alone to handle problems that arise, and which we are good at handling, we would be a more efficient organization.

- Less influence from Congress
- Much of the research is driven by 'political' ends - there are certain policies (e.g. encouraging salt restrictions) that the research had better support otherwise there can be trouble.
- Less political influence and a change to the mostly uneducated advisory board
- Greater emphasis on ethical considerations for public health actions and policies.
- We need to have less fear about negative press or negative statements by various stakeholders who have the public's ear when instituting/recommending controversial but scientifically supported policy. I also feel as if we increasingly do "less than our best" because of the fear we'll fail by setting too high a standard and suffer negative press and decreased credibility. The impact: fear of potential criticism or backlash dilutes our capacity to lead in public health.
- Let the scientists and programs do their work and realize that they are the subject matter experts. Too often, policy, communications, and leadership try to define, lead, and interpret. They should support the programs. 2) Let the Agency and Divisions decide what needs funding. Too often, advocacy groups and congress decide which programs should be funded or de-funded. 3) Reduce administrative burden and layers; there are too many people in clearance and review chains- it causes redundancy and inefficiency.
- Although the survey does not define "integrity of scientific work", I inferred from the questions and response options that "integrity" in this survey means "avoiding bias caused by political or business motives in the conduct and reporting of scientific work". Based on that definition, the most effective methods for improving the integrity of scientific work produced by CDC include: (1) more training to achieve awareness and consensus among scientists, program managers, and administrators regarding (a) the meaning of the term "integrity of scientific work", (b) threats to that integrity, and (c) best practices for ensuring integrity of scientific work; (2) more applied research on threats to integrity and effectiveness of interventions to improve integrity of scientific work; (3) better implementation and evaluation of efforts to improve integrity of scientific work.
- I think that funding for the work we do is a priority to protect the public. There is a lot of politics regarding decisions which are clearly defined and influenced by Congress. There are funding limits to what we can do, the projects we can work on and the ability to travel and attend conferences where

we can share our work; in particular the international conferences. Because of this, there is low morale and lack of incentive about sharing and learning about work from other scientists that impact the public. The scientific work produced could be boosted by acknowledging and listening to the scientists and not partisan politics. The work that CDC does is great both national and international. People are human and there may be issues in how they manage; however; CDC is a great place to work and we work very hard and we do everything we can do to protect the public.

- There is significant influence from HHS and the White House on when something is released and what is included in the information. Overall, there seems to be a fear of delivering bad news which needs to be improved.
- CDC is run by people who are mostly isolated from the real world of competitive science and research that is practiced in academic institutions in the US. In general, most of the scientific research in my Division are poor quality research that would not be accepted in any average academic institution. Yet, papers get published in prestigious journals mostly because of the brand name, and nobody wants to upset the Feds. I am increasingly noticing though, even less prestigious journals are starting to reject papers submitted by CDC scientists more and more today. Where did this publish or perish mentality come from in a federal agency? Nobody perishes and that's the problem in a federal agency, but some so called experts have found prestige within the agency in publishing poor research. They can walk around thinking they are better than every body else. We are wasting tax payer money supporting travel and other requirements of so called CDC experts in most areas.
- Less interference or spin by policy people-->80% of the time they made bad changes but they think they know better than the scientists Make clearance above the division more of an exception, not routine
- Preserve a non-partisan approach -- the agency exists to advance the health of everyone.
- Remove the politics
- I'd like to see less deference to politics--which in my experience are more often driven by "consumer advocacy" groups than by "industry" groups, but which are most often driven by election campaigns.
- Remove politics. We should be allowed to conduct research and publish findings on relevant topics regardless of controversy (e.g., firearms) or concern about specific interest groups. We should also not have to have our reports cleared at the White House level or HHS level--our results should be reported as is, regardless of whether or not the agencies above CDC agree with the findings. I recall a time when a report was nearly unpublished because staff from above CDC didn't like the findings. This is unacceptable.
- DC leadership has been strongly influenced by pressure from the highest levels at the Department of Health and Human Services over the past 6 years. This has resulted in extraordinary clearance requirements for any sensitive topics. Unfortunately, it seems like everything is sensitive. This has resulted in a level of caution that means everything is very slow to come out and everything is very cautiously worded (which can reduce the clarity and impact of the message). While I have not experienced any sort of overt scientific misconduct, it has created an environment where this level of caution trickles down through the agency and people start questioning whether they should even work on something because it might not get cleared. It is creating a very difficult situation with

morale among scientists. The science on certain things is clear and we should not be afraid to say it plainly. My observation is that this pressure is largely political in nature.

- Fewer levels of internal review before external peer review; Freedom to study any topic of interest instead of limitations on some topics that are controversial; Easier access to others in my scientific community (conferences, training, etc)
- Take the politics out
- There are now so many bureaucrats and midlevel managers who control "the Message" at CDC in Atlanta who are making decisions on subjects way out of their sphere of knowledge. CDC should allow its scientists "freedom of Speech" -- we have actually been told that ALL Ebola-related material has to be vetted by a Speakers Bureau Group -- and we have no idea about the qualifications of this group, and what they are afraid their scientists will do. We have been told that CDC is responding to HHS, and HHS is responding to the White House...it all sounds as if politics is trumping the science. They only want a positive message to come out of the CDC Experience, which portrays CDC in some shining light... which may not be scientifically accurate nor helpful -- if one cannot have a "Lessons Learned" talk or a timely talk -- the message is lost, and the opportunity to provide public health is lost. Through the years there has been MORE and MORE control. CDC needs to trust its scientists and loosen the grips on scientists communicating with other non-CDC scientists...
- By being less driven by POLITICS, and more by actual true, proven SCIENCE.
- Within CDC, Dr. Friedan is doing everything possible, I think. But we still suffer from the after-effects of the Dr. Gerberding years during which industry influence greatly increased and reorganization was implemented with significant patronage, non-merit-based promotions, and petty emotional battles. During this era websites did disappear related to reproductive health and workplace violence. Outside CDC, our biggest problems are measures taken that slow down our productivity. Endless required training. Low budgets and the high cost of contracting out means no more administrative support. (PhD scientists process their own travel vouchers, fill out procurement forms, and do a lot of low level work because in my group (NIOSH) we have 1 admin person for 28 scientists/engineers). Old computers replaced every 5 years because all computer support is now contracted out and has significantly deteriorated. Servers go down for a whole day twice a year and for half days 6 times a year. Library requests for journal articles not subscribed to take more than a week. No funds to translate a foreign article.
- Lessen the pressure on scientists to "self edit". For example, I've been involved in developing a paper that has some pretty clear implications for disability policy--but what we'll say to that effect is likely to be minimal.....we'd never get the paper out of clearance if we didn't water down any conclusions or even informed discussion that could be seen as criticizing extant SSA policy. In other words, we can usually present the facts--but we're highly constrained with respect to interpretation and conclusions (they're often so constrained as to be positively vapid).
- I have seen situations in which a testimony or Q&A document is written for a CDC leader, but then altered due to Congressional or political implications. I believe that, although it is important to take political outcomes into consideration, CDC's job is to present the best available science. This starts with leadership and filters down through the ranks. The less concerned the CDC Director is, the less concerned other are.

- I think the scientific work at CDC could be vastly improved by the work not being constrained by other organizations. For instance, research on gun violence comes to mind. The integrity of the scientific work would be improved if the National Rifle Association did not prevent CDC from doing more research on gun violence in the U.S.
- If there was no political influence on how CDC is to be run and to function.
- focus on science instead of what Congress etc. want us to say/do
- By allowing scientific evidence to drive key decisions
- Relax the Congressional constraints of specific funding appropriations, to give the CDC more flexibility in deciding how much funds to allocate for research / program / policy / disease surveillance around HIV/AIDS. The CDC management and leadership knows very well how to allocate the funds so we meet our public health goals.
- Provide objective science, remain impartial to political and business influences, protects public not business interests.
- Concentrate more on the science needed to improve public health. CDC should not let industry or advocacy groups such as health-care influence its recommendations.
- I think focusing more attention on the actual work of public health rather than the politics would improve our work, which includes research and financially supporting the state health departments. Decreasing the layers of administrators and management would be helpful. Also, it would be nice if the layers of bureaucracy could be peeled back instead of increased. The paperwork reduction act (OMB) has REALLY hindered us from doing public health research; it will take 1-2 years to get a new questionnaire approved before you can start collecting data. It would also be nice if Congress would let us spend the money the way it needed to be spent instead of telling us how to spend it.
- Can we insulate science from politics? No.
- There are conflicting policies regarding areas such as training between HHS and CDC that directly impact staff who want to stay current and maintain credentials. What use is a direct deduction from the budget of each CDC Branch of \$1,000 annually for an ILA account when you have to ultimately leave that individuals requested training up to some HHS review for approval. Remove barriers, restrictions, and HHS micro management of individual training of CDC personnel, as this impacts the CDC mission. CDC should ensure that for every program under its domain that there is some minimum percentage of direct CDC funding. Currently I know of two branches in my Division who are totally funded by either the organizations we have regulatory authority for or we consult to. These organizations receive a variety of services from these CDC Branches, so the costs are legitimate, but CDC bears no responsibility for any costs incurred by these Branches. Make the existing clearance reviews conducted by science advisors in the Divisions include specific targeting of issues like CDC mission and integrity of the science. Let them look deeper at the connection of any scientific work and either an industry or political interest, to ensure that if a connection exists that it had no bearing on the work conducted or the conclusions.
- Diminish political interference from Washington, D.C. However, I'm not sure how that could be done in the current hyperpartisan climate.
- CDC should be able to research gun violence and its impact on public health.

- Allow scientist to publish their results more freely, without elaborate multi-level review processes and accompanying censorship.
- I work at NIOSH, and we have rigorous reviews of all work completed, but we do not have enough statistical or data management staff. Hiring more staff knowledgeable in these areas would help, and that would require increased budgets. Also, not allowing Congress to reduce funding simply because they do not like the work we do at NIOSH is a HUGE problem. We haven't been able to study ergonomics since I arrived here in 2002 because leadership is worried our funding will be cut.
- Through greater protections from Congressional oversight and control.
- I think the best way for improvement is getting back to doing science and staying out of politics. This is best accomplished by hiring the smartest person available to do the job. Many years ago this was the practice and it is why the US was so strong technically that peaked in the 1960's. But since that time politics has eroded this hiring practice as the current people being promoted have political skills and are far less technically educated but can enforce the wishes of the boss. It has become corrupt. There is no fairness. For any new promotion a person has already been selected by management. It is a power game where the objective is to keep it and gather more. The people needed to solve the technical problems are just a task that needs to make some progress. Keeping power, just like in politics, is management's major concern. So small numbers of technical people are kept to do the bare minimum of work. Lip service is given to the importance of this scientific work but the reality is that the engineers and scientists are not promoted. I am a PhD research engineer with ■ years of experience and have published dozens of papers and I am still a GS-12 step10 but I am not the only one like this at my office. The newest job opening here is for a branch chief. It will be a GS-14. The applicant has already been selected by the boss via the grapevine news and will be my new supervisor with a B.S. degree in engineering. It happens all the time..
- Policy and programmatic decisions regarding scientific works need to be less influenced by politics and business interest. CDC needs to give value to the staff morale and motivation
- Reduce Congressional and White House/Administration micromanagement and reduction of the cumbersome reporting requirements imposed by Congress for political reasons.
- There needs to be a way to minimize intrusion by politics (including Congress, OMB, and the White House).
- hing Congress about the difference between lobbying and policy-based public health work. They got it wrong in CPPW and we've been paying for it ever since, having to act like policy is a dirty word and changing the way we discuss things in publication to avoid undue scrutiny.
- Reduce bureaucracy, and make decisions independently of political interests.
- Streamline the 'clearance' procedure and limit its oversight to scientific issues rather than political concerns and fears about criticism
- Most of the problems are driven by the current corporate domination of Congress and the Administration. This largely can't be fixed at the level of agencies like CDC, although protections for middle and upper management would help address the bureaucratic cowardice that pervades government. The Dept. of Agriculture and its sponsors are probably the biggest obstacle in dealing with dietary policy issues.
- We need to be less afraid of the political fall out of our scientific findings.

- Reduce political influences, convert contractors to FTEs, have leadership make solid decisions and have a clear idea how projects should be implemented and executed, and stop placing people in roles of power who clearly abuse them or others.
- We are very bogged down with all kinds of administrative requirements that eat into the time my staff could spend on science. Our upper management has a hard time setting a science agenda and sticking to it. They often change their minds, based on pressure from CDC OD or advocacy groups.
- More research regarding topics that have been considered too politically sensitive to tackle, such as gun violence, sex work, and the relation of poverty and joblessness to disability and disease.
- I support the mission of CDC and remain flexible as it evolves with the changes that occur under different presidential/majority political party and our CDC Directors. I stay true to scientific integrity for my work, even though some reports are not cleared because of controversy, therefore never reach the light of day.
- Eliminate fear of what the Congress might do if we publish this paper. This is be a huge step in a right direction
- leadership that stands their ground against political whims-- the data is what the data is. leadership that supports and backs their scientists against political and industry groups-- follow the data, not the money.
- De-politicize the director's position; de-politicize the director's position; de-politicize the director's position. Reconsider the applicability of the Paperwork Reduction Act to data collection activities.
- Less concern with social stigma and a stricter focus on purely quantitative data: young men that have sex with men are at an alarmingly high risk for contracting HIV. However, because the fear that this group would be stigmatized, this message is not mainstream and those at highest risk are unaware of how great their risk is and they are continuing to contract HIV..
- limit collaborations with industry
- Allow the subject matter experts in a field to provide credible information to customers (decision makers, public media, etc.) without the interference of multiple reviewers whose expertise has nothing to do with the information requested. The whole process of REVIEW places an enormous burden on the scientific community. Results of this relationship can be seen in the so-called "settled" science of climate change. the majority of the data about this subject show that MAN MADE effects upon climate change do not exist. Yet, because of POLITICAL pressure, the "louder" voices in the "scientific" realm indicate the opposite. The chair person of the IPCC (the "go-to" source for "scientific" data on this subject) was an ECONOMIST; not a scientist! The furor of climate change is merely a rouse to distribute the income from the wealthy nations to the poor nations. Wealth distribution is not motivated by science, it is rather motivated by socialist policies which have at their heart little science. Mankind is not the scourge of this planet; the progressive liberal thinking of academics is. Thank you.
- Less political cticism
- Timely process. Continuing to allow scientists to publish independently under their own name regardless of poltitical party in power. Not squashing scientific findings that relate to policy change or putting them under political review.

- Ensuring that subtle pressure by industry and the orientation of "partnership" toward the industries whose workers we study are discouraged at the highest levels of CDC and NIOSH (my agency within CDC). Keep political pressure from undermining the CDC's and NIOSH's mission. Get rid of the Paperwork Reduction Act. It is nothing more than an attempt by OMB to interject politics and industry pressure into the science. OMB's reviews through the PRA add about a year to the timeline for a simple cross-sectional exposure-health study, with little-to-no added benefit to the science or to the public.
- Partisan politics should play no part in science and public health.
- Our opponents will cling like grim death to their answer, even when it is wrong, and so be revealed as disinterested in facts, truth, and ultimately, progress.
- It could be improved by allowing scientists to be proud of their work, instead of asking us to remain hush-hush because what we are doing might offend some lobbyist or rival politician or activist. Heaven forbid we discuss how our work clearly demonstrates the effectiveness of gun control, or how the use of animal research is leading to great advances in HIV research. If we were to give an interview about our work without getting it cleared by multiple levels of leadership, we would be fired.
- New, nearly insurmountable barriers to doing any study: 1) extensive and meaningless OMB application and review of surveys given to people who have already consented to interview--often delaying more than a year the start of any work; 2) excessive top down management of subject matter experts who are often bewildered and frustrated by decision-making made by those who are not versed in the field; 3) inability to hire anyone in a timely manner and then through a centralized, inefficient, and inappropriate system (USAJobs); 4) hiring of an army of more reviewers and policy people, without similar staffing of the people actually doing work (studies, programs, etc); and 5) a determination to not do anything that could be remotely criticized by anyone. Improvement in any of these areas would make CDC more like the faster moving, more relevant Agency it used to be.
- Less HHS and Congress interference
- Analogous to the military, we need a knowledgeable, capable, mature and experienced cadre of scientific and public health faculty and infrastructure to allow the agency to be ready to respond effectively to events like Ebola, Deep Water Horizon, Freedom Industries, etc. Try to insulate CDC from political influence in funding decisions and scientific reviews.
- CDC used to lead with science and was always able to fall back on the science in the face of scrutiny or questions. Politics have increasingly become part of the landscape at CDC. The political landscape is important, but when it begins to govern too much of the work, the interests of the public and public health are compromised. The agency's brand and credibility also suffers when politics and advocacy take a front seat over science. There has been a significant increase in "monitoring" and "review" processes and other system-level bureaucracies over the last few years. This has made the agency an increasingly "micromanaged" organization from the top down. It is all part of "issues management" -- a whole chain of folks from the top on down -- who scrutinize, censor, and otherwise compromise science.

- I believe that if political pressure on our leadership were to be lightened, our leadership would feel greater ease in allowing the scientists to recommend courses of action that are most consistent with scientific evidence.
- To put science before politics. Too often, it is the other way around.
- Currently, mission and integrity at the CDC are the least of my agencies problems with CDC Atlanta I am employed by NIOSH, which is a part of the CDC. NIOSH is not viewed with a kind eye by CDC. Our concerns are a low priority with CDC Atlanta and are sinking lower. We have a bare bones budget that keeps the lights, runs our computers and buys office supplies. Laboratory research is at an all time low due to lack of funding; insufficient staffing and laboratory resources to do what work we could do. Staff lost by attrition and retirement are not replaced. Our branch has not had an official branch chief in 5 years, and there have been no serious efforts to recruit a new one ! We're dying here. In years long gone by, NIOSH did try to study occupational exposures to 1-bisphenol a, and acrylamide. Any serious research efforts were effectively blocked by the chemical industry, and there was no substantial support from Atlanta in either of these efforts. When minimal funds were available for a study of antineoplastic exposure in physicians and nurses, the project died in the Bush Two's OMB. The research that was eventually allowed was severely limited in scope with significant health outcomes and endpoints stripped from the research protocol. Occupational Safety & Health research at NIOSH is something for which CDC Atlanta is happy to provide 'lip-service', but lip-service only.
- Protection from political interest on budget
- Working at the CDC is like trying to work with one hand tied behind your back. The scientists are good, knowledgeable, and ethical from my experience, but it is hard to stay motivated when non-scientist administrators continue to add ridiculous requirements to appease congress or whomever has decided they want to take an interest in how highly trained scientists get their work done. I mean ridiculous - they implement "safety" protocols that don't really address safety as much as they imply that scientists are untrustworthy and can't be expected to follow rules. Why would I want to continue to work somewhere where I am treated like a kindergartener when I have spent so many years getting a PhD and doing valuable science.
- Less fluctuation in funding from Congress. Less new paperwork regulations created when an isolated incident occurs.
- I think that the work of the CDC could be best improved by letting the science dictate where the CDC moves its recommendations and not congress. I know this is not a reality that can be easily controlled, but it is something that I wish would work.
- More focus on science, less on politics. Also, more focus on science, and less on administrative activities, Better-enforced guidelines regarding authorship.
- Protecting the agency from budget cuts as a result of controversial findings.
- Reduce the dependence on narrow authorizations from Congress and restrictions imposed by Office of Management & Budget (OMB). Isolate the management from their historical dependence on "Guidelines" for clinical and public-health practices that were frequently drafted and promulgated by "experts" or "advisory bodies" with ties to industry and clinical specialties. (In this sense, I could

not easily answer the question #13 posed by this survey. In my view, some of the "scientific advisory bodies" are tainted.)

- Reduce the influence of partisan politics which works on behalf of industry.
- By putting CDC corporate and leadership emphasis on letting objective science drive the search for truth rather than personal or corporate beliefs driving the use of science to "prove" convictions. 2) By questioning "politically correct" public health suppositions since they are very likely to be influenced by people's opinions rather than true science. 3) Start trusting CDC scientists a little bit more. The amount of review of CDC products (abstracts, presentations, papers) is getting to ludicrous and unmanageable levels which inhibits presentation of useful material in a timely fashion. 4) If CDC continues to require extreme product review policies, then take off the requirement that all materials have to have a disclaimer. This diminishes the scientific integrity of material that CDC puts out for the scientific community.
- Yet, it is fresh in my memory that due to the influence from the congress CDC has not been able to engage in research on guns. In my view the widespread availability of guns is a major public health issue of the U.S. The congressional influence has limited CDC's capacity to address this issue, and I strongly hope the "ban" be lifted in the future.
- Provision of adequate funding and by a better understanding by the American public concerning the truth regarding public health issues, especially those that are controversial and subject to deliberately misleading and erroneous noise from advocacy groups or politicians (assuming the latter is a meaningful distinction)..
- By politicians not politicizing public health or trying to insert themselves into making public health decisions based on politics rather than on evidence and known facts.
- Get Congress out of the business of deciding what is and isn't good science. Increase our budget to reflect the importance of the work we do. Deal with the horrendous Paperwork Reduction Act which has only increased paperwork and stops us from doing good work by making it almost impossible to survey people. I am not opposed to having oversight of how much we ask the public questions but this process is so broken anything else would be better.
- There are too many layers, decision-makers, and personal interests. Too many layers of over-site caused by rare occurrences or abuses of employees. Too much political grand-standing by Congress.
- More of a firewall between political considerations and scientific decision making.

Funding and Staffing

(Mentioned in 9% of coded responses)

- Allow and encourage EVERYONE to go to major conferences such as ASM and ICAAC. By limiting the number of total participants from the organization you stymie cross pollination from other scientists in other fields. No, it is not effective to participate remotely, because many of the best collaborations come about through informal brainstorming between sessions, over dinner, etc. This is especially true for junior scientists that need to build up their scientific networks. Focus more time on evaluating projects and programs rather than individuals. It's been my experience after 19+ years at CDC, that very rarely do you encounter someone who is incompetent here, and they tend not to stay long. You're also not going to increase my effectiveness as a business administrator (for instance) because that is not my primary interest and the most annoyingly mundane part of my job.

Please stop rating me that way. It doesn't tell you anything important about my contribution to the agency. It would be better to focus on how I contribute to the mission of my program, which hasn't had a significant review and revision from senior management for about a decade. This confuses me as to what parts of my job duties should be prioritized. I can't do everything I think is interesting and important because of lack of resources (personnel and money) and limited time (outbreak support, training, administrative duties, and labwork never all fit into a 40 hour week!)

- Allow the hiring of more FTEs so that there is less of a need to rely on contractors
- Better funding
- Build more capacity of local staff
- By continually informing scientists on the CDC's scientific integrity policy. - By establishing a competent clearance process of scientific documents (public health and environmental health are multi-disciplinary fields) - By acknowledging the differences in background among CDC scientists (from medical sciences to physical-biological-chemical sciences, engineering, and other) and appreciating that we can complement each other. - By making information on the availability of research funding open to all scientists.
- By reminding employees periodically about CDC Mission, integrity and their obligations in scientific work. Additionally, setting funds aside for young and experienced scientist to attend key scientific conferences/Seminars for professional growth.
- By retaining competent scientist and removing incompetent and inefficient ones.
- By training more scientist
- CDC is run by people who are mostly isolated from the real world of competitive science and research that is practiced in academic institutions in the US. In general, most of the scientific research in my Division are poor quality research that would not be accepted in any average academic institution. Yet, papers get published in prestigious journals mostly because of the brand name, and nobody wants to upset the Feds. I am increasingly noticing though, even less prestigious journals are starting to reject papers submitted by CDC scientists more and more today. Where did this publish or perish mentality come from in a federal agency? Nobody perishes and that's the problem in a federal agency, but some so called experts have found prestige within the agency in publishing poor research. They can walk around thinking they are better than every body else. We are wasting tax payer money supporting travel and other requirements of so called CDC experts in most areas.
- Congress should provide appropriate funding level to CDC.
- Currently, mission and integrity at the CDC are the least of my agencies problems with CDC Atlanta I am employed by NIOSH, which is a part of the CDC. NIOSH is not viewed with a kind eye by CDC. Our concerns are a low priority with CDC Atlanta and are sinking lower. We have a bare bones budget that keeps the lights, runs our computers and buys office supplies. Laboratory research is at an all time low due to lack of funding; insufficient staffing and laboratory resources to do what work we could do. Staff lost by attrition and retirement are not replaced. Our branch has not had an official branch chief in 5 years, and there have been no serious efforts to recruit a new one ! We're dying here. In years long gone by, NIOSH did try to study occupational exposures to 1-bisphenol a, and acrylamide. Any serious research efforts were effectively blocked by the chemical industry, and

there was no substantial support from Atlanta in either of these efforts. When minimal funds were available for a study of antineoplastic exposure in physicians and nurses, the project died in the Bush Two's OMB. The research that was eventually allowed was severely limited in scope with significant health outcomes and endpoints stripped from the research protocol. Occupational Safety & Health research at NIOSH is something for which CDC Atlanta is happy to provide 'lip-service', but lip-service only.

- Funding is too limited and caters to the disease/issue de jour.
- Get Congress out of the business of deciding what is and isn't good science. Increase our budget to reflect the importance of the work we do. Deal with the horrendous Paperwork Reduction Act which has only increased paperwork and stops us from doing good work by making it almost impossible to survey people. I am not opposed to having oversight of how much we ask the public questions but this process is so broken anything else would be better.
- I completely support the mission of the CDC and I'm truly proud to be a part of it. The current reliance on Fellows is inefficient and, frankly, bordering on unethical. While the intent is that these positions are for training purposes, the reality is that most fellows are used for cheap labor. They do the same work as their T5 colleagues but receive 25-50% less pay, and, depending on the type of fellowship, full to zero benefits. At a recent conference, academic colleagues referred to the CDC fellows programs as "Sweat-Shop Science". Embarrassing... but a pretty good analogy. Lastly, the turn-over of Fellows causes a constant flux in capability and expertise which limits overall productivity.
- I do not think scientific integrity is a problem at CDC. I do object against the restriction on travel, such as cap of \$25000 for a conference for entire CDC staff even when a conference does not require travel. Example: American Association of Clinical Chemist Conference in 2015 will be Atlanta. It would be a great opportunity for entry level scientific staff to attend at minimal cost. But because of the number of attendee and expense caps only a few is able to go. I do object against the huge overheads collected by contractors like Battelle on scientific staff. The money for these overheads comes from hard earned scientific project funds. These overheads should be used for laboratory equipment and scientific staff salaries not for contractor overheads!!! Because of these overheads an entry level BS degree scientist takes out more from research and laboratory service funding than an experienced senior PhD level scientist!!
- I think that funding for the work we do is a priority to protect the public. There is a lot of politics regarding decisions which are clearly defined and influenced by Congress. There are funding limits to what we can do, the projects we can work on and the ability to travel and attend conferences where we can share our work; in particular the international conferences. Because of this, there is low morale and lack of incentive about sharing and learning about work from other scientists that impact the public. The scientific work produced could be boosted by acknowledging and listening to the scientists and not partisan politics. The work that CDC does is great both national and international. People are human and there may be issues in how they manage; however; CDC is a great place to work and we work very hard and we do everything we can do to protect the public.
- I think the best way for improvement is getting back to doing science and staying out of politics. This is best accomplished by hiring the smartest person available to do the job. Many years ago this was

the practice and it is why the US was so strong technically that peaked in the 1960's. But since that time politics has eroded this hiring practice as the current people being promoted have political skills and are far less technically educated but can enforce the wishes of the boss. It has become corrupt. There is no fairness. For any new promotion a person has already been selected by management. It is a power game where the objective is to keep it and gather more. The people needed to solve the technical problems are just a task that needs to make some progress. Keeping power, just like in politics, is management's major concern. So small numbers of technical people are kept to do the bare minimum of work. Lip service is given to the importance of this scientific work but the reality is that the engineers and scientists are not promoted. I am a PhD research engineer with ■ years of experience and have published dozens of papers and I am still a GS-12 step10 but I am not the only one like this at my office. The newest job opening here is for a branch chief. It will be a GS-14. The applicant has already been selected by the boss via the grapevine news and will be my new supervisor with a B.S. degree in engineering. It happens all the time..

- I work at NIOSH, and we have rigorous reviews of all work completed, but we do not have enough statistical or data management staff. Hiring more staff knowledgeable in these areas would help, and that would require increased budgets. Also, not allowing Congress to reduce funding simply because they do not like the work we do at NIOSH is a HUGE problem. We haven't been able to study ergonomics since I arrived here in 2002 because leadership is worried our funding will be cut.
- I work in a small office. The delay or release of our science is due to the fact that managers are so overloaded and unable to delegate. The lack of trust between them makes them very "possessive" of their scientific projects which impedes cooperation and creativity.
- Improved/expidited hiring procedures
- In addition, the government hiring process is horrible, with the ability to hire qualified scientists an incredible challenge!
- Inadequate funding is a serious limitation on fulfilling the public health mandate. There is a pathological attention to security at federal facilities that wastes significant resources.
- Increase baseline support to assure adequate staff and ongoing research and public health activities.
- Increase funding. Decrease number of private contractors (from Northrop Grumman, Lockheed Martin, etc.) and increase number of direct hires (full time federal employees)
- Increase the discretionary budget which is allotted to CDC leadership, in particular Center Directors
- Increased Budget. Increased scientific literacy of Congress and the public at large. More effective scientific communication. Increased understanding and communication of our role to the media and public at large. Scientist here are careful, precise and understated. This does not go over well in the 24 hour media cycle, no one gets credit for disasters that do not happen.
- Increased funding
- Increased funding to deepen and broaden the activities in support of its mission and scientific work. One significant improvement would be funding to support more granular research into the influence of culture on health decision making and behavior. Instead of developing science-based communication interventions for the 'general public' or for Latino/Hispanic audiences or for African American Audiences, CDC's integrity of its scientific work and its missin could be substantively improved with insight to the cultural nuances of ethnic nationalities such as Americans of Irish

descent, Italian descent, Nigerian, Columbian, Mexican, Russian, Cambodian, Indian, Navaho descent.

- Laboratory science at CDC is receiving far less support than it did historically and the quality of our work is suffering as a result. In my group, all lab technicians are contractors. When I first started at CDC, I had two technicians who were FTEs. Technicians have been turned into administrators.
- Less fluctuation in funding from Congress. Less new paperwork regulations created when an isolated incident occurs.
- More conference funding.
- More funding
- More laboratory scientists and more people with external business and regulatory experience need to be hired in senior positions at the CDC and for the structure of laboratory science to be promoted over traditional outbreak investigations and surveillance activities that do not improve the health of the public.
- More resources;
- More scientists, better collaboration, higher tier scientists
- New, nearly insurmountable barriers to doing any study: 1) extensive and meaningless OMB application and review of surveys given to people who have already consented to interview--often delaying more than a year the start of any work; 2) excessive top down management of subject matter experts who are often bewildered and frustrated by decision-making made by those who are not versed in the field; 3) inability to hire anyone in a timely manner and then through a centralized, inefficient, and inappropriate system (USAJobs); 4) hiring of an army of more reviewers and policy people, without similar staffing of the people actually doing work (studies, programs, etc); and 5) a determination to not do anything that could be remotely criticized by anyone. Improvement in any of these areas would make CDC more like the faster moving, more relevant Agency it used to be.
- One way is building the capacity of field staff
- Over time, the increase the requirements in administrative processes and restrictions in funding seem to have increasingly impeded scientific work, specifically, the ability to start and complete scientific studies in a timely way. The removal of some of these administrative requirements could go a long way in helping CDC to accomplish more and in a more timely manner. One example of administrative barrier is the OMB - PRA review process, which is becoming overwhelmingly burdensome. In at least one instance, data collection for a study was delayed more than 1 year due to this onerous process. Also, the interpretation of OMB-PRA regulation has become such that more and more activities are now required to undergo OMB-PRA review than ever before (e.g., progress reports from grantees). Despite the increase in requirement, the review process at the OMB office seems to have slowed. I expect that this will only become worse as the requirement for more OMB-PRA review increases. OMB seems to have a great deal of authority and control, in regards to scientific work, and there is no channel for voicing concerns that would lead to a meaningful response.
- Please continue to advocate for federal resources to prevent, control, and eliminate preventable diseases, especially those that disproportionately affect certain populations (i.e., incarcerated or detained persons, persons who have experienced homelessness, migrants, etc.) Local programs and

states do not have adequate resources to prevent and eliminate disease with the continued decreased funding. Healthcare morale is fading. Support your employees. Provide resources (travel for conferences or training; opportunities to share data and turn research into practice). Travel funds have been almost eliminated (even to local conferences where you were invited to give a talk) except for top level employees (usually without a talk or poster to present).

- Protecting the agency from budget cuts as a result of controversial findings.
- Provide more resources to NIOSH.
- Provision of adequate funding and by a better understanding by the American public concerning the truth regarding public health issues, especially those that are controversial and subject to deliberately misleading and erroneous noise from advocacy groups or politicians (assuming the latter is a meaningful distinction)..
- Reduce micromanagement and increase research funding
- Relax the Congressional constraints of specific funding appropriations, to give the CDC more flexibility in deciding how much funds to allocate for research / program / policy / disease surveillance around HIV/AIDS. The CDC management and leadership knows very well how to allocate the funds so we meet our public health goals.
- Right now I don't think it's a matter of integrity but outright access--the limited budget and worse the travel and conference attendance rules imposed after the GSA and IRS conference scandals that misused taxpayer funds has seriously crimped CDC scientists and others from attending biomedical / scientific conferences in adequate numbers and forcing the withdrawal of presentations and posters for those who can't get travel approval (remember, if one gets something accepted for presentation but fails to show up, then usually the presenter is barred from submitting future material for a set period). From what I can tell, the travel procedure is arbitrary and not directed at any particular office or department or topic. It is adversely affecting networking, information sharing and continuing education opportunities. As something to check in the future, there may only be 25 approved attendees for the upcoming International Conference on Emerging Infectious Diseases (ICEID) in August, 2015. A conference in Atlanta (where CDC is), which CDC is a co-sponsor, and the number one topic will undoubtedly be Ebola Viral Disease. Twenty-five--that's how many were approved to go to the American College of Preventive Medicine (ACPM) national meeting (out of over 200 wanting to go). I could go, but I have to pay my own way, take vacation time off, and I'm not allowed to represent CDC in any way. Ridiculous.
- Scientific works done in all branch offices of CDC should be build. Capacity building in the overseas should be strengthened. There should be a way that emerging and young scientists to build there potential.
- Streamlining the ADS process. There is a lot of discouragement to doing any sort of evaluation work. There is some very good data that has been produced that will not be presented to the public or CDC because people find the process far too cumbersome. And even demeaning. It is very difficult to know if you are working in the correct direction without the ability to meet with scientists from outside CDC at conferences and other forums. This ties back in with the comment above, it is too difficult to get approval for abstracts and journal articles. Maybe that office is understaffed. Maybe the oversight has gone too far.

- The funding does not come or is not consistent enough over the time period it takes to answer critical questions (baseline data collection with no follow-up, data collection with no time for analysis and dissemination).
- The requirement for Office of Management and Budget (OMB) for most projects delays them by a year or more, and is unhelpful and duplicative, and a waste of precious resources. OMB review has even now been extended to emergency situations, and to well-established routine communicable disease surveillance
- There are conflicting policies regarding areas such as training between HHS and CDC that directly impact staff who want to stay current and maintain credentials. What use is a direct deduction from the budget of each CDC Branch of \$1,000 annually for an ILA account when you have to ultimately leave that individuals requested training up to some HHS review for approval. Remove barriers, restrictions, and HHS micro management of individual training of CDC personnel, as this impacts the CDC mission. CDC should ensure that for every program under its domain that there is some minimum percentage of direct CDC funding. Currently I know of two branches in my Division who are totally funded by either the organizations we have regulatory authority for or we consult to. These organizations receive a variety of services from these CDC Branches, so the costs are legitimate, but CDC bears no responsibility for any costs incurred by these Branches. Make the existing clearance reviews conducted by science advisors in the Divisions include specific targeting of issues like CDC mission and integrity of the science. Let them look deeper at the connection of any scientific work and either an industry or political interest, to ensure that if a connection exists that it had no bearing on the work conducted or the conclusions.
- Unfortunately, the large fraction of CDC research portfolio is effectively underfunded and as such does not have any measurable impact on society and it is ineffective in protecting public interests.
- We also need to have an office that directly deals with scientific research issues and the office should be staffed with the right personnel. For a couple of years, the office has been non-existent in our organization. With PEPFAR funding declining, opportunities to travel and make presentations on scientific papers international conferences are now very scarce. There is therefore need for managers to work on soliciting funds elsewhere so that this important of scientific research is not neglected.
- We need the resources to hire individuals with the right technical expertise so that we can advance the science.
- We presently have inadequate resources, not only for conducting research, but also for communicating findings (as per conference attendance, etc.). This limits our effectiveness as well as reducing morale.
- Within CDC, Dr. Friedan is doing everything possible, I think. But we still suffer from the after-effects of the Dr. Gerberding years during which industry influence greatly increased and reorganization was implemented with significant patronage, non-merit-based promotions, and petty emotional battles. During this era websites did disappear related to reproductive health and workplace violence. Outside CDC, our biggest problems are measures taken that slow down our productivity. Endless required training. Low budgets and the high cost of contracting out means no more administrative support. (PhD scientists process their own travel vouchers, fill out procurement

forms, and do a lot of low level work because in my group (NIOSH) we have 1 admin person for 28 scientists/engineers). Old computers replaced every 5 years because all computer support is now contracted out and has significantly deteriorated. Servers go down for a whole day twice a year and for half days 6 times a year. Library requests for journal articles not subscribed to take more than a week. No funds to translate a foreign article.

- more funding for FTEs

Training

(Mentioned in 9% of coded responses)

- Provide appropriate training under the guideline of CDC's policy. Supervisor should give enough time to the newly joined personnel particularly at the beginning of hiring.
- Mandatory annual relevant trainings based on the job of the staff
- Better leadership, managers who are better qualified to supervise scientists, better qualified and trained scientists, and better organization of administrative requirements and work flows. Most time is devoted to administrative issues and little to no time left to do science, which can jeopardize scientific integrity.
- Making room for people to work and train in different areas that may be of interest to them and not making them feel like they are stuck and unable to move onward and forward in the CDC.
- Increased accountability and supervisory oversight of staff scientists. Improved documentation and implementation of quality management systems measures at all levels of scientists, within labs and outside labs. Increased training in laboratory science management and leadership. Too many quality indicators have been ignored in the name of "productivity" but the consequence may be questionable scientific findings. Senior leadership needs to support improved quality practices for all scientists and managers.
- To Have more scientific experts. To Train CDC staffs on scientific issues so that they can participate more. create conducive environment to staff on science contexts.
- By training/retrain all staff on scientific methods
- Although the survey does not define "integrity of scientific work", I inferred from the questions and response options that "integrity" in this survey means "avoiding bias caused by political or business motives in the conduct and reporting of scientific work". Based on that definition, the most effective methods for improving the integrity of scientific work produced by CDC include: (1) more training to achieve awareness and consensus among scientists, program managers, and administrators regarding (a) the meaning of the term "integrity of scientific work", (b) threats to that integrity, and (c) best practices for ensuring integrity of scientific work; (2) more applied research on threats to integrity and effectiveness of interventions to improve integrity of scientific work; (3) better implementation and evaluation of efforts to improve integrity of scientific work.
- staff training
- More education on professional integrity for both supervisors and subordinates. 2) Promote and ensure upward and downward communication because this will help solve and be aware of issues before they are out of hand.

- CDC mission and the integrity of its scientific information products could be improved by creating necessary awareness about CDC standards/policies and ensuring staff/contractors are being trained and retrained in their respective professional areas to cat up with merging challenges/technologies.
- There are conflicting policies regarding areas such as training between HHS and CDC that directly impact staff who want to stay current and maintain credentials. What use is a direct deduction from the budget of each CDC Branch of \$1,000 annually for an ILA account when you have to ultimately leave that individuals requested training up to some HHS review for approval. Remove barriers, restrictions, and HHS micro management of individual training of CDC personnel, as this impacts the CDC mission. CDC should ensure that for every program under its domain that there is some minimum percentage of direct CDC funding. Currently I know of two branches in my Division who are totally funded by either the organizations we have regulatory authority for or we consult to. These organizations receive a variety of services from these CDC Branches, so the costs are legitimate, but CDC bears no responsibility for any costs incurred by these Branches. Make the existing clearance reviews conducted by science advisors in the Divisions include specific targeting of issues like CDC mission and integrity of the science. Let them look deeper at the connection of any scientific work and either an industry or political interest, to ensure that if a connection exists that it had no bearing on the work conducted or the conclusions.
- Scientific training for managers who have not produced their own original scientific work but supervise scientists
- Ensure more frequent trainings are offered especially those in line with ones employment job descriptions.
- Teach staff to decide these issues up front and how to conduct these negotiations and/or draft memos of understanding.often supervisors give no guidance in the beginning or later after problems arise.
- By training more scientist
- By ensuring more tailor- based scientific training for CDC technical staff
- Supporting staff development
- Annual training to update scientists on relevant information.
- oviding more training to staff and a media for staff to express their opinion
- The mission should not change, and the scientific work could be improved providing more training opportunities to scientists.
- Scientists need more input in the polices that regulate their day to day work (inventory, etc.) and made aware of intellectual property issues regarding new science. Young scientists need to be grown and encouraged within the agency. There are many postdoctoral fellowships but very few opportunities to transition out of training positions to semi-permanent positions and fewer still to full time. If you do manage to transition to a semi-permanent ("term limited") position, as I have, the opportunities to attend conferences are limited and frequently co-opted by senior scientists/supervisors. This limits potential for collaboration, training, and exposure to new ideas. On top of all of this, many of us in term limited positions become discouraged watching permanent employees who slack off and decide to leave CDC for positions with greater growth potential. Some

sort of bridging program and scientists-mentoring scientists programs might help but it many require a culture change.

- -CDC staff annual training - Alignment with the local stakeholder (GO, NGOs) scientific work
- Support employees grantees to have the right capacity through trainings, experience sharing and organizational capacity building
- Staff capacity building used to be one of the strong pillars of CDC and we used to learn new approaches/methods of research and data analysis methods but nowadays this is abandoned, CDC need to weigh the benefit vs the cost encored for the staff trainings
- better training for staff in the lap.
- More communication and training on CDC mission, regulations on integrity of the scientific work
- Empowering senior and other level scientists with more influence on management policy and decisions; management and leadership structure and bias are too hierarchical and industry like. Survey scientists on how to recruit and retain scientific talent.
- The scientific work at CDC can be improved by working on balancing speed with integrity. In addition, perhaps too much attention has been placed on getting CDC into the media. I think if we do good work there is no need to advocate to be in the media. Additionally, there has been a trend in my division for only a handful of persons to address the media using the work of others. This may be a bit unfair as the person who actually did the work should be offered media training so they can also address the media.
- I think all staff involved in research in CDC need to be aware of the scientific integrity policy and be trained on it.
- I think the mission of the CDC and the integrity of the scientific work produced by the CDC could best be improved by training CDC staff in Integrity of scientific work and involve much more staff in this process.
- Give training every time there is a new issue to hand
- This can be improved by designing a training module that can be taken by all CDC staff. This training should address the CDC mission and the integrity of the scientific work.
- Improve the knowledge and skill base of management and supervisors. Many have been with the government or CDC for 20 to 30+ years and most continue to work with the knowledge and skills they had when they arrived. Rigorous annual training plans should be established and routine reviews of the skills and skill levels of management should be implemented. It is ridiculous that a person with the title "Data Manager" should have no clue what a "server" is and have no programming skills whatsoever. It is equally ridiculous that Project Officers in charge of data analysis should have no data analysis skills and no concept of even basic data qualities.
- Hold annual refresher training on the policy is required because people tend to forget
- The bureaucratic structure stifles the ability to produce timely and quality work. "Diversity" requirements are held on a pedestal above science and protected groups are given preferential treatment through the agency, even if science is sacrificed during the process. Most statistical work is completed by non-statisticians or scientists ill-qualified to perform the analysis. Information system security teams often have little to no training and do not understand how to properly weigh security concerns against the need to execute the agency's mission. Furthermore, information

system security policies and decisions are applied in a non-uniform manner across the agency leading to delays, confusion, and increased costs.

- Provide training of scientists and staff on the integrity of scientific work
- Also, leadership appears generally to consist of medical officers with little to no competence-based training in leadership, management, and work-force ethics. This, in my experience, produces tension due to the lack of understanding or appreciation of staff, and inhibits support of scientific integrity.
- Regular review and training and updating for all involved
- Administrative procedures and requirements for deployments, general training requirements, and other similar recurring activities have become overly burdensome. It greatly detracts from the amount of time that can be spent doing science. It doesn't really affect integrity but it does impede overall efficiency.
- Have templates or step by step guides on how to follow procedures for specific items
- There should be better coordination between human resources and management, and support for employee and management training needs. Improve supervisor training; implement programs to develop supervisors' ability to lead and manage- often, scientists are promoted and supported for doing good science but these skills do not necessarily translate in appropriate human resources management practices. Morale can be improved by better training and accountability of supervisors; by creating flexible opportunities to change positions and work on detail. Currently, these opportunities must be sought out by staff. optimally, there would be a mechanism for employees to have HR support for finding a better position fit, and consequences for poor employee management. The records of employee grievances, even those that have been successfully resolved, should be reviewed to determine patterns among individual supervisors or for patterns of poor management practices, such as excessive reprimands by supervisors (this writer has never received one). there is extensive evidence throughout CDC of fear based decision making that is directly related to fear based management practices. outcomes of this fear based management are evident in staff being unwilling to report their errors or those of their subordinates, or superiors.
- Many senior managers (from Branch level up) have minimal laboratory science training but they are tasked with directing the work of laboratory staff.
- Commit to progressive discipline for non performers. Train supervisors and managers on how to work with non performers. Upper management back this move. Management not "fold" as soon as someone utters "grievance" or "lawsuit." We are reaching a tipping point where the non performers outnumber the performers in some areas of CDC.
- We need a training item that tells us how scientific integrity is being protected. We are bombarded with training on ethics and whistleblower stuff but scientific integrity just isn't contained in these.
- By reminding employees periodically about CDC Mission, integrity and their obligations in scientific work. Additionally, setting funds aside for young and experienced scientist to attend key scientific conferences/Seminars for professional growth.
- Those involved in decision making around the use of science should have adequate scientific training. There are many people in the pipeline with MD and MPH degrees that do not have the depth of training or experience to make the decisions they make. This slows the clearance process and, at times, allows external factors to influence clearance and review. More importantly,

these factors impact what gets funded and what doesn't. The politics of appropriations is perhaps one of the most damaging factors influencing the integrity of science these days. The funding does not come or is not consistent enough over the time period it takes to answer critical questions (baseline data collection with no follow-up, data collection with no time for analysis and dissemination). OMB is also a critical factor in the mission of CDC and the integrity of the scientific work. The process is long, delayed for non-scientific reasons, and the clearance officers are not always familiar with public health methods. Finally, the time frame of OMB clearances does not align with appropriations time frames which can impact whether a study gets done or what the final data collection period is for a study.

- Decreasing the pushing down of administrative duties to the subject matter experts and let them get back in the lab with the junior scientists. In the prior decades, jr. scientists were trained by the Sr. scientists in the labs or epi offices. Now we hire contractors and fellows, give them an online training safety course and turn them loose because we are so tied up with surveys and paperwork to actually do science. The safety issues of late were ALL inexperienced scientists not the long term ones. The reason, the long term scientists were trained by Sr. scientists in the lab with them. Now they are on their own.
- Continuous training and transparency.
- By: 1) Practicing good science, sound methods 2) Asking questions that inform real word problems 3) Disseminating findings in non-scientific settings in a responsible manner 4) CDC should be engaging in increasing science literacy among the general public 5) Increase training and mentorship to junior scientists, especially ethnic minorities and women
- The scientific work produced by CDC can improve if simple and expedited review system is put in place. Furthermore, training of staff on this issue would be of paramount importance.
- It can be improved by involvement of all staff at CDC regardless of the position also ensuring that all staff have information concerning the scientific work done
- I suggest to train regularly employee on the integrity of scientific work to let them be aware on update.
- Improved data literacy could result in scientists being better prepared to use and analyze data in new ways. Information technology improvements could improve the quality and quantity of data available for scientific research.
- Reduce the massive amount of paperwork and trainings needed to do our work, and instead let us do our work.

Communication

(Mentioned in 9% of coded responses)

- Get Congress out of the business of deciding what is and isn't good science. Increase our budget to reflect the importance of the work we do. Deal with the horrendous Paperwork Reduction Act which has only increased paperwork and stops us from doing good work by making it almost impossible to survey people. I am not opposed to having oversight of how much we ask the public questions but this process is so broken anything else would be better.
- By continually informing scientists on the CDC's scientific integrity policy. - By establishing a competent clearance process of scientific documents (public health and environmental health are

multi-disciplinary fields) - By acknowledging the differences in background among CDC scientists (from medical sciences to physical-biological-chemical sciences, engineering, and other) and appreciating that we can complement each other. - By making information on the availability of research funding open to all scientists.

- more communication
- It could be improved by allowing scientists to be proud of their work, instead of asking us to remain hush-hush because what we are doing might offend some lobbyist or rival politician or activist. Heaven forbid we discuss how our work clearly demonstrates the effectiveness of gun control, or how the use of animal research is leading to great advances in HIV research. If we were to give an interview about our work without getting it cleared by multiple levels of leadership, we would be fired.
- Increased Budget. Increased scientific literacy of Congress and the public at large. More effective scientific communication. Increased understanding and communication of our role to the media and public at large. Scientists here are careful, precise and understated. This does not go over well in the 24 hour media cycle, no one gets credit for disasters that do not happen.
- Be more transparent about where we are during a crisis. Ebola situation domestically was messaged very badly. Be clear with the public about what we know and what we don't and what we will do to improve. In the case of Ebola there was not enough contrast of the characteristics of the spread in Africa and why that culture exacerbated the spread and what is different about our culture that makes it so unlikely. We should have been much more out front about why Texas happened - the result of our heroic efforts (especially in comparison to the African countries hit by Ebola) to save every patient as opposed to just providing palliative care. Explain that this different level of healthcare was something we needed to take into better account and now we have. Be straightforward and less politically correct when providing information. Be less certain about man-caused climate change and be open to other expert opinions. The fact that we appear so certain undermines our credibility with the public - but keeps us close to the administration's view. This is inconsistent with the actual science at this time and is hard to justify.
- The scientific work at CDC can be improved by working on balancing speed with integrity. In addition, perhaps too much attention has been placed on getting CDC into the media. I think if we do good work there is no need to advocate to be in the media. Additionally, there has been a trend in my division for only a handful of persons to address the media using the work of others. This may be a bit unfair as the person who actually did the work should be offered media training so they can also address the media.
- clearance requirements clear Allowing for science to be published for the sake of science Including scientists and subject matter experts in meetings and communications with legislative and policy makers
- oviding more training to staff and a media for staff to express their opinion
- Fewer levels of internal review before external peer review; Freedom to study any topic of interest instead of limitations on some topics that are controversial; Easier access to others in my scientific community (conferences, training, etc)

- Aggressive delayering. More layers more timidity, more layers more delay. One supervisor per 10 subordinates would be the correct ratio all the way from the bottom to the top. Should be an easy sell since it not only improves effectiveness but saves money. (2) Aggressive elimination of non-scientific management personnel. In the military, there's a term called the 'tooth-to-tail' ratio -- the number of fighting forces compared non-fighting forces. It's said that the desirable ratio is 75-25, but when it reaches 50-50 there's a tipping point (equivalent to a casualty rate) at which the unit can no longer carry out its mission. This 'tooth-to-tail' criterion might well be applied to CDC activities. (3) Allow CDC scientists to publish either: (1) with the CDC imprimatur, indicating that it was edited and cleared by the organization, in which case the persons in authority who take responsibility should be named; or (2) on their own authority, indicating that it represents the position of the authors and not necessarily of CDC. In no case, should scientific publications be substantively altered by anonymous persons in authority for which the individual scientists are required to take involuntary responsibility. (4) Eliminate the current rule that each employee is allowed to attend only three-quarters of one scientific conference per year, with attendance is subject to a zillion levels of approval by non-scientists all the way to Washington. Public health is done in public places. No communication of findings, no public health. No interactions, no science. Lethal rule. (3) Renew the primary CDC mission outlined by a previous director: "The generation of good science to guide public health policy."
- ensuring that all staff have information concerning the scientific work done
- Remove or relax scientific regulatory procedures (e.g., OMB PRA, research determinations, clearance extending beyond science [e.g., communications, policy]). These processes have gone way too far for us to see added value to the integrity of scientific work at the agency. We need to get back to science and let that float above all these other distractions.
- Value of communication of research work to the public should be appreciated, until now it is only a written support, but practically effort to publish scientific work and present scientific papers on conferences are understood as extra tasks which employees may do during their personal time
- Issue formal guidance to the agency that the interest of the agency or government or prevention of negative press should not influence the decisions of management regarding release or use of data, media products, social media, etc.
- Publication of CDC papers in the other countries Language which the paper originate. Also by developing more Fact sheets which are easily accessible and understood by Public
- Right now I don't think it's a matter of integrity but outright access--the limited budget and worse the travel and conference attendance rules imposed after the GSA and IRS conference scandals that misused taxpayer funds has seriously crimped CDC scientists and others from attending biomedical / scientific conferences in adequate numbers and forcing the withdrawal of presentations and posters for those who can't get travel approval (remember, if one gets something accepted for presentation but fails to show up, then usually the presenter is barred from submitting future material for a set period). From what I can tell, the travel procedure is arbitrary and not directed at any particular office or department or topic. It is adversely affecting networking, information sharing and continuing education opportunities. As something to check in the future, there may only be 25 approved attendees for the upcoming International Conference on Emerging Infectious Diseases

(ICEID) in August, 2015. A conference in Atlanta (where CDC is), which CDC is a co-sponsor, and the number one topic will undoubtedly be Ebola Viral Disease. Twenty-five--that's how many were approved to go to the American College of Preventive Medicine (ACPM) national meeting (out of over 200 wanting to go). I could go, but I have to pay my own way, take vacation time off, and I'm not allowed to represent CDC in any way. Ridiculous.

- More education on professional integrity for both supervisors and subordinates. 2) Promote and ensure upward and downward communication because this will help solve and be aware of issues before they are out of hand.
- Scientists need to remember to transfer their knowledge to all audience education levels and not to other scientists and researchers. Our research means nothing if the general public cannot understand what we are trying to say.
- Address with the general public (outreach, education, partnering, etc.) what the basic scientific method is and the processes involved. Much of the time, I find that the general public pushes a public health issue (advocacy groups mostly) or voices a concern that CDC isn't doing enough or the question the science behind recommendations and the length of time that is necessary to conduct quality science work. Much of the time a recommendation is made or an action is encouraged, but when it comes to providing a science, evidence-based rationale, people scrutinize why things are moving along more quickly for example. It's not adequately communicated that some research questions aren't very complex and require various methods to answering the question. And that there is always room to reevaluate science work that is done and improve areas - for example in the diagnostic arena. New technology and new knowledge comes about and thus change can occur and CDC's position may change on a particular topic. Additionally, conveying or communicating to the public more clearly how the government functions and collaborates across agencies to coordinate science work for the greater good which potentially can improve the integrity of the science work we do at the agencies individually but also as a whole.
- Vaccines and immunizations present an especially challenging domain. Because of the effectiveness of immunizations, CDC both help to make the recommendations (via ACIP) and procure the vaccines (via VFC; several \$billion annually). CDC collects overhead on this procurement. To some skeptic outsiders, the integrity of the CDC scientific work, especially on vaccine safety issues, may be diminished by this perceived conflict of interest. In no other domain of public health that I'm aware of, with possible exception of PEPFAR and global AIDS (where most procurement is done by USAID), does CDC get involved in such a large way financially with both the science and the program.
- By allowing scientists to tell publish actual true data rather than skewed data.
- Make research in progress and completed more available to the public-move away from an archive type system to one more in the public space
- More publication opportunities, and more assistance with conferences and scientific outlets to disseminate results and provide venues on evidence based practices to implement our public health findings. Greater support for conferences in our respective subject matter, opportunities to present work in the national and international settings. More opportunities to widely disseminate our work to strengthen the bridge in implementing public health research to public health practice.
- Report the unvarnished scientific facts and never stating that the science is "set".

- Sharing more information and adhering to proven science
- Provide more safe/anonymous opportunities (like this survey) for folks at all levels to provide input on what is happening without fear of retaliation.
- The process of review and approval of documents, web sites and other products has become onerous over the years and requires higher levels of review for routine documents at the CDC OD and HHS levels. Quite frankly, the CDC OD is one of the biggest barriers to efficient decision making and dissemination of information.
- Information on integrity of scientific work etc could be better disseminated as many staff are unaware
- more public communications other than just web based
- improving on avenues of communication with the public and relevant stakeholders (improving both quantity and quality of communications)
- provide more and clear communication between field and HQ staff
- The CDC's Director's response to the Ebola could have been much better and a quicker and more scientifically sound response may have prevented the deaths in the U.S. and adherence to public quarantine rules. The CDC came off as weak and bumbling, which is very out of character for the agency.
- By: 1) Practicing good science, sound methods 2) Asking questions that inform real world problems 3) Disseminating findings in non-scientific settings in a responsible manner 4) CDC should be engaging in increasing science literacy among the general public 5) Increase training and mentorship to junior scientists, especially ethnic minorities and women
- More and more effective public outreach regarding workplace safety and health conditions, especially to organized labor. More effective consideration of multifactorial causes of disease and disability, such as psycho-social factors.
- More communication and training on CDC mission, regulations on integrity of the scientific work
- Congress and White House should stay out of scientific matters. 2. News Media, though it would be difficult to control, should cease witch hunts when a mistake is made or an accident occurs. Dangerous pathogens and dangerous chemicals are by nature the work of CDC. In laboratory work, as in any endeavor, there is the human element. Scientists have training on handling dangerous chemicals and dangerous pathogens. Though rare, occasionally a mistake is made, or an accident occurs, as they occur in private industry or in academia. The people best able to handle such issues are right here in CDC, not congress, not the White House. I have seen during my time as a CDC scientist, congress get involved in CDC property system issues; and blow them out of proportion. Nevertheless, CDC had to make a fix for the problem, buy costly software so that accountants in Washington can account for every bean. The software was and is so complicated and unwieldy, that unless one uses it full time, it is a fight every time a property officer has to use it. After a reorganization of CDC around 10 years ago, support people who could place orders with credit cards, and do property officer work were diminished at branch level. As a result, scientists have to divide time from science to do administrative work such as this. I have seen during my time at CDC, one agency make a poorly considered statement publicly. As a result, a fix had to be made, because congress got involved. Divisions where no such mistakes or poor decisions had been made already

had a document approval process prior to submission of a document to a scientific or medical journal for peer review prior to publishing. Now there are additional redundant steps prior to even getting the documents into our approval system. The additional steps accomplish nothing except waste of time and productivity. 99.9% of CDC scientists and physicians are highly capable and competent. If congress, White House, news media would leave us alone to handle problems that arise, and which we are good at handling, we would be a more efficient organization.

- More clarity on the mission of the CDC and the integrity of the scientific work produced by the CDC needed between OD level and nonmanagement staff.
- All members of the scientific community, including educators, researchers, and public servants, need to be advocates for science. It is not enough to just quietly putter along in our labs, conferences and journals while the opponents of science shout loudly to a much larger audience. It requires the ability to communicate effectively, but also the willingness to communicate, to stand up to those who don't have the public good at heart, and who reject the basic egalitarian principles of the scientific method. Unlike them, we don't need to be afraid to be wrong, because that's how science works. We celebrate wrong answers, because every one we find reduces the list of wrong answers by one and increases our chances of finding the right answer. Our opponents will cling like grim death to their answer, even when it is wrong, and so be revealed as disinterested in facts, truth, and ultimately, progress.
- Remove the ridiculous restrictions on travel and attending conferences. I am unable to go to important conferences with junior staff, which I feel is critical for junior staff to develop into subject matter experts. These restrictions also mean that CDC's point of view is not represented at these conferences. In my field, others who are outside CDC, intentionally distort and misinterpret information. I feel CDC has the power to minimize the damage from these distortions by presenting sound descriptive studies that make it difficult for the distorters to continue their misinformation.
- To involve and inform all CDC staffs on all emerging and re-emerging issues that are related and have much influence with mission of the CDC
- There are now so many bureaucrats and midlevel managers who control "the Message" at CDC in Atlanta who are making decisions on subjects way out of their sphere of knowledge. CDC should allow its scientists "freedom of Speech" -- we have actually been told that ALL Ebola-related material has to be vetted by a Speakers Bureau Group -- and we have no idea about the qualifications of this group, and what they are afraid their scientists will do. We have been told that CDC is responding to HHS, and HHS is responding to the White House...it all sounds as if politics is trumping the science. They only want a positive message to come out of the CDC Experience, which portrays CDC in some shining light... which may not be scientifically accurate nor helpful -- if one cannot have a "Lessons Learned" talk or a timely talk -- the message is lost, and the opportunity to provide public health is lost. Through the years there has been MORE and MORE control. CDC needs to trust its scientists and loosen the grips on scientists communicating with other non-CDC scientists...
- Faster, more efficient approval of materials for public dissemination.
- It is not an accident that the NIAID director is asked to comment to the media on science issues that are largely those assigned to CDC and involve the CDC public health mission.

- I believe that CDC takes every precaution to make decisions carefully, however, the agency is sometimes portrayed in a negative light by the media. The CDC should always stick to the science and make the best possible decision based on knowledge and experience. I think we should always share what we know upfront and continue to make decisions the best way we know how.
- Better risk communication.
- Through transparency and creating a culture which enables individual CDC scientists to be comfortable voicing their professional opinions, even in instances where the opinions may be a bit different than what ended up as the massaged and filtered CDC position/document. Wouldn't it be brilliant if CDC scientists could add statements to CDC documents, policies, and/or web sites? Such statements could be reviewed and need to comply with documented criteria (e.g. need for providing the scientific basis for the opinion) prior to being posted. However, while there may be some appeal to this transparency, i'm not aware of research being done to evaluate the strengths/weaknesses of such an approach (e.g. individual scientists could be targeted by external parties who might then try to influence individual scientists and undermine the integrity of their voiced opinions).
- Legal fear over data security issues has crippled the CDC's ability to keep up with the rest of the country's ability to leverage big data.
- In my topic area, unfortunately Science takes a back seat to interpersonal difficulties among bickering managers at the upper level. My supervisor is an extremely poor communicator and a non-scientist put in charge of a scientific activity. The net results are, predictably, a train wreck. Good survey.
- So, scientists need to become more adept at communication, understand how scientific evidence and value judgments complement each other, and become more aware of their value presuppositions as well as the stakeholders in programs and interventions being implemented by public health. Leaders and administrators must become better at public articulating the rationale behind their projects and consequently become less fearful of having someone call them into question.
- I think that in order to ensure continued improvements in CDC and integrity of the scientific work produced by the CDC, all involved parties must continue to communicate openly without fear of reprisals. I think there must be more documentation and sharing of information so employees are always operating with current information regarding policies and procedures.

Collaboration

(Mentioned in 4% of coded responses)

- Improve collaborations with Universities and other "think tank" type institutions.
- at the field, involve local staff more fully for the ownership of the mission, improve under utilization of LES staff.
- More collaborations within CDC agencies and across sectors.
- Support and collaboration across USG.
- Allow more interaction of scientific community to attend scientific meetings and conferences to keep up with new technologies, discoveries and trends in public health

- Scientists need more input in the policies that regulate their day to day work (inventory, etc.) and made aware of intellectual property issues regarding new science. Young scientists need to be grown and encouraged within the agency. There are many postdoctoral fellowships but very few opportunities to transition out of training positions to semi-permanent positions and fewer still to full time. If you do manage to transition to a semi-permanent ("term limited") position, as I have, the opportunities to attend conferences are limited and frequently co-opted by senior scientists/supervisors. This limits potential for collaboration, training, and exposure to new ideas. On top of all of this, many of us in term limited positions become discouraged watching permanent employees who slack off and decide to leave CDC for positions with greater growth potential. Some sort of bridging program and scientists-mentoring scientists programs might help but it many require a culture change.
- Senior leadership has a focus on clinical expertise - at the impact of other highly trained professionals from other disciplines with equally important experience yet are overlooked because of bias towards being an MD. Improve integration - HIV and STD are prime examples of how staff working along similar areas have incredible challenges by the two divisions not working together, sharing staff resources etc. With the national health plan and health department accreditation - cities are trying to model something the CDC hasn't even done themselves well. this lack of experience (and the feeling of, "do as I say, not as I do") has devalued the role and impact the CDC is making.
- We need to invest more in our current staff - many are retiring and taking institutional knowledge with them. There needs to be more cross-mentoring. Additionally, I see a lot of scientific work in silos. We'd be more efficient if we worked together more, and if people were working more to their strengths. There also needs to be more accountability. Finally, I've noticed administrative processes such as grants and cooperative agreement management becoming increasingly beurocratic and complex, too much for scientists to manage and do scientific work. CDC would benefit from having more business management (trained, like MBA) staff in our workforce to help us run more efficiently and utilize staff skill sets better. Also, to help with management of staff, Many scientists become managers with no training or skill set in management.
- There is a huge communication gap between HR and security in Atlanta and other CDC sites. The process is extremely disorganized and dysfunctional. Lots of time was wasted (repeatedly emailing, calling, etc.) when coming on board which hinders the scientific work CDC hired me to do.
- By continually informing scientists on the CDC's scientific integrity policy. - By establishing a competent clearance process of scientific documents (public health and environmental health are multi-disciplinary fields) - By acknowledging the differences in background among CDC scientists (from medical sciences to physical-biological-chemical sciences, engineering, and other) and appreciating that we can complement each other. - By making information on the availability of research funding open to all scientists.
- Support employees grantees to have the right capacity through trainings, experience sharing and organizational capacity building
- Giving the opportunity to young scientists to grow and have close collaborative activities with headquarters colleagues

- More cooperation within the Agency. Involve contractors in more of the decision making processes.
- The CDC's mission and integrity of work can continue to improve through employee collaboration and leadership flexibility.
- Continue to consult with co-workers on decisions, trials, and work progress to improve the working environment and science.
- Ensure coauthors and those working on projects contribute proportionate to their level of acknowledgment .
- Allowing scientists the capability to freely associate and collaborate with various divisions and branches. Making room for people to work and train in different areas that may be of interest to them and not making them feel like they are stuck and unable to move onward and forward in the CDC.
- More scientists, better collaboration, higher tier scientists
- OMB regulations and the increasingly broad interpretation of those regulations has severely limited both the scope of public health activities and the timeliness of CDC's response to emerging public health threats. In order to allow CDC to respond to public health needs of Americans, the OMB process needs to be streamlined and more information exchange among the agencies should be encouraged.
- Scientist are forced to follow protocols that were written by non-scientists (QMS). These protocols often adhere to strict regulations but do not follow a practical laboratory approach that leads to the misconduct or taking short cuts- and thus to the recent lab incidents. Inventory of reagents and consumables takes away valuable work time from scientists and does not contribute to the mission of CDC. Scientific data should be the highest value of the agency to rebuild the good reputatation it has lost over lab incidents, but right now all scientists are discouraged through strict regulations. Scientists that are performing great should not become supervisors/managers just because they are entitled to (not all scientists are great managers). Scientists should be encouraged to spend time on creative projects that interact with different divisions/groups to benefit from broad knowledge at CDC. This increases the engagement of people and use resources more wisely. Scientists should not be reproached for errors, but supervised when they are first hired, and over the course of their work. Just because you earned a degree it does not mean that you should not be supervised.
- I work in a small office. The delay or release of our science is due to the fact that managers are so overloaded and unable to delegate. The lack of trust between them makes them very "possessive" of their scientific projects which impedes cooperation and creativity.
- the work produce by CDC could improved by: - a good coordination of work with others partners in country - the implication of stakeholders - the alignment of CDC work to the national plan of country - the mobility of CDC staff in provinces
- More interagency intrac
- I think that all laboratory should be able to work together and be able share all information know matter how big or small the information is it could help.

Transparency and Accountability

(Mentioned in 4% of coded responses)

- Continuous training and transparency.
- The science should be driven, to a large extent, by the stakeholders at the state and local level whose programs benefit from the science. All too often CDC scientists and leadership are disengaged from public health at the state and local level and tend to pursue research that is not as "applied" as it should be towards encouraging practice improvements at the local level. I have not been involved in issues where folks are trying to interfere with the findings or interpretation and it is more often the difficulty of making decisions on limited resources when many PIs are focused in pursuing their particular area of interest and expertise. This latter is a difficult situation since it can be perceived as interfering when in fact CDC is a public health agency and should constantly review our portfolio of work and determine priorities along with external reviewers. Too often the "integrity" issue is more about independence.
- Primary focus for public health efforts should rely on surveillance, adequate planning and implementation of interventions designed with input from those intended to benefit from such efforts, i.e. participatory efforts should be the norm not the exception. Adequate appraisals and participation of those groups who are the intended beneficiaries can mitigate undue interference from other groups that may have less public health oriented missions.
- CDC, NIH, NASA, portions of DOD, and probably other agencies all suffer from the same problems which are two-fold. First, the top and near-top jobs are filled with job-seeking politicians, not the highest-tier scientists or engineers. Secondly, the setting of priorities, even down to the staff level, is based on an ever-present effort to associate whatever science people "want" to work on with whatever the latest funding craze is, be it Ebola or anthrax. This is no way to run a country.
- We are a science agency and yet it is increasingly difficult to get high qualified scientific staff in my branch, division, and center. However, there continues to be a growing number of policy and communication staff. They seem to increasingly see their job as directing/determining the science agenda for various high profile programs. Yet, they have no training and it is clear in talking with them they have no knowledge of the existing literature on the topics in which they consider themselves expert. I also see an increasing level of corruption. I have no hard proof, but I see administrators increasingly taking money that was designated for scientific programs and spending it on their own pet projects -- these projects are often ill defined and have little if any scientific merit. I recommend the following: More transparency on budget issues -- I am a team lead and don't get to inform most decisions on budget. We are a public agency and honestly I don't see any reason where all monies spent should not be readily accessible to all staff (and the public for that matter). The people making decisions about the budget should have to justify how they are spending the money. A scientific agency/HHS ombudsmen office -- and this should be staffed by individuals who have worked as scientists in the agency. There needs to be a mechanism to bring concerns forward without fear of reprisal -- but also in a way that does not escalate to the whistleblower stage.
- I think there must be more documentation and sharing of information so employees are always operating with current information regarding policies and procedures.
- Through transparency and creating a culture which enables individual CDC scientists to be comfortable voicing their professional opinions, even in instances where the opinions may be a bit

different than what ended up as the massaged and filtered CDC position/document. Wouldn't it be brilliant if CDC scientists could add statements to CDC documents, policies, and/or web sites? Such statements could be reviewed and need to comply with documented criteria (e.g. need for providing the scientific basis for the opinion) prior to being posted. However, while there may be some appeal to this transparency, I'm not aware of research being done to evaluate the strengths/weaknesses of such an approach (e.g. individual scientists could be targeted by external parties who might then try to influence individual scientists and undermine the integrity of their voiced opinions).

- Make sure that the science is proven. Make sure that the science used is transparent before being acted upon.
- There are too many decisions being made by CDC individuals by virtue of their position, rather than everyone adhering to consistent policies around the agency.
- Provide more opportunities for professional judgment and increase accountability
- continue transparency of work
- Considering the needs of our stakeholders and stepping out of our comfort zone. We are not in academia but a public health agency. People need to be able to relate to what we say and do. We need to learn from the business sector and be accountable for the impact of our work which should go beyond publications.
- We need to invest more in our current staff - many are retiring and taking institutional knowledge with them. There needs to be more cross-mentoring. Additionally, I see a lot of scientific work in silos. We'd be more efficient if we worked together more, and if people were working more to their strengths. There also needs to be more accountability. Finally, I've noticed administrative processes such as grants and cooperative agreement management becoming increasingly bureaucratic and complex, too much for scientists to manage and do scientific work. CDC would benefit from having more business management (trained, like MBA) staff in our workforce to help us run more efficiently and utilize staff skill sets better. Also, to help with management of staff, Many scientists become managers with no training or skill set in management.
- Apply disciplinary action equally to the managers and the perpetrators. Have all the Directors for Science and the Human Subjects Reviewers under the supervision of the Associate Directors for Science at each organizational level. For example, The center ADSs are supervised by the Center directors, and not by the Agency ADS. the Division ADS reports to the Division director and not to the Center ADS. The country based ADSs report to the Country Director and not to their home based ADS.
- I think CDC should focus more on public health and serving the American people. When it takes a group (Enteric Diseases) 6 months to get data back to a state health lab, but in that same time the group has published 5 papers - what is their priority? If they have time to do research, then they have the time to run biochemical tests on a sample and let the state and ultimately the tax paying patient know what disease he or she may have. I think the CDC and government agencies' hiring policies have lost focus and the inability to cut dead weight and fire employees hurts its productivity and integrity overall. The CDC was loud and proud about a Culture of Safety after the Anthrax exposure, but what about a Culture of Accountability? Why is the woman who exposed 80+ CDC employees to a deadly bacteria still working at CDC? From my experience, the hardest workers I've

seen are typically contractors where as FTE's once they are converted feel they have a free ride and there is nothing you can do about their complacency other than to "shift responsibilities" and make them someone else's problem. The hiring is based more on degrees and less on experience. You rule out a lot of very great employees with years of experience because they don't have a Master's or higher. Why punish an individual because he or she was able to secure a job right out of college?

- CDC just needs to continuously work on pushing its mission of public health and make sure to be honest and forthcoming to maintain its integrity.
- Transparency and accountability.
- Transparency and long term strategy
- Continued monitoring with proper checks and balances in place for the protection of the public and the agency.
- Be more transparent about where we are during a crisis. Ebola situation domestically was messaged very badly. Be clear with the public about what we know and what we don't and what we will do to improve. In the case of Ebola there was not enough contrast of the characteristics of the spread in Africa and why that culture exacerbated the spread and what is different about our culture that makes it so unlikely. We should have been much more out front about why Texas happened - the result of our heroic efforts (especially in comparison to the African countries hit by Ebola) to save every patient as opposed to just providing palliative care. Explain that this different level of healthcare was something we needed to take into better account and now we have. Be straightforward and less politically correct when providing information. Be less certain about man-caused climate change and be open to other expert opinions. The fact that we appear so certain undermines our credibility with the public - but keeps us close to the administration's view. This is inconsistent with the actual science at this time and is hard to justify.
- Increased accountability and supervisory oversight of staff scientists. Improved documentation and implementation of quality management systems measures at all levels of scientists, within labs and outside labs. Increased training in laboratory science management and leadership. Too many quality indicators have been ignored in the name of "productivity" but the consequence may be questionable scientific findings. Senior leadership needs to support improved quality practices for all scientists and managers.

OMB Paperwork Reduction Act

(Mentioned in 3% of coded responses)

- De-politicize the director's position; de-politicize the director's position; de-politicize the director's position. Reconsider the applicability of the Paperwork Reduction Act to data collection activities.
- reduction of the myriad of other agency requirements like OMB that essentially create incredible hurdles that require the agencies to expend their resources on internal bureaucracy instead of doing the work of public health.
- Research that involves consented subjects should be removed from OMB review. The Paperwork Reduction Act was intended for involuntary collection of data, such as from taxpayers seeking to file tax returns. It was not intended for voluntary research participants who are informed of their rights to participate or withdraw if they feel too much information is collected from them. As such

research is already reviewed by Institutional Review Boards, there is a set of checks and balances in place, so the OMB review is not needed for that purpose. OMB review process is lengthy (easily takes a year or longer) and unwieldy and hampers science greatly by not allowing research studies to be approved quickly. Short term projects are impossible to fund because of the lengthy process. We can't switch study instruments in a timely fashion because of the extra layer of review. Processing Information Collection Requests for consented research studies represents a major amount of time and effort on the part of scientists and administrators. It comes down to being the Paperwork Creation Act. IRB review is much faster and efficient and focused on science. It appears to me that the reason for OMB to review all the research is to add an outside layer of interference into efficient research, not a layer of protection for the public.

- Eliminate OMB's paperwork reduction act,
- Get rid of the Paperwork Reduction Act. It is nothing more than an attempt by OMB to interject politics and industry pressure into the science. OMB's reviews through the PRA add about a year to the timeline for a simple cross-sectional exposure-health study, with little-to-no added benefit to the science or to the public.
- Get Congress out of the business of deciding what is and isn't good science. Increase our budget to reflect the importance of the work we do. Deal with the horrendous Paperwork Reduction Act which has only increased paperwork and stops us from doing good work by making it almost impossible to survey people. I am not opposed to having oversight of how much we ask the public questions but this process is so broken anything else would be better.
- Over time, the increase the requirements in administrative processes and restrictions in funding seem to have increasingly impeded scientific work, specifically, the ability to start and complete scientific studies in a timely way. The removal of some of these administrative requirements could go a long way in helping CDC to accomplish more and in a more timely manner. One example of administrative barrier is the OMB - PRA review process, which is becoming overwhelmingly burdensome. In at least one instance, data collection for a study was delayed more than 1 year due to this onerous process. Also, the interpretation of OMB-PRA regulation has become such that more and more activities are now required to undergo OMB-PRA review than ever before (e.g., progress reports from grantees). Despite the increase in requirement, the review process at the OMB office seems to have slowed. I expect that this will only become worse as the requirement for more OMB-PRA review increases. OMB seems to have a great deal of authority and control, in regards to scientific work, and there is no channel for voicing concerns that would lead to a meaningful response.
- OMB is also a critical factor in the mission of CDC and the integrity of the scientific work. The process is long, delayed for non-scientific reasons, and the clearance officers are not always familiar with public health methods. Finally, the time frame of OMB clearances does not align with appropriations time frames which can impact whether a study gets done or what the final data collection period is for a study.
- Remove or relax scientific regulatory procedures (e.g., OMB PRA, research determinations, clearance extending beyond science [e.g., communications, policy]). These processes have gone way

too far for us to see added value to the integrity of scientific work at the agency. We need to get back to science and let that float above all these other distractions.

- I think focusing more attention on the actual work of public health rather than the politics would improve our work, which includes research and financially supporting the state health departments. Decreasing the layers of administrators and management would be helpful. Also, it would be nice if the layers of bureaucracy could be peeled back instead of increased. The paperwork reduction act (OMB) has REALLY hindered us from doing public health research; it will take 1-2 years to get a new questionnaire approved before you can start collecting data. It would also be nice if Congress would let us spend the money the way it needed to be spent instead of telling us how to spend it.
- The Paperwork Reduction Act of OMB is a significant resource drain on the agency and the purpose/justification seems ill conceived and slows the responsiveness of CDC and other federal agencies.
- Limit OMB's oversight to matters pertaining to paperwork reduction and time demands on members of the public participating in government-sponsored research. Too often OMB requires changes to IRB-approved research protocols, questions the need for the research, asks for details on various scientific aspects (e.g., data analysis plans), asks questions and requests details one-at-a-time, and returns materials for revision multiple times. The OMB approval process delays research initiation by at least 6 months. Delays increase when OMB-required changes necessitate amendments to protocols, resubmission to multiple partners' IRBs, and sending the revised protocol with new IRB approvals back to OMB.
- I am increasingly concerned about the impact of OMB's interpretation of the Paperwork Reduction Act. Before the government can sponsor any data collection, including data to monitor the performance of grantees (if more than 9 were funded under an announcement), we must submit a data collection request package to OMB and their review process can take a full 12 months. They can force us to drop questions or make changes for any number of reasons before approval is granted.
- OMB is a pain in the ass - the Paperwork Reduction Act is a joke. It significantly hampers CDC's ability to quickly assess emerging situations, including outbreaks, due to its imposition of burdensome requirements for approval of assessment tools. The IRB exists to ensure that CDC staff conduct research that is in line with scientific core values (Justice, Autonomy, Beneficence). OMB seems to exist solely to make work more difficult.
- Work with Congress to repeal the OMB Paperwork Reduction Act. This Act is totally unnecessary, makes no sense, likely does not achieve it's intended effect, requires a large time commitment to prepare an application, respond to follow-up questions and long delays (>6 months) to obtain a decision. Complying with this act is a huge burden on public health and interferes with timely action. Much of what is covered constitutes voluntary activities. On that basis alone, the Act is unnecessary and burdensome.
- The folks reporting to the CDC Director must be willing to hear, respond to, and pass on up messages from front line scientists about challenges they are facing with resources, work load, bureaucracy, rules, and barriers. Instead, they try to manage away the problems rather than face them. 2) OMB PRA approval is severely broken. The guidance and reviews from ICRO and OMB are

unconscionably slow, inconsistent, contradictory, unhelpful, and not scientifically sound. The 1999 draft OMB PRA Guidelines have never been published. The OMB ICR "pipeline" restricts the number of that can be submitted at one time, is technologically antiquated, and is just a way for OMB to delay the work load. Research and program funding cannot be spent before it expires because of the 6-12 months required for the entire OMB PRA process. The "streamlining" offered by OMB--e.g. generics and clinical exemptions--does not apply to most of CDC's data collections. When generic ICRs are proposed by CDC, OMB often says they are too broad--but if they have to be narrow and not cover a range of data collections, why bother? Even generic approvals can take 4-6 months. The poster child for generics at CDC--the OSTLTS generic--takes an incredible amount of staffing, staffing that most programs do not have for just one data collection. And even it has gotten overwhelmed. OMB Desk Officers are overworked, covering too many agencies. The chain of command at CDC prevents scientists from speaking directly to the OMB Desk Officer to ask questions, provide information, and clear up confusion. ICRO and Center PRA Coordinators prevent communication with OMB because they are scared of annoying our OMB Desk Officer and Statistician and then getting retribution. OMB does not provide its Desk Officer with assistance when CDC has to increase its ICR submissions, e.g. because of the new EEI Generic and Ebola-related ICRs. Instead, CDC is supposed to "prioritize" a list of ICRs which, even in normal times, is too long for the Desk Officer to handle efficiently. This unworkable system is costly to the agency in terms of dollars allocated but not able to be spent, delays, staff morale, and lack of credibility with our partners who cannot understand why we cannot fulfill our scientific obligations on time. Critical projects that require short timelines are abandoned in the planning stages because they do not qualify for OMB's emergency approval. I have yet to see a benefit. OMB has overreached in expanding its mission from preventing burden on the public to include changing the science and looking for policy implications, all without having the staff and resource commitment to do any of those missions well. The incredible drain on staff time, morale, funding, and productivity that ensues from scientists dealing with OMB PRA approval will not improve until CDC leadership does an in-depth review of the problem and its impacts, then is proactive in communicating it to HHS, OMB, and Congress.

- The requirement for Office of Management and Budget (OMB) for most projects delays them by a year or more, and is unhelpful and duplicative, and a waste of precious resources. OMB review has even now been extended to emergency situations, and to well-established routine communicable disease surveillance.

Use of Contractors

(Mentioned in 3% of coded responses)

- The contractor system tends to create inefficiencies because: 1) there is no immediate supervisor over both contractors and regular staff to resolve issues that might arise; 2) it is extremely difficult for a project lead to collaborate meaningfully, and provide good oversight of quality, when contract staff are off site; and 3) because any use of a contractor's time must be charged to an account, FTE scientists are not able to briefly consult with contract scientific staff about projects the contractors are not engaged in. While I can call an FTE scientist to get a quick opinion on something, I don't feel like I can call a contract scientist unless he/she is explicitly assigned to the project. The breadth of

expertise at CDC, and our ability to work together towards our mission, makes us better scientists; creating silos of expertise tucked away in contracts interferes with that.

- More cooperation within the Agency. Involve contractors in more of the decision making processes.
- Reduce political influences, convert contractors to FTEs, have leadership make solid decisions and have a clear idea how projects should be implemented and executed, and stop placing people in roles of power who clearly abuse them or others.
- Laboratory science at CDC is receiving far less support than it did historically and the quality of our work is suffering as a result. In my group, all lab technicians are contractors. When I first started at CDC, I had two technicians who were FTEs. Technicians have been turned into administrators.
- There are many postdoctoral fellowships but very few opportunities to transition out of training positions to semi-permanent positions and fewer still to full time.
- Hire official FTE's instead of contractors that just have 1-2 year contracts. They leave in the middle of projects to get an FTE elsewhere either inside (but not in same department) or outside of CDC.
- Increase funding. Decrease number of private contractors (from Northrop Grumman, Lockheed Martin, etc.) and increase number of direct hires (full time federal employees)
- The use of government contracting companies is killing morale. It has gotten to the point that new contractors have no hope of ever obtaining an FTE. They have no job security, no mechanism for advancement or raises, and usually terrible benefits. They are not allowed to attend trainings that are directly related to their work. They are treated like second class citizens (e.g., not allowed to have lockers for bike commuters). Why not make these people term FTEs? Cheaper than contractors, gives them real benefits, and costs the Agency less because they cut out the middle man.
- Big questions! Overall, and with less thought than I would like, but principally assessing "mission" (were I writing this question, I do not think I would lump "mission" and "integrity of scientific work" together--a "double-barreled question!": 1. Bureaucracy is overwhelming. Multiple layers of review are needed of simple things, e.g., conference attendance or, even worse, being able to put on a conference (however that is defined). What was once a flat organization is now a paragon of vertical. 2. Contractors, and many are good, do not have the dedication to the mission of CDC that FTE's do. That said, the average FTE at CDC now does not have the dedication that they did 10 or more years ago. More self-interest and less "selflessness," less desire to be dedicated to the organization and its goals, more of an 8-5 job and "then I'm home." Yes, I know that many persons such as myself who have been with an organization for a long time harken for "the good old days." In the case of CDC, it is true. 3. We are bloated with infrastructure. This hurts the mission because I do not think decisions are any better than without such a process (and this relates to my first comment, above, also), and the infrastructure and review are clearly frustrating for staff--all staff. 4. Scientific integrity at CDC is good. I have few complaints here. I think the Agency does stand up for what it thinks is right.
- Hire qualified FTE's and move away from the contract positions.
- I think CDC should focus more on public health and serving the American people. When it takes a group (Enteric Diseases) 6 months to get data back to a state health lab, but in that same time the group has published 5 papers - what is their priority? If they have time to do research, then they

have the time to run biochemical tests on a sample and let the state and ultimately the tax paying patient know what disease he or she may have. I think the CDC and government agencies' hiring policies have lost focus and the inability to cut dead weight and fire employees hurts its productivity and integrity overall. The CDC was loud and proud about a Culture of Safety after the Anthrax exposure, but what about a Culture of Accountability? Why is the woman who exposed 80+ CDC employees to a deadly bacteria still working at CDC? From my experience, the hardest workers I've seen are typically contractors where as FTE's once they are converted feel they have a free ride and there is nothing you can do about their complacency other than to "shift responsibilities" and make them someone else's problem. The hiring is based more on degrees and less on experience. You rule out a lot of very great employees with years of experience because they don't have a Master's or higher. Why punish an individual because he or she was able to secure a job right out of college?

- Improving hiring processes and simplifying some of the bureaucratic red tape. The CDC is not attracting new talent because of the USA Jobs system and its policies. They are also wasting millions on training and employing fellows to do the work of FTEs but then never hiring those fellows on. There are two knowledge leaks currently: when fellows and contractors leave, and when employees retire. Plugging that first leak by fixing the hiring system would, in effect, plug the second leak (by replacing the retired employees with new talent).
- Convert contractors to FTEs.
- Allow the hiring of more FTEs so that there is less of a need to rely on contractors. I know of many situations where a manager wanted to hire someone and had the money, but didn't have an FTE slot available so they had to hire a contractor. They get next to no say over who is hired and sometimes the contracting agency produces someone highly competent and sometimes they claim someone is "qualified" who clearly isn't. If the person is completely incompetent, they have to complain to the contractor, wait well the contractor tries to remedy the problem, then say that the person still isn't satisfactory. Then they have to hope to contracting firm produces a better candidate the next time around, which they often don't. Don't get me wrong, there are a lot of great staff who are contractors and many work as hard or harder than the FTEs. But they are sometimes treated as second class citizens while administrative rules prevent eg. their CDC boss (who, let's face it, is actually supervising them) from acting as such. There's a lot of administrative waste. If these people can't be federal employees with full benefits, at least make them fellows or something who are hired/fired/supervised by a CDC team lead.

FWS

Thirty-nine percent (382) of the 981 FWS survey respondents provided written responses.

Funding and Staffing

(Mentioned in 28% of all coded responses)

- Providing funds and capacity to conduct and review science outside of regulatory and political constraints. In other words, non-partisan, neutral parties/entities (and scientific peers from other agencies or academia) should review science and determine if/when science is published or made public. It should not be controlled by Regional Directors or Assistant Regional Directors. So called "Leaders" in this agency tend to want to play it safe with their Region's work and findings.

- By restoring staffing/funding to pre-sequester levels
- Start hiring people in the field offices again. I recommend you research the number on FWS staff/biologist lost over the last 5 years as compared to budget declines. Although budgets have dropped over the last 5 years, staffing levels have seen a much more drastic decline, leaving staff in the field wondering where the funds are going.
- Greatly increase staffing, especially at the field level (e.g., at least double the 2010-level of staffing at field offices). b. Pursue legislative updating of FWS programs to meet current and future ecological challenges, using internal agency recommendations but also input from external parties with appropriate scientific expertise. c. Support increased participation by FWS biological staff (including non-leadership positions) in pertinent scientific organizations, such as through conference attendance and scientific publication. d. Support increased FWS collection and analysis of new scientific data. e. Provide all FWS employees adequate training in scientific integrity. f. The FWS needs to aggressively uphold its scientific integrity policy, including thorough investigation of alleged misconduct, appropriate disciplinary action against all persons found to have contributed to confirmed instances of misconduct, and prompt ample support of whistleblowers. g. Solicit and use input from all staffing levels for needed improvements in the scientific integrity policy and its implementing program.
- Change in top leadership; too many funds diverted to what are considered new ideas by current leadership, which are really just a re-hash of past programs (surrogate/representative species) or concepts like SHC and LCC which were tried in a lesser sphere of influence (ecoteams) in the past and for the most part didn't work. They were good concepts but once they were out there the financial and leadership support dwindled. We need to use the limited financial resources FWS has to work across program areas to get high priority tasks (like ES recovery and habitat protection) done. I don't agree with the establishment of an Inventory and Monitoring "kingdom" with many high paid professionals the cost of which drained the on the ground capabilities of field stations like refuges, hatcheries, and ES offices.
- Increase scientific capacity of staff within the agency at the field level. Reduce need for generic reports and populating databases by field staff. Provide resources (staff and money) to support data collection and analysis to support scientific decision making.
- Science should be the basis of our decisions. More scientists should be hired and trusted to conduct the Service's mission. Managers should have strong scientific backgrounds. Those managers who are incapable of making decisions based upon science should be removed from decision-making roles. Biologists should be encouraged to find and use the best science, trusted, and supported. [The opposite is occurring.] The use of science needs to be emphasized and supported up and down, across and through the agency. The entire FWS culture needs to be changed. Science is supposed to be the foundation. Emphasizing this message at the Regional Director levels could be very helpful. The FWS will continue to lack scientific integrity and have extreme difficulty in conducting the mission until these issues are fixed.
- Hire more of the appropriate staff--follow field office requests/recommendations as the guide for need of more staff, not Regional.

- Accomplishing the mission of the FWS could be improved if we had adequate staff and funding to keep up with our ever-growing workload. That would allow staff to do more thorough work. It would also allow decisionmakers to make more timely and perhaps thoughtful decisions. Adequate staff and funding are what needs to be improved, not our adherence to scientific integrity, which I think we're doing (and have always done) quite well.
- increase budget increase number of GS 11/12/13 biologists allow adequate time to evaluate complex issues decisions should be made after issues are thoroughly analyzed allow lead author to decide when documents and reports are complete
- Greater scientific capacity within the Service---especially social science capacity. More consistent use of Structured Decision Making process and tools, especially by top-level (Directorate level) Service decision makers. Lack thereof has eroded confidence by support staff in the integrity of Service leadership. More transparent decision making, especially at high leadership levels. Better communication of REASONS and PROCESS of Service decisions to Service staff throughout the agency.
- More scientific and technical staff More time for scientific analysis Less time in policy review
- More staff and more money to conduct quality monitoring and research, but I don't expect that to happen. We don't have to study all our actions to make good decisions and conduct good management. It is an unrealistic standard driven by policies resulting from political necessity - lawsuits and congressional inquiries and raw public perception.
- Adequate funding and staff to conduct our work and achieve our mission.
- The #1 issue is staffing levels. To survive funding cuts (sometimes real decreases, but more often roughly flat budgets, yet with ever-increasing costs), the FWS has limited the hiring of new staff -- and has done so for a while (the FWS, to it's credit, started this practice well before the economic downturn truly hit the Federal budgets). While this was good in that we didn't have any RIFs when the crunch hit, we nevertheless had a fairly constant rate of staff departures; this has translated into an ever-shrinking work force. And it continues. Due to workload levels, we typically have inadequate time to properly make our evaluations. This translates into products that inadequately address the complex, highly nuanced decisions we need to make. Controversial decisions that are weakly supported in our documents fail to win support from decision makers. (In my experience with the FWS, decision makers are willing to "go to bat" for a well supported decision, even if controversial -- but they're not going to do so for a poorly supported decision; it's simple pragmatism.) With more staff, the workload would be spread around; each biologist would have more time to devote to each individual evaluation, producing stronger, better-supported decisions (documents) -- that would be supported by managers.
- We have been chronically understaffed and have had poor leadership in place for the last 5+ years. Our last field supervisor completely deconstructed my ability to effectively run Coastal Program by disbanding our partnership programs and not allowing appropriate obligation of Coastal and Partners funding.
- We have been hiring people for biologist positions who have no graduate level courses and minimal work experience. We would do better to hire people who have had more experience with scientific studies rather than just the nuts and bolts of our particular operation. People seem to be picked

based on a first impression of managers and selected for training so that other employees are excluded and left behind. The result is that we develop disgruntled technicians lead by biologists that are more concerned with making themselves look good to the managers by only presenting them with what they want to see.

- More funding and personnel at the field station level instead of top heavy populating of scientists at the Regional level.
- Stop hiring temp workers I.E. Temp and term positions. We train these people and then let them go because of how the hiring process works with OPM. We are losing irreplaceable institutional knowledge, paying for training them only to not be allowed to rehire them for the same job they have been doing already. Highly inefficient.
- End the practice of contracted term positions for regulated entities.
- Our hiring practices should prioritize hiring scientists with the highest degree of education possible so that decisions are made primarily on the best scientific information available.
- Our operating budgets have been decreased, as have our staffs. Our regulatory responsibilities keep increasing. As a result, staff are often spread too thin. As long as our director is a political appointee, politics will always enter into regulatory decisions. Our hierarchical organizational structure, with no check and balance system where employees are provided the opportunity to anonymously evaluate their supervisors creates a potentially unhealthy working environment.
- Placing greater value on the technical expertise of their current employees and hiring staff with substantial expertise rather than relying on "on the job" training.
- Better funding
- Too many contractors or other entities doing work that should be done in house.
- More funding to carry out the basic mission. Science! What a luxury. We have suffered devastating staff and budget cuts in the last several years--just staying on top of bare minimum control of the most of noxious weeds is about all we can handle right now on my refuge. Time to do research is almost unthinkable in this current budget climate.
- More resources,
- Sufficient staff resources and time to incorporate the every growing amount of scientific data in many fields to analyzing and addressing very complex environmental issues. The FWS needs the ability to fund projects and research that can help us make appropriate recommendations for species conservation integrated within a regulatory framework and more pressure on natural resources.
- In my personal opinion, FWS would benefit from an increased focus and capacity dedicated to scientific research-- including more monitoring data to work with (more boots on the ground), more spatial modelers and/or landscape ecologists, and more statisticians. We desperately need scientific capacity related to broad-scale issues as opposed to site-level management (though we definitely need both).
- The severe budget cuts for many years now has negatively impacted the ability of FWS to adequately pursue its mission and all of its trust responsibilities. We have been at skin and bone levels for a while now; staff positions aren't being filled, leaving more work to the smaller and smaller number that remain. This, obviously, has forced FWS to prioritize and re-prioritize

repeatedly in terms of where the limited funds will go, leaving many trust duties and responsibilities by the way side. FWS needs more funds to re-build its work force capacity and actually hire staff.

- Additionally, all of the work and funding invested in the FWS LCCs has basically ended up being a different version of the state grant money that comes through FWS and goes directly to the states. None of the work done by the LCCs is obviously and directly helping FWS staff achieve their mission and duties. It is all outwardly focused and the LCC areas don't even communicate or work in-house with FWS programs. FWS is allocating a large amount of funds to the LCC program without any of our internal programs and trust responsibilities seeing any benefit. That whole approach needs to be re-considered and re-done.
- more resources to do the work we are charged to do.
- By providing adequate budgets and staff to accomplish the scientific work.
- Budget appropriations enable full staffing in all departments of the agency so that biologists/ecologists are less encumbered. We are currently just keeping our basic projects afloat. We need the capacity to spend time collecting biological data, analyzing it, reviewing the literature and determining the best course of conservation actions.
- Focusing more on how to improve science (e.g. monitoring of monitoring projects) instead of how to prioritize \$\$\$
- Additional staff is needed for research and monitoring.
- The science aspect of the Service was stripped away over 20 years ago and handed to USGS to do our work. That money is dwindling and lots of needed science does not get done or is left for Universities to pick up, which sometimes leads to bad science as well.
- The people in the field, for the most part, are frustrated by this fact and morale is low.
- More personnel and additional funding to conduct the biological studies necessary to make appropriate conservation, mitigation, and regulatory decisions.
- Enable the Service to hire scientists at appropriate and competitive grade levels
- a result of being so short-staffed that workloads circumvent publication attempts.
- We need to stop hiring "hook and bullet" biologists and managers who have little understanding of ecosystem management. Even the basic requirements to be hired as a biologist promote this rather than understanding of new concepts for management of natural resources.

█ Budget increased to a level commensurate with the current cost of..... Updated facilities. Labs, Hatchery buildings, Raceways and tanks, etc... Less 8A contracting. Make people competitively bid for construction projects instead of giving the job to an over priced contractor just because they are owned by a minority! Hold the contractors that do get the bid to the terms of the contract so that we do not have to pay someone else to fix the mistakes shortly after. █

- Consider spending a few more dollars from the NRDA trust account rather than sitting on it and making the corporations wonder why their NRDA funds are not being put to use.
- Increases in funding so that more biological staff can be hired to fill current deficiencies in staffing
- Provide proper resources and funding for science. Increase funding for Science Applications.
- Be given adequate time and resources. Currently, we are just simply overwhelmed with work.
- Need more capability and capacity within the FWS.

- An increased budget to allow for better scientific data collection, analysis and staff training and support.
- Consider the most important resource, the people.
- Greater investment of time and resources, larger staff to address science-based issues.
- Less administrative level staff - more field staff. New staff should be best qualified not diluted to meet HR etc. initiatives. More support for time/staff to conduct high quality resource work - time management issues
- We need more staff to complete all of the work we need to do. Every Refuge should have a trained biologist. Survey and monitoring protocols need to be standardized nationwide. We need more law enforcement personnel.
- I think we need to focus on building our capacity, rather than continuing to deteriorate it by non-strategic or well-thought out workforce planning decisions. We also need to stop directing money away from research, monitoring, and management at the field level, which is often where much of the rubber meets the road.
- eat up our budget and time to do good science
- Restore pre-2000 levels of actual funding. Work loads have increased, administrative work has mushroomed, but we have fewer people to do the work than before.
- Stop promoting sub-standard scientists to management positions.
- More resources are needed to improve the integrity of the scientific work produced by the FWS. As an agency, we do not have enough money to fund robust monitoring and scientific investigations to show the long-term effectiveness of our conservation and management decisions. We do not have enough trained scientists, especially biologists, to conduct the necessary standardized, basic research that is sorely needed - especially basic life history work for many threatened and endangered species, or long-term habitat monitoring and modeling. Highly trained professional staff are marginalized and undervalued in the FWS.
- More resources=better science
- More funds allocated towards monitoring pre and post project work. Many gaps exist within the knowledge we need to appropriately make decisions and money, time, and effort is not spent to fill those gaps. Our field cannot progress without more research and the need is evident in every aspect of my job.
- The integrity of FWS scientific work can be strengthened by improving quality. Many employees lack the quantitative skills (e.g., population modeling, assessment, habitat modeling, sampling design, statistical modeling) required for such tasks as informed endangered species management and trend assessment. The FWS lacks capabilities particularly in operating the conservation planning and design components of their Strategic Habitat Conservation approach. This reality becomes obvious quickly, and, in fact, the land-grant universities and several public universities in a recent publication confirmed this status of incoming graduates. Fortunately, the National Conservation Training Center has well-developed curricula that can build these competencies in staff. Regrettably, these opportunities are underutilized. Supervisors and employees must be made aware of the value of these competencies for informed natural resources management and commit to building these skills, despite the fact that typically more than one week of instruction is required.

- Having a larger budget and directing a greater portion to research.
- If we had more scientists doing field work and research.
- More capacity! The current administration and agency management support science-based decision making for conservation of wildlife (previous administrations did not). However, we don't have adequate funding and personnel to do the science that is required, and decisions have to be made without all of the studies we'd like to do. I believe this is a deliberate strategy by some in Congress... to cut funding for research agencies and then claim we don't have good research to support the decisions they don't like. We are constantly being sued by groups that say we don't go far enough to protect wildlife, and by industry (ag, ranching, timber, o&g) supported by states, that say we go too far... that sort of evens out.
- The agency has been underfunded for years. We tend to throw money at certain issues such as the condor or sage grouse while ignoring other issues. In addition, wind and solar projects are considered high priorities which can actually harm sensitive wildlife habitat while there is little recognition or funding for Habitat Conservation Plans which can result in large scale conservation. The whole agency is embarrassed about regulating the ESA and tries to downplay its role.
- I think the leadership and all employees of the USFWS for the most part have a shared understanding of the mission of the FWS and an understanding that it must be carried out using good science but the chronic understaffing due to flat and declining budgets precludes the system working as it should. Scientists are in short supply or must do tasks other than monitoring and research to keep the ship from sinking. This in turn reduces the amount and quality of information available for the managers to use when making decisions.
- Resources for hiring enough staff to complete workload in a timely manner.
- Secure sufficient resources to hire adequate staff; the vast majority of field offices are woefully understaffed, at least in the ES, Fisheries, Law Enforcement and National Wildlife Refuge System programs.
- Address inequitable field distribution of received Congressional funding (example: the FWS Southeast Region has more aquatic and fishery resources than any other FWS Region with the possible exception of Alaska, yet only receives around 4 percent of the national budget for Fish and Wildlife Assistance; this has repeatedly been brought to the attention of the FWS Directorate, but remains unaddressed; rumor has it that the recent inequitable distribution is in part "punishment" meted out by the FWS Director over his displeasure at the leaking of an internal list of proposed National Fish Hatchery closures, allegedly by FWS Southeast Region staff).
- More staff at the field level
- More boots on the ground and regional & national support.
- For my work on recovery of listed species, limitations of funding needed to complete necessary research is a big problem.
- funds should be provided to ensure this occurs
- There seems to be a distinct reduction of lower grade biological staff and refuge biologists in general. These are the entry level positions that allow some of the refuge staff to learn the agency and mission purpose from the ground up so we can be better focused on conservation delivery. I remember the National Wildlife Refuge Biologist Conference at NCTC promising a biologist on every

refuge. The last conference about where this great agency is heading does NOT even mention conservation delivery goals. As these jobs are whittled away we are hiring more I&M staff, JV staff, and LLC staff at much higher grade levels. While I do understand the need for these, we have some that really do not have a clue what goes on in a refuge. They fail to realize that many biologists are the folks that are doing quite a bit of the habitat management as well as trying to keep the refuge functioning while juggling biological work. I see biological staff working on equipment due to loss of maintenance staff, helping do refuge operation specialist work because we have streamlined and removed those staff, and the list goes on. We need biological boots on the ground and a I&M biologist covering a huge zone goes back to the historical days when we had zone biologists, which was stopped because they couldn't serve that large of a land scape. And while I am blessed with having probably the best of the I&M crop, one brilliant biologist located 100 miles or more away cannot replace a biologist on a half dozen to a dozen refuges. Two thoughts keep popping up in my mind. If we don't learn from our history we are doomed to repeat the past. Insanity is repeating the same thing over again and again while expecting a different outcome.

- FWS should be given more funding to conduct high-quality monitoring and fully implement adaptive management practices.
- There are instances where perhaps a species should have been listed as a threatened spp but the Service chose not to do so, with part of the reason being that there is not enough data. Well, then put funding towards acquiring the data so that we can prevent a species from reaching the endangered status.
- provide more of the budget to actual field biology, monitoring, and research
- By adequately funding activities so the agency doesn't chase money based upon flawed science. There is a lot of money in science and that seems to drive things more than actual scientific data.
- Provide as much resources and focus on the advancement of science and scientific integrity as we do with leadership training.
- Provide funding for more capacity. When looking at permanent positions, the FWS is top-heavy. Currently there are few permanent positions being filled at a GS-9 and lower. These positions are being filled with temps/terms. Most of the field work is conducted by people in these positions. These biologists are trained and then move on because there are no opportunities for them to become permanent. I think this is wasteful and unfair to biologists that have been working for the Service for many years.
- We also need more employees, we have 9 employees on the [REDACTED] acre refuge in which I work. I am the only [REDACTED] employee, there is no way to succeed with those numbers. We are setting ourselves up for failure.
- Hire more science positions
- The most valuable change would be to have a larger budget and adequate staff to complete the work coming in to our office. Follow up on past work to ensure compliance is virtually never done because we can barely keep up with new work coming in. The degrades the value of our work in the long run.
- Continue to recruit and develop good scientists, and ensure their findings are not censored.
- More staff and resources.

- , better funding,
- More staff in the field.
- Frankly, the mission and integrity are fine, it is the current lack of resources and people that is the major hindrance to production and use of science by FWS. We have seen major loss of staff and experience recently, and the inability to hire new young talent. Good intentions can't be realized without enough people. Morale generally, especially in Refuges and Ecological Services, is low and dropping. We are massively overworked. The current conservation model of the Service depends on research and monitoring, but we don't have the capacity, or the money to contract the capacity, to fill those two demands. So our model (strategic habitat conservation) is an empty promise, and we all know this.
- Also, the extremely long hiring process to fill vacancies is a big problem. Supervisors need to spend an inordinate amount of time to get through the multiple bureaucratic steps just to get a vacancy announced, then the budget problems and delays in hiring cause staff shortages to collect biological information and produce scientific credible information in a timely manner.
- Ending sequestration and the madness of reductions in personnel. We've cut back way too far and the administrative functions at our Regional Office have become a nightmare. The FWS Pacific Region seems to have targeted one of the programs that needs help not more cuts, Fisheries. They have reduced line-supervisor coverage to the point we can barely detect a presence of the one remaining and ineffective person left who should retire. It's a strange situation where the RD and Deputy RD seem happy to churn org charts and move people around and out of fisheries, but never do a reality check on service impacts to the field. It's gotten, dysfunctional and destabilizing and they seem a bit clueless and unconcerned about it. Saving money and reorganizing whether detrimental to the mission or not is all that seems to matter. Continuing same level of service always is expected of course. But less with less has to happen, and things get missed and the administrative burdens to the field have gone off the charts making it nearly impossible to keep up. Things are of balance pretty badly.
- Improve funding and return research capabilities to FWS.
- Need more capacity in the form of money and people. Far too much work to do with limited resources! No money for monitoring and research. Partnerships with other Federal, state and local agencies and NGOs necessary to further mission.
- More funding. The cuts have been very difficult for morale.
- Appropriate budget and staffing levels.
- More opportunities for full time permanent work. USFWS loses really good biologist and technicians to the private sector because we get tired of seasonal, term, and term work.
- More money for staff.
- Work loads are increasing, staff is shrinking, folks are retiring. We need more people, more time, and more PhD's and Masters folks in the agency. Our administration sometimes things one GS 12 can be replaced with 3 GS7's. There is a need for more horse-power in house - more research experience - more analytical skills. As GS 12 PhD's are retiring - we have either no one to replace them or a GS7 with a Bachelors in Environmental Policy (???)

- Increase discretionary spending allotments primarily for the upkeep of production based facilities allowing the implementation of the 'best courses of action' determined by the abundant governmental and non-governmental scientific finding relating to the conservation and restoration of habitat and biological species.
- Adequately staff the Field Offices with professional scientific staff, so that the large, unmet workload currently backlogged there can be properly addressed.
- We need more staff. We need to get rid of programs like LCCs that are robbing our budgets. I work for ██████████ in review of major development projects like ██████ and ██████ and we don't have enough qualified people working on these projects. When decisions need to be made our leadership is more concerned about the political implications and the effect on their careers then they are about doing the right thing for fish, wildlife, and habitat.
- Contracting of surveyors and biologists based on their qualifications instead of the lowest bidder selection. Allocation of funds for additional inventory and monitoring projects. Standardization or suggested methodology and protocols for data collection.
- Adequate funding and staffing. Increased focus on agency mission and mandates and elimination of duplicative or unnecessary initiatives (e.g., Landscape Conservation Cooperatives dilute the agency's mission, do little or nothing to assist with adherence to agency mandates, and remove resources from necessary programs).
- organizationally or policy wise I am not sure...but our budgets do not allow us to oversee and engage at a level that could maximize our agencies reputation and expertise internationally. Our agency staff positions are low graded relative to Dept of State, NMFS at the least for comparable responsibility and expertise. This is due to historic small budgets and the ability to exploit the passions and dedication of conservation minded individuals.
- More resources and capacity to meet the scientific demands of Adaptive Management (e.g., modeling, monitoring, etc.). Our agency officially does SHC but doesn't really do much of it on the ground, and can point to relatively few "comprehensive" examples. This disconnect between what we say we do and what we actually do makes people cynical and disenfranchised.
- We lack financial support and permanent staff. We lack support for environmental contaminants staff. Endangered Species is painfully overburdened. Everyone has huge workloads.
- More funding and staff resources, and associated relative reduction in administrative burdens.
- Agency culture also needs to break down silos that are created by how funding and resources are currently distributed. Need multi-year funding process for better planning and implementation of appropriate surveys to inform management decisions.
- funding is almost nonexistent for conservation and recovery,
- FWS really suffered when our researchers were taken away from the agency and ultimately put into USGS. We lost control over the research that we needed, and over time, lost our say in what research USGS does. We also lost the funding that was used for research. We need to add researchers and research funding back to the FWS. Also, the Fish and Wildlife Cooperative Research Units need to be added back to the FWS - USGS should not be in charge of these units. The USGS is an unbiased agency with no mission to do good things for fish and wildlife. The Units have a mission

to do good things for Fish and Wildlife and are supposed to work at the behest of the State wildlife agencies and the FWS. But the FWS is no longer a voting member of the Coop Units. This is crazy.

- Have adequate staffing. Have adequate and stable budgets to complete scientific objectives
Maintain a focus on collecting and using good scientific information to support management decisions. Less political interference.
- Less HQ and RO staff and more in the field. More trust in the field to get things accomplished.
- More staff,
- Increased funding for conservation research
- More data collection and research done by FWS scientists. We can often do the job just as fast and for less money than hiring independent contractors. We don't have the budget to hire independent contractors to do the work, and it is often not a priority of FWS scientists to do their own work. There is very little opportunity for us to confirm the work of the reports that are submitted to us by other agencies or businesses.
- In my opinion the FWS spends time reacting to crises and redirecting personnel and funding to address crises. We do not value the agency programs that are pro-active, fund science and recovery because they are not litigated or "hot" programs. These successful partnerships and stories are invisible and not supported by management.
- Need more funds to conduct priority work;
- More agency scientists in the field at refuges. We have been cut almost in 1/2 in biological staff in the last 10 years. Most refuges do not have a biologist at the station anymore. It is not the same for contractors to come in for a short term, perhaps only hrs, visits and fulfill a limited suite of duties compared to a biologist that is on station everyday and notices subtle changes over time and can assimilate that information with disparate actions, activities, weather, etc.
- Adequately staff the agency so we can do research and publish in-house. Give us back our research arm that went to USGS many years ago. Since we lost our in-agency research branch to another agency, our access to high quality research and researchers radically decreased. USGS will do research for us but it is a cumbersome process and their scientists may or may not agree to do what we request. In other words, most research that gets done is determined by USGS scientists (who were FWS employees in the past) and other researchers (e.g., Universities, NGOs, contractors, etc.). This hinders the FWS's ability to quickly obtain high quality scientific data needed for decision-making to effectively achieve our agency's mission.
- Provide the funding
- Increased staffing would go a long way towards better, more effective decision making.
- We need qualified scientists in top-level positions. We cheapen the word "science" as many of our leaders and many across the FWS are not scientists by any definition that I am aware of. Very few hold PhDs, very few publish, very few teach science classes at universities, very few give talks on research at professional meetings. We have taken a "Facebook" approach to science; say the word (like "friend" in Facebook) and you are doing science....bull....
- Get rid of the excessive amounts of Regional Office and DC people. Too much tail and not enough teeth. I mean, for God's sake, why do so many people need to review a listing package or a biological opinion on a controversial project? The positions should be transferred to the Field Offices that are

swamped with work and no one to do it. 6. Require upper level and SES to have a biological background. The Deputy Regional Director of Region █ openly brags in meetings to other Service employees that █ has no biological training, not as much experience as them, and was hired directly into a █ management job.

- Provide better tools and funding and incorporate all divisions of the FWS in decisions.
- Improvements could be substantial with sufficient staffing and support from leadership.
- More funding.
- Increase our budget and staff levels, so that we have time to become well informed about the latest science.
- Additional resources and support for long-term monitoring, additional support for applied research through USGS or universities, additional training for staff on scientific integrity.
- Increased support for biologists that work in aquatic ecosystems, particularly marine systems.
- With stable and declining budgets, travel, especially to symposia and meetings are the first to go, and that is unfortunate.
- Increase in-house scientific capacity. Hire more capable scientists (esp those trained in modern computing and statistical analyses) to help staff involved in regulatory work be better informed and better understand the state of the science. 2) Improve capacity to fill in missing info when the "best available science: is insufficient. 3) Stop cutting (or refusing to backfill) positions. Reducing the Agency's staffing level in the face of increasing (and increasingly complex) numbers of projects is exacerbating the problems of incomplete or conflicting FWS work products.
- FWS needs significantly more resources to conduct basic monitoring and work toward true adaptive management. Staffing levels and financial resources are severely limiting our ability to conduct science.
- I don't know given the current political climate. It appears my RD is making decisions to keep our funding off the chopping block for the long term while compromising recovery of listed species in the short term.
- Use Congressional appropriations for their intended purpose as reflected in the budget justification. For example, the National Wetland Inventory budget is about \$5.1 million/19 FTEs which appears to be adequate for mapping the extent and types of wetlands throughout the nation. However, there are only 13 FTEs employed, some \$\$ are being funneled into a General Program Services to support a large workforce in DC. Some money is funneled to support the Coastal Barriers Act program, historically funded by the Service's coastal program. After these cuts, there's not much left to adequately map or keep current the data for this critical habitat resource that supports fish and wildlife.
- more funding to allow us to do work we simply don't have the resources to do.
- FWS lost a connection with science when USGS was removed. Many FWS employees do not understand science and how to use it to inform decisions. This mainly comes from a lack of training in science. A large proportion of FWS employees did not complete graduate school in their field of work, and if they did, very few have published. Selection of more scientifically trained applicants would help.

- Lay-off incompetent workers in the Regional Office. Do not allow employees to stay at one duty for a long period of time, especially facility Directors. It would help the FWS if those in the FWS who have the power to stand up to other agencies to actually have a back bone and not let them walk all over the FWS. I am tired of hearing everyone complain that Ecological Services in [REDACTED] curls up in a ball every time there is confrontation with the [REDACTED]. They are letting the [REDACTED] break the law while endangered species get closer and closer to extinction.
- Allow for a research grade in FWS, this would help retain the best and brightest researchers.
- The most effective solution would be to have more actual biologists involved at higher levels of the Service. Additionally, more focus/funding/support for doing research rather than only regulatory issues that often overwhelm staff would help put focus on science rather than policy/politics. This may be hard since many biologists do not seek out the higher levels of management, preferring to spend time outdoors or with the organisms they study rather than having to play politics or manage other people.
- Fund us. More experienced employees getting promoted from within.
- We should get the U.S. Fish and Wildlife Scientists back in the Service. It was a mistake for Babbitt to get rid of the Patuxent Wildlife Researchers.
- We lack resources to do the research and monitoring we need.
- There is simply not enough USFWS employees with scientific expertise and use of modern analytic techniques. Much of this is being developed with the Inventory and Monitoring "effort". This began as an initiative. Inventory and Monitoring should be made a program, as applying loose terms makes the agency appear uncommitted to developing applied science
- We are being starved out by Congress. We have insufficient funds to adequately conserve wildlife here and abroad.
- Reinstate, support and highlight the Conservation Planning and Assistance Program in Ecological Services; devote less funding and activity with eagles and endangered species; hire professional wildlife ecologists, landscape ecologists, environmental ecologists, fisheries biologists, habitat scientists and other scientists in leadership positions;
- Increases in Field staff to accomplish field work. More funding to utilize scientists outside of the Service to conduct needed work.
- I think that improvements could be made by hiring people with higher education backgrounds and not just promoting from within
- . Politics generally influences my work through funding. If stakeholders are opposed to FWS management or regulations, then funding is withheld such that it becomes difficult if not impossible to conduct a statistically valid analysis needed to support the recommendation that can withstand peer review.
- Provide "tenure" protection to permanent FWS employees.
- Hire permanent field workers so quality data is collected. Hire permanent employees so there is some consistency and accountability throughout projects.
- There is a serious lack of capacity such that it encumbers all but the simplest decisions. We need more staff as we have suffered for years under budget cuts and staff losses.

- Stop using USGS for R&D. Have the USGS, NASA, NOAA, NSF R&D funding come directly to FWS for direct distribution to accredited universities competitively at needed issues.
- Hire the best qualified people for the job

Management and Leadership

(Mentioned in 22% of coded responses)

- A lot of lip service is paid to scientific integrity by officials at Headquarters (D.C.) and in Regional Offices, but the importance somehow gets lost by the time you get to the field level. Staff expertise is often discounted or ignored by decision-makers in Regional Offices, when it is those very staff in the field that have a direct link to the research being done in support of the mission. I am unsure whether it is arrogance or pressure from supervisors that causes it, but Regional Office decision-makers feel like they know best, despite being several hundred miles away from any given issue. I think that our mission and the integrity of our scientific work could be improved by truly instilling our upper echelon managers with a sense of how important our mission is. It would also be helpful to have true leaders in decision-making positions, instead of biologists that have been handpicked because they know the "right" people and have taken the "right" leadership courses. Too many of them are more interested in making their supervisors or high-powered "partners" happy, as opposed to standing by what is right by the species or environment. We often have to make unpopular decisions at the field level, and those decisions are made even more difficult when the Regional Office either doesn't support us by remaining silent, or worse, contradicts and changes our decisions. We do not receive the trust and support that we need (not to mention resources in the form of staff and funding) to make the right calls. Ultimately, the USFWS would be improved the most if we could make decisions based solely on the science, instead of having to balance those decisions with politics. But then, if that were the case, we would be right alongside the EPA in having our budgets reduced at an even more rapid rate.
- Change in top leadership; too many funds diverted to what are considered new ideas by current leadership, which are really just a re-hash of past programs (surrogate/representative species) or concepts like SHC and LCC which were tried in a lesser sphere of influence (ecoteams) in the past and for the most part didn't work. They were good concepts but once they were out there the financial and leadership support dwindled. We need to use the limited financial resources FWS has to work across program areas to get high priority tasks (like ES recovery and habitat protection) done. I don't agree with the establishment of an Inventory and Monitoring "kingdom" with many high paid professionals the cost of which drained the on the ground capabilities of field stations like refuges, hatcheries, and ES offices.
- Science should be the basis of our decisions. More scientists should be hired and trusted to conduct the Service's mission. Managers should have strong scientific backgrounds. Those managers who are incapable of making decisions based upon science should be removed from decision-making roles. Biologists should be encouraged to find and use the best science, trusted, and supported. [The opposite is occurring.] The use of science needs to be emphasized and supported up and down, across and through the agency. The entire FWS culture needs to be changed. Science is supposed to be the foundation. Emphasizing this message at the Regional Director levels could be very helpful.

The FWS will continue to lack scientific integrity and have extreme difficulty in conducting the mission until these issues are fixed.

- Senior management seem to support science that supports the direction they want to go and selectively interpret inconvenient science
- The FWS should make better use of experienced staff. Although I have worked for the FWS for [REDACTED] years, worked on numerous controversial projects, and worked under the same regional director for over 6 years, we have had maybe 3 discussions of issues. His predecessor would call me directly to discuss issues; this RD only wants staff to prepare briefings that get passed through several levels of review; he will not engage staff.
- Having Wildlife Biologists with field experience at the top levels of the service.
- Upper management should not overrule the decisions of committees for funding or other recommendations unless for some odd reason they are directly conflicting USFWS policy or mission. USFWS should not sponsor workshops for "partners" and then form management committees to make the same planning decisions. Upper managers (e.g., RDs, Refuge Chiefs) should be scientists and not pulled from non-scientific backgrounds like Realty or Visitor Services! If upper management is going to do a You-Tube seen by all employees (e.g., on surrogate species) they'd better know what they are talking about. The USFWS should take care in hiring retired State employees who are acculturated into the state mission and point of view of wildlife management which is often in direct conflict with the federal viewpoint.
- In our office, the FWS mission and integrity of scientific work would be enhanced by hiring good supervisors/managers that understand and support science and enhance the biologists' ability to do their jobs. We have been chronically understaffed and have had poor leadership in place for the last 5+ years. Our last field supervisor completely deconstructed my ability to effectively run Coastal Program by disbanding our partnership programs and not allowing appropriate obligation of Coastal and Partners funding. This was despite the fact that Coastal Program projects had won a Recovery Champions Award the previous year and were consistently used as examples of effective restoration.
- We have been hiring people for biologist positions who have no graduate level courses and minimal work experience. We would do better to hire people who have had more experience with scientific studies rather than just the nuts and bolts of our particular operation. People seem to be picked based on a first impression of managers and selected for training so that other employees are excluded and left behind. The result is that we develop disgruntled technicians lead by biologists that are more concerned with making themselves look good to the managers by only presenting them with what they want to see.
- By disseminating information and making logical management decisions based off of sound science. I feel like I am constantly exposed this mentality that we should continue doing things a certain way because "that's how we always done it". I feel that we need to start having more of a "quality vs. quantity" state of mind.
- clear direction,
- Involvement of the Refuge Inventory and Monitoring Program in developing and prioritizing biological projects. Completion of a Natural Resources Management Plan (NRMP) and an Inventory

and Monitoring Plan (IMP) which follows the goals and objectives of the Refuge CCPs to allow clear analysis of management effectiveness.

- By returning the science program(s) that was moved to USGS back to FWS, or initiating a new program within FWS similar to the one that was relocated.
- USFWS is paranoid of controversy and would rather just keep quiet about issues rather than having negative press. We are failing to meet our mission--for a variety of factors both internal and external--and I think that is an important issue that needs to be disclosed. Serious administrative burdens are exacted on USFWS staff, making progress for wildlife conservation difficult. USFWS will not purchase land, hold easements, but rather is trying to create markets for the private sector to perform conservation. There is no time in our history that private business performed conservation at any measure equivalent to the government.
- As for the integrity of the scientific work produced by FWS.... current leadership is actively and deliberately downgrading and eliminating much of our actual scientific work and duties. They view much of that work as within the purview of USGS and not our responsibility, when we do often have clear responsibility and duty for that work. Other instances may be more of a gray area, but the work would serve the needs of FWS better if it was done by actual FWS biologists instead of farmed out to USGS (and it would be more cost-productive if FWS employees did the work as opposed to USGS doing the scientific work). This change in senior management mentality has completely shifted the focus and pursuit of scientific work that FWS staff do and has led to horrible morale.
- There needs to be more efforts to develop policy level leadership internally within the Service, and specifically from the scientific ranks.
- It is my perception that upper-level managers are influenced by fear of Congress dismantling the Endangered Species Act and/or otherwise interfering with the mission of the Service. This affects their ability to appropriately support the scientific integrity of the very conscientious scientific staff whose work is supposed to support the managers' decision making. The best way to improve things would be to actually remove the political threats to the Service, but barring that, it would help if the managers could make a commitment not to let their good judgement be corrupted by fear.
- Reduce the amount of internal, administrative confusion (seems to always be changing and takes too much time)
- The mission of the Service can improve by allowing its own biologist to do the work and not rely on others that don't know the species to do the work. More often than not civilian contractors that are hired by other regulatory agencies (i.e. Army Corps of Engineers) do not have adequate expertise in conducting scientific surveys for T&E species. As a result, bad science is collected, usually not in favor of the species, and the Service is forced to make determinations based on their data.
- More effective, engaged, and supportive regional office managers.
- I think we are so wore out and so beat down that we are afraid to make a move that will cost us politically and financially. I think much of our leadership has the best intentions, but the fallout from making politically unpopular decisions is so prevalent that it becomes paralyzing and the things that really matter and are hard to do, don't get done. The people in the field, for the most part, are frustrated by this fact and morale is low. We are just waiting out this storm of poor budgets, poor leaders, and weak backbones. We all work hard, love the resource and our coworkers, but we're

feeling more and more abandoned and micromanaged by our cadre of inexperienced leaders who's main objective seems to be 'leaving their mark' versus listening to the people on the ground, speaking up for their staff, and building our programs back up. Again, we're waiting and hoping this tide will turn.

- Create a system of authority whereby managers are held accountable
- New leadership that supports science at both the director and regional director level. Our regional director moved to our region during the Bush Administration.
- Less management layers. We spend too much time briefing mid level managers than doing the work. We need a direct pipeline to decision makers. GS13s don't need "baby sitted". Let us do our job.
- There is a culture that has taken root at FWS, and especially within Ecological Services, where many managers are arrogant, ignorant, inept, and incompetent at coordinating scientific knowledge; professional experience and integrity, expertise, and credible management skills for promoting the good of our fish and wildlife resources and the environment. Unfortunately, it now is my opinion that there is no reasonable administrative fix for this now-entrenched and deep-rooted culture. The only way to effectively deal with it is through a good house cleaning of poor managers, from the Director of the Fish and Wildlife Service on down through at least mid-level management.
- We need leadership that is willing to make unpopular decisions because it is the "right thing to do." Our leadership lacks backbone. 2. Authority for management decisions, including how science is conducted, stand with mid-level supervisors or decision makers rather than coming from the top down (mainly due to #3 below). Ultimate authority does not stand at the top, especially when it comes to how conservation is implemented on the ground. Part of this is because field people don't trust leadership even though they will say they do or otherwise their careers will be affected. I have been threatened with this in a significant way within the past year
- By appointing conservationists at the highest level of government, with scientific backgrounds. Not business leaders.
- Be given adequate time and resources. Currently, we are just simply overwhelmed with work. We are constantly "distracted" by new admin policies, poor infrastructure, and too many layers of management. Reliance on on-line training is a joke. Travel restrictions and the entire travel process is so cumbersome, I'd rather just pay for it myself sometimes. I have an endless list of inefficiencies I could grouse about...
- Remove the inept managers who don't have any scientific or leadership skills. Reduce the government jibber jabber that creates unreadable documents because they are so long and so produce shorter more focused documents. Headquarters needs to stop forcing one-size-fits-all guidance/business models.
- Dismantle onerous administrative requirements instituted during the early 2000's which eat up our budget and time to do good science. These include the GPRA Act, the byzantine employee evaluation process (which takes 10 times as much of my time as it used to), centralized computer system control (which makes it difficult to obtain essential scientific software), data management bureaucratic requirements, the various "accomplishment" databases such as TAILS, and training programs that are top-heavy with annually-required administrative training rather than the technical training we need to do good science work and keep on top of the field. 2. Restore pre-

2000 levels of actual funding. Work loads have increased, administrative work has mushroomed, but we have fewer people to do the work than before.

- Stop promoting sub-standard scientists to management positions.
- The mission of service can greatly improve if all components of my office are integrated into the decisions taken and improved communication between all employees. Most of the time the information reaches a few employees and other employees not aware of the information.
- I think we do a lot of work here that is just because "we" want to use the biggest, baddest, most expensive and newest stuff out there (particularly Asian carp and eDNA) instead of using the most sound, accurate, realistic, sensible science. There is a lot of pressure to do SOMETHING and "we" do things just to show that we are, again, instead of because it makes sense or is supported by research. A lot of the actions "we" have taken have negatively impacted the environment simply because the USFWS was pressured to do something and had to show that, even if the actions were useless or even counterproductive. There is a lot of pressure to continue doing work in order to support jobs- and although I appreciate having my job- it seems a waste of effort, and money that would be better used for research instead of the management and implementation done by the USFWS. I think it would be useful for either the USFWS to have research branches engrained in the agencies because having the USGS do all the research seems to cause a disconnect between the science and the field work.
- By holding managers to the standards of the scientific integrity policy, and possibly by allowing review of the decision making process at various levels.
- Eliminate some of the administrative and bureaucratic obstacles to conducting scientific work efficiently. A good example are requirements for contracting and financial assistance awards.
- I believe the problems adhering to the mission of the FWS and scientific integrity lie primarily with senior levels of management, from regional offices to FWS headquarters in Washington. I work with endangered species, and many of these species that we are responsible for protecting and recovering are afforded inadequate protections due to political influences and influences of other agencies and stakeholder groups. Science, the ESA, and the mission of the FWS are too often ignored in lieu of politics during decision making and policy setting. During the course of the last few years I have grown increasingly discouraged, frustrated, angry, and disappointed with some of the questionable actions and decisions of senior level management within the agency I work for and used to hold in high regard.
- FWS management should support staff's positions more often instead of undermining them.
- Take immediate action to remove and/or discipline managers who alter or influence field work and/or research results for political expediency (e.g., see the widely-publicized case from the ES Field Office in Oklahoma which involved freshwater mussel investigations).
- Free biological staff from onerous administrative requirements (i.e., historically, time and attendance and travel administration was done by administrative staff; currently, field biologists spend inordinate amounts of time with Concur and Quicktime software, especially the former, when this work should be done by admin staff).
- leadership with a much stronger science background/expertise/experience/

- Improve quality of agency leadership and decision making. Increase FWS connectivity to conservation stakeholders needed to identify partnership based solutions to environmental problems.
- I was unpleasantly surprised to see results of a poll showing that the highest percentage of employees at FWS work here because of upper mobility opportunities. The strongly dedicated employees are mostly those in the trenches, working hard at protecting the natural world at GS-12 grades and below.
- More focus on habitat and species integrity; less focus on meeting quotas (diversity) and upper staff positions.
- Reduce the unwritten requirement that the FWS work in "agreement" with the States or other government agencies. While the FWS is mandated to work with State Game and Fish agencies in partnership, there appears to be an unwritten rule that the FWS should always back down, and agree with the State perspective so as to not "make waves". In my experience with this endangered spp project in the last 5 years, I have seen us (FWS) tend to back down (or make back-door deals) when the States opposed a FWS policy that was put in place in the Recovery of an endangered species. I have also seen a FWS manager not concede to the State on certain management actions that the State Natural Resource agencies had not agree with, and that manager was then no longer viewed as being objective, was pegged a "trouble maker" and his/her promotional potential just ended.
- Leadership
- Contractors must not have any decision power over employees. Supervisors must make sure to respect, protect and listen to the experience of employees over contractor just making money through the government with no real interest in conservation. Supervisors micromangement is a night mare. They are supposed to supervise, administer and provide the tools for the scientist to do their work. Not to take uninformed decisions over them, mining their credibility and respect with co-workers and contractors. Specially giving the late ones so much control that their decision are not on the best interest of the U.S. Fish and Wildlife Service, conservation and recovery of endangered species.
- Listen to the biologists; don't override their conclusions and suggestions; don't tell them to change recommendations which are based on their findings and best judgement; provide more of the budget to actual field biology, monitoring, and research and get rid of all the bureaucratic fat; stream-line and/or eliminate much of the red tape and bureaucratic steps that impede and do nothing to foster accomplishing the real mission of the Refuge System; trust local staff to carry out the mission and hold them personally responsible;
- those in Anchorage, DC, Lakewood in general do not have a clue about how best to go about meeting the mission of the Service at the "local level", they should let local staff be responsible for those efforts and not create "silver bullet" regulations and policies that just create hurdles, barriers, and impediments to responsible and efficiently carry out the mission of the Service. We have a responsibility to the public and the lands and waters we are supposed to protect and manage to achieve this mission in an efficient, genuine, and effective manner. Hold us responsible accountable

as individuals and get out of the way if you aren't going to facilitate and foster our efforts. Passing blanket regulations and policies confining our efforts does not accomplish this.

- Leadership needs a spine to make the right decisions even if stakeholders don't like it, when based on very obvious scientific results
- Better managers and supervisors with good skills, vision, and strategy, and a strong conservation ethic. And, a backbone.
- Eliminating some of the bureaucratic nonsense that occupies so much of our time. Everyday work related activities such as travel, purchasing, and mandatory training significantly decrease the amount of time available to complete the duties we were hired to perform.
- In Region 7 the regional office has had a significant turn over in staff with science expertise. There replacements have little subject matter expertise or motivation to promote science based decision making.
- More timely decision-making by leadership on accepting planning and monitoring protocols. Change in leadership.
- Reduce , streamline recruitment and hiring proceses, and minimize unnecessary training. Let the scientist do the data collection and report writing and not spend wasteful hours with bureaucratic and administrative matters.
- Integrating data management policies and procedures into scientific work and integrating the data quality, and science efforts with the DOI data management efforts
- Remove all management and start over.
- Delegate more authority to the Field offices Hire more science positions Develop a technical GS series so a scientist can move up a ladder without moving into management. Currently levels above a GS 12 in science are rare.
- Eliminate excessive use of out-sourcing for training and travel. The required use of DOI learn is unnecessary and should be limited to 4 - 1 hour online classes per year. The use of Concur for travel is a waste of money and very complicated to use. Making travel reservations locally would save money and result in 2-3 hours loss of time. 2) Eliminate excessive extra collateral duties such as safety, managing grants (we give up 17% of grants for this and still do all the work), maintenance, computer/IT, etc.
- Improve leadership in Headquarters and Region 6.
- Having upper management that believes in and supports our mission and scientific integrity
- Improve leadership,
- For over twenty years, the process to get approved to attend professional conferences is demeaning and frustrating. On one hand, biologists are encouraged to share their scientific information, yet the bureaucratic process to get approved to attend causes frustration and loss of morale.
- Placing research functions largely within USGS has significantly impaired FWS access to applied research.
- It's unfortunate, because it seems like a lot, if not most, of the leadership in the FWS is driven by the desire to "be in charge" - direct people, make decisions, hold power, mingle with the big-wigs. It appalls me how little science is actually considered by the decision makers - I've seen time and time again how the findings of research scientists gets shoved under the table or broadly generalized in

favor of politics and back-door agreements, very much to the detriment of species conservation. Many of the decision-makers of the FWS can't call themselves biologists, or even scientists in general, per their educational backgrounds. And if we're supposed to be basing policy and regulatory decisions based on science relative to the ESA, where does that leave us? It leaves us with a bunch of politicians making the decisions. They can bend the facts any way they like (or ignore them altogether), and there's not much that the scientists feel like we can do about it. While we're informed of our whistle-blower rights, we've all seen instances where the whistle-blowers are faced with retaliation and discrimination. The political machine in the FWS seems to be growing, and it's beating us down more every day, and it's getting harder and harder to stand up against it.

- Strong support of middle management to put the mission of the agency above the interests of regulated industry and less risk averse, more aggressive support from DOJ.
- Improved leadership training that is founded in experience with the agency programs. Improved partnership with state fish and wildlife agencies.
- Also, upper level managers or administrators (e.g. Regional Office) influence decisions based on administrative or management goals or priorities even if they are not supported by our own science. I am not sure how this could be changed, because it is an internal, agency problem.
- By support and trust of upper management, Assistant Regional Directors, Regional Directors and higher, to conserve our trust resources. And through stronger leadership. Leadership currently appears to care more about appeasing others, mostly the states, than they do about listening to the science and the biological conclusions of their employees. Additionally, I think our credibility is hampered by a lack of more outreach to the general public. We don't often respond to negative claims, and when we do it is too politically correct to be effective.
- By rewarding those who do publish scientific work with promotions, however, currently it seems that the people who do not publish are the ones that get promoted, probably because they are spending that extra time selling themselves.
- Relieve FWS employees of the excessive demands of time/effort needed to satisfy administrative processes and mandatory training requirements. Allow more time and provide more leadership support for us to focus on our missions and purposes.
- Adequate funding and staffing. Increased focus on agency mission and mandates and elimination of duplicative or unnecessary initiatives (e.g., Landscape Conservation Cooperatives dilute the agency's mission, do little or nothing to assist with adherence to agency mandates, and remove resources from necessary programs).
- Scientific integrity is compromised by middle management who obey their regional directors
- We are greatly underfunded and workforce issues are critical. We have been told "just because we can implement the Endangered Species Act doesn't mean we should." I believe a major overhaul is needed. There is a significant imbalance of power between field biologists and management. In the recent past, field offices were efficient (and had support for) conducting scientifically-based recovery and conservation work, processes permits in a timely basis, and maintained good relations with conservation partners. Management was there to support the field by providing funding, helping make conservation happen, and implementing our policies. Now, management insists on being involved with all controversial decisions, funding is almost nonexistent for conservation and

recovery, and the regulated community has determined how to get the decisions they want by directly going to the regional office. Our conservation partners are asking with increasing frequency "what is happening within the USFWS?" Unlike in the past, we have almost no access to higher levels of management, especially our regional director. If this would change, perhaps she would understand the fundamental problems occurring throughout the region.

- Place qualified scientists, not policy wonks, in leadership positions throughout the FWS.
- In my opinion the FWS spends time reacting to crises and redirecting personnel and funding to address crises. We do not value the agency programs that are pro-active, fund science and recovery because they are not litigated or "hot" programs. These successful partnerships and stories are invisible and not supported by management.
- administration often dictates their priorities and not necessarily the real priorities;
- As the Service has centralized contracting, it has made it very difficult to justify sole source acquisitions of services (e.g., a specific scientific lab) or products (e.g., a specific scientific instrument) to ensure that we are either state-of-the-art or consistent the protocols of scientific partners.
- Reduce pressures from Congress at the highest levels of the agency.
- If leadership would actually use the science in their decision making process as opposite to political influence.
- I believe the FWS's approach embodied under Strategic Habitat Conservation (SHC) is wise, but suffers enormously from the inherent tendency among pretty much all people to resist change. The paradox here is that many (most?) of us already embrace (and have long embraced) the tenets of SHC, including movement (when possible) toward proper ecosystem function, adaptive management (learning) approach, and leveraging of partnerships.
- That leadership take scientific analysis into consideration in making and changing decisions. Make more transparent what factors were used when decisions go against the research. Provide the funding and timing of decisions, so that research can better address management decisions. Follow the DOI policy on using Structured Decision Making and Adaptive Management to make decisions more transparently, <http://www.doi.gov/initiatives/AdaptiveManagement/TechGuide.pdf>.
- Management of the agency just wants to get along and avoid controversy, even to the point of having to ignore when members of Congress are totally inaccurate, using false information, and spouting it off to ensure that the more it is repeated without challenge, the more credibility it is given.
- by management taking a few minutes to figure out what the fuck they're trying to do...
- I'm concerned that it's beyond repair. Bad managers need to go, the scientific integrity policy needs to be enforced.
- The current "leadership" of FWS has sold out a "conservation career" for "career conservation and advancement." Specifically, there is a evolving culture of deference to anyone and everyone with an opinion (especially State Directors), often to the exclusion of the agency's own experts. The agency "leadership" has taken an increasingly and very strong anti-conservation position on numerous, obvious decisions in last few years. So if it looks and smells bad from the outside view, you can be 99% sure that FWS experts don't support the decision. This applies to listing decisions and section 7

consultations. FWS routinely excludes own scientific, species, policy experts from providing information contrary to their pre-decision. Specifically, it is the ARD-ES, Deputy Regional Directors, and Regional Directors who perpetrate these practices. There is no trust or deference given to FWS ecological and policy experts with decades of experience. In ESA decision-making practice, statutory, APA, regulatory and policy standards as well as fundamental tenets of conservation biology are routinely ignored or perverted. There are double standards applied such as demand for absolute, empirical scientific certainty for mgt to support an "adverse effect," a "jeopardy," an "endangered listing," or other decision that states, congress, or industry doesn't like. On the other hand, mgt will take a whispered thought with no support or basis from outside interests and rely on that "data." ESA decision-making standard is "best available" but mgt plays both ends to support their decisions. Decisions are no longer science based, but outcome based. Attempting to maintain professional, legal, scientific standards is met with hostility, threats, advice to not take certain positions, and ultimately, they remove you from meetings, communication and decision-making when you don't bend over. It is an embarrassment to work for this agency. Morale is the lowest I have experienced in my nearly 25 year career. Hundreds of dedicated scientists are being crushed under this regime. The FWS has lost its credibility and there is little hope of change with the current clowns sitting in leadership positions. Outside entities need to force change b/c the Director and his minions are either sympathetic or powerless against the Regional anti-conservation regimes.

- Get actual scientists in leadership positions instead of political appointees and industry lobbyists. Give the FWS leadership autonomy and greater compliance power. Allow for scientific input to stand on its own without political or vested interest interference. Appoint leaders that actually understand policy and mission.
- It starts with our leadership as they set the tone for the agency.
- Listing decisions should rely on the scientific data and not the interpretation of that data by the upper management.
- The Service needs to hire more scientists for science positions, especially at upper levels. In too many cases, regional and national science administrators are good ol' boys and girls with minimal science background who don't understand science and are more interested in personal advancement or supporting their program than advancing conservation through science. We tend to hire from within, with far more emphasis on who a person is and if they're an up-and-comer than if they're actually qualified. Consequently, conservation, morale, and our science efforts suffer. We have seen a large emphasis on science in the past several years, but there is little substance and much inefficiency in what the Service has done with science. This survey emphasized external pressures such as the influence of business and politics on decisions, but I think our biggest problems are internal. Almost all leaders are afraid of anything controversial, and will use more studies and programs to give the appearance of doing something, when what they're really doing is trying to avoid making a tough decision, even when the answer is clear.
- Fire the majority of SES "managers." This is a system that encourages and promotes political hacks. 2. Get rid of the "Stepping Up to Leadership" program. This is a system that encourages and promotes "go-along-to-get-along" spineless "managers." In reality it is a testing and filtering system to make sure only followers get promoted into higher ranks. 3. Get rid of the "Foundations" training for new

employees at NCTC. This is just an "I'm okay - you're okay" BS waste of time. Start a program for all new ES biologists, similar to Special Agent Basic School, that includes instruction about the ESA, MBTA, Lacey Act, CWA, etc with real tests that you have to pass to graduate. Also it should include physical training. 4. (This sounds weird) - give awards, similar to military campaign ribbons to wear on our uniforms. For example, for getting a jeopardy biological opinion out, a tough listing, etc. This will allow you to see immediately if you are dealing with The Real Deal or a political hack. 5. Get rid of the excessive amounts of Regional Office and DC people. Too much tail and not enough teeth. I mean, for God's sake, why do so many people need to review a listing package or a biological opinion on a controversial project? The positions should be transferred to the Field Offices that are swamped with work and no one to do it. 6. Require upper level and SES to have a biological background. The Deputy Regional Director of Region █ openly brags in meetings to other Service employees that █ has no biological training, not as much experience as them, and was hired directly into a █ management job. 7. Get rid of the decision by committee mindset. Example - the new listing program involves a "team" that produces a report (but with NO recommendation) which goes up through the chain to a "decision maker." The whole ES Program is now designed to encourage and promote group think and rarely to do the right thing. The Service needs to bring back Individual Responsibility. The late Admiral Hyman Rickover built the concept of individual responsibility into the nuclear Navy and they have gone more than 50 years without a major accident. 8. Getting rid of excessive management, and other droids at the Regional and DC levels, along with establishing the concept of individual responsibility will hopefully raise the quality of biologists, morale, and esprit de corps. We currently have a system that encourages robotic behavior, and "apologists" - people who are embarrassed that we administer and enforce the ESA and MBTA. They do not understand that the vast majority of Americans want endangered species, wildlife, and the environment protected and it is a privilege to work here, not a burden or a means to higher level jobs!

- Managers should actively solicit input from field biologists, and not cultivate a "culture of fear" where voicing one's opinion can involve negative consequences.
- Improvements could be substantial with sufficient staffing and support from leadership.
- The decisions made at the top are not always based upon what we the biologists see as good science because it is diluted and bent to accommodate political or financial interests. It would take strong leadership in the Executive Branch of the government to stand by recommendations based upon science and not dilute the effectiveness of our recommendations for the sake of politics, advancement, or fear of ramifications. I am not able to say how those who make the ultimate decisions decide, but less of it should be based upon fear and advancement than science and doing what is right for the resources that cannot defend themselves. Our lives depend upon STRONG leadership all the way to the Presidential Office.
- Get a new Secretary of the Interior and new Director. Stop promoting less-than-qualified individuals to supervisory positions.
- Return to field based operation, with managers who know their place and who back the scientific recommendations of their highly experienced field staff. Our office of 7 biologists has almost 180 years of experience, but we have been told that our managers neither trust nor respect us because

we have suggested that politically based decisions are inappropriate. We have just learned of the scientific integrity policy and are appalled that the managers at the RO all but mock it by saying that their goal is to highly value good science. We need a clean sweep of agency leaders and now. It is tragic that it will take a few successful lawsuits which eat up time and treasure to get the attention of decision makers who can fix this.

- The challenges faced by our agency are significant. We need to be focused on the most important questions. Creating new initiatives such as LCC and SHC and telling each other that we are moving forward is just a distraction. It takes away from real progress. We need to stay focused on tackling the most critical issues, focusing all available resources on providing sound science for good decision making, and not just shuffling staff around and holding workshops.
- There is a spectrum of opinion among upper level management for how stringent data required and its analysis needs to be as applied to listing and recovery decisions.
- Hire management who are familiar with this field, not lawyers or people who have 2 years left in their careers. The turn over of upper management is way too high creating a very inefficient work environment which trickles down.
- Too many managers just do what it takes to keep the \$\$\$ flowing. Make the Regional Director (political appointee) happy and they make the DC appointees happy and the \$\$ keep coming. Make some tough decisions, litigate a deserving offender, etc.. get any bad PR or do something controversial and you won't get the next promotion up the management chain so it doesn't happen. Industry and congress control FWS policy and our funding far too much.
- Reducing the huge schism that has been created between management and employees, to distribute decision making more evenly among experienced staff. This would give staff with stronger scientific backgrounds an opportunity to engage in and contribute to decisions than they now have and would create final outcomes that are more ecologically founded.
- Get a new Director
- It is my belief that there needs to be major personnel changes at the regional level and at the management level in my facility.
- Lay-off incompetent workers in the Regional Office. Do not allow employees to stay at one duty for a long period of time, especially facility Directors. It would help the FWS if those in the FWS who have the power to stand up to other agencies to actually have a back bone and not let them walk all over the FWS. I am tired of hearing everyone complain that Ecological Services in [REDACTED] curls up in a ball every time there is confrontation with the [REDACTED]. They are letting the [REDACTED] break the law while endangered species get closer and closer to extinction.
- The stance of the office Project Leader is, "you can't do real science unless you have a PhD". Since I have not worked for the FWS long, it may just be an isolated perspective. Either way, it is harmful to morale. I generally feel undervalued, thus my motivation to maintain a high-quality level in my work suffers at times.
- Have the directorate actually make scientifically valid decisions/statements rather than just saying that we use the best available science to make decisions
- Superiors need to trust their employees to do what is right.

- Collaboration with other agencies doing the same type of studies.
- The most effective solution would be to have more actual biologists involved at higher levels of the Service. Additionally, more focus/funding/support for doing research rather than only regulatory issues that often overwhelm staff would help put focus on science rather than policy/politics. This may be hard since many biologists do not seek out the higher levels of management, preferring to spend time outdoors or with the organisms they study rather than having to play politics or manage other people.
- Come into compliance with Executive Order 13653 and rewrite cooperative agreements to reflect the 'improvement of the Nation's preparedness and resilience to climate change impacts'. Man hatcheries with personnel committed to the best available science and management practices, and stop relying on "position savings" as a means to stay within budget at satellite facilities.
- For Refuges specifically, how does 'landscape management' relate back to what we do on a daily basis? How much science should be done by Refuges versus relying on other entities (e.g. USGS, universities) to complete research for us? Often, due to reductions in staff, biologists are pulled away from research and into helping complete management actions. In other words, at what point do biologists need to distance themselves from day to day management to complete/take part in research that informs those management activities? Project Leaders and Refuge Managers direct day to day operations of biologists, without fully understanding what today's biologists need to do their jobs to in turn help inform management. How do we better educate our station managers on the importance of a quality biological program? Consequently, we very seldom actually investigate whether management actions truly have the desired impact. We mostly just assume that if there seemed to be a benefit during research conditions, there must be when we complete management actions that may or may not be similar to research conditions.
- Get rid of dirty managers and hire competent people with experience and ethics, based on merit only. 2. Impose appropriate consequences for violations of the Scientific Integrity Policy;
- Drop Strategic Habitat Conservation and surrogate species initiative. It does not fit with our mission or purpose and just makes our partners weary of our intention. Landscape Conservation Cooperatives are funneling money away from resources and also confuse our partners. Joint ventures and fish habitat partnerships are closer to the ground and are more likely to have an impact.
- For decision-makers to follow the recommendations resulting from factual analyses, not to be swayed by politics. We are supposed to be conserving wildlife in functional units for future generations... not just remnant populations.
- We seem to have mandates that at times result in conflict with one another, with no clear vision of which mandate trumps which - e.g., the ESA has strong language about collaborating with the States, but also on the use of best available science. What if the state doesn't like the science? Service leadership seems to think collaboration trumps science when making policy decisions related to endangered species management. Does it?
- Agency promotion of faddish and scientifically dubious initiatives including LCCs and surrogate species has impacted resource program budgets and the development of actual science. The vision for LCCs was that it "put the science back in FWS", but in fact it has done the opposite. Funding from

programs with limited budgets was removed from those programs to fund what are essentially business managers in each region. These "LCC Coordinators" transfer many more funds removed from FWS resource programs to NGO partners who supposedly conduct science. Thus, development of science products has essentially been outsourced and they rarely meet the priorities of the programs, but instead meet the priorities of the boards of the LCCs. Many of the NGOs that traditionally support FWS (and many more that do not) obviously approve of this approach because they are now the recipients for FWS largess. Failure to support and cooperate with USGS, our main source of federal fish and wildlife science, needs to be restored. Cooperation with USGS has been de-prioritized under this administration. USGS receives funding specifically to provide scientific support to FWS, but FWS has snubbed them in lieu of building ineffective, inefficient bureaucracies (LCCs).

- Presently, complaints must be made against individuals (ha!). The problem is when the agency does not comply with its own policy. The entire policy is undermined by oversight and implementation by managers with less than rigorous degrees, frequently in disciplines not even remotely associated with conservation or biology (which will only get worse as younger staff opt for non-rigorous degrees). The Service is the last remaining federal agency that has not tackled the Animal Welfare Act; Health Research Extension Act; US Government Principles for Utilization and Care of Vertebrate Animals Used in Testing, Research, and Training; and Public Health Policy and the objections to addressing these mandates was driven by strength of personality not by technical review of legal merit - simply somebody did not think it applied to free ranging animals. Also, regardless of statements to the contrary, the Service is not based on science, but rather "agenda" which is woefully warped in its understanding of the most basic tenets of science. The entire priority and surrogate species effort, strategic habitat conservation, landscape conservation design, landscape conservation cooperatives are based on an agenda to save the agency money and staff.
- If we can't make the need NEW policy to protect the species which have fallen through the cracks...we should not dilute the policy that we DO have (ESA, NEPA, MBTA, etc.).
- Actually prioritize our agencies mission, it seems to receive lower priority these days for other internal programs. Actually let FWS employees spend time on our agencies mission instead of non-mission oriented required trainings and activities.

Respect for Science and Scientists

(Mentioned in 20% of coded responses)

- non-partisan, neutral parties/entities (and scientific peers from other agencies or academia) should review science and determine if/when science is published or made public. It should not be controlled by Regional Directors or Assistant Regional Directors.
- Reviews of scientific reports currently are given more time than research and writing. This should be reversed. Administrative records should be kept in pdf format. Printing and storing takes too much time and resources that could otherwise be put towards scientific research and writing. Lead biologists should be given the opportunity to review final drafts, and to put objections on the record.
- FWS staff need to be treated as scientists. Nearly all have scientific backgrounds and many have advanced degrees. They are required to state hypotheses and develop research programs. Yet it is

widely known that the Service doesn't do science - that's USGS's role. FWS only conducts monitoring. This view is highly destructive and removes FWS staff from the scientific process and undermines the use of science in policy/management decisions.

- The FWS needs to aggressively uphold its scientific integrity policy, including thorough investigation of alleged misconduct, appropriate disciplinary action against all persons found to have contributed to confirmed instances of misconduct, and prompt ample support of whistleblowers.
- Increase scientific capacity of staff within the agency at the field level. Reduce need for generic reports and populating databases by field staff. Provide resources (staff and money) to support data collection and analysis to support scientific decision making.
- Science should be the basis of our decisions. More scientists should be hired and trusted to conduct the Service's mission. Managers should have strong scientific backgrounds. Those managers who are incapable of making decisions based upon science should be removed from decision-making roles. Biologists should be encouraged to find and use the best science, trusted, and supported. [The opposite is occurring.] The use of science needs to be emphasized and supported up and down, across and through the agency. The entire FWS culture needs to be changed. Science is supposed to be the foundation. Emphasizing this message at the Regional Director levels could be very helpful. The FWS will continue to lack scientific integrity and have extreme difficulty in conducting the mission until these issues are fixed.
- The FWS should also develop policies and regulations that make sense and are functional. The current eagles regulations make no sense because they were developed by Washington office isolates who do not have experience dealing with issues in the field; if we are going to say we are going to permit something, we have to have clear procedures for doing so and not make the process so byzantine that it does not function.
- increase budget increase number of GS 11/12/13 biologists allow adequate time to evaluate complex issues decisions should be made after issues are thoroughly analyzed allow lead author to decide when documents and reports are complete
- Due to workload levels, we typically have inadequate time to properly make our evaluations. This translates into products that inadequately address the complex, highly nuanced decisions we need to make. Controversial decisions that are weakly supported in our documents fail to win support from decision makers.
- Upper managers (e.g., RDs, Refuge Chiefs) should be scientists and not pulled from non-scientific backgrounds like Realty or Visitor Services! If upper management is going to do a You-Tube seen by all employees (e.g., [REDACTED]) they'd better know what they are talking about.
- Allow more time to pursue and become involved with "real" science, improve our scientific credibility, feel that highly placed decision makers will support science and convey that they are actually listening to us, even if their decisions do not convey that impression.
- integrity of scientific work would be enhanced by hiring good supervisors/managers that understand and support science and enhance the biologists' ability to do their jobs.
- Separate the science (compilation of available information with analysis using published literature and techniques) from the decision process where aspects of the law or regulations are open to interpretation. This is being tried right now with the species status assessment process and I think

this is a good direction. But, I expect some blow-back from decision makers who don't want to be on the spot for the decision if it doesn't meet political or business or public backlash considerations. The biologists should never have to change the science (which is where having peer review of the SSA to make sure our interpretation of the science is valid give us a lot more protection) to meet the cowardice of the decision maker.

- Our hiring practices should prioritize hiring scientists with the highest degree of education possible so that decisions are made primarily on the best scientific information available.
- There is a disproportionate deference to tribal desires and preferences on biological issues. Tribes can wield more influence on biological consultations and decisions than congress or industry
- Since I have been employed here I have not seen any one who works for FWS do any type of scientific research. I am unaware of how Management bases their decisions to manage FWS property. I think there should be more FWS employees doing scientific research.
- Increased science support at the field level. Specifically data management, decision processes, survey design, setting clear and measurable objectives
- Bring science back to the FWS. Too many contractors or other entities doing work that should be done in house. Peer review and publishing of findings should also be standard practice for Service staff. Respect of the findings. Not enough weight is being placed on findings. Sometimes, study results are not taken seriously if they conflict with direction the outside world is pressing on the Service to take.
- I feel that we need to start having more of a "quality vs. quantity" state of mind
- Good science should be the driving factor behind as many agency decisions as possible. Politics does intervene from time to time but these considerations need to be minimized when possible. At times it is understandable this should be the case. However, as one of the few agencies with the sole purpose of conserving natural resources, we have the freedom to use science to inform our decisions, without necessarily having to answer to a small sector with biased interest.
- All actions or recommendations should be based on the best conservation for the species or habitat regardless of the political community.
- I believe that data standards and a common "data language" need to be pushed by upper echelon leadership within the US FWS. Non-standard data prevents the creation of national data sets that can help answer conservation questions.
- Let the scientists do their job. Don't try to rewrite the results they obtain to fit the case the FWS is trying to make. The new mandate to have all the raw data generated in a common database for easy access by managers is not only a great deal of added work for a reduced workforce but it is not clear why raw data needs to be present. Is it so others can manipulate it to get the results that are more favorable for them. The data is analyzed and then presented in reports or peer reviewed journal articles, why does the raw data need to be made available?
- Waive most regulatory compliance required to implement restoration projects, which BENEFIT species. Give more authority to programs conducting work that will have benefits. 2. Consult with independent scientific experts on a more regular basis, coming from varied disciplines.
- Focusing more on how to improve science (e.g. monitoring of monitoring projects) instead of how to prioritize \$\$\$

- The mission of the Service can improve by allowing its own biologist to do the work and not rely on others that don't know the species to do the work. More often than not civilian contractors that are hired by other regulatory agencies (i.e. Army Corps of Engineers) do not have adequate expertise in conducting scientific surveys for T&E species. As a result, bad science is collected, usually not in favor of the species, and the Service is forced to make determinations based on their data. The science aspect of the Service was stripped away over 20 years ago and handed to USGS to do our work. That money is dwindling and lots of needed science does not get done or is left for Universities to pick up, which sometimes leads to bad science as well. I feel if the Service was allowed to be more proactive and work with universities and other agencies more on the ground level then, good science will always take precedence and force checks and balances among agencies and academia.
- Enable the Service to hire scientists at appropriate and competitive grade levels. Create a system of authority whereby managers are held accountable to measurable standards that are demonstrated through use of data that is collected in a scientifically defensible manner. Enforce use of standards and protocols for all data collection that is used to make management decisions. Prioritize management, scientific, and research needs; and policy directives, through a documented and transparent decision-making process.
- More time and support for biologists interested in submitting manuscripts to peer-review journals. If I want to publish, I have to write during my own time; there's isn't enough opportunity during the work day. This is not an artifact of discouragement by supervisors, but a result of being so short-staffed that workloads circumvent publication attempts. It reflects well on our research that our methods and results stand up to the rigor of peer-review.
- Fws should hAve a research branch like they used to have. Before NBS split off into USGS.
- ive at least an equal amount of respect and consideration for the FWS employees who have dedicated their life's work when an expert opinion is asked for;
- Give employees the time and encouragement to publish. Increase effectiveness of data management. SHC is still a concept that management is not engaging in. The LCCs are not well understood by the Service.
- for better scientific data collection,
- There should be more rigorous investigation into the benefit and statistical basis for research. I have seen too many projects get funded with no or very little statistical work to improve the results of their experiments. Not being statistically valid can be cured by actually talking with a statistician BEFORE the experiment is begun. This will not only save money for valid projects, it will not waste the time and resources on invalid and statistically weak research.
- Greater emphasis on developing pro-active scientific approaches and forecasting impacts. Reduced emphasis on reactive responsibilities and legally required obligations. Greater emphasis on solving environmental issues, as opposed to evaluating our regulatory responsibility and legal obligations. Greater participation and involvement in research projects in partnership with Academia, state agencies, and other NGO's.
- Specifically, our agency's decision to disallow use of GMOs on Refuge lands lends credence to the anti-GMO movement even though the majority of the scientific studies indicate that they are safe.

Reducing use of these tools will not have a substantive impact on a landscape scale as they will continue to be used on surrounding private lands, and failure to allow use of GMOs by cooperative farmers can result in the loss of cooperative farmers as they can no longer afford to farm without them. The Service would increase operation costs if forced to force-account farm all refuge agricultural lands, and would simultaneously reduce the positive economic impact to our local communities. These costs would be better justified if they were supported by sound science.

- Lastly, I think that the scientific expertise provided by folks within the agency needs to be listened to and conveyed in all decisions and documents that we put forth. There are instances where significant revisions of materials and recommendations put forth by scientists within the agency have occurred prior to this information being released to external and other internal audiences without an opportunity for those scientists who worked on the project to provide additional feedback or comment. This needs to stop.
- Our science within the agency is not keeping up with modern theory and methods, and this is a far larger problem than the integrity of the science itself. [NCTC is 5-10 years behind (as are, I should note, many universities) in their course offerings related to landscape conservation sciences, climate change science, genetics, etc. and is not hiring highly qualified instructors.]
- We need more field research so we can make the best decisions.
- Having a non-governmental group of scientists and fish/wildlife administrators (say from University's) evaluate the ESA and make an assessment for what is and isn't working and why, and recommendations for how to correct what is flawed and/or broken. Develop a more collaborative relationship w/USGS.
- By placing more emphasis on science needed to support our mission, and not get bogged down in bureaucratic minutiae that places greater emphasis on process than on what we need to do for the trust resource.
- Policy states that the FWS use the best scientific information available to make decisions; however, the lack of information often over-rides existing data, specifically if data support a listing action.
- decisions have to be made without all of the studies we'd like to do
- Scientists are in short supply or must do tasks other than monitoring and research to keep the ship from sinking. This in turn reduces the amount and quality of information available for the managers to use when making decisions.
- Reward whistle blowers whose actions are determined appropriate.
- Find some way to increase the influence of technical staff, and diminish the influence of political appointees, during the decision-making process.
- Compared to other federal agencies such as USGS and USFS, the FWS is not a research agency (I came to the Service from academia).
- We need a better process to have vigorous debate on the science that drives listing decisions. The listing decisions are handed from the field to the Region to HQ with little opportunity for biologists to debate and/or defend recommendations based on science with the policy and decision makers. Quite often these listing packages will change significantly between the time they leave the field to when published in the FR with often no opportunity for biologists review of the changes.

- Species surveys for biological opinions and assessments should be completed internally, and funds should be provided to ensure this occurs. We have talented, intelligent biologists who need to apply this knowledge in the field, themselves, versus relying on outside consultant/contractor data.
- There seems to be a distinct reduction of lower grade biological staff and refuge biologists in general. These are the entry level positions that allow some of the refuge staff to learn the agency and mission purpose from the ground up so we can be better focused on conservation delivery. I remember the National Wildlife Refuge Biologist Conference at NCTC promising a biologist on every refuge. The last conference about where this great agency is heading does NOT even mention conservation delivery goals. As these jobs are whittled away we are hiring more I&M staff, JV staff, and LLC staff at much higher grade levels. While I do understand the need for these, we have some that really do not have a clue what goes on in a refuge. They fail to realize that many biologists are the folks that are doing quite a bit of the habitat management as well as trying to keep the refuge functioning while juggling biological work. I see biological staff working on equipment due to loss of maintenance staff, helping do refuge operation specialist work because we have streamlined and removed those staff, and the list goes on. We need biological boots on the ground and a I&M biologist covering a huge zone goes back to the historical days when we had zone biologists, which was stopped because they couldn't serve that large of a land scape. And while I am blessed with having probably the best of the I&M crop, one brilliant biologist located 100 miles or more away cannot replace a biologist on a half dozen to a dozen refuges. Two thoughts keep popping up in my mind. If we don't learn from our history we are doomed to repeat the past. Insanity is repeating the same thing over again and again while expecting a different outcome.
- USFWS should also have their own researchers to conduct research that is relevant to their specific stations instead of relying on USGS
- There are instances where perhaps a species should have been listed as a threatened spp but the Service chose not to do so, with part of the reason being that there is not enough data. Well, then put funding towards acquiring the data so that we can prevent a species from reaching the endangered status
- Listen to the biologists; don't override their conclusions and suggestions; don't tell them to change recommendations which are based on their findings and best judgement
- We have a responsibility to the public and the lands and waters we are supposed to protect and manage to achieve this mission in an efficient, genuine, and effective manner. Hold us responsible accountable as individuals and get out of the way if you aren't going to facilitate and foster our efforts.
- Support the science that agency biologists produce.
- Better support for scientists in terms of data management, specialized IT needs, funding for support staff. Greater investment in FWS science rather than reliance on USGS contracts. Administrative support for increased reliance on science in decision making.
- Transfer research responsibility back to FWS from USGS
- Often times, we are asked to analyze data and present results, but those results are not respected or moved forward. While I feel support from my immediate supervisor and these messages often reach the regional office, there is a significant amount of scrutiny placed on the messaging of those

results. We have been told to ask "Is the controversy worth the conservation?". This approach hardly ensures confidence in the scientific process of evaluation.

- I believe that greater FWS emphasis and support of USGS research would improve the integrity of scientific work of FWS, and in turn, scientific decisions made by FWS. USGS personnel can provide the expertise, ingenuity and credibility to maximize the information available to the FWS and provide publications acknowledged world wide. Long before an ES listing of a species and proposing critical habitat, scientific work by USGS would go far to provide unbiased and credible information on which to base decisions. Whereas information gathered "inhouse" by ES, with employees not trained in research, is not likely to be considered as "agendaless". The Service would benefit with better information on species needs and more precise proposed critical habitat deliniations. There must be compatibility with the mission of the FWS and the missions of the individual FWS Refuges, and good science should be the basis for those decisions. Additionally, I believe that FWS personnel have confidence in USGS science as professional, independent and excellent.
- By punishing the all the individuals that are guilty of violating the scientific integrity policy and the Whistleblower Protection Act, instead of punishing the whistleblower. Until staff employees see that they will not be retaliated against and that those individuals that have violated our policies and laws are punished, no one will come forward and stand-up for scientific integrity for fear of retribution. I have personally heard from Service employees say they witnessed or our knowledgeable about a scientific integrity violation but will not come forward for fear of retribution or because they do not think it will be worthwhile.
- I don't think the integrity needs to be improved the the quality and quantity does. I believe the US FWS needs to be the lead agency regarding wildlife, plants and other natural resources. Unfortunately that area was relocated years ago to USGS. There has been a push to gain some of it back by the US FWS but without appropriate funding it is almost an impossible task.
- Allow specialist to do their jobs and not push for employees to become generalist. I have so many other tasks that include maintenance, house keeping, etc... that take up precious time. I enjoy those task but they allow scientist to collect the best information and produce viable reports for the FWS.
- Reduce administrative burdens on scientists. Top administrators should have the objectives and protocols of the new science initiatives peer reviewed, and subsequently revised according to reviewer comments, before implementing these initiatives across the agency. A clear example of a failure by administrators in the regard is the service's Surrogate Species Initiative.
- Streamline administrative review process.
- more reliance on best science available (which would also include indigenous knowledge).
- By support and trust of upper management, Assistant Regional Directors, Regional Directors and higher, to conserve our trust resources. And through stronger leadership. Leadership currently appears to care more about appeasing others, mostly the states, than they do about listening to the science and the biological conclusions of their employees. Additionally, I think our credibility if hampered by a lack of more outreach to the general public. We don't often respond to negative claims, and when we do it is too politically correct to be effective.
- Having outside peer reviewers provide feedback to FWS scientist

- We need better data management and processing policy so we can be confident we're actually using the best, most complete data for analysis. The Service and many federal agencies have lost & ignored more data than they use for most decisions. The net result is gross inefficiencies and less-than-informed decisions.
- Use the best available science in our Biological opinions, permits and Listing and Recovery findings.
- By encouraging scientists the ability to share ideas and weigh in on big decisions. By allowing and encouraging scientists to work locally and provide information up to leadership rather than the current top-down approach, e.g., focus on surrogate species, SHC, and LCCs in ways that are not appropriate. These were good ideas and concepts that were ruined by poor implementation and a top-down approach.
- Field biologists are not trusted or respected for their work.
- More trust in the field to get things accomplished.
- Place qualified scientists, not policy wonks, in leadership positions throughout the FWS.
- More data collection and research done by FWS scientists. We can often do the job just as fast and for less money than hiring independent contractors. We don't have the budget to hire independent contractors to do the work, and it is often not a priority of FWS scientists to do their own work. There is very little opportunity for us to confirm the work of the reports that are submitted to us by other agencies or businesses.
- Adequately staff the agency so we can do research and publish in-house. Give us back our research arm that went to USGS many years ago. Since we lost our in-agency research branch to another agency, our access to high quality research and researchers radically decreased. USGS will do research for us but it is a cumbersome process and their scientists may or may not agree to do what we request. In other words, most research that gets done is determined by USGS scientists (who were FWS employees in the past) and other researchers (e.g., Universities, NGOs, contractors, etc.). This hinders the FWS's ability to quickly obtain high quality scientific data needed for decision-making to effectively achieve our agency's mission.
- more focus on good science, partnering with universities
- Make sure independent science review teams are better selected and include true conservation and restoration ecologists with a proven track record. The current independent science teams are comprised mostly by academics whose driving philosophy is "more research needs to be done" or "more hypotheses need to be tested", as opposed to recommending useful approaches to restore declining species and their habitats.
- There is no trust or deference given to FWS ecological and policy experts with decades of experience. In ESA decision-making practice, statutory, APA, regulatory and policy standards as well as fundamental tenets of conservation biology are routinely ignored or perverted.
- By requiring signed concurrence of all staff scientists who worked on any report, regulation, etc., affirming the integrity of the science and science processes vis-a-vis such reports and regulations. Refusal of a staff scientist to sign such an affirmation should automatically trigger a full investigation by a truly independent third party and should completely halt release of such report or promulgation of such regulation until the investigation has been completed. Managers who have an adverse investigation result on their record should be ineligible from any further advancement

within the agency. Scientific integrity must be directly linked to a manager's career prospects (see comments below) to be able to compete with political pressures as a decision-driving force.

- Develop a regulatory body with some teeth. That is not answerable to the Director's office but the Sec. Interior. Have a strong Contaminants program. It is a shell of its former reputation. Ash has done a lot to gut the program due to its controversy with big Chemical companies and responsible parties. The LCC programs are a joke too and should be abolished so that we may bolster the Service's contaminants program.
- Focus agency missions on science-based objectives, rather than disproven drivel such as Strategic Habitat Conservation.
- I think they need to understand what the philosophy of science is and what science is. I think that they need to understand the need for adaptive management and the fact that Wildlife Management is a soft science. They also need to attach the quantitative areas of environmental science such as air, water and the toxins that are impacting the species for the long term and not play 1940 Wildlife Management. Do something for Wildlife that will impact the next 100 years. I look to the Nature Conservancy as the model. We need new leadership and not the same good old boys and I am 66 and one of those old boys who cannot believe our preoccupation with meaningless bag limit and shooting birds like woodcock and black duck to hell.
- We need qualified scientists in top-level positions. We cheapen the word "science" as many of our leaders and many across the FWS are not scientists by any definition that I am aware of. Very few hold PhDs, very few publish, very few teach science classes at universities, very few give talks on research at professional meetings. We have taken a "Facebook" approach to science; say the word (like "friend" in Facebook) and you are doing science....bull....
- Listing decisions should rely on the scientific data and not the interpretation of that data by the upper management.
- The Service needs to hire more scientists for science positions, especially at upper levels. In too many cases, regional and national science administrators are good ol' boys and girls with minimal science background who don't understand science and are more interested in personal advancement or supporting their program than advancing conservation through science. We tend to hire from within, with far more emphasis on who a person is and if they're an up-and-comer than if they're actually qualified. Consequently, conservation, morale, and our science efforts suffer. We have seen a large emphasis on science in the past several years, but there is little substance and much inefficiency in what the Service has done with science. This survey emphasized external pressures such as the influence of business and politics on decisions, but I think our biggest problems are internal. Almost all leaders are afraid of anything controversial, and will use more studies and programs to give the appearance of doing something, when what they're really doing is trying to avoid making a tough decision, even when the answer is clear.
- Get rid of the decision by committee mindset. Example - the new listing program involves a "team" that produces a report (but with NO recommendation) which goes up through the chain to a "decision maker." The whole ES Program is now designed to encourage and promote group think and rarely to do the right thing. The Service needs to bring back Individual Responsibility. The late

Admiral Hyman Rickover built the concept of individual responsibility into the nuclear Navy and they have gone more than 50 years without a major accident.

- Managers should actively solicit input from field biologists, and not cultivate a "culture of fear" where voicing one's opinion can involve negative consequences.
- Despite the education level of many FWS employees, they seem to be weak writers and are not even really observant of plagiarism and what a proper peer review should be. Seems almost "old school" in how it regulates. I think there is a level of drama and empowerment that has been allowed for FWS biologists that really affects their decision-making and writing. Have no clue where that has come from since I have only been with this agency a short while, but I am very uncomfortable with the quality of science and decision-making of this agency. I think all of this may be due to such a small number of employees and very little turnover. I think this agency actually needs to be closely tied to academics, but not sure how to do that without bias in final reviews and such.
- Provide better tools and funding and incorporate all divisions of the FWS in decisions.
- we should focus on adhering to the mission and utilize only scientific work that we can prove is ethically produced. Utilizing articles from random magazines and websites is not credible and should not be used as a basis for our decision making processes. We should also not use incredible articles to sway the public on scientific issues. We should also investigate the validity of research done on other countries and understand the reasons for their environmental policies that we should possibly "adopt".
- The biologists and management need to stick to the facts and not emotion or supposition.
- Independent scientific unit to monitor scientific abuses.
- Improved linkage between Science Applications and field level science needs. Improved funding for the Inventory and Monitoring program to provide funding and expertise to address field level management questions using sound, applied research.
- There is a spectrum of opinion among upper level management for how stringent data required and its analysis needs to be as applied to listing and recovery decisions. Conclusions from the same data and recommendations are viewed on a spectrum from speculative to robust depending on the decision maker. This contributes to a long and iterative review process and variance of final products from a reasonable common standard. Creation, agreement and adherence to common standards for data quality and analysis, magnitude and effect of threats, and small population criteria would I think minimize effects of political and business pressures in decision making.
- Continue to encourage participation in scientific and professional groups, such as the American Fisheries Society, to promote ongoing research and encourage personal growth. With stable and declining budgets, travel, especially to symposia and meetings are the first to go, and that is unfortunate.
- By following the scientific method. FWS and many other agencies rely on information to make decisions. Not all the information used by FWS to make decisions is science. Many believe that it is actual science, but unless it follows the rigorous scientific method, it is not science per se. Information and data gathered using scientific methodology does not constitute science. For it to be science, the information gathered needs to be used to formulate a theory, and that theory needs to

be tested several times until it is proven or disproved. To simply use data and other information as science, without having formulated and proved a theory is not science. FWS personnel constantly make inferences and estimations on possible outcomes based on existing data, thus skipping the essential step of formulating and testing a theory. Thus, most of the assumptions and conclusions reached by FWS employees and managers is not really based on science, but simply based on assumptions based on data. This is not science!

- By separating science and policy as much as possible, and making both the scientific and policy decisions as transparent as possible.
- By getting our science centers back from the USGS.
- Allow FWS employee ability to compete for grants, or other types of monies....or even better provide the researcher with a process to compete for monies among FWS for projects. Similar to SSP for USGS but for FWS...
- More emphasis on the ecological mission and less on the service to people aspect.
- FWS lost a connection with science when USGS was removed. Many FWS employees do not understand science and how to use it to inform decisions. This mainly comes from a lack of training in science. A large proportion of FWS employees did not complete graduate school in their field of work, and if they did, very few have published. Selection of more scientifically trained applicants would help.
- By hiring professionals with different areas of expertise (e.g., hydrologist, biometrician, modelers, etc.) to provide input/analyses of data collected/provided to help formulate the best conclusion for Ecological Services decisions (e.g., listing, recovery, consultation, incidental take permits, recovery permits, strategic or landscape conservation planning and implementation, etc.). By adopting an easy process to establish and use a panel of peer reviewers for major project or conservation decisions (e.g., programmatic section 7 consultations, large-scale HCPs, listing decisions, etc.).
- closer attention to cumulative impact and more scrutiny on if parts of projects should be looked at separately versus total project as related to considering if cumulative impacts would warrant a jeopardy opinion.
- I think the problem in the FWS is that science is not the driving force in our policy and mission. There are too many times when the science behind species needs is just one of many factors going into decision making (along with politics, process, and fear of a lawsuit). To improve how the mission and scientific integrity, we need to ensure that our leadership has some understanding of science and the scientific process. I feel like the FWS is now run by lawyers and administrators with no background in science, no experience in trying to learn about what a species needs to fulfill its daily needs, and no understanding of how that information should be applied. Science is just a meaningless word that is bandied about and applied as "the perception of science". For example, if we say we used science then it must be science.
- I think the integrity of scientific work produced by FWS leaves a lot to be desired. I have been wanting to experience working for FWS for years, but since I have started my current position I have been sadly disappointed. I think that improvements could be made by hiring people with higher education backgrounds and not just promoting from within. I have received little to no training, there should be a core set of training classes or modules for each position. There should also be

tutorials about the use of scientifically sound sources to make important decisions during section 7 consultations and in listing documents. Since I have been here, I have been amazed at the number of times people are making decisions based on personal opinion rather than scientifically sound information found in primary literature. In fact, it seems that a personal communication through email holds as much, if not more, weight as a peer-reviewed article, even in documents and analyses such as Species Status Assessments. I do not believe that the most qualified people are making the best decisions based on the most sound science.

- Listen to employees with experience.
- Partnerships with academics, other agencies, and NGO scientists. The standards associated with improving our understanding of our Nations' fish and wildlife resources should be equivalent no matter what organization one works for. Encouraging partnership with others outside one's organization provides support and encourages rigorous scientific endeavors. There are isolated science groups within the Service. This isolation has led to biased and programmatic divisions within the agency and hubris within some of these groups. This is self defeating in the long run and does not move the agency and its staff forward. Providing education on the differences between the fields of conservation and science would also be extremely helpful. Most staff within the agency tend to merge those two different fields when they are completely different. Managers play too significant a role in what the organization defines as science. Classic are the roles of risk assessment and risk management. There should be strong separation between the two or management will begin to influence assessment in an effort to influence management actions. Conversely, technical staff can have a tendency to inject conservation policies or management actions prior to providing the scientific assessment side of the problem. More training for managers and for technical staff. Some examples include the LCCs, which have great promise but are strangled by the influence of managers in and outside the Service. Surrogate species process was significantly hampered by managers due to feared based perceptions of the outcome on their management activities.
- More published science coming out of the refuges.
- I think Biologists should be able to show results from their projects as opposed to just conducting ongoing monitoring or research projects that never produce results. Too many are allowed to just dabble with lots of different technologies while never producing any tangible results. We as a Service MUST be held responsible for producing results for the projects we run.
- Hire permanent field workers so quality data is collected. Hire permanent employees so there is some consistency and accountability throughout projects.
- The building where we have moved is not a good working environment for scientists. We, GS-13 scientists with master's degrees and PhDs are sitting in 8 x 8 cubicles. There are visual and auditory distractions constantly. It is degrading and productivity has gone down.
- Have the USGS Biological Survey division back with the FWS. Limit the ability of non profits from suing as much as they do (e.g., listing decisions). We end up spending more time and money responding to litigation than doing conservation or scientific work.

Political and/or Corporate Interference

(Mentioned in 15% of coded responses)

- Ultimately, the USFWS would be improved the most if we could make decisions based solely on the science, instead of having to balance those decisions with politics.
- By restoring staffing/funding to pre-sequester levels, but also the FWS is still hampered by Bush administration appointees (at the SES level). Even though it's been 6 years since the new administration, the Bush admin. was very good at appointing people, who hired people under them, who hired people under them, who hired people under them, etc., who have a very industry-friendly mindset, and far less of a conservation ethic than what should be present in the USFWS. Because the Bush admin. had 8 years, they were able to get people with their mindset all the way down into the field level, and in most cases those people are still there. A good example is ██████████ in Region █ (the ████ for ██████████). Under the Bush admin, ██████ was hand-picked to be on the ██████ Committee that was to re-write (i.e., weaken) the ESA. ██████ still in the same position, still dictating the direction of ████ in Region █. Because the Bush admin. was so intent about staffing the FWS with like-minded people for 8 years, and because the Obama admin has done nothing to counter it, many FWS employees feel like we're still in the Bush admin.
- The agency has become less mission oriented and more sensitive to political and industry pressures. Although the agency states it is science driven this has changed. Senior management seem to support science that supports the direction they want to go and selectively interpret inconvenient science putting it through a policy lens of risk and uncertainty.
- One of our high-ranking officials told me that they measure success by how few complaints they get from members of Congress and other important people. If we are using the best available information to assess the effects of projects on listed species and migratory birds, we are going to reach findings on occasion that project proponents do not like. The criterion by which our work should be judged is whether we reached reasonable conclusions based on the available information, not whether our conclusion was not to the proponent's liking.
- The USFWS should take care in hiring retired State employees who are acculturated into the state mission and point of view of wildlife management which is often in direct conflict with the federal viewpoint.
- Politics should stay out of our business. We are suppose to err on the side of the species. They have no other voice, but politics and big business always over rules. Its very disheartening.
- FWS has been "captured" by the industries it is meant to regulate. Science is not at the forefront as it should be. Communication skills should be improved. How to talk about science to non-scientists should be a requirement.
- Sometimes, study results are not taken seriously if they conflict with direction the outside world is pressing on the Service to take.
- All actions or recommendations should be based on the best conservation for the species or habitat regardless of the political community
- USFWS will not purchase land, hold easements, but rather is trying to create markets for the private sector to perform conservation. There is no time in our history that private business performed conservation at any measure equivalent to the government.

- Sometimes political decisions are made at the Regional Office level that are not necessarily derived from work that was done by a scientific staff member of the Service. But rather it is based off of other factors that were non-biologically based.
- Let the scientists do their job. Don't try to rewrite the results they obtain to fit the case the FWS is trying to make. The new mandate to have all the raw data generated in a common database for easy access by managers is not only a great deal of added work for a reduced workforce but it is not clear why raw data needs to be present. Is it so others can manipulate it to get the results that are more favorable for them. The data is analyzed and then presented in reports or peer reviewed journal articles, why does the raw data need to be made available?
- Additionally, leadership positions in upper middle management often target employees from State agencies that have a much different scientific/Policy interactions and ethics than federal agencies.
- For example, under the ESA the FWS is prohibited from considering economic considerations when making a listing recommendation. However, final decision makers are known to apply a political/industry filter to those decisions because of the perceived impact an ESA listing will have to a segment of the economy.
- It is my perception that upper-level managers are influenced by fear of Congress dismantling the Endangered Species Act and/or otherwise interfering with the mission of the Service. This affects their ability to appropriately support the scientific integrity of the very conscientious scientific staff whose work is supposed to support the managers' decision making. The best way to improve things would be to actually remove the political threats to the Service, but barring that, it would help if the managers could make a commitment not to let their good judgement be corrupted by fear.
- I think that Congress should not be able to include appropriation riders prohibiting the FWS from making or publishing final rules related to any species or from making any type of biological determination associated with a species. That is overstepping their authority and interfering with our mission.
- I do believe politics still plays to big of a role
- New leadership that supports science at both the director and regional director level. Our regional director moved to our region during the Bush Administration.
- Have less involvement from political appointees in the Department of Interior. Some previous administrations asserted their interests to compromise science and polity way too much.
- Reduce political and lobbyist from having the power to distort the facts. We can't do it alone.
- Decisions on wildlife conservation must be based on biology. NOT on politics. During the Bush (#2) Administration, there was intimidation practiced on the USFWS biology staff from people under the Director of the Fish and Wildlife Service to change scientific information in documents that would negatively impact wildlife conservation. Because this appointment is political, if the incumbent does not agree with the ESA - the ability of USFWS biologists to practice sound conservation is inhibited. This position needs to be freed from that kind of political pressure.
- Stick to the science and the conclusions based on science and quit worrying about making someone (politician) unhappy about the decision. Give at least an equal amount of respect and consideration for the FWS employees who have dedicated their life's work when an expert opinion is asked for; as opposed to knee-jerking to the beat of a wealthy landowner who has a stated personal agenda.

- I think that our agency decisions should be based on sound science rather than political interests or pseudo-science movements.
- We need to ensure that all decisions related to conservation of fish and wildlife are scientifically based, and that we use the best available science to back up decisions, even when there is politics and other considerations involved.
- Scientific integrity among biological staff is high, but is sometimes affected by political policy interventions by upper management. We are still hearing of high-level supervisors that take draft BOs home and rewrite them to fit political agendas (numerically rare, but still happening).
- The agency is fear-reactive - fear of loss of ESA and loss of budget and political support. The FWS is unfairly pressured to show "successes" for the ESA and is constantly threatened and derided by many who do not understand or do not consider the larger context within which our agency is charged with species recovery - an virtually unwinnable challenge with economic considerations, political pressures, climate and other huge threats.
- any of these species that we are responsible for protecting and recovering are afforded inadequate protections due to political influences and influences of other agencies and stakeholder groups. Science, the ESA, and the mission of the FWS are too often ignored in lieu of politics during decision making and policy setting.
- Less political considerations are needed. Most decisions I'm aware of: wolf, wolverine, American burying beetle, mussels, were the result of political interference.
- I believe this is a deliberate strategy by some in Congress... to cut funding for research agencies and then claim we don't have good research to support the decisions they don't like. We are constantly being sued by groups that say we don't go far enough to protect wildlife, and by industry (ag, ranching, timber, o&g) supported by states, that say we go too far... that sort of evens out.
- Reward whistle blowers whose actions are determined appropriate.
- Find some way to increase the influence of technical staff, and diminish the influence of political appointees, during the decision-making process.
- more support for our mission from the public and from Congress right now the public and Congress' appetite for putting anything including conservation above the almighty dollar is very low. people approve of conservation in general, or in other countries, but when push comes to shove within the US, it feels like nothing should stand between the economy and energy development
- keep politics and ecology separate
- When it comes to endangered/threatened species listings it would be best if FWS didn't appear to be influenced by industry/political entities.
- If a particular partner is unhappy with some interaction (real or perceived), the potential for consequence exists. Often times, we are asked to analyze data and present results, but those results are not respected or moved forward. While I feel support from my immediate supervisor and these messages often reach the regional office, there is a significant amount of scrutiny placed on the messaging of those results.
- make sure that politics and the public are not key factors in FWS decisions. Let the science dictate what is done and what is right for the land and the wildlife.

- I think the use of best science is not the issue. It's the influence at the leadership level in Washington that may affect application of the best science. As I am not part of that level of management I can't provide any more clarity. But I have often received phone calls or e-mails from my leadership or leadership in DOI asking for clarification on the science so they can use that information to make decisions. I perceive policy and pressure from other agencies, including state and local governments, are the biggest impediment to effective and efficient application of science in final decisions. Congress also occasionally weighs in, but not to change the science, but to emphasize biased findings and legislate wildlife management.
- Less influence by advocacy groups (NGOs) and better communication with Congress.
- The political machine in the FWS seems to be growing, and it's beating us down more every day, and it's getting harder and harder to stand up against it.
- This agency uses integrity of scientific work as a shield. When it is politically convenient it is used; when inconvenient it is ignored. Case and point: Central Valley Project water operations and the Bay Delta Conservation Plan. Run by water contractors for water contractors. This agency does not like to regulate. It therefore agonizes endlessly about decisions that could result in more regulation that would be unpopular with industry. Ecological Services is viewed as "black hat" function. Too much of that. The agency should be very proud of the conservation and partnerships that are the hallmark of effective ES programs throughout the nation. The emphasis on SHC is hypocritical. Science does not support it as proposed, yet agency leadership will not back off.
- Strong support of middle management to put the mission of the agency above the interests of regulated industry and less risk averse, more aggressive support from DOJ.
- Advocacy groups and state agencies exert too much pressure on fws scientists to adjust our findings suit their agendas, and fws leadership is too cautious in addressing them (especially state conservation agencies who quite often do NOT share the same priorities as much as the public might think).
- Less (ex-)industry people in regional offices and DC. Less political pressure from DC and regional offices.
- By removing political influence.
- less political, and more biological reasoning
- Replace politics with honor and integrity
- Keep politics out of the biology/ecology.
- Change position of Director and that of Secretary of Interior to non-political appointee hires, so that politics is removed from decision-making. For example, there is currently a standing policy that the FWS is not allowed to draw linkages between greenhouse gas emissions and potential jeopardy to a federally-listed endangered species when reviewing a development project (i.e., regulatory review through the NEPA process and ESA Section 7 consultation).
- FWS is subject to consider political pressure, and, because its funding is dependent on Congress, it often succumbs to political pressure.
- State Fish and Wildlife Directors, industry representatives, and some federal agencies (e.g., Army Corps of Engineers) have undue influence on permitting processes. If they do not like the answer they get from field biologists, they immediately go to our Congressional delegation or directly to

the regional office because they know they will get a favorable decision. The values of field biologists and management are not the same. Field biologists attempt to use the best available science, implement the policy, and keep an administrative record as they have been trained to do. Management disregards or chooses the science that best placates special interest, in many cases disregards policy and regulation, and direct staff "not to keep anything in writing." As a result, litigation is increasingly common, which further erodes time available to field staff to do their work.

- Less political interference.
- less politics,
- Place qualified scientists, not policy wonks, in leadership positions throughout the FWS.
- By convincing politicians that scientific evidence trumps their opinions.
- Reduce pressures from Congress at the highest levels of the agency.
- If leadership would actually use the science in their decision making process as opposite to political influence.
- Keep Congress out of FWS decisions.
- Stand up to the misinformation and pressure from Congress. Members of Congress are briefed by industry or special interest groups using totally inaccurate information. No one in this agency stands up and says No, that's not correct. Management of the agency just wants to get along and avoid controversy, even to the point of having to ignore when members of Congress are totally inaccurate, using false information, and spouting it off to ensure that the more it is repeated without challenge, the more credibility it is given. As a Federal agency, we work under the laws passed by Congress, but to have individual members impose private agendas that are unsupported by data compromises our duty to the resources and the American public.
- Prevent senators or other agencies from undermining FWS mission by influencing top regional FWS officials.
- There are double standards applied such as demand for absolute, empirical scientific certainty for mgt to support an "adverse effect," a "jeopardy," an "endangered listing," or other decision that states, congress, or industry doesn't like. On the other hand, mgt will take a whispered thought with no support or basis from outside interests and rely on that "data." ESA decision-making standard is "best available" but mgt plays both ends to support their decisions. Decisions are no longer science based, but outcome based. Attempting to maintain professional, legal, scientific standards is met with hostility, threats, advice to not take certain positions, and ultimately, they remove you from meetings, communication and decision-making when you don't bend over. It is an embarrassment to work for this agency.
- By having upper management listen to their biologists rather than politicians and corporate America.
- Get actual scientists in leadership positions instead of political appointees and industry lobbyists. Give the FWS leadership autonomy and greater compliance power. Allow for scientific input to stand on its own without political or vested interest interference. Appoint leaders that actually understand policy and mission.
- The agency openly champions a mission of wildlife conservation founded on robust science, yet consistently caters to or is otherwise forced to take actions and make decisions that are politically

and/or economically motivated, not motivated by the pure mission of the agency to protect, restore and conserve wildlife and wildlife habitats for future generations. The agency invests considerable resources in science, monitoring, modeling, planning, and even human dimensions work, yet fails to allow the burden of scientific information from these and other investments to factor significantly in decisions, particularly high profile or controversial ones (e.g.s, feral cats/horses, climate change, beach driving, T/E species listings/de-listings, law enforcement actions, use of MBTA and other laws/policies to protect species, etc). Its difficult to know how to extract a government bureau from the ties of politics and economics so as to allow science to factor into decision making as strongly as the agency says it does, and as strongly as it should. Science needs to be given equal footing to short-term political interests. I don't know how to make an agency administration responsive to that when they are beholdng to Congress and a Presidential Administration that has its own priorities and interests that often quite contrary to the protection of wildlife and fisheries.

- More agency courage to refute adversary misinformation.
- Scientific integrity must be directly linked to a manager's career prospects (see comments below) to be able to compete with political pressures as a decision-driving force.
- I think there is a lot of political micro-management from above that pretty much determines the outcome before the documents are final. I think there is a lack of common sense collaboration and cooperative behavior at the start of the regulatory process that is ignored. Not sure employees are well trained in that kind of thinking. When I have been the scientist who either played the scientific devil's advocate with the results of a FWS report. or tried to look for compromises to eliminate or mitigate circumstances on the ground, I was ostracized.
- The decisions made at the top are not always based upon what we the biologists see as good science because it is diluted and bent to accommodate political or financial interests. It would take strong leadership in the Executive Branch of the government to stand by recommendations based upon science and not dilute the effectiveness of our recommendations for the sake of politics, advancement, or fear of ramifications. I am not able to say how those who make the ultimate decisions decide, but less of it should be base upon fear and advancement than science and doing what is right for the resources that cannot defend themselves. Our lives depend upon STRONG leadership all the way to the Presidential Office.
- We have been told that our managers neither trust nor respect us because we have suggested that politically based decisions are inappropriate. We have just learned of the scientific integrity policy and are appalled that the managers at the RO all but mock it by saying that their goal is to highly value good science
- think minimize effects of political and business pressures in decision making.
- Too many managers just do what it takes to keep the \$\$\$ flowing. Make the Regional Director (political appointee) happy and they make the DC appointees happy and the \$\$ keep coming. Make some tough decisions, litigate a deserving offender, etc.. get any bad PR or do something controversial and you won't get the next promotion up the management chain so it doesn't happen. Industry and congress control FWS policy and our funding far too much.

- I don't know given the current political climate. It appears my RD is making decisions to keep our funding off the chopping block for the long term while compromising recovery of listed species in the short term.
- Reducing the amount of politics that influences science based decisions. I am currently being asked to manage habitat against my scientific opinion to appease a state agency and so upper level management can "keep his promise" to this state agency.
- We could be more effective if pure science could be invoked into our decision making without the need to consider political ramifications as well.
- let the science lead, not be influenced by politics, congress, other agencies, controversial topics, etc.
- -Safeguards against the undue influence of political appointees in the agency.
- I do hear of problems with politics and science in the Endangered Species programs, although locally I have not seen this occur.
- help put focus on science rather than policy/politics.
- any of the higher up positions are occupied by 'people who like the outdoors' but aren't really scientists. Industry connections can be helpful sometimes, but relying on the science is what this agency is based on and our leaders should reflect that. Preventing industry, congress, and the judiciary from overhauling decisions made by scientists is of the utmost importance. Enforcement of laws (such as the Migratory Bird Treaty Act) is often left up to the current administration. Congress passes laws superseding the Endangered Species Act and many attack it as ineffective while they degrade its power. NGOs (activists and lobbyists) sue over decisions they don't like and judges overturn/amend sound scientific findings. A scientific review board should be established to review these types of cases (appeal to NSF instead?). In general, the FWS has turned into an advisory agency. Much of the 'teeth' behind enforcement of laws such as MBTA or ESA have been stripped away due to pressure from outside sources (mainly the energy industry). Actions are taken to be reactive instead of cheaper, more effective actions that could be taken proactively. So to have the FWS effectively achieve its mission, we need a public (and a government) that supports funding these proactive operations and trusts that the FWS will make quick, effective, and scientifically sound decisions, even if not everyone always agrees with those decisions.
- Develop policies for limiting the potential for political and business influence; require recording/records of such interactions if/when they occur. No closed-door deals.
- Outside interest groups (especially the States, BLM, and energy companies) have too much influence on FWS decisions. We need more backbone to make the right decisions regardless of political posturing, especially in [REDACTED]. Look at the wolverine decision, for example.
- Avoid allowing politics to become too embedded in the process - such as Endangered Species Listing and Recovery.
- For decision-makers to follow the recommendations resulting from factual analyses, not to be swayed by politics. We are supposed to be conserving wildlife in functional units for future generations... not just remnant populations.
- acknowledge and address the fact that politics/business may and often have interest than conflict with conservation/science. I have seen improvement in communications with partnering with non-governmental groups where the message doesn't come solely from the FWS but also from local

stakeholder groups. Scientific findings can be unpopular and we need training in communications/PR/salesmanship in getting the word out.

- The FWS would have to be independent of Congress and the Administration. There is strong political influence on FWS management to minimize impacts of fish and wildlife management on business. Another improvement would be to make the FWS independent of the Bureau of Reclamation. Reclamation's goals do not include the conservation of fish and wildlife, but yet they control some restoration funds for the FWS. If political influences could be minimized, it would then be necessary to replace FWS management with scientists. Politics generally influences my work through funding. If stakeholders are opposed to FWS management or regulations, then funding is withheld such that it becomes difficult if not impossible to conduct a statistically valid analysis needed to support the recommendation that can withstand peer review. Allowing businesses that utilize environmental resources to conduct their own studies almost always yields biased results. Sometimes there is a direct effect in that FWS management fears that their phone will ring if protective recommendations could impair a business (e.g., agriculture). Even if it is obvious that too much water is being diverted or an excessive amount of pesticides is being applied such that populations are threatened, FWS management may not make those recommendations.

Transparency and Accountability

(Mentioned in 5% of coded responses)

- We are aware of and trained in Whistle blowing and such, but few would actually feel confident in coming forward on an issue.
- Greater scientific capacity within the Service---especially social science capacity. More consistent use of Structured Decision Making process and tools, especially by top-level (Directorate level) Service decision makers. Lack thereof has eroded confidence by support staff in the integrity of Service leadership. More transparent decision making, especially at high leadership levels. Better communication of REASONS and PROCESS of Service decisions to Service staff throughout the agency.
- more accountability is needed for funded projects and other science based work to defone the data being generated will further the FWS mission or support specific resouece management decisions
- Better communication about scientific integrity policy and how it affects the science of the agency would be helpful.
- More regular emails should be sent out informing staff about the scientific integrity within the FWS.
- The mission of the FWS is to conserve species, but also to be a service to the public. At times, the public's interest and the species we are trying to conserve will conflict and decisions need to be made to support one direction or the other.
- Clear documentation on what standards are being used to make recommendations and what standards are used in the final decision.
- Reduce the amount of internal, administrative confusion (seems to always be changing and takes too much time)
- Make existing integrity policy crystal clear, and then hold employees accountable to following the policy.
- enforce decision makers to actually follow the integrity policy

- Enable the Service to hire scientists at appropriate and competitive grade levels. Create a system of authority whereby managers are held accountable to measurable standards that are demonstrated through use of data that is collected in a scientifically defensible manner. Enforce use of standards and protocols for all data collection that is used to make management decisions. Prioritize management, scientific, and research needs; and policy directives, through a documented and transparent decision-making process.
- Supervisors at all levels need to be held accountable for their promotion of conservation work and not, basically, for staying out of trouble.
- Transparency in why decisions are made, if it is clear that they are being made by other important factors beyond science (e.g. political considerations), rather than veiling decisions in science.
- to the public - the actual reason for a delisting and/or whether the delisting actually meets criteria set forth in ESA and recovery plan.
- By clarifying the role of science and policy application, the later includes a clear and explicit decision framework. The former which would continually renew based on the latest in conservation biology. Clear expectations by our decision makers to staff on how they expect climate change to be integrated into our analyses, etc.
- Reward whistle blowers whose actions are determined appropriate
- Increase transparency within the agency (i.e., make sure that draft documents are widely shared with field staff who will be charged with policy implementation; this has been rather hit-or-miss during the past but seems to be better recently, e.g., the draft FWS Mitigation Policy is being widely shared with field staff -- but I understand the version we are seeing is much watered-down from the early versions).
- We have a responsibility to the public and the lands and waters we are supposed to protect and manage to achieve this mission in an efficient, genuine, and effective manner. Hold us responsible accountable as individuals and get out of the way if you aren't going to facilitate and foster our efforts.
- There needs to be clear consequences for violating the scientific integrity policy. Managers will be less likely to violate the policy if they know there would be significant penalties. The managers in my office that were proven to have violated the policy were removed from our office but no other action was taken. Measures to insure a quick timeframe for evaluation of complaints and include independent reviewers and a comprehensive investigation should be included.
- Clearly articulating for staff the dividing line between science and policy. When decisions are made to satisfy pragmatic concerns, disclosures about when, how, and why this is the case should be made to staff, even if there is disagreement. Managers need to be free to make decisions based on direction set at the next higher level, but staff deserves to hear why recommendations might not be followed.
- Make more transparent what factors were used when decisions go against the research.
- Independent scientific unit to monitor scientific abuses.
- By separating science and policy as much as possible, and making both the scientific and policy decisions as transparent as possible.

- transparency on the scientific information and sharing the information on a regular basis with the FWS biologists and public.
- If decision is not scientifically supported, that's fine, but clearly state that it's a policy decision not informed by science. Given researchers the ability to attend national conferences and training to see current research/methods and network with colleagues.
- Be transparent about what we know and what we don't know. Explain threats to wildlife in a clear way understandable to the general public and politicians who may have little or no science background.
- Hire permanent employees so there is some consistency and accountability throughout projects.

Training

(Mentioned in 5% of coded responses)

- I think our office should spend more time on supporting our decisions with current scientific findings regarding the species that we are regulating for and protecting. Species specific training should be provided for each species that an employee comments on and yearly refresher training should be provided to keep current on information regarding the species.
- I think generally, there needs to be more training given towards any new employee to the USFWS on scientific integrity, political interactions, and business interactions.
- Reliance on on-line training is a joke.
- staff training and support.
- Make sure that refuge managers have been trained in resource management. Most are not and instead focus only on facilities and personnel management.
- The integrity of FWS scientific work can be strengthened by improving quality. Many employees lack the quantitative skills (e.g., population modeling, assessment, habitat modeling, sampling design, statistical modeling) required for such tasks as informed endangered species management and trend assessment. The FWS lacks capabilities particularly in operating the conservation planning and design components of their Strategic Habitat Conservation approach. This reality becomes obvious quickly, and, in fact, the land-grant universities and several public universities in a recent publication confirmed this status of incoming graduates. Fortunately, the National Conservation Training Center has well-developed curricula that can build these competencies in staff. Regrettably, these opportunities are underutilized. Supervisors and employees must be made aware of the value of these competencies for informed natural resources management and commit to building these skills, despite the fact that typically more than one week of instruction is required.
- Require that all FWS technical staff (all field biologists, all field-level managers, Program Managers at the Regional level and any managers empowered to make final agency recommendations, including Regional Directors, Deputy Directors, ARDs, etc.) undergo annual training in the FWS scientific integrity policy (they make us take annual training for IT, Equal Opportunity, Sexual Harassment, etc., so why not Scientific Integrity?).
- New training and greater understanding of uncertainty in decision making by scientists and management.
- Standardize training courses on data quality aspects of science

- Training for leadership to incorporate science in policy decisions
- Short training each year to remind staff of our rights and responsibilities under the scientific integrity policy.
- minimize unnecessary training
- More background/training for new employees. As well as possible refresher courses.
- Improved leadership training that is founded in experience with the agency programs.
- Design a program for folks without masters degrees to get them via the service. For those that came to the Service with adequate field time in lieu of a MS, this would allow those that want to, to work to improve their skills and develop to that higher educational level, similar to other agencies and contractors. A program to do this would help to improve the overall credibility of the Service.
- FWS staff need to be made more aware of the science work produced by the Service. Just announcing a new journal or publication is not enough. Authors/Researchers should be invited to give webinars about their work. Science managers should also host webinars on a regular basis to present these topics and facilitate a discussion or at least answer questions.
- Get rid of the "Stepping Up to Leadership" program. This is a system that encourages and promotes "go-along-to-get-along" spineless "managers." In reality it is a testing and filtering system to make sure only followers get promoted into higher ranks.
- 3. Get rid of the "Foundations" training for new employees at NCTC. This is just an "I'm okay - you're okay" BS waste of time. Start a program for all new ES biologists, similar to Special Agent Basic School, that includes instruction about the ESA, MBTA, Lacey Act, CWA, etc with real tests that you have to pass to graduate. Also it should include physical training.
- additional training for staff on scientific integrity.
- Training for employees
- Schooling in NEPA. Cooperation between agency divisions.
- In my job I see a lot of instances where the FWS would benefit if FWS Biologists had greater technical skills and knowledge.
- FWS lost a connection with science when USGS was removed. Many FWS employees do not understand science and how to use it to inform decisions. This mainly comes from a lack of training in science. A large proportion of FWS employees did not complete graduate school in their field of work, and if they did, very few have published. Selection of more scientifically trained applicants would help.
- Develop and require annual training on the Scientific Integrity Policy.
- I have received little to no training, there should be a core set of training classes or modules for each position. There should also be tutorials about the use of scientifically sound sources to make important decisions during section 7 consultations and in listing documents.
- Scientific findings can be unpopular and we need training in communications/PR/salesmanship in getting the word out.

Communication

(Mentioned in 4% of coded responses)

- Communication skills should be improved. How to talk about science to non-scientists should be a requirement.
- By disseminating information
- Improve communication about science in the Service and SHC. Much of the communication is not clear. People are confused by surrogate species, LCCs, I&M. They are really all part of SHC. People see them as disparate, unconnected initiatives. Connect the dots for people.
- The mission of service can greatly improve if all components of my office are integrated into the decisions taken and improved communication between all employees. Most of the time the information reaches a few employees and other employees not aware of the information.
- Better internal communication;
- Allow scientists to represent their work. Lessen the role of outreach specialists (PR) that act as a filter for the science and often get it wrong or misrepresent it with political biases.
- improve bottom-up communication;
- Better communication of the science produced by the FWS to the public.
- we are not allowed to speak directly with many of the stakeholders or press, as issues and controversy arise. Many times, we have attempted to be transparent and proactive in preparing FAQs, factsheets, and outreach materials only to have the work never approved at a higher level (and be allowed to be shared). While we are still responsible for managing our content, every social media post or website change must first be approved by multiple levels of supervision
- ensure their findings are not censored.
- Clearly articulating for staff the dividing line between science and policy. When decisions are made to satisfy pragmatic concerns, disclosures about when, how, and why this is the case should be made to staff, even if there is disagreement. Managers need to be free to make decisions based on direction set at the next higher level, but staff deserves to hear why recommendations might not be followed.
- Develop a protocol for internal communication when one or more offices of the service are involved in a project.
- Educate folks about the processes for insuring scientific credibility including the disagreement process.
- FWS staff need to be made more aware of the science work produced by the Service. Just announcing a new journal or publication is not enough. Authors/Researchers should be invited to give webinars about their work. Science managers should also host webinars on a regular basis to present these topics and facilitate a discussion or at least answer questions.
- Field staff should have more opportunity to communicate directly with the Headquarters Office. In my region, it is the Regional Office that suppresses factual information finding it's way to the Headquarters Office decision-makers.
- More support and encouragement to actively participate in professional societies, and presenting at conferences
- Despite the education level of many FWS employees, they seem to be weak writers and are not even really observant of plagiarism and what a proper peer review should be.

- By following sound ecological principles and not creating any flavor of the day approach to conservation. FWS also needs to increase its capacity in creative education and outreach to meet the changing demographics of the nation. Certainly science and evidence based conservation is very important, but it is also very important to reach out to the public if we are to conserve our natural resources and biodiversity into the future.
- Schooling in NEPA. Cooperation between agency divisions.
- Given researchers the ability to attend national conferences and training to see current research/methods and network with colleagues
- I believe scientists should not be filtered with respect to media communication (as is now the case).
- Scientific findings can be unpopular and we need training in communications/PR/salesmanship in getting the word out.

Whistleblower Protection

(Mentioned in 1% of coded responses)

- We are aware of and trained in Whistle blowing and such, but few would actually feel confident in coming forward on an issue. It will always get back to the supervisor/leaders/etc... eventually.
- By punishing the all the individuals that are guilty of violating the scientific integrity policy and the Whistleblower Protection Act, instead of punishing the whistleblower. Until staff employees see that they will not be retaliated against and that those individuals that have violated our policies and laws are punished, no one will come forward and stand-up for scientific integrity for fear of retribution. I have personally heard from Service employees say they witnessed or our knowledgeable about a scientific integrity violation but will not come forward for fear of retribution or because they do not think it will be worthwhile.
- They can bend the facts any way they like (or ignore them altogether), and there's not much that the scientists feel like we can do about it. While we're informed of our whistle-blower rights, we've all seen instances where the whistle-blowers are faced with retaliation and discrimination.
- Create a law protecting employees from being fired or relocated to other position by FWS if employee has evidence conservation of species is being compromised by FWS policy or the lack of it . The current whistle blower laws explicitly state they do not apply when the FWS is not doing enough to protect the environment.
- -More awareness of whistleblower policies and how we are allowed to interact with the public. - Safeguards against the undue influence of political appointees in the agency.

FDA

Twenty-one percent (391) of the 1,866 FDA survey respondents provided written responses.

Management and Leadership

(Mentioned in 32% of all coded responses)

- Also, reduce the the level of paperwork we have to do. It takes to long to manage tasks like constantly reporting our assignments and time reporting, etc. that it is detracting from our ability to just do our job of reviewing what should be reviewed. If we can streamline all the software and platforms and tools that are supposed to help us that would alleviate time wasted on administrative

paperwork. It would be nice to not have to fill out 50 forms to eventually be able to attend a local conference let alone travel anywhere.

- More emphasis on science and people and less on process. Process has thrown people and science under the bus in CDRH.
- Top managers must have a very high "scientific background". Most of the managers have forgotten what they learnt in school..
- Replacing the current leadership
- Right now we are discouraged from doing research on "sensitive" topics because management is afraid that we will find something or say something that doesn't adhere to FDA's official or unofficial position on the topic. The discouragement isn't overt -- but if we choose to write anything on a sensitive topic, we are subjected to many extra layers of review, with scrutiny of every word by every reviewer. The result is that the language in papers/presentations on sensitive topics is full of caveats and qualifiers, and in the end the papers/presentations don't provide useful information. I don't know how this situation could be improved other than FDA recognizing that it might be ok to sometimes release study results that vary from FDA's party line.
- By providing adequate staffing and training, clear and timely decisions on complex issues from upper management, particularly with regard to implementation of new legal requirements and additional staffing to support the increased workload for compliance with such new mandates. Relief from the restrictions on attendance of important scientific meetings for the purpose of training and to present work generated by FDA employees.
- Reduce non-scientific, administrative hurdles. Support all employees' participation in relevant scientific meetings, conferences, including non-local travel. Increase active recruitment of highly qualified professionals. Increase remuneration.
- By creating more full time position for qualified scientists
- the regulatory review process appears to be working OK. With the consolidation of FDA at White Oak, I think we've become too big, and there is not enough focus on making the actual campus a more pleasant place to work. There are few good restaurants in the area, and the location of the parking garages makes it difficult to leave work in the middle of the day.
- less administrative burden
- streamlining internal process -- right now, too much time and energy are spent on navigating internal procedures (which change frequently), taking focus away from fundamental scientific and public health issues.
- less bureaucracy
- Better management Better guidance on mission critical research projects that fulfill FSMA requirements More notice prior to cancelling ongoing projects
- FDA has a great core of scientists. They are competitive with any university or medical center. Despite this Scientists are continuously made to feel that they have to justify their existence. The state of mission critical science could be improved by: +Giving scientists more control over their budgets +Making funds and contractors available in multi-year installments so there is less wasted time and reduced uncertainty. +Reducing the bureaucratic burden of hiring personnel. +Reducing the

beaurocratic burden of attending conferences +Reduce the number of roles each person is expected to fullfill.

- Allow the scientist to attend more professional meetings to keep up with changes in science and risk assessments
- Improve the efficiency of the review process by shortening review timelines and allowing NDAs and BLAs to take precedent over other review work; this will require incentives to staff for timely completion of important work. Also, the one size fits all approach to NDA reviews (e.g. timelines, requirements) across all medical disciplines is not the best way to accomplish timely reviews. Decrease the number of meetings required by reviewers during the submission review timeline, decrease the required length and number of formal reviews filed in DARRTS during a NDA or BLA review cycle. There are way too many meetings and too many minor submissions in DARRTS that could be screened by other staff (project managers, staff with science backgrounds) and tagged as minor documents which don't require formal review by clinical (professional level) staff. Template based reviews of annual reports, protocol amendments, safety reports, etc. could improve efficiency of review divisions. In essence, take the burden of less important activities off reviewers so they can finish the formal NDA/BLA application reviews in less time. Also, too improve efficiency at FDA there must be greater incentives for all staff to get the important work done in a timely manner. The current yearly pay incentives are extremely small compared to work outside of government - that is a big obstacle to overcome. You have to inact real, valuable incentives in order to appreciate improved output by staff. The private sector knows this.
- By recognizing that the engineering of medical products is as important to the public health as the science. FDA frequently does an outstanding job of deciding difficult clinical issues, but often overlooks the more prosaic details of product design that bear on safety and performance. By eliminating reliance on entry-level scientists and engineers to perform functions for which they are fundamentally unqualified. By restructuring the agency to provide effective governance of scientific and engineering staff. By restructuring the Federal personnel system to enable us to hire and retain the best talent. By giving the agency, or portions of it, independence from political influence (which is largely driven by the undue influence that business interests exercise over both Congress and the Executive Branch).
- Resolute support by leadership and management throughout the organizational chain -- from the Presidential Administrative level, through HHS, FDA, and all of its sub-components -- allowing the scientific staff to spend a substantial enough fraction of their time to keep up with scientific literature and conferences, to do relevant research and publish findings, and facilitating transparency and honesty in policy decisions.
- Appoint Directors, Deputy Directors from the same field who understand what is going on. Not non-dermatologists to guide dermatology. These are plum jobs, 'blind keep on giving the candies to blinds''
- By very senior managers of OFVM growing a backbone to replace the piece of cooked spaghetti they currently have..
- better management that actually understands the science and is not affraid to stand behind the science.

- Reduce the number of levels of management.
- Supervisory management at all level stick to law and agency policy with high professional ethics and integrity.
- In the area of software acquisitions, the FDA should have individuals from the IT organization with specific skills in software development involved in the process from the very beginning.
- The mission of the FDA to protect and promote public health could be improve by devoting appropriate resources to answering questions related to safety and efficacy or effectiveness of medical products. The integrity could be improved by assessing the amount and quality of scientific oversight and examining how regulatory science priorities and metrics are evaluated. The prioritization (resources including time, money, and people) of scientific pursuits at the FDA is intertwined with the integrity of the scientific work. Thus, improvements to the prioritization process --- less burdensome, more transparent --- should also help to improve the integrity of the scientific work produced by the FDA. In some instances, less emphasis on justification of the scientific work that has already been determined to add regulatory value (by funding the project or otherwise) may enable scientists to pursue more questions and provide more results.
- Better funding, more opportunities to attend scientific meetings, hiring more FTE's to complete the work, elimination of personal vendettas of upper management
- The Agency should pay more attention to "bottom up" ideas. Many times perception of problems or new ideas start at the bottom, with the folks in the "trench", and they die-out as they move up through management. Many times, these ideas or "clues to problems" could have alerted the Agency to an issue that became a more significant problem later.
- There is a disconnect between the individuals who make the decisions and the individuals with strong technical expertise who can provide guidance in that decision making. At times it appears that this divide prevents the input of science and engineering guidance and accuracy to the development of policy and the application of the regulations. This survey appears to focus on scientific research integrity, but the concern extends beyond that. It is far easier for a decision maker to avoid considering inconvenient scientific and technical accuracy by simply not including those people at the table. It is not clear to me that this phenomenon unique to government, or that this is a surprise to anyone.
- Giving scientists the freedom and resources to do more investigator-initiated research and participate in more often in academic and professional conferences to keep up to date and meet collaborators. Also great need to reduce bureaucracy in managing lab budget and hiring research fellows.
- The practice of hiring ORISE fellows to do research needs to be looked at. I am a Ph.D. scientist in a high-demand field working full-time on funded regulatory research, yet I receive no job benefits whatsoever. Because of a recent change at ORAU, ORISE fellowships can only be renewed year-to-year so I don't even have good job stability. The one year, no-benefits appointments make it extremely difficult to recruit good scientists because the jobs are not competitive. If the FDA wants to better fulfill the mission of doing regulatory research to issue guidance, they need to be hiring Ph.D. level scientists into FTEs. The "try before you buy" attitude is not conducive to finding and keeping talent.

- I don't think we should be filling leadership roles at the agency with ex-pharmaceutical company executives. I don't think the fear of being sued by pharmaceutical companies should limit our regulatory authority.
- Improve the upward mobility of research scientists. There are many very talented and energetic scientists at the Staff and Fellow level that should be running their own labs. The increased competition for a static or shrinking number of PI positions, occupied by senior scientists who should be retiring, reduces the quality of work and increases the likelihood of fraud.
- Bring right expertise on board and involve them in complex scientific / regulatory issues. Application science in medicine, drug development, clinical research and public health has changed a lot. New scientific disciplines have been created in academia. Create positions for them within the agency. Reduce complex management system, reduce number of managers, branch chiefs, directors and increase scientists. Reduce multiple layers of management levels. Frequent open science discussion within the agency Improve clarity within the office
- data and metrics to better manage/evaluate processes, staff, and leadership
- involve more stakeholders to provide the data that sometimes is missing, incomplete, or too small to make conclusions
- FDA remains too tiered in managerial structure. The FDA needs to flatten the organization so that anyone can directly interact with anyone else. New reviewers should be able to email, text, call the commissioner, center director, etc. anytime they feel the need. Vertical management in science based organizations is not ideal. The volume of work remains a challenge to manage across the FDA.
- need to change the center director position every 8 years the current center director who has been with the agency for too long
- Federal travel restrictions have made it very hard for scientific staff to attend conferences. It would be better for scientific staff to have more ready access to scientific training. Our review load is so high that there is little time to conduct independent research. I would like the agency to build at least 20% time for scientific staff to conduct their own research and attend seminars. Risk-benefit decisions for drug approval could be improved by use of more quantitative methods. Labeling for prescribers and for consumers, especially for safety could vastly improve to provide a more relevant information. The focus now seems to be citing everything to prevent potential lawsuits from consumers.
- A timely and rational federal budget process. The administrative overhead required of everyone including scientific staff has reached unprecedented levels. This constantly increasing distraction away from mission is the biggest threat to the quality of science in the agency.
- Support more attendance and participation at scientific conferences
- There has been an insidious attempt by Congress to reach directly into the agencies, such as EPA and USGS, and direct the work. This is inappropriate. Congress is using funding and the threat of de-funding to manipulate science policy, at least in terms of environmental science. Since I've only been at FDA for [REDACTED], I can't comment on things here, but if my observations and experience at other agencies holds true, then I would assume that Congress is meddling with FDA the same as they do with the other agencies. Anytime there is something controversial, or if there is/are issues that are near and dear to the hearts of the industry/sector interests that contribute to their political

election campaigns, Congress finds a way to see that science is subverted to suit the interests of these groups. The Administration does it too, but it is more subtle. They don't announce this, they let it filter down through management. But it happens, clearly. I've talked to many scientists at agencies who say 'we're not allowed to work on X' or 'we've been told hands off of Y'. This is wrong and in a lot of instances it hurts public health. So, those comments although not aimed specifically at FDA are generalizable to all science missions in US government.

- I see scientific work produced by the FDA belonging to three areas. 1) Data monitoring 2) Data mining and 3) Lab research. Lab research is inherently every efficient and generates expertise over the long term and is not well suited in its current approach for the mission of the FDA. We need to consider other approaches to efficiently using outside expertise. Also, Lab research is stymied by the uncertainties in the funding process, this needs to be fixed.
- FDA is seriously hampered in its efforts to fulfill its mission by inadequate appropriations from Congress. Congress needs to appropriate adequate funds for: Adequate scientific staffing; Salary increases competitive with those of comparable non-government positions; Adequate travel needed for: scientific training and professional development, oversight of regulated industry, development of national and international standards, education and outreach to regulated industry In-house research directly related to FDA mission; Physical office and parking facilities designed to allow future expansion instead of being overfilled by the time they are completed.
- Although it obviously would be difficult to achieve due to pressure from politicians and businessmen, it would be better if high level (and other) FDA employees were not part of the revolving door process in which people come from the regulated industry (or law firms representing the regulated industry), work for the FDA and then return to high paid jobs in the private sector.
- By FDA hiring employees with integrity who value individual patients and employees and the impact FDA's actions have on individual patients and the impact FDA managers have on FDA employees and FDA actions.
- Information systems that make accessing submission relevant documents more accessible. Currently, all of the submission related regs, MAPPs, precedence, previous reviews, toxicology, and submission docs are housed in unrelated locations, requiring a lot of repetitive searching to collect and re-collect the documents for every submission.
- The actual science experts should be consulted and their work considered to a greater degree in regulatory decisions. More managers of the science groups don't have strong science backgrounds in contrast to past times. There are also many more layers of regulatory staff, managers and administrators now between the science expert and the decisionmakers that an accurate science-based message can get lost along the way with the "agendas" of all these levels. Also FDA is very lawyer heavy at this time and they are determining a lot of science-based decisions.
- Top management should be more opened minded and not edit out sections of reports or findings just because they do not understand the science or because they do not agree with the report or position of the author.
- In my limited exposure to research in my division, I think the dual research/regulatory position is a very poor model for fostering productive scientists and producing quality research. In the end, the people I have seen that are supposed to be doing 50/50 research regulatory always are forced to do

more regulatory work because those responsibilities have deadlines and there is little accountability for lack of production in the lab based on my experiences. Often, the research/reviewer is a very hard working individual who wants to do more research, but are forced to limit their lab activities due to the regulatory obligations. In other cases, there is no evidence of any research accomplishments and they are effectively preventing someone else from acquiring a position and performing quality research to advance the field and aid in the FDA's mission to better protect public health. I think a very serious alteration in the staff fellow model should be considered as right now I think it is very harmful to the productivity of many FDA labs and it can negatively impact the staff fellow's career as well. I honestly believe more pure research FTE positions would significantly help this situation and allow for people to not have to juggle both responsibilities. It is also frustrating to see the incredible amount of money that goes into acquiring lab equipment and materials when a better allocation of money would be in hiring more lab personnel. We have enough cool equipment and resources here at the FDA. WE NEED MORE PEOPLE.

- Deregulate the employees! We are bound to numerous regulations imposed by MDUFA that our work has become meaningless. These arrangements were made by administrators who do not do the field work at FDA. MDUFA is a political strategy to make it look like government is being cooperative with industry. The agency keeps adding layer upon layer of administrative review to discredit scientific/clinical review work so they increase their percentage of first round approvals. This philosophy takes away from our goal of protecting public health. These upper layer administrators tell clinicians that they are wrong in asking for additional information necessary for the protection of human subjects in clinical trials. We have to literally fight to ensure that the right questions are asked. This destroys morale and motivation. Why should we work so hard to have our work shut down and the agency go over our heads to approve unsafe and ineffective devices? So, to answer your question, FDA administration needs to start respecting and trusting the professional opinions of their scientists and clinicians.
- Management that has an agenda needs to be weeded out. Americans deserve better. And we need to stop funding quack researchers who are simply pushing their agenda as well.
- Fewer restrictions on attendance at important (national) scientific meetings. There are caps set by the Dept. (HHS)
- More people with higher degrees such as Ph.D. should be hired as we need more experts in different disciplines to draft new scientific guidance documents and update all kinds of out-dated scientific guidance documents (some are more than twenty years old). Also the FDA scientists should be given some reasonable time every year to work on these scientific guidance documents. The scientific documents will greatly improve the quality of the industry's submission and the efficiency and consistency of the FDA's review process. Additionally, to maintain good staff, the hired scientists should be fairly paid; people with similar degrees should be paid similarly across the centers.
- FDA should allow employees to attend scientific meeting to gain scientific knowledge
- more staff, bi-annual budgeting(budget stability/planning), looser travel restrictions, more/flexible project/on-detail work, more training, focus, and commitment to sci integ/dispute process by managers.

- Independent scientific work free of political/business/other interest group influence. Reasonable workload (90h/week) and reasonable deadline pressure. Means to retain experienced workforce; no "people come, people go" mentality, but address the root problems.
- Increase the budget of the research labs. To hire students and research fellows, and purchase the more expensive pieces of equipment we need, we write proposals to outside funding agencies, such as the military. I don't think it is a good use of taxpayers' money to fund us to write proposals. It also forces us to cater more toward the needs of funding agencies than public health. Also, please stop placing blanket restrictions on travel, and adding training requirements, because someone in some part of government abused a freedom or privilege.
- New senior leadership
- Would have to overhaul the regulatory process to allow more time for review and consideration of information outside the formal submission process. You would also have to greatly increase scientific staff.
- I have been working almost 15 year at FDA, doing researches and publishing papers, on frontier microarray technology at that time, and dendritic vaccine currently, but never asked to provide information for regulatory guidelines. For example, as I know, evaluation and regulatory of microarray technology was signed to CDRH. Actually several Centers also conduct projects using microarray, having microarray all equipment and experimental experiences. I think when preparing a regulatory guideline for one product, FDA should call all forces, then regulatory review can be laid on one office/center.
- Remove pressure from management to modify regulatory decisions in the Division.
- The work of the FDA could be improved by updating the outdated guidance / regulations / laws that govern the FDA. There are numerous outdated regulations related to the performance standards of medical equipment and many revisions to guidance documents. However, it is very difficult to get these through the center / agency / regulatory council etc... to make revisions and/or make them available to the public. There seems to be a general unwillingness to put forth updates, when in many cases they are not controversial and would benefit everyone (e.g., remove outdated regulations to reduce burden on FDA and industry).
- I am largely a regulatory science researcher, who is occasionally involved in review of complex medical devices. I try to listen to the issues of my reviewer counterparts and how my research can aid their decisions. But that is not typical at FDA. The congress needs to fund FDA regulatory research, not FDA administration. We need long-term technicians, and staff scientists to aid scientists in focusing on long-term safety issues, and not be running after every hot button in the news of what will affect FDA's appearance to the public, industry, and congress. While a hot button science branch is needed, a lot of the current hot-button studies are just PR junk to make us look good. Ex. 8/2014. First no Ebola research is funded in our center, but a big PR program is made to justify how we help Ebola products get reviewed. I tell mgmt this is unwise given the size of the rising outbreak. Mgrs that have no background in bioscience (engineers often) ignore our advice. Then suddenly no research funding, becomes lots of Ebola funding for research in 2015. I have interesting non-Ebola research results, but now I must gun for Ebola money. Scientists are scrambling for project funding due to poor upper management decisions made by our center. The

current situation is our science is perverted due to lack of internal funding (oddly money is often siphoned by review to make " survey studies" and not basic research), and in desperation, science funding is obtained from the military (DARPA) and agencies for their pet projects, not FDA's needs. It is no surprise our reviewers think FDA research has no direction to help them in review. We hire newly minted Ph.D.s with little or no research experience and they turn into managers (cause science is too hard, and we have a patronistic structure of directors), to "direct" large research projects they have no expertise doing. The project fails.

- Science-based collaborative analysis rather than conformity to performance standards that have little or no relevance to science-based analysis.
- need more rapid evolution of our scientific basis for decision. new information leads to new acceptance/safety criteria all the time ... we are locked into stagnant guidance document framework. we don't have a safety model for medical devices ... therefore we don't have a consistent review process.
- Regarding Tobacco Products the FDA needs to develop a set of studies and data that are required to answer questions and enable the industry to move forward with regulation. currently the FDA may not be providing quite enough guidance to the industry. Congress writes legislation that indicates that they have no idea what FDA does or how it works.
- Hire more scientists to reduce the heavy workload. 2) Provide all employees the opportunity to continue scientific education. 3) Just because we are government workers doesn't mean we don't need salary increases. It was very damaging to the moral to not have our living expense increase for 8 years. I know it's 1%, but it really does add up with time.
- More independence to senior scientists. Scientists working for FDA for over twenty five years do not have any independence.
- Better methods to capture data need to address drug safety issues and assess risk in the US health care system (regardless of the setting of care). Validated claims-based algorithms to conduct public health research on health outcomes and adverse events. We also need active drug safety surveillance
- Continued emphasis on integrity of the work performed and high ethical standards which is a constant part of the ethos here at the FDA. Also, constantly review the processes (around ethics at the FDA) in place to enhance the confidence employees have in those processes.
- Create rapid analysis Teams to assess emerging technologies and how it may benefit FDA.
- remove excessive administrative burden 2. fix the broken procurement process 3. fund the science
- The problem is management. FDA is run by scientists who have no management skills. The attitude is do not rock the boat. Top down policy and lack of transparency, and leadership. Right hand not knowing what left hand is doing leading to secretive policies.
- Hire more professionals
- Recruit and retain younger degreed professionals
- Easier access to experts in centers of scientific research (e.g., other government agencies, universities, or major hospital centers) could possibly improve how well FDA accomplishes its mission.

- New Center management that is knowledgeable in science and scientific method 2) New Center management that does not show favoritism when it comes to budgeting or personnel decisions. 3) New Center management that does not openly criticize its employees/certain groups in an inappropriate setting which is totally based on gossip. 4) New Center management that follows appropriate OPM procedures in hiring.
- Having a Commissioner and people in a position of authority more familiar with the work of the people that they represent. Our Commissioner has made little effort to get to understand the work of reviewers and scientists. All of the new mandates that have been issued over the last few years seem to add extra administrative burden and work with less employees. Quality gets compromised.
- Stop continually changing SOPs. More relaxed deadlines. Concentrate on the quality of the work instead of the speed at which it is accomplished.
- Skilled well trained managers and good leaders who are willing to inspire the staff members and keep them scientifically strong.
- Less administrative tasks, more administrative support. I spend way too much time doing progress reports, cost reports, cost projections, labor projects, labor reports, presenting these reports in talks to the same people who get these reports, etc. I need more time to do the actual science.
- bring back 360 evaluation between employees and their managers; remove inefficient managers; US President changes between 4 to 8 years, but some of these managers are here for 20 - 30 years; With them on board, you cannot get rid of prejudice and bias. Make the managers get back to bench level,
- Allow and encourage staff in the review divisions (CDER/office of new drugs) to attend medical and scientific meetings to remain update with current scientific thought and clinical practice . This has been actively discouraged and underfunded since 2010 given recent government scandals regarding conference attendance. This policy is contrary to the FDA mission. Review staff providing recommendations and making decisions with such significant impacts (drug approval) should be REQUIRED to attend these conferences to maintain skills and remain up to date with current thoughts in his/her respective field.
- Cancell contractors and take them as Federal employee and stop saving money in this field because this will affect directly the public health. 2. Fire any big mouth pretending that he/she is doing a lot of work and actually they are doing nothing.
- The key review staffs are lacking, while FDA hired too many administrative staffs, and created many unnecessary procedures which wasted lots of reviewers' time.
- Reduce administrative barriers
- Industry puts too much pressure on managers, and reviewers are put under intense pressure by managers to approve products. Disapprovals are scrutinized closely at many levels and require a lot of time and effort, whereas approvals seem to fly through. Reviewers who closely scrutinize data can be seen as troublemakers, so there's less incentive to do a thorough review. Managers are so pleased with approvals. I'd like our work to be more independent of industry interests. I'd also like to see more resources spent in training FDA staff. Sometimes new reviewers make mistakes, sometimes industry is deliberately misleading in their submissions, but based on current regulations, we can't pull a product from the market until after we get adverse event reports. Mistakes on our

end can't be rectified. It's very demoralizing to be told that one person's mistake sets the bar for all other products.

- I do not think the problem is with scientific integrity. I think the problem is having insufficient technical and medical personnel to meet the agency's mission. As a result insufficient time to do a good job, and an apparent powerlessness of agency management to correct the situation, creates in me terrific dissatisfaction. More and more the agency is treating its medical reviewer staff as a labor pool to be exploited. The general lack of knowledge of regulatory process and clinical trial science in the pharma community is also highly demoralizing. Pharma executives appear to be quite content with being ignorant of scientific evaluation of new drugs.
- Difficult The problem starts at the top. There seem to be two major different, but equally ineffective types of "FDA leadership". There is the old school – those (mostly older men) who are generally well-educated and intentioned but unable/ unwilling to change and allow for technological or Agency innovation & education in our new societal paradigm and development environment; they are also unwilling or unable to leave the agency or retire or allow anything under their control to change/evolve. Some are intellectually lazy and unwilling to learn new processes outside of science. Most (in CDER) have spent their entire careers there and have created the convoluted process and bottlenecks that now hold the Agency hostage. They are relatively conservative (scientifically) and benign to public health compared to others, but they are fierce and enduring roadblocks to change. The other type of top leadership (esp in CDRH) is the one driving their own agenda and industry's agenda. These are the actively dangerous ones. Some are from industry, some were surreptitiously placed in the Agency through Congressional connections, and some are just personally ambitious and hungry to please industry so they have a nice job waiting when they leave the FDA. They are making "customer service" priorities for reviewers (not science and not proper workload). They put non-clinicians in charge of clinical trials. They are trying to get potentially dangerous, clinical software removed from FDA oversight and regulations (via pressure from Apple, Google and other major players). These are also "Leaders who micromanage and insert themselves into individual product reviews and threaten people to get answers they want and steer FDA responses in the direction they want (versus what the science implies). In fact, I have not seen anything that I would consider "real" leadership at the FDA - esp. for public health. I think Dr. [REDACTED] poor handling of the inquiry after the compounding pharmacy debacle illustrated a third characteristic of "agency leadership" – the inability to provide clear answers or a course of action.
- By developing policies, procedures, guidances and regulations that align with new Acts in a timely fashion, so that new review issues are handled objectively rather than "on-the-fly" and inconsistently while things are under development.
- I think when the review team and senior management disagree it should be public. this is a bigger issue with medical devices than with drug and biologics because individual reviews are not posted with devices. i think a better peer review process ought to be in place for the intramural research programs along the lines of NIH.
- In the case of CTP, scientific decisions should be made based on the input and recommendations from subject matter experts. Many of the scientists in management positions are not subject matter

experts for the working groups or decisions that they provide. Thus, many decisions and research projects miss the mark.

- We are so poorly served by our leaders, who are not scientists but fancy themselves such. Note that neither our former, or especially our current, "Chief Scientists" are actually scientists of any stature. This is appalling, and illustrates the overall problem.
- Stop hiring people from industry with false impressions on how they are "going to change" the FDA! especially stop hiring American Red Cross managers to work in the area of BLOOD at FDA.
- Increase transparency and consistent decision making.
- Increased resources (from appropriated funds, not fees). More hiring flexibility, especially for STEM positions. E.g. direct hire for mission-critical scientific position categories.
- In our branch, reviewers with expertise and experience appropriate to the devices we review should be hired. It seems that the new reviewers currently hired by management have come to FDA "to learn" about the devices we review. While the new reviewers are clearly well-educated and intelligent, they come with narrowly scoped research backgrounds and have not had any clinical exposure/experience.
- To remove the direct and indirect influence of the industry that FDA is supposed to regulate from its budget and decision-making procedures because the industry has direct influence on the members of congress who are supposed to oversee FDA's work. The presence of revolving door between the FDA and the industry in terms of employment, particularly management and upper management levels, also has a negative impact on the integrity of FDA's work.
- reduce the huge waste of money spent on major non-productive initiatives/contracts; Stop unfair support and grants to lobbyist organizations (CDISC, CFAST, for example) whose only interests are to influence FDA policies that would benefit their organizations but do a lot more harm than good to the industry and their scientific investigations; Remove obvious redundancies and inconsistencies among different Centers.
- The user fee legislation should be amended so that FDA review practices and policies are not influenced in any way by industry that is regulated by FDA itself. FDA resources are too limited making for competitive funding as part of the prioritization of scientific programs. FDA needs better funding, not tied to industry. The bureaucratic and administrative burden upon scientists at the FDA has become increasingly problematic and interferes with the conduct of the research needed. Approval of research projects needs to be streamlined and simplified. Additionally, there is too much emphasis on shortening review times and meeting MDUFMA goals rather than on public health and safety. The customer service initiative is not meaningful in terms of scientific research and should be curtailed.
- Hi [REDACTED] I wanted to bring you "up-to-speed" on my findings. Many structures have eroded at [REDACTED] that should exist: i.e., Good Laboratory Practice (GLP) investigations and Conflict of Interests (COI) investigations prior to initiating toxicology studies. I contacted [REDACTED] to determine what mechanisms they still have in place, and I have communicated with [REDACTED] about GLP and COI. See http://en.wikipedia.org/wiki/Good_laboratory_practice about the purpose of GLP. See http://en.wikipedia.org/wiki/Conflict_of_interest regarding conflict of interests that can bias a

study. Also, see email thread below. Additionally, our ability to have industry perform the necessary studies has also disappeared---hence, the request for a DATA CALL-IN mechanism to FFDC. I contacted [REDACTED], as per [REDACTED] recommendations. I also know to have such a legislative change one must demonstrate it to be a long-term pervasive problem for the agency. As such, I contacted [REDACTED], [REDACTED], and other offices of [REDACTED], and I am happy to say these centers and offices have identified data needs requiring a data call-in mechanism. We, FDA, should never be in a position to have to “beg” industry for data to determine safety, and if and when we receive studies to review, we should have the confidence in the data, because it has been performed at a GLP certified laboratory, objectively, by individuals who don't have a direct association with industry or who won't benefit in some way from the results of the studies due to conflicts of interests. Comments from Dr. [REDACTED], who assumed the [REDACTED] [REDACTED] role when our [REDACTED] inspector retired. However, [REDACTED] is a [REDACTED] supervisor, who reviews studies of staff scientists. How can [REDACTED] perform a [REDACTED] [REDACTED] from behind a desk in [REDACTED]? [REDACTED] reply to my remarks: In regards to your statement, “We did not perform a conflict-of-interest (COI) investigation of the laboratory nor a GLP certification investigation. We should perform these activities when we find out whom performed the work. These are standard operating procedures for federal science agencies where studies/data are submitted that would impact safety” ----- The FDA Bioresearch Monitoring (BIMO) and thusly the [REDACTED] BIMO does not perform conflict-of-interest (COI) investigations on laboratories that submit toxicology to the FDA and we do not certify laboratories under our GLP program. The laboratory that is chosen to conduct toxicology studies for a Sponsor is strictly a business decision between the sponsor and that lab Facility. After we have received the new [REDACTED] toxicology studies and If our management decides that these studies should be audited and the laboratories conducting these studies should be inspected, then these studies will be added to a “Potential Studies/Laboratories To Be inspected” List – managed by the [REDACTED] BIMO and may be inspected upon [REDACTED] Management's request.

- as a Peer Review system for Scientists which is barely functional. Scientists in Research are required to go through Peer Review every 5 years. Other Scientists can go through Peer Review for Promotion, but access to the process is discouraged in both obvious and subtle ways. Scientist supervisors should go through Peer Review, and sometimes do when higher level management want to discourage certain candidates, but there is no requirement for scientific Supervisor candidates to go through Peer Review for qualification, and as a consequence the hiring of scientific Supervisors is more often a "Beauty Contest" than a process of determining either scientific qualifications or leadership skills. This is why there is such a proliferation of "Leadership" courses at FDA. Experience and skill are the most attractive attributes of a Leader, but FDA thinks it can train the inexperienced/unskilled ladder climbers to lead. Real scientific learning opportunities are few and far between for those who want to provide scientific expertise.
- Focuses on safety evaluation into post market outcomes, and that information must reflect to premarket review and the standard update.
- Stop CDRH policies regarding "early feasibility" studies and emphasis on post-market review (where FDA has no teeth) from pre-market review

- The Centers mission often conflicts with the division's mission. We are told more and more of what the outcomes will be ahead of time.
- The FDA should be making science based decisions, and it is for the most part. However we are hindered by limited resources (inadequate funding for test samples, lab space, hiring), ineffective processes for completing work assignments, incompetent employees who cannot be easily fired, and changing priorities each time new leadership comes around (which seems to be every few years).
- More support staff. I think scientists spend way too much time doing chores that must be done, but could easily be done by support staff (project managers, technicians, secretaries, etc). As it is, managers understandably fill their few FTEs with highest level worker feasible. Suggestion: institute change whereby support FTEs and professional FTEs are in separate 'accounting' buckets for each work unit. I think this would improve the scientific product by allowing more time to accomplish the scientific work that is largely under tight deadline, greatly improve morale and retention of FDAs professionals, all resulting in improved accomplishment of FDAs daunting and incredibly important mission.
- Implement the Equal Voice Principle across all centers within FDA. Training new scientific reviewers on issues associated with equal voice in decision making-process.
- There are significant obstructions to the hiring process and the ability to travel to conferences is basically non-existent. To be able to share knowledge and learn from your peers about new methods and techniques is critical, to hire staff to fulfill research and data gaps is critical.
- It would be great if all research facilities were afforded the same level of access to resources and technology. Many of the offices that are not centrally located to headquarters suffer from a lack of updating and are treated much like "step children" IM
- FDA management does not follow the FDA's policy on scientific integrity. Management does not care about substantive conflicts of interest or dissemination of inaccurate information. Management does not care about scientific integrity or the protection of the US public health.
- To have a data integrity oversight board or some other means to regularly and systematically evaluate and scrutinize the data from clinical studies that are submitted to FDA (especially for medical devices). Much of the data that is submitted are "cleaned" or appear to be filtered prior to submission to FDA. FDA reviewers' ability to trust the data submitted is then compromised, but reviewers have no other choice than to review the data as submitted or to miss deadlines and fall behind in other work in an effort to try to more closely scrutinize the data submitted.
- Increased promotion and profile for internal FDA research including increased funding and expansion of research units that do not have review responsibilities. Separating the science from review influences is critical. Use of annual appropriations for funding has severe negative effects on the continuity and consistency of research within the FDA. Alternate way to provide funding would be significant improvement. Ability to do research purchasing outside many of the contracting constraints of the federal government would also improve the efficiency and efficacy of FDA research.
- The current purchasing process through the Office of Acquisitions and Grants Services and the new requirement to buy nearly everything from GSA Advantage, are hamstringing the Agency's ability to

stay at the cutting edge of science--acquisition takes up more of the scientists' time, and it is becoming increasingly difficult to acquire the best instrumentation and services to accomplish the Agency's mission.

- Fire managers who retaliate against scientists who publish. Educate the public about the importance of scientific integrity to our economy (their jobs).
- FDA does not have a 360 degree survey that enables employees to anonymously report their experience and opinions on their supervisor's management skills. As supervisors and upper management have the authority to influence directly what employees are supposed to do as their job, including scientific research directions and preserving or even violating the integrity of scientific work, it is important to be able to filter poorly skilled managers and improve work-place moral.
- More transparency particularly from management with regards to budget, projects, who is working on what
- did you know that a device company can submit a copy of an article (no data - just an electronic copy of a published article) as "proof" of the efficacy of their product to support changes in the indications for use statement? I would recommend that device companies be required to conduct clinical trials for their devices. Keep the lobbyists, lawyers, and the politicians out of decision making. increased funding and staff. need longer periods of time to review drug applications. While there is a year to review the information submitted, there are so many additional requirements and layers of management for approval that it is difficult to complete the information on time.
- By increasing transparency. Frequent training. Providing more exposure to regulatory affairs. Providing regulatory training. In my opinion FDA higher authorities or the decision makers should revisit some of the issues, e.g., in many of the offices/divisions/labs people coming to FDA from various part of the world having J1 VISA and after a while being converted to H1 VISA, who are not-permanent US resident or not-US citizen. They are being provided with highly classified regulatory works and getting high quality regulatory trainings. Unfortunately many of the US permanent residents and US citizens are not allowed to do any regulatory works as well as not allowed to sit for any of the regulatory training sessions. I'm a US citizen. I joined [REDACTED] as an ORISE fellow (while I was a permanent resident of USA, waiting to be a US citizen). I was not allowed to do any regulatory work nor to sit for any regulatory training. [REDACTED]
[REDACTED] It is very disappointing and unfortunate. While joining FDA one would naturally think/expect to have a very deep regulatory exposure, the very uniqueness only FDA has on the earth. I suggest/request the policy makers to revisit this regulation and give priority to the US Permanent residents/US Citizens rather than the temporary foreign workers.
- I think that FDA scientists are hamstrung by a lack of support in terms of allowing us to travel and participate in conferences. Only high level supervisors are granted any sort of access to travel "privileges". Science should not be done in a vacuum. It is essential that FDA scientists are encouraged and enabled to participate in and present their research at conferences, which has not been happening for the past at least 3 years.
- I believe that the mission to assure the availability of high quality pharmaceuticals with very reproducible clinical outcomes is advanced by the development of scientifically sound shared expectations between the FDA and the regulated industry. I believe this is best advanced by

proactive discussions outside of the context of specific actions, such as those that occur at professional conferences. The burden of participation in these conferences, of assuring that this participation is neither a vacation-like junket, a resume padding exercise, nor an arbitrary support of a for profit venture has increased radically in the last few years. The result is a decrease in FDA participation in technical conferences (especially those on manufacturing sciences), a decrease in good will with conference organizers, and a decrease in shared education and active listening between the FDA and the regulated industry. Multiple layers of approval to attend conferences, weeks of sitting in poorly defined approval trains, and arbitrary definition of what is an allowed or not-allowed conference or venue compromises the mission. This issue must be addressed at the Department, Agency, and Center level if the goal of timely, science driven, risk based shared discussion is to be achieved.

- You could start by finding some more better managers. However, even the best managers have to deal with congress and stateholders (regulated industry). Better management will help make FDA employees more productive.
- Increasing the time for review of a New Investigational New Drug (IND application) and clinical protocols that are submitted to an ongoing IND. Currently, the time to review these before a clinical trial goes forward are 30 days, and 0 days. These are not reasonable timelines. 2) Almost all the upper management for safety evaluation/risk assessment at the FDA are MDs. This results in an environment in which the upper management does not have a reasonable understanding or appreciation for the work done by non-MDs, specifically by PhDs. PhDs from within the Agency need to be able to achieve equal positions. 2) Increase the salary of scientists who are doing safety assessment. It is nearly impossible to recruit competent and experienced toxicologists based on salary to the FDA. Instead of recruiting toxicologists for these positions, individuals with zero training or experience in toxicology are filling the large portion of these positions. They are trained at the FDA, by others who may or may not have limited experience in toxicology. While it is fine to have part of your workforce trained in situ, there is a dearth of scientists who have formal training in toxicology. This is a public safety issue.
- Flatten the hierarchy. Too many levels of clearance. Improvements in leadership are needed. In many sectors, leaders are selected because they are high performing technicians. Oftentimes they have minimal to no leadership skills.
- More resources and some needed statutory changes.
- Give all FDA scientists an annual, guaranteed budget to attend scientific meetings. All FDA scientists should have a minimum of 10% of their job duty be to perform independent regulatory research. Require "expert scientists" in the FDA to spend 25% of their time training junior scientists. Make this something they get evaluated on in their performance review. In general, only expert scientists are going to scientific meetings. And they are so busy managing their careers that they are not bringing the level of scientific expertise up to their level in the FDA. Right now, those expert scientists have an ulterior motive (which goes unchecked) for doing this. When they retire, they get to draw a very high consulting salary from the FDA because they have given people the impression that they are irreplaceable. Or in other instances, they move into private industry and take a lot of federal contract work with them, again, because they made a niche for themselves in the FDA and decisions

become dependent on their expertise - even after they leave. This has to stop! And it can with proper training in place within the agency. All scientists come here after being stellar researchers and clinicians. Don't let that go to waste because of the walls senior FDA scientists have put up to keep out competition for their career within the FDA.

- the division directors, who should be experts in science, the authority to make decisions on research topics and approaches to be used. There are too many bureaucratic levels above them, staffed by individuals with little or no research experience, who micromanage everything.
- I believe top management officials understand the mission of the FDA and try their best to protect the scientific integrity. However, some middle management officials do not understand the mission very well and their lack of understanding on scientific data often prevent reviewers from properly addressing the issues to the audience who deserves to hear. Equal voice practice is often compromised by some management officials who utilize fear factor to control their employees.
- The FDA needs to stop using the same arcane HR process used by the rest of the government. Every FDA hire that is primarily a scientific or engineering position should be a Title 42 hire or some modified version of it. People complain about contractors and frequent turnover, when in reality contractors and people with ambition who eventually wind up leaving the Agency actually produce some of the best work while they are there.
- the mission of the FDA could best be improved by greater interactions with stakeholders, including industry, the laboratory community, and consumer groups. Currently, only a small handful of senior FDA employees interacts with these stakeholders. The vast majority of FDA employees have a lack of understanding of the needs of these stakeholder groups. Programs such as the Experiential Learning Program should be expanded to laboratory and consumer groups to give rank-and-file FDA employees a clearer understanding of stakeholder needs.
- I am a medical scientist, involved in regulation of drugs and biologics. The FDA has a chronic problem related to its ability to recruit and retain talented individuals. In my experience, the problem is due to inability to "shoe-horn" scientists into a strict, linear administrative structure. This means that, during decision-making meetings or even general discussions, the weight of an opinion is directly proportional to the pecking-order level of the participants. This is extremely uncomfortable for someone who has held a senior-level academic position prior to coming to FDA, and as a consequence, such individuals usually don't come here and many, but certainly not all, of the medical staff are mediocre. Furthermore, advancement for free-thinking scientists is usually limited at FDA. The consequence of this is lack of retention of talented people. Finally, opportunities for meaningful educational experiences are limited by time and budgetary restraints. To improve this situation, these issues must be addressed in a serious manner, but after many years here, I am not optimistic.
- Make the FDA lawyers (OCC or OGC) work much, much faster. Streamline the GGP process so that scientifically current Guidance documents may be made available in a timely fashion.
- The management needs training on the ethics we learned about in academia. No unnecessary credit grabbing. Giving people the credit they are actually due is really appreciated instead of sweeping their work under the rug without giving the person's work any consideration. Management should give people more opportunity because my experience in FDA is not what I had

for experience in academia or in the contracting industry. It is clear that the playing field is not level and there is politics as to who management elevates and who management does not. I did not get a chance to be a Team Leader in GLP. I got limited opportunity to participate in generation on Guidances or science policy. I said that I was interested in being part of the Biosimilars team, and it never materialized. Management should be better at evaluating individuals fairly, not only evaluating people on the quality of work but also upon the quantity of work done as well because this factor varies, usually increases year after year. The people in management should also have a better command of the knowledge of the field compared to their subordinates. That is why they earn more money. Therefore, management should be held more accountable for their actions or lack thereof.

- Clearer goals and expectations from the scientists and establishment of a transparent, science based and public health centric policies.
- In my Division it would be having supervisors sufficiently experienced and knowledgeable in the working of the FDA to be able to make decisions and provide appropriate feedback to reviewers. Also knowing how to provide feedback and able to discuss the scientific reasons and rationale for decisions, rather than "that is what we did for X and a blank when asked why was that done for X, and why is that appropriate for this different case Y." In our division, there has been a history of supervisors lacking these skills.
- Better IT support and infrastructure. 2. Management training. Although I currently have a very good manager, I have had past experience with very poor managers who refused to listen to fact contrary to their views, and stifled all dissenting views. Some attention should be paid and concrete steps taken to improving the poor morale and the poor leadership.
- research staff instead of temporary contract or fellows that there is no intention of retaining. Research topics a discussion among research, program offices and center management. Currently topics too narrow to be of much use. In next few years many scientists will be retiring including myself and I see no move to hire/retain replacements.
- Better internal power balances
- I have reached a point of frustration in my career at CFSAN that now I am willing to say what many of us think is the best solution to improve the integrity of our scientific work and fairness to young scientists: Remove our incredibly incompetent Senior Science Advisors. They are regarded by many as Industry Hacks, decades behind the times with respect to relevant areas of public health that should be mission critical to CFSAN. Of all the Centers, CFSAN is regarded as having the worst scientific leadership and the lowest morale among scientists. Concern over retaliation which we have all witnessed prevents many of us from reporting the unethical and scientifically unsound actions of our senior scientific leadership, and then who would we report it to? Recently, those who complained to HR were labeled insubordinate. The mission of these leaders seemingly is to impede scientific discovery that may draw attention to the Center because it supports an unpopular action or decision unfavorable to industry. Why is it that as research scientists we have to go through a strenuous peer review process meeting the demands of publication, showing evidence of national and international scientific recognition, demonstrating significant impact of our published work and invited seminars and presentations, while our leaders (Division heads, Senior Science Advisors, etc.)

are not required to go through peer-review, nor are they expected to publish scholarly manuscripts. They do not read the critical literature relevant to CFSAN regulated products and public health concerns, but simply respond to higher pressures in making decisions as to which research will be terminated or initiated. Our Senior Science Advisor even decides which research proposals will be allowed to be submitted to the Challenge Grants and other in-house scientific funding opportunities. I don't know how many of my colleagues will take the time to respond to your survey; however, I can assure you that very few are content with the scientific leadership and many have witnessed scientific misconduct, but all of them fear for their jobs.

- Address the Equal Voice policy.
- Adopt a new pay scale like other industry-funded Federal agencies use. Make training and conferences again available to staff. Hire fewer attorneys and more scientists with business and/or management and public health experience.
- Encourage those in non-management positions to speak up when they disagree with the scientific decisions of those in management positions. Educate officers in the Public Health Service that FDA is a civilian agency that encourages scientific discussion and debate to resolve differing viewpoints. Members of the Public Health Service that serve in FDA management should not expect or enforce a pseudo-military culture on their subordinates and should encourage scientific debate.
- Center leadership is critical in this process. If the center Director considers science as a side matter rather than essential for regulatory decisions, and he/she does not have scientific background required for informed decision making, failure will be unavoidable. We have experienced this in CFSAN last couple of years. We need strong leaders with strong scientific and regulatory experience.
- Currently there are too many layers of management, not enough reviewers, it would be great to cut down the middle guys.
- By having more people involved in scientific work and less people involved in managerial and administrative work.
- By hiring a highly skilled workforce. It is a well meaning agency and everybody tries hard to do the right thing. However, the diverse workforce cannot always come together in a harmonized way.
- more staff, and more opportunity for advancement.
- Less administrative crap
- Promotions and training of individuals should be based upon their experiences, needs and qualifications and not for other reasons such as personal preferences. Quite often more highly qualified individuals get passed over by newer employees by the individual(s) making the decision for personal preference (i.e. the manager making the selections for promotions, details and/or training give preference to those individuals they hired and not to older employees hired before their tenure).
- Placing actual scientists, and only those materially participating in producing scientific work, at the forefront of regulatory and administrative discussion would help the overall mission of FDA to produce outcomes based on scientific principles, integrity and merit, not on bureaucracy and ineffectiveness.
- Easier administrative procedures. The HHS Conference Form requirement for all conference travel is too cumbersome, limiting, and delays/blocks conference attendance/participation. Very sad for a

government agency that needs to work with stakeholder at conferences to be limited due to excessive paperwork. Gov Trip is very cumbersome too.

- Ensure that scientists across all Centers as well as OC receive adequate support and training towards their continuing education so they stay abreast of the latest advances. Currently, such support is variable across Centers and OC and depends on the discipline/background of the supervisor who may or may not understand such needs and advocate these needs.
- The agency needs strong permanent leadership to hire competent employees with solid scientific skills who are will to work.
- More communication and collaboration between Center personnel and the field. Mutual respect of differing ideas. Maintaining a stable workforce that is there is so much turnover in the Centers and many new people who have never had the field experience. The writing of FMDs should not be completed without field and QMS personnel review. Make it mandatory that at varies level a respond is required before any FMDs is released. Communicate better the role of QMS personnel to the FDA as a whole and how it should be intergrated into every day FDA work, but also have a clear mindset as to the authority of QMS personnel that is what are they allowed to do and what are they not allowed to do.
- less layer of management
- I believe the FDA could meet its goals with 50% or less of the current staffing. This would ultimately improve the integrity of the scientific work of the FDA because employees would truly become subject matter experts in their line of work due to the increased exposure and practice with their workload.
- Decisions at the higher level should be made quickly and decisively. The agency should not make vastly different decisions based on who is currently running the "show." The concept of "One-Voice" should echo regardless of who comes and leaves the agency.
- I propose we have a scientific peer evaluator who periodically reviews our establishment inspection reports (EIR) to check for the content as it relates to science and scientific methodology. I think the current format for the inspection report places a great deal of emphasis on the administrative segments of the report instead of whether the firm has good manufacturing practices and have adequate controls to prevent product contamination. We are required to report concisely by our supervisors; however, during the training we are taught to be concise but to provide a detailed review of their processes. Its very frustrating.
- Making standards for scientific work products and communicating those standards throughout the agency (all employee levels and all employees processing scientific work products) to aid in daily decision making process.
- Those making the decisions need to connect with those directly affected by the decision to seek opinion and practicality (they do this with business and the public, why not with employees?). 2. I also think that the FDA ought to default to Public Safety first - in other words, a chemical is unsafe until proven safe, not the other way around.
- Put in place check and balances for policies made.
- Reduce inefficiency caused by too many levels of review before authorization for essential items is given.

- Senior personnel (e.g. GS-15/SES) should be aware that their approach to certain matters is considered bullying as well as the way they are speaking to people or their choice of words. I'm only referring to one SES that has behaved in this manner.
- I see pockets of excellence in the agency. They are usually established by a visionary director with the highest standards. Everything flows from the top. We need competent and visionary leaders that are not afraid to challenge the malaise and set high standards. I can give you two examples: the FCC and the ARL laboratory (I work for neither). Both of these organizations maintain the highest standards and provide the best service to the American public. Both have/had strong competent and visionary directors.
- FDA employees at least should work as hard as in the industry. All the managers at least should know what they are doing.
- Better method of selecting employees for training and special projects
- I think folks from HQ writing and creating assignments for the field should visit the field to see if their assignments really make sense on a large scale. Coming from industry I know that scale from RD is one of the hardest transitions. I do not believe that those making assignments really know how difficult it is to complete in the field. For example the sprouts and avocado assignment are poorly written, in that collecting the amount required are extremely difficult at the retail level.
- Basically, FDA needs to have more overall regulatory powers, and better consistency in its policy applications practices, without it, there will be no respect from other sectors.
- I don't know. I took this job thinking it would be science based but it's just pushing paper and essentially busy work. I came to FDA to make a difference. I am not.
- Revise congressional mandates for field actions to be based on public health outcomes rather than arbitrary numbers of exams/inspections completed without consideration to actual health risk. Decision making at top levels needs to be based solely on science without political considerations. Do better at enforcing regulations equally between those companies/industries that are large and have congressional lobbies and those that do not. Standardize policies and operations across the country rather than deferring to local district policy.
- More scientists at high levels within the agency.
- Improve the selection and training of District Compliance Officers to ensure the product risks from quality system and manufacturing deficiencies are adequately understood and represented in the consideration for regulatory action against violative drug manufacturing firms. Efforts to prevent drug shortage may have diminished the occurrence of public notification (Warning Letters) that would have been issued in the past following significant documented manufacturing and quality system deficiencies in the drug manufacturing process.
- Hire managers who have had actual experience in performing analyses within the FDA and are competent to manage the scientific phase of FDA's obligations. Science managers in FDA need to be acquainted with technical procedures through their own experience as analysts and so forth. Otherwise they are incompetent in making decisions of a scientific nature. The trend is continuing and management is of a poor quality. I see no hope for the future. Level of competence has dropped dramatically during my years with the agency. Good scientists are leaving the agency due largely to poor management.

- Better allocation of funding. Example: Buying several hundred thousand to million dollar pieces of equipment for every lab then deciding it will not work or all testing should be done in one lab. Millions of wasted dollars in unusable equipment. Some employees are told that they don't have funding for conventions, courses, or basic equipment (new pipettes) while there are million dollar pieces of equipment in empty rooms. (currently 3 examples at my lab at this exact time.
- I work in a field office as a CSO. There are PhDs and DVMs working in the field and we are not allowed to make professional decisions. All decision-making has to go through the Centers. The professional decision of people with equal (or less) education from the Centers has to be followed, even if we disagree with the decision. There is no system in place where we can offer our differing opinion.
- Top management, in the agency should be more upfront and should be more of an advocate for those under their charge. They should also be fair across the board.
- When the FDA came to be, it was at a time when the states did not have the capabilities and sophistication to perform on their own the work the FDA does. Reduce the FDA and return much of its responsibilities to the states. In the modern era, the states definitely have the know how and capabilities to do most of what FDA does. So shift the burden of sampling and testing back to the states. This would free up the FDA and amplify its power, as a few FDA auditors could certify the state's own FDA and do occasional inspections. The result of doing this would be the certification of private industry to perform routine FDA lab analyses. Instead of a few hundred FDA chemists... we would have all the power of the thousands and thousands more chemists in private labs throughout the states. Without the huge burden of trying to test all domestic and import samples that we currently do test, the agency could focus on method development, delayering of management, and inefficient managerial processes.
- All FDA research projects should be subject to independent review for their technical merit, feasibility, and usefulness. Too many projects are redundant and don't directly support FDA's mission.
- Streamline the enforcement process that results in quick action when needed
- The mission and integrity of the FDA could be better improved by allowing the real analysts and scientists make decisions. Facts should be an important component to make justifications for the way we do things. In many respects, it appears that the decisions are made by upper management with little to no regard to those who are on the bench and are out there doing the work. Management appears to make decisions that benefit the inconsequential things that don't support the improvement of public health.
- From an import logistics standpoint, actually having an office or resident posts close to where product is being stored seems crucial. It is ridiculous that NYK-DO IOB detains so many products, meanwhile its district office cannot meet this self-inflicted workload because it is located so far from the warehouses. Most product is stored in NJ. How is the district office practically in Long Island, NY and all that stands in NJ is a lowly resident post--manned by a handful of CSOs? This results in so much product being released due to time frame. If we cannot examine/sample the products, how is that providing accurate scientific data about the hazards associated with foreign products/manufacturers, at least in this area?

- WE Dont use any science to guide our behavior in the realm of Import Inspections...Instead of science decisions on whether to detain or sample something is based on a work plan quota like system. Where i work we behave much more like bureaucrats that happen to have science degrees...Than people with science degrees using them to do what is needed to ensure the safety of the public
- Recruit, promote and retain employees with experience from industry, that is from outside the government. Personnel and professionals from pharma, biologics and device companies need to be recruited, promoted and retained. This organization lacks an appreciation for "real world applications" and instead focuses on credentials- letters after the name. It is indidous and counter productive. There needs to be more oversight for research funding, and the purchasing process is a nighmare.
- Decisions need to be data driven and not influenced by personal preference or political pressures. Too many decisions seem to be made without regard to the science. In addition, the agency is hobbled by a fear of "messaging up" and the ramifications or backlash that occur. Much of this is due to administrative issues and not the work itself.
- FDA Foods needs to create a group of employees responsible for developing and maintaining current lists of food products, food manufacturers, farms, distributors, foreign importers, retail stores,restaurants, and corresponding data on product quantities produced in the U.S or imported here and amounts sold here and to other countries, and also number of animals on farms that produce food such as milk and eggs. In general, we don't have good lists to enable us to do studies or regulation when there is a food crisis. In the lingo of surverys, FDA Foods needs a group of people whose mission is to develop and maintain sampling frames. The work of maintaining such lists is never-ending since all these entities are subject to constant change.

Respect for Science and Scientists

(Mentioned in 22% of coded responses)

- More emphasis on how the work and work products (reviews) relate to the public health and less busy work that has little relevance for public health. A real focus on public health instead of on work that has or may have little or no effect.
- Allow for robust and thorough 3rd party analytical review of scientific data and outcomes.
- More emphasis on science and people and less on process. Process has thrown people and science under the bus in CDRH.
- Researchers and data analysts are frequently prevented from using modern IT technologies because all installed software needs to be approved by a central organization which 1) Doesn't understand the software very well and 2) is very slow to respond to requests. Granting greater powers to certain "power users" such as scientists and application developers to make their own software choices would help to bring FDA up to speed with other research environments.
- more time and staff to full evaluate the scientific data/information we are supposed ot review. 2) more oppourtunities to go to conferences and CME 3) more value placed on protecting/supporting vunerable populations, not what congress wants.
- Right now we are discouraged from doing research on "sensitive" topics because management is afraid that we will find something or say something that doesn't adhere to FDA's official or unofficial

position on the topic. The discouragement isn't overt -- but if we choose to write anything on a sensitive topic, we are subjected to many extra layers of review, with scrutiny of every word by every reviewer. The result is that the language in papers/presentations on sensitive topics is full of caveats and qualifiers, and in the end the papers/presentations don't provide useful information. I don't know how this situation could be improved other than FDA recognizing that it might be ok to sometimes release study results that vary from FDA's party line.

- FDA has a great core of scientists. They are competitive with any university or medical center. Despite this Scientists are continuously made to feel that they have to justify their existence. The state of mission critical science could be improved by: +Giving scientists more control over their budgets +Making funds and contractors available in multi-year installments so there is less wasted time and reduced uncertainty. +Reducing the bureaucratic burden of hiring personnel. +Reducing the bureaucratic burden of attending conferences +Reduce the number of roles each person is expected to fulfill.
- allow for more independent thinking free of pressure from the outside world and base all decisions solely on scientific evidence
- Allow the scientist to attend more professional meetings to keep up with changes in science and risk assessments.
- Improve the efficiency of the review process by shortening review timelines and allowing NDAs and BLAs to take precedent over other review work; this will require incentives to staff for timely completion of important work. Also, the one size fits all approach to NDA reviews (e.g. timelines, requirements) across all medical disciplines is not the best way to accomplish timely reviews. Decrease the number of meetings required by reviewers during the submission review timeline, decrease the required length and number of formal reviews filed in DARRTS during a NDA or BLA review cycle. There are way too many meetings and too many minor submissions in DARRTS that could be screened by other staff (project managers, staff with science backgrounds) and tagged as minor documents which don't require formal review by clinical (professional level) staff. Template based reviews of annual reports, protocol amendments, safety reports, etc. could improve efficiency of review divisions. In essence, take the burden of less important activities off reviewers so they can finish the formal NDA/BLA application reviews in less time. Also, to improve efficiency at FDA there must be greater incentives for all staff to get the important work done in a timely manner. The current yearly pay incentives are extremely small compared to work outside of government - that is a big obstacle to overcome. You have to enact real, valuable incentives in order to appreciate improved output by staff. The private sector knows this.
- FDA needs to invest in scientists who can represent the science and provide input on risk management and solutions to complex problems. The current approach that separates these does not ensure that FDA policies are science based and adequately protect consumers.
- By recognizing that the engineering of medical products is as important to the public health as the science. FDA frequently does an outstanding job of deciding difficult clinical issues, but often overlooks the more prosaic details of product design that bear on safety and performance. By eliminating reliance on entry-level scientists and engineers to perform functions for which they are fundamentally unqualified. By restructuring the agency to provide effective governance of scientific

and engineering staff. By restructuring the Federal personnel system to enable us to hire and retain the best talent. By giving the agency, or portions of it, independence from political influence (which is largely driven by the undue influence that business interests exercise over both Congress and the Executive Branch).

- Resolute support by leadership and management throughout the organizational chain -- from the Presidential Administrative level, through HHS, FDA, and all of its sub-components -- allowing the scientific staff to spend a substantial enough fraction of their time to keep up with scientific literature and conferences, to do relevant research and publish findings, and facilitating transparency and honesty in policy decisions.
- The laboratories and the scientific investigators in the FDA are under increasing pressure to spend more of their time reviewing files and less doing research. This is caused by increasing pressure from industry for faster approval and legislation from congress enacting those shorter deadlines.
- I believe scientific research is underfunded and under-appreciated by the agency which impairs the FDA's ability to improve review processes based on strong scientific rationale.
- Current policies are dominated by regulation, which is important. However, these regulations make it extremely difficult for an FDA scientist to be actively involved in the scientific community, such as visiting Universities to give talks, inviting speakers to give talks, traveling and going to meetings. In addition, collaborating with individuals outside FDA (in my case, almost exclusively academic institutions) is said to be important, but the legal requirements make this very difficult.
- Better management that actually understands the science and is not afraid to stand behind the science.
- It seems that decisions that are made that are science based somehow get stalled at the FDA Commissioner/HHS/White House level. The reasons for this are not communicated back down to FDA. For example, FDA CTP issued a report and recommendations on menthol. Word is it has been with HHS 1.5-2 years.
- Respect science.
- I think the biggest effect comes from requirements from the Department, OPM, etc. We have little control over hiring, increasing time spent on justifying travel, and other changes made to the way we operate that are due to changes in overarching federal policy, even if the changes are not appropriate or are detrimental to the functioning of the FDA. This makes it more difficult for scientists to stay up to date, and to concentrate on science and review. FDA, and even the Centers and Offices within the FDA, should have more control over their own operations.
- Integrity of the scientific work could best be improved if open discussion is allowed on all levels. Principal investigators cannot dictate what outcome they expect from the project, rather, form hypothesis and test it through scientific process.
- Everything can be improved no matter how they are run or organized. Greater transparency of the decision making process and issues involved in making a regulatory decision can only increase the public's understanding and trust in the FDA's mission. The agency and public health will always benefit from science based decision. I believe political pressure to even a small degree to delay approval of a drug can have long term consequence on public's trust in the agency's mission.

- The mission of the FDA to protect and promote public health could be improved by devoting appropriate resources to answering questions related to safety and efficacy or effectiveness of medical products. The integrity could be improved by assessing the amount and quality of scientific oversight and examining how regulatory science priorities and metrics are evaluated. The prioritization (resources including time, money, and people) of scientific pursuits at the FDA is intertwined with the integrity of the scientific work. Thus, improvements to the prioritization process --- less burdensome, more transparent --- should also help to improve the integrity of the scientific work produced by the FDA. In some instances, less emphasis on justification of the scientific work that has already been determined to add regulatory value (by funding the project or otherwise) may enable scientists to pursue more questions and provide more results.
- There is a disconnect between the individuals who make the decisions and the individuals with strong technical expertise who can provide guidance in that decision making. At times it appears that this divide prevents the input of science and engineering guidance and accuracy to the development of policy and the application of the regulations. This survey appears to focus on scientific research integrity, but the concern extends beyond that. It is far easier for a decision maker to avoid considering inconvenient scientific and technical accuracy by simply not including those people at the table. It is not clear to me that this phenomenon is unique to government, or that this is a surprise to anyone.
- Given the political climate, I think it is the best it can be. A few years ago Mike Taylor wanted to require all shellfish to undergo a pasteurization treatment. That would have saved lives, but Congress put a stop to it. The FSMA legislation shows a lack of understanding about food safety. I wish USDA would survey the pathogens from concentrated animal feeding operations and add them to our whole genome sequencing database. That would help us solve outbreaks.
- Giving scientists the freedom and resources to do more investigator-initiated research and participate in more often in academic and professional conferences to keep up to date and meet collaborators. Also great need to reduce bureaucracy in managing lab budget and hiring research fellows.
- Improve the upward mobility of research scientists. There are many very talented and energetic scientists at the Staff and Fellow level that should be running their own labs. The increased competition for a static or shrinking number of PI positions, occupied by senior scientists who should be retiring, reduces the quality of work and increases the likelihood of fraud.
- In my specific area, there is a need for us to communicate with other researchers, but the restrictions on travel make that nearly impossible. Allowing us to attend two conferences a year would help us be aware of the latest issues in our field, make contacts necessary to efficiently and effectively conduct research, and disseminate our findings to those most interested and able to use and build upon them. All of that would help achieve the goal of protecting the public's health.
- In some cases, when warranted based on scientific evidence, existing rules, practices, even prior decisions, should be revisited, reviewed, and revised as necessary based on scientific evidence.
- Getting right expertise on board and involve them in complex scientific / regulatory issues. Application science in medicine, drug development, clinical research and public health has changed a lot. New scientific disciplines have been created in academia. Create positions for them within the agency.

Reduce complex management system, reduce number of managers, branch chiefs, directors and increase scientists. Reduce multiple layers of management levels. Frequent open science discussion within the agency Improve clarity within the office

- Reduce the number of people/managers that need to review scientific publications and regulatory actions before they leave the Agency. Some documents take several months to get cleared because of numerous reviews and re-reviews that do not increase the quality of the document.
- I think the FDA should be more involved in primary data collection.
- Federal travel restrictions have made it very hard for scientific staff to attend conferences. It would be better for scientific staff to have more ready access to scientific training. Our review load is so high that there is little time to conduct independent research. I would like the agency to built at least 20% time for scientific staff to conduct their own research and attend seminars. Risk-benefit decisions for drug approval could be improved by use of more quantitative methods. Labeling for prescribers and for consumers, especially for safety could vastly improve to provide a more relevant information. The focus now seems to be citing everything to prevent potential lawsuits from consumers.
- The mission of those Centers which are funded in large part by User Fees has been altered, in my opinion, to cater to Industry and whatever their concerns are at the moment. There is an inherent conflict of interest in being paid/funded by the industries we are supposed to regulate. That said, FDA has made great strides in meeting MDUFA (user fee regulations) reduced review timelines and increasing the number of device approvals. However, my concern is that some devices that may not have met their efficacy endpoints - e.g., they don't work - will get approved/cleared anyway because they don't pose any safety concerns. I believe we should follow our "science"- based evidence rather than compromise to keep industry happy.
- Hiring qualified people (which includes salary and incentives to attract them), then allowing them enough autonomy (along with training and professional development), to do their best work.
- FDA is seriously hampered in its efforts to fulfill its mission by inadequate appropriations from Congress. Congress needs to appropriate adequate funds for: Adequate scientific staffing; Salary increases competitive with those of comparable non-government positions; Adequate travel needed for: scientific training and professional development, oversight of regulated industry, development of national and international standards, education and outreach to regulated industry In-house research directly related to FDA mission; Physical office and parking facilities designed to allow future expansion instead of being overfilled by the time they are completed.
- I think that the funding for PDUFA, MDUFA, and GDUFA should flow through another Agency who oversees the distribution of the funds to provide distance, avoidance of potential influence, and the appearance of impropriety. I also believe that an outside scientific panel of experts should be involved in setting of policy, at the Agency level and the Office level. Since 1999, the IOM, OIG, GAO, and multiple scientific panels have made recommendations for how to improve postmarketing. They have recommended increased use of automation, data mining tools, and increased collaboration with experts and other regulatory agencies. As of this date, none of that advice has been followed. The GAO continues to state that they have expressed concerns regarding the postmarketing safety process for 30 years.

- Reduce bureaucratic layers to restore the science to the scientist. Provide more funding to scientists to go to meetings to interact with other scientists. The Washington area has many great meetings where scientists from all over the country and the world come to discuss their research, and we are not even able to go because of "mission-critical" requirement litmus test, usually due to budgetary restraint rather than real mission criticalness.
- The actual science experts should be consulted and their work considered to a greater degree in regulatory decisions. More managers of the science groups don't have strong science backgrounds in contrast to past times. There are also many more layers of regulatory staff, managers and administrators now between the science expert and the decisionmakers that an accurate science-based message can get lost along the way with the "agendas" of all these levels. Also FDA is very lawyer heavy at this time and they are determining a lot of science-based decisions.
- Top management should be more opened minded and not edit out sections of reports or findings just because they do not understand the science or because they do not agree with the report or position of the author.
- Decrease barriers to collaboration within the agency and with the scientific community. FDA leaders appear reluctant to make decision about regulating new technologies that could impact multiple areas (ie next generation sequencing technologies), resulting in years of delay in the integration of technologies in clinical settings. Part of the delay is due to the lack of transparency across FDA centers and other government agencies leads to replication. While replication is great when multiple independent studies confirm each other, often unintentional replication of studies contain design variables that make the results incomparable. At a conference that included the public and government agency presenters, I heard many FDA colleagues comment that the most important thing they took home was an understanding of how other FDA centers are trying to test or create standards for the new technology. The lack of funding for travel to scientific meetings is hurting your ability to attract and retain top quality researchers. It is hard to stay abreast of the current scientific findings and gauge the relevancy of your research to the community without attending scientific conferences. Furthermore, most talented young researchers aren't willing to join an agency that could hinder their future career choices when the availability of permanent research positions with the FDA are so scarce.
- I think the dual research/regulatory position is a very poor model for fostering productive scientists and producing quality research. In the end, the people I have seen that are supposed to be doing 50/50 research regulatory always are forced to do more regulatory work because those responsibilities have deadlines and there is little accountability for lack of production in the lab based on my experiences. Often, the research/reviewer is a very hard working individual who wants to do more research, but are forced to limit their lab activities due to the regulatory obligations. In other cases, there is no evidence of any research accomplishments and they are effectively preventing someone else from acquiring a position and performing quality research to advance the field and aid in the FDA's mission to better protect public health. I think a very serious alteration in the staff fellow model should be considered as right now I think it is very harmful to the productivity of many FDA labs and it can negatively impact the staff fellow's career as well. I honestly believe more pure research FTE positions would significantly help this situation and allow for people to not

have to juggle both responsibilities. It is also frustrating to see the incredible amount of money that goes into acquiring lab equipment and materials when a better allocation of money would be in hiring more lab personnel. We have enough cool equipment and resources here at the FDA. WE NEED MORE PEOPLE.

- Reviewers of applications for device/drug approval should be able to request the performance data that they believe necessary to evaluate the safety and effectiveness of a drug/device.
- Deregulate the employees! We are bound to numerous regulations imposed by MDUFA that our work has become meaningless. These arrangements were made by administrators who do not do the field work at FDA. MDUFA is a political strategy to make it look like government is being cooperative with industry. The agency keeps adding layer upon layer of administrative review to discredit scientific/clinical review work so they increase their percentage of first round approvals. This philosophy takes away from our goal of protecting public health. These upper layer administrators tell clinicians that they are wrong in asking for additional information necessary for the protection of human subjects in clinical trials. We have to literally fight to ensure that the right questions are asked. This destroys morale and motivation. Why should we work so hard to have our work shut down and the agency go over our heads to approve unsafe and ineffective devices? So, to answer your question, FDA administration needs to start respecting and trusting the professional opinions of their scientists and clinicians.
- More people with higher degrees such as Ph.D. should be hired as we need more experts in different disciplines to draft new scientific guidance documents and update all kinds of out-dated scientific guidance documents (some are more than twenty years old). Also the FDA scientists should be given some reasonable time every year to work on these scientific guidance documents. The scientific documents will greatly improve the quality of the industry's submission and the efficiency and consistency of the FDA's review process. Additionally, to maintain good staff, the hired scientists should be fairly paid; people with similar degrees should be paid similarly across the centers.
- science is foundation, and consumer's interest should be built on the science.
- Do not delay the release of information that may be controversial. Do not fear pushback from either industry or consumer groups. Sometimes decisions made in accordance with the law are not popular by many groups, it is better to release information of decisions based on the best available science used to follow the law and let the public debate than to delay for long periods of time. Delays only make the public think there is something to hide.
- FDA should allow employees to attend scientific meeting to gain scientific knowledge
- Increase the budget of the research labs. To hire students and research fellows, and purchase the more expensive pieces of equipment we need, we write proposals to outside funding agencies, such as the military. I don't think it is a good use of taxpayers' money to fund us to write proposals. It also forces us to cater more toward the needs of funding agencies than public health. Also, please stop placing blanket restrictions on travel, and adding training requirements, because someone in some part of government abused a freedom or privilege.
- I think the biggest problem with science and integrity today come from people with little or no scientific background using alarmism and scare tactics to generate concern over fabricated issues.

They prey on ignorance and use catch phrases to generate panic amongst the ignorant. This happens on every level... from social media posts to partisan political agendas. So far, I think we have done what we can to educate and correct misinformation, but we are limited in what we can do. Unlike the public that can spread misinformation without any sort of recourse, we are beholden to a higher standard to support our positions scientifically and with one voice. So long as we have congressional members that battle us and contribute to the scare tactics and misinformation, you will always have people who doubt the caliber of the scientists at the FDA and the decisions they make. We see it a lot on the veterinary side from special interest groups who suggest that we are allowing drugs to be put into food animals that are not safe for people to eat. I think as scientists, we will just keep making decisions based on evidence and hope that logic will overcome fear-mongering.

- I am largely a regulatory science researcher, who is occasionally involved in review of complex medical devices. I try to listen to the issues of my reviewer counterparts and how my research can aid their decisions. But that is not typical at FDA. The congress needs to fund FDA regulatory research, not FDA administration. We need long-term technicians, and staff scientists to aid scientists in focusing on long-term safety issues, and not be running after every hot button in the news of what will affect FDA's appearance to the public, industry, and congress. While a hot button science branch is needed, a lot of the current hot-button studies are just PR junk to make us look good. Ex. 8/2014. First no Ebola research is funded in our center, but a big PR program is made to justify how we help Ebola products get reviewed. I tell mgmt this is unwise given the size of the rising outbreak. Mgrs that have no background in bioscience (engineers often) ignore our advice. Then suddenly no research funding, becomes lots of Ebola funding for research in 2015. I have interesting non-Ebola research results, but now I must gun for Ebola money. Scientists are scrambling for project funding due to poor upper management decisions made by our center. The current situation is our science is perverted due to lack of internal funding (oddly money is often siphoned by review to make "survey studies" and not basic research), and in desperation, science funding is obtained from the military (DARPA) and agencies for their pet projects, not FDA's needs. It is no surprise our reviewers think FDA research has no direction to help them in review. We hire newly minted Ph.D.s with little or no research experience and they turn into managers (cause science is too hard, and we have a patronistic structure of directors), to "direct" large research projects they have no expertise doing. The project fails.
- Science-based collaborative analysis rather than conformity to performance standards that have little or no relevance to science-based analysis.
- Less reliance on lawyers opinions and more reliance on science.
- More independence to senior scientists. Scientists working for FDA for over twenty five years do not have any independence.
- That could be great to make a final decision : does FDA need regulatory science, I mean laboratories which do research on regular base. In case the decision is yes, give the laboratories more money on regular base (not two times per year) and enough - so, scientists who work in laboratories will know they have enough money to buy all need instruments and supply for their research - they will spend the money for exactly happened needs (not in advance, for future) and will have a possibility

to buy new, modern scientific instruments needed to perform the research on excellent level and more effective.

- for science-based decision making, as opposed to decision making based upon political or social pressure.
- This is a challenging question. Striking a balance between responsibilities to the public health with the business concerns of the health industry, political interest, budget concerns, and workers rights is tricky, to state the obvious. The most obvious area for improvement is the review process needs to be more driven by concern for the public health, not the lobbying efforts of the pharmaceutical industry that wants products brought to market faster, or the media driven health scares that are frequently used to rationalize pressurization of the review process and erode its scientific integrity. There is such a thing as fast track review for products that address a pressing public need. Commentary on the processes and government decision making policies that affect the FDA mission should be restricted to qualified scientists. Congressman and all government decision makers involved with health care regulation should be completely divested from the health care industry.
- Recognize that FDA's customers are the general public; the sponsoring companies submitting new treatments are not. 2. FDA should listen carefully to advisory panels' suggestions, but take responsibility for final approval/disapproval decisions based on scientific evidence of safety and effectiveness.
- As a science based Agency decisions should be based on science, not politics.
- Less administrative tasks, more administrative support. I spend way too much time doing progress reports, cost reports, cost projections, labor projects, labor reports, presenting these reports in talks to the same people who get these reports, etc. I need more time to do the actual science.
- Provide more fund to scientific studies mainly based on the opinions from scientists, not from those from administrators.
- Allow and encourage staff in the review divisions (CDER/office of new drugs) to attend medical and scientific meetings to remain update with current scientific thought and clinical practice . This has been actively discouraged and underfunded since 2010 given recent government scandals regarding conference attendance. This policy is contrary to the FDA mission. Review staff providing recommendations and making decisions with such significant impacts (drug approval) should be REQUIRED to attend these conferences to maintain skills and remain up to date with current thoughts in his/her respective field.
- Improved efficiency of medical and scientific review processes.
- Industry puts too much pressure on managers, and reviewers are put under intense pressure by managers to approve products. Disapprovals are scrutinized closely at many levels and require a lot of time and effort, whereas approvals seem to fly through. Reviewers who closely scrutinize data can be seen as troublemakers, so there's less incentive to do a thorough review. Managers are so pleased with approvals. I'd like our work to be more independent of industry interests. I'd also like to see more resources spent in training FDA staff. Sometimes new reviewers make mistakes, sometimes industry is deliberately misleading in their submissions, but based on current regulations, we can't pull a product from the market until after we get adverse event reports. Mistakes on our

end can't be rectified. It's very demoralizing to be told that one person's mistake sets the bar for all other products.

- Less meddling from congress, industry and advocates. Often they drive us to deal with perceived risk rather than actual risk.
- In the case of CTP, scientific decisions should be made based on the input and recommendations from subject matter experts. Many of the scientists in management positions are not subject matter experts for the working groups or decisions that they provide. Thus, many decisions and research projects miss the mark.
- In our branch, reviewers with expertise and experience appropriate to the devices we review should be hired. It seems that the new reviewers currently hired by management have come to FDA "to learn" about the devices we review. While the new reviewers are clearly well-educated and intelligent, they come with narrowly scoped research backgrounds and have not had any clinical exposure/experience
- DA needs more staff to accomplish our mission. Perhaps the most critical issue for scientists is the extreme lack of travel funding. We are not able to attend meetings to share our work and to keep up with our field. This essential professional development is hampering the ability of staff to maintain their professional standing. If it continues, I am concerned that junior scientists will leave.
- Decisions need to be based solely on sound science; meaning reproducible and peer reviewed.
- The user fee legislation should be amended so that FDA review practices and policies are not influenced in any way by industry that is regulated by FDA itself. FDA resources are too limited making for competitive funding as part of the prioritization of scientific programs. FDA needs better funding, not tied to industry. The bureaucratic and administrative burden upon scientists at the FDA has become increasingly problematic and interferes with the conduct of the research needed. Approval of research projects needs to be streamlined and simplified. Additionally, there is too much emphasis on shortening review times and meeting MDUFMA goals rather than on public health and safety. The customer service initiative is not meaningful in terms of scientific research and should be curtailed.
- Hi [REDACTED] I wanted to bring you "up-to-speed" on my findings. Many structures have eroded at [REDACTED] that should exist: i.e., Good Laboratory Practice (GLP) investigations and Conflict of Interests (COI) investigations prior to initiating toxicology studies. I contacted [REDACTED] to determine what mechanisms they still have in place, and I have communicated with [REDACTED] about GLP and COI. See http://en.wikipedia.org/wiki/Good_laboratory_practice about the purpose of GLP. See http://en.wikipedia.org/wiki/Conflict_of_interest regarding conflict of interests that can bias a study. Also, see email thread below. Additionally, our ability to have industry perform the necessary studies has also disappeared--hence, the request for a DATA CALL-IN mechanism to FFDA. I contacted [REDACTED], as per [REDACTED] recommendations. I also know to have such a legislative change one must demonstrate it to be a long-term pervasive problem for the agency. As such, I contacted [REDACTED], [REDACTED], and other offices of [REDACTED], and I am happy to say these centers and offices have identified data needs requiring a data call-in mechanism. We, FDA, should never be in a position to have to "beg" industry for data to determine safety, and if and when we receive studies

to review, we should have the confidence in the data, because it has been performed at a GLP certified laboratory, objectively, by individuals who don't have a direct association with industry or who won't benefit in some way from the results of the studies due to conflicts of interests.

Comments from Dr. [REDACTED], who assumed the [REDACTED] [REDACTED] role when our [REDACTED] inspector retired. However, [REDACTED] is a [REDACTED] supervisor, who reviews studies of staff scientists. How can [REDACTED] perform a [REDACTED] [REDACTED] from behind a desk in [REDACTED]? [REDACTED] reply to my remarks: In regards to your statement, "We did not perform a conflict-of-interest (COI) investigation of the laboratory nor a GLP certification investigation. We should perform these activities when we find out whom performed the work. These are standard operating procedures for federal science agencies where studies/data are submitted that would impact safety" ----- The FDA Bioresearch Monitoring (BIMO) and thusly the [REDACTED] BIMO does not perform conflict-of-interest (COI) investigations on laboratories that submit toxicology to the FDA and we do not certify laboratories under our GLP program. The laboratory that is chosen to conduct toxicology studies for a Sponsor is strictly a business decision between the sponsor and that lab Facility. After we have received the new [REDACTED] toxicology studies and If our management decides that these studies should be audited and the laboratories conducting these studies should be inspected, then these studies will be added to a "Potential Studies/Laboratories To Be inspected" List – managed by the [REDACTED] BIMO and may be inspected upon [REDACTED] Management's request.

- FDA has a Peer Review system for Scientists which is barely functional. Scientists in Research are required to go through Peer Review every 5 years. Other Scientists can go through Peer Review for Promotion, but access to the process is discouraged in both obvious and subtle ways. Scientist supervisors should go through Peer Review, and sometimes do when higher level management want to discourage certain candidates, but there is no requirement for scientific Supervisor candidates to go through Peer Review for qualification, and as a consequence the hiring of scientific Supervisors is more often a "Beauty Contest" than a process of determining either scientific qualifications or leadership skills. This is why there is such a proliferation of "Leadership" courses at FDA. Experience and skill are the most attractive attributes of a Leader, but FDA thinks it can train the inexperienced/unskilled ladder climbers to lead. Real scientific learning opportunities are few and far between for those who want to provide scientific expertise.
- Protection of independent findings from regulatory scrutiny/framework.
- Additional funding for staff especially in regulatory science. Funding for travel and training has been slashed due to Congressional budget cuts which is incredibly unfortunate for FDA scientists and the public.
- Stop CDRH policies regarding "early feasibility" studies and emphasis on post-market review (where FDA has no teeth) from pre-market review
- Stop the continuing resolution BS for funding the agency. Also, ensure funding exists to send scientists to at least one scientific meeting a year. Reading about scientific advances is not the same as having an opportunity to discuss advances/scientific findings with our peers. The interactions with our peers is one of the best ways to stay abreast of current knowledge and state of the art technologies. Waitnign 4 - 5 years between meetings is a great way to ensure the agency is behind the times given that scientific advances are occurring so quickly. It is also a great way to encourage

people to leave government service since they are not getting the stimulation from learning/hearing about topics in individuals field of specialization. Furthermore, making decisions based on what was current 5 years ago affects the reputation and integrity of the agency.

- We need more people on our team. The workload is too high for us to be effective with so few people. Our management do not get adequate sleep, food, or time to go to the bathroom between meetings. Our scientists are also overburdened, under tight deadlines and a high workload. In order to be more effective I think we need to triple our team size or at least double it. 2. We also need money for conferences and education. Due to time and budget shortages we are unable to attend conferences or receive adequate continuing education. Last year, we could only send one employee per office to the annual international conference for our field. We are poorly represented at this conference. 3. Our computing resources are not enough for the amount of data we process. Even with the best available scientific workstation I do not have enough available memory to complete some analyses.
- Use common sense to rely on science.
- did you know that a device company can submit a copy of an article (no data - just an electronic copy of a published article) as "proof" of the efficacy of their product to support changes in the indications for use statement? I would recommend that device companies be required to conduct clinical trials for their devices. Keep the lobbyists, lawyers, and the politicians out of decision making. increased funding and staff. need longer periods of time to review drug applications. While there is a year to review the information submitted, there are so many additional requirements and layers of management for approval that it is difficult to complete the information on time.
- I think that FDA scientists are hamstrung by a lack of support in terms of allowing us to travel and participate in conferences. Only high level supervisors are granted any sort of access to travel "privileges". Science should not be done in a vacuum. It is essential that FDA scientists are encouraged and enabled to participate in and present their research at conferences, which has not been happening for the past at least 3 years.
- I believe that the mission to assure the availability of high quality pharmaceuticals with very reproducible clinical outcomes is advanced by the development of scientifically sound shared expectations between the FDA and the regulated industry. I believe this is best advanced by proactive discussions outside fo the context of specific actions, such as those that occur at professional conferences. The burden of participation in these conferences, of assuring that this participation is neither a vacation-like junket, a resume padding exercise, nor an arbitrary support of a for profit venture has increased radically in the last few years. The result is a decrease in FDA participation in technical conferences (especially those on manufacturing sciences), a decrease in good will with conference organizers, and a decrease in shared education and active listening between the FDA and the regulated industry. Multiple layers of approval to attend conferences, weeks of sitting in poorly defined approval trains, and arbitrary definition of what is an allowed or not-allowed conference or venue compromises the mission. This issue must be addressed at the Department, Agency, and Center level if the goal of timely, science driven, risk based shared discussion is to be achieved.

- Increasing the time for review of a New Investigational New Drug (IND application) and clinical protocols that are submitted to an ongoing IND. Currently, the time to review these before a clinical trial goes forward are 30 days, and 0 days. These are not reasonable timelines. 2) Almost all the upper management for safety evaluation/risk assessment at the FDA are MDs. This results in an environment in which the upper management does not have a reasonable understanding or appreciation for the work done by non-MDs, specifically by PhDs. PhDs from within the Agency need to be able to achieve equal positions. 2) Increase the salary of scientists who are doing safety assessment. It is nearly impossible to recruit competent and experienced toxicologists based on salary to the FDA. Instead of recruiting toxicologists for these positions, individuals with zero training or experience in toxicology are filling the large portion of these positions. They are trained at the FDA, by others who may or may not have limited experience in toxicology. While it is fine to have part of your workforce trained in situ, there is a dearth of scientists who have formal training in toxicology. This is a public safety issue.
- Politics still appear to play an important role in decision making, and that shouldn't always be the case. For instance, the implementation of improved analytical methods could lead to "stepping on someone else's toes", and this is, unfortunately, sometimes hampering our efforts to move forward. Recognizing that some scientists have developed novel methods that could outperform existing ones may help improving analytical work.
- Give all FDA scientists an annual, guaranteed budget to attend scientific meetings. All FDA scientists should have a minimum of 10% of their job duty be to perform independent regulatory research. Require "expert scientists" in the FDA to spend 25% of their time training junior scientists. Make this something they get evaluated on in their performance review. In general, only expert scientists are going to scientific meetings. And they are so busy managing their careers that they are not bringing the level of scientific expertise up to their level in the FDA. Right now, those expert scientists have an ulterior motive (which goes unchecked) for doing this. When they retire, they get to draw a very high consulting salary from the FDA because they have given people the impression that they are irreplaceable. Or in other instances, they move into private industry and take a lot of federal contract work with them, again, because they made a niche for themselves in the FDA and decisions become dependent on their expertise - even after they leave. This has to stop! And it can with proper training in place within the agency. All scientists come here after being stellar researchers and clinicians. Don't let that go to waste because of the walls senior FDA scientists have put up to keep out competition for their career within the FDA.
- Give less weight to Congressional pressure, or what is getting attention in the media and more weight to scientific opinion when deciding where to focus limited agency resources. Reduce the policy aspect of the job and allow the science to speak for itself
- Give the division directors, who should be experts in science, the authority to make decisions on research topics and approaches to be used. There are too many bureaucratic levels above them, staffed by individuals with little or no research experience, who micromanage everything.
- Allow reviewers to attend scientific meetings for professional development
- I work in CDER. I think the mission of CDER would be improved by more attention to the public health impact of its regulatory decisions and priorities, rather than the present focus on making new

drugs available rapidly. It is important to make new treatments available, but that should be in the service of public health rather than being an end in itself.

- I think FDA should use science to protect and promote public health. I am not sure about the FDA mission to generate original scientific work. I think FDA should be a scientific collector to make scientifically appropriate decision in the regulated fields and to appropriately inform the public regarding the health field. I personally feel that the FDA mission could be improved with a team of outreaching scientists able to present complex (and sometime controversial) health reality to the public with a balanced and respectful approach.
- Increased funding for FDA scientist driven regulatory science research.
- Make the FDA lawyers (OCC or OGC) work much, much faster. Streamline the GGP process so that scientifically current Guidance documents may be made available in a timely fashion.
- Continue efforts to set scientific standards to support regulatory decision-making.
- Much more needs to be done about what levels of evidence or certainty are necessary or appropriate to support different FDA actions. For example, could be much less stringent re implementing new tobacco control rules or activities (to stop ongoing addiction and harm and death) than for approving medicines/drugs for minor diseases that might have significant harmful side effects. Too much talk/culture about being "science-based" as opposed to being evidence-based and about taking actions reasonably likely to promote and protect the public health without a significant public health downside (e.g., using the uncertainty principle more often and more appropriately). Clearance process is broken. For example, too many layers of review, too much review unrelated to public health impacts, too much review by people who bring little or nothing to process other than delay.
- There is a lot of catering to sponsors and lowering of scientific data required for clearance or approval of in vitro diagnostic devices. The 510k program is a program of ever diminishing standards for assays.
- I have reached a point of frustration in my career at CFSAN that now I am willing to say what many of us think is the best solution to improve the integrity of our scientific work and fairness to young scientists: Remove our incredibly incompetent Senior Science Advisors. They are regarded by many as Industry Hacks, decades behind the times with respect to relevant areas of public health that should be mission critical to CFSAN. Of all the Centers, CFSAN is regarded as having the worst scientific leadership and the lowest morale among scientists. Concern over retaliation which we have all witnessed prevents many of us from reporting the unethical and scientifically unsound actions of our senior scientific leadership, and then who would we report it to? Recently, those who complained to HR were labeled insubordinate. The mission of these leaders seemingly is to impede scientific discovery that may draw attention to the Center because it supports an unpopular action or decision unfavorable to industry. Why is it that as research scientists we have to go through a strenuous peer review process meeting the demands of publication, showing evidence of national and international scientific recognition, demonstrating significant impact of our published work and invited seminars and presentations, while our leaders (Division heads, Senior Science Advisors, etc.) are not required to go through peer-review, nor are they expected to publish scholarly manuscripts. They do not read the critical literature relevant to CFSAN regulated products and public health

concerns, but simply respond to higher pressures in making decisions as to which research will be terminated or initiated. Our Senior Science Advisor even decides which research proposals will be allowed to be submitted to the Challenge Grants and other in-house scientific funding opportunities. I don't know how many of my colleagues will take the time to respond to your survey; however, I can assure you that very few are content with the scientific leadership and many have witnessed scientific misconduct, but all of them fear for their jobs.

- Encourage those in non-management positions to speak up when they disagree with the scientific decisions of those in management positions. Educate officers in the Public Health Service that FDA is a civilian agency that encourages scientific discussion and debate to resolve differing viewpoints. Members of the Public Health Service that serve in FDA management should not expect or enforce a pseudo-military culture on their subordinates and should encourage scientific debate.
- Center leadership is critical in this process. If the center Director considers science as a side matter rather than essential for regulatory decisions, and he/she does not have scientific background required for informed decision making, failure will be unavoidable. We have experienced this in CFSAN last couple of years. We need strong leaders with strong scientific and regulatory experience.
- The Review officers write a memorandum which is reviewed by the Branch Chief. The Memorandum has to get concurrence from the Branch chief who invariably wants to change dozens of times without any justification at times. This results in duplication of efforts with minor improvement in the overall quality of the review. In fact some times the quality goes down. I, as a Scientific review Officer or Medical Officer writes a Review (Memorandum) - NO ONE should have the right to change the review - Not even by a sentence. If the Branch chief does not agree even by a single sentence they should write their own Memorandum and make their decision. Same thing should hold for the Deputy Director, and then the Director of the Division. This has been going on in the Agency. Even Scientist with 10-20 years of experience are asked to change their consult. If one writes their Memo that should be their final review. If the Branch chief or the Director disagree that is fine. They can write a brief one paragraph or one page Memorandum why they disagree with the review officers. If you think that the Scientist is not of great quality, fire him or get in the first year probationary period. That is better than making him a 'sheep'
- There is substantial and increasing pressure from Congress, business groups and some patient groups to lower scientific standards. It is having an impact -- people are afraid to do their work, and are bullied (internally) by senior management and threatened (externally) in a number of high profile areas. Scientific standards are being completely undermined by political agendas. Congress interferes with scientific decisions nearly constantly. The ability for staff to do their work in a science-based data-driven way is being seriously undermined.
- preventing delay in reporting the science.
- More input from the scientists within the agency before implementing Programs requiring scientific analysis.
- Have greater feedback with the scientist involved and the issue of the problem involved.
- Statistics are being generated off of inaccurate data. The old axiom of GIGO seems to have gone by the wayside. More statistics is better even if based on bad input, or flawed data gathering systems & procedures. I agree w/ Daniel Yankelovich (1972): " The first step is to measure what can easily be

measured. This is ok as far as it goes. The second step is to disregard that which cannot be measured, or give it an arbitrary quantitative value. This is artificial and misleading. The third step is to presume that what cannot be measured really is not very important. This is blindness. The fourth step is to say that what cannot be measured does not really exist. This is suicide."

- Keep politicians and other people who know nothing about science, or have no concern for the public well being out of it.
- Placing actual scientists, and only those materially participating in producing scientific work, at the forefront of regulatory and administrative discussion would help the overall mission of FDA to produce outcomes based on scientific principles, integrity and merit, not on bureaucracy and ineffectiveness.
- The Agency should support sound, accurate scientific work/research irregardless of political pressures or industry influences.
- Risk based actions should be taken instead of benchmarks set by Congress.
- Those making the decisions need to connect with those directly affected by the decision to seek opinion and practicality (they do this with business and the public, why not with employees?). 2. I also think that the FDA ought to default to Public Safety first - in other words, a chemical is unsafe until proven safe, not the other way around.
- Enlist the aid and review of other employees in the field that has a master degree or higher in the field level for input or suggestion.
- Reduce inefficiency caused by too many levels of review before authorization for essential items is given.
- Involve the front-line scientist in decision making.
- I think folks from HQ writing and creating assignments for the field should visit the field to see if their assignments really make sense on a large scale. Coming from industry I know that scale from RD is one of the hardest transitions. I do not believe that those making assignments really know how difficult it is to complete in the field. For example the sprouts and avocado assignment are poorly written, in that collecting the amount required are extremely difficult at the retail level.
- Allow FDA scientists to teach and participate in peer reviewed, published research.
- Since we are reported to be an agency of science, putting the funding in place to keep the analysts up to date with current methods, instrumentation and training. As is stands right now we are grossly under funded in continuing education of scientists.
- I don't know. I took this job thinking it would be science based but it's just pushing paper and essentially busy work. I came to FDA to make a difference. I am not.
- Revise congressional mandates for field actions to be based on public health outcomes rather than arbitrary numbers of exams/inspections completed without consideration to actual health risk. Decision making at top levels needs to be based solely on science without political considerations. Do better at enforcing regulations equally between those companies/industries that are large and have congressional lobbies and those that do not. Standardize policies and operations across the country rather than deferring to local district policy.
- Hire managers who have had actual experience in performing analyses within the FDA and are competent to manage the scientific phase of FDA's obligations. Science managers in FDA need to be

acquainted with technical procedures through their own experience as analysts and so forth. Otherwise they are incompetent in making decisions of a scientific nature. The trend is continuing and management is of a poor quality. I see no hope for the future. Level of competence has dropped dramatically during my years with the agency. Good scientists are leaving the agency due largely to poor management.

- By obtaining more advanced technology to perform our work. This will produce more accurate information and speed up the processes of our job responsibilities. We will be able to do more. The more we do, the more information we obtain to protect the public health earlier.
- I work in a field office as a CSO. There are PhDs and DVMs working in the field and we are not allowed to make professional decisions. All decision-making has to go through the Centers. The professional decision of people with equal (or less) education from the Centers has to be followed, even if we disagree with the decision. There is no system in place where we can offer our differing opinion.
- All FDA research projects should be subject to independent review for their technical merit, feasibility, and usefulness. Too many projects are redundant and don't directly support FDA's mission.
- The mission and integrity of the FDA could be better improved by allowing the real analysts and scientists make decisions. Facts should be an important component to make justifications for the way we do things. In many respects, it appears that the decisions are made by upper management with little to no regard to those who are on the bench and are out there doing the work. Management appears to make decisions that benefit the inconsequential things that don't support the improvement of public health.
- WE Dont use any science to guide our behavior in the realm of Import Inspections...Instead of science decisions on whether to detain or sample something is based on a work plan quota like system. Where i work we behave much more like bureaucrats that happen to have science degrees...Than people with science degrees using them to do what is needed to ensure the safety of the public
- Decisions need to be data driven and not influenced by personal preference or political pressures. Too many decisions seem to be made without regard to the science. In addition, the agency is hobbled by a fear of "messaging up" and the ramifications or backlash that occur. Much of this is due to administrative issues and not the work itself.

Political and/or Corporate Interference

(Mentioned in 15% of coded responses)

- Stop having industry make a call to FDA and "put pressure" on an approval.
- more time and staff to full evaluate the scientific data/information we are supposed ot review. 2) more opportunities to go to conferences and CME 3) more value placed on protecting/supporting vulnerable populations, not what congress wants.
- Less political influence. The political scene is ever-changing and this makes it hard to focus on and complete scientific work due to the ever-changing directives being handed down to the scientific reviewers.

- allow for more independent thinking free of pressure from the outside world and base all decisions solely on scientific evidence
- By recognizing that the engineering of medical products is as important to the public health as the science. FDA frequently does an outstanding job of deciding difficult clinical issues, but often overlooks the more prosaic details of product design that bear on safety and performance. By eliminating reliance on entry-level scientists and engineers to perform functions for which they are fundamentally unqualified. By restructuring the agency to provide effective governance of scientific and engineering staff. By restructuring the Federal personnel system to enable us to hire and retain the best talent. By giving the agency, or portions of it, independence from political influence (which is largely driven by the undue influence that business interests exercise over both Congress and the Executive Branch).
- NOT Taking money from industry via PDUFA funds and getting all FDA appropriations from the government and not making all the PDUFA quids pro quo to satisfy industry for its money. This PDUFA arrangement/program keeps increasing all kinds of arrangements to benefit industry..
- The laboratories and the scientific investigators in the FDA are under increasing pressure to spend more of their time reviewing files and less doing research. This is caused by increasing pressure from industry for faster approval and legislation from congress enacting those shorter deadlines.
- current policies are dominated by regulation, which is important. However, these regulations make it extremely difficult for an FDA scientist to be actively involved in the scientific community, such as visiting Universities to give talks, inviting speakers to give talks, traveling and going to meetings. In addition, collaborating with individuals outside FDA (in my case, almost exclusively academic institutions) is said to be important, but the legal requirements make this very difficult.
- It seems that decisions that are made that are science based somehow get stalled at the FDA Commissioner/HHS/White House level. The reasons for this are not communicated back down to FDA. For example, FDA CTP issued a report and recommendations on menthol. Word is it has been with HHS 1.5-2 years.
- I think the biggest effect comes from requirements from the Department, OPM, etc. We have little control over hiring, increasing time spent on justifying travel, and other changes made to the way we operate that are due to changes in overarching federal policy, even if the changes are not appropriate or are detrimental to the functioning of the FDA. This makes it more difficult for scientists to stay up to date, and to concentrate on science and review. FDA, and even the Centers and Offices within the FDA, should have more control over their own operations.
- I have fairly limited experience with some topics listed in this survey; however, I have personally witnessed policy being altered slightly due to the request of Congress members, even if the subject matter experts do not agree with the change. Besides political pressure weighing heavily on our actions, I think that overall the agency has a lot of scientific integrity and makes decisions according to current, high quality science.
- Everything can be improved no matter how they are run or organized. Greater transparency of the decision making process and issues involved in making a regulatory decision can only increase the public's understanding and trust in the FDA's mission. The agency and public health will always

benefit from science based decision. I believe political pressure to even a small degree to delay approval of a drugs can have long term consequence on publics trust in the agency's mission.

- given the political climate, i think it is the best it can be. a few years ago [REDACTED] wanted to require all shellfish to undergo a pasteurization treatment. That would have saved lives, but congress put a stop to it. the FSMA legislation shows a lack of understanding about food safety. I wish USDA would survey the pathogens from concentrated animal feeding operations and add them to our whole genome sequencing database. that would help us solve outbreaks.
- I don't think we should be filling leadership roles at the agency with ex-pharmaceutical company executives. I don't think the fear of being sued by pharmaceutical companies should limit our regulatory authority.
- I think that ADUFA has changed the working environment and there is a more pressure to approve drugs.Sponsors are more vocal in their complaints, whether or not they are justified.
- By stopping the revolving door of industry people who are brought into high level positions, wreak havoc during their tenure, then return to the industry from which they came.
- The mission of those Centers which are funded in large part by User Fees has been altered, in my opinion, to cater to Industry and whatever their concerns are at the moment. There is an inherent conflict of interest in being paid/funded by the industries we are supposed to regulate. That said, FDA has made great strides in meeting MDUFA (user fee regulations) reduced review timelines and increasing the number of device approvals. However, my concern is that some devices that may not have met their efficacy endpoints - e.g., they don't work - will get approved/cleared anyway because they don't pose any safety concerns. I believe we should follow our "science"- based evidence rather than compromise to keep industry happy.
- There has been an insidious attempt by Congress to reach directly into the agencies, such as EPA and USGS, and direct the work. This is inappropriate. Congress is using funding and the threat of de-funding to manipulate science policy, at least in terms of environmental science. Since I've only been at FDA for [REDACTED] months, I can't comment on things here, but if my observations and experience at other agencies holds true, then I would assume that Congress is meddling with FDA the same as they do with the other agencies. Anytime there is something controversial, or if there is/are issues that are near and dear to the hearts of the industry/sector interests that contribute to their political election campaigns, Congress finds a way to see that science is subverted to suit the interests of these groups. The Administration does it too, but it is more subtle. They don't announce this, they let it filter down through management. But it happens, clearly. I've talked to many scientists at agencies who say 'we're not allowed to work on X' or 'we've been told hands off of Y'. This is wrong and in a lot of instances it hurts public health. So, those comments although not aimed specifically at FDA are generalizable to all science missions in US government.
- I think that the funding for PDUFA, MDUFA, and GDUFA should flow through another Agency who oversees the distribution of the funds to provide distance, avoidance of potential influence,and the appearance of impropriety. I also believe that an outside scientific panel of experts should be involved in setting of policy, at the Agency level and the Office level. Since 1999, the IOM, OIG, GAO, and multiple scientific panels have made recommendations for how to improve postmarketing. They have recommended increased use of automation, data mining tools, and increased collaboration

with experts and other regulatory agencies. As of this date, none of that advice has been followed. The GAO continues to state that they have expressed concerns regarding the postmarketing safety process for 30 years.

- Although it obviously would be difficult to achieve due to pressure from politicians and businessmen, it would be better if high level (and other) FDA employees were not part of the revolving door process in which people come from the regulated industry (or law firms representing the regulated industry), work for the FDA and then return to high paid jobs in the private sector.
- Deregulate the employees! We are bound to numerous regulations imposed by MDUFA that our work has become meaningless. These arrangements were made by administrators who do not do the field work at FDA. MDUFA is a political strategy to make it look like government is being cooperative with industry. The agency keeps adding layer upon layer of administrative review to discredit scientific/clinical review work so they increase their percentage of first round approvals. This philosophy takes away from our goal of protecting public health. These upper layer administrators tell clinicians that they are wrong in asking for additional information necessary for the protection of human subjects in clinical trials. We have to literally fight to ensure that the right questions are asked. This destroys morale and motivation. Why should we work so hard to have our work shut down and the agency go over our heads to approve unsafe and ineffective devices? So, to answer your question, FDA administration needs to start respecting and trusting the professional opinions of their scientists and clinicians.
- Do not fear pushback from either industry or consumer groups. Sometimes decisions made in accordance with the law are not popular by many groups, it is better to release information of decisions based on the best available science used to follow the law and let the public debate then to delay for long periods of time. Delays only make the public think there is something to hide.
- Independent scientific work free of political/business/other interest group influence. Reasonable workload (90h/week) and reasonable deadline pressure. Means to retain experienced workforce; no "people come, people go" mentality, but address the root problems.
- I think the biggest problem with science and integrity today come from people with little or no scientific background using alarmism and scare tactics to generate concern over fabricated issues. They prey on ignorance and use catch phrases to generate panic amongst the ignorant. This happens on every level... from social media posts to partisan political agendas. So far, I think we have done what we can to educate and correct misinformation, but we are limited in what we can do. Unlike the public that can spread misinformation without any sort of recourse, we are beholden to a higher standard to support our positions scientifically and with one voice. So long as we have congressional members that battle us and contribute to the scare tactics and misinformation, you will always have people who doubt the caliber of the scientists at the FDA and the decisions they make. We see it a lot on the veterinary side from special interest groups who suggest that we are allowing drugs to be put into food animals that are not safe for people to eat. I think as scientists, we will just keep making decisions based on evidence and hope that logic will overcome fear-mongering.
- MDUFA timelines and pressure from industry to complete things in single cycles are definitely affecting the scientific rigor of reviews. Qsubs should not be free for Sponsors. IDEs should not be

immediately approved if a decision cannot be made in 30 days. MDUFA 4 needs to have more considerations for the work needed to make proper scientific reviews for these products with more emphasis on patient safety.

- Less influence from Congress in writing and establishing policy and regulation.
- Congresspeople can desist from sending letters demanding explanations of how the agency has handled outbreak investigations.
- I am largely a regulatory science researcher, who is occasionally involved in review of complex medical devices. I try to listen to the issues of my reviewer counterparts and how my research can aid their decisions. But that is not typical at FDA. The congress needs to fund FDA regulatory research, not FDA administration. We need long-term technicians, and staff scientists to aid scientists in focusing on long-term safety issues, and not be running after every hot button in the news of what will affect FDA's appearance to the public, industry, and congress. While a hot button science branch is needed, a lot of the current hot-button studies are just PR junk to make us look good. Ex. 8/2014. First no Ebola research is funded in our center, but a big PR program is made to justify how we help Ebola products get reviewed. I tell mgmt this is unwise given the size of the rising outbreak. Mgrs that have no background in bioscience (engineers often) ignore our advice. Then suddenly no research funding, becomes lots of Ebola funding for research in 2015. I have interesting non-Ebola research results, but now I must gun for Ebola money. Scientists are scrambling for project funding due to poor upper management decisions made by our center. The current situation is our science is perverted due to lack of internal funding (oddly money is often siphoned by review to make "survey studies" and not basic research), and in desperation, science funding is obtained from the military (DARPA) and agencies for their pet projects, not FDA's needs. It is no surprise our reviewers think FDA research has no direction to help them in review. We hire newly minted Ph.D.s with little or no research experience and they turn into managers (cause science is too hard, and we have a patronistic structure of directors), to "direct" large research projects they have no expertise doing. The project fails.
- Clear acceptance that our "customer" is the American people, and our mission is protecting and promoting public health. Our customers are NOT industry, and performance metrics should not be geared to appeasing industry stakeholders at the expense of the public.
- Support for science-based decision making, as opposed to decision making based upon political or social pressure.
- This is a challenging question. Striking a balance between responsibilities to the public health with the business concerns of the health industry, political interest, budget concerns, and workers rights is tricky, to state the obvious. The most obvious area for improvement is the review process needs to be more driven by concern for the public health, not the lobbying efforts of the pharmaceutical industry that wants products brought to market faster, or the media driven health scares that are frequently used to rationalize pressurization of the review process and erode its scientific integrity. There is such a thing as fast track review for products that address a pressing public need. Commentary on the processes and government decision making policies that affect the FDA mission should be restricted to qualified scientists. Congressman and all government decision makers involved with health care regulation should be completely divested from the health care industry.

- Recognize that FDA's customers are the general public; the sponsoring companies submitting new treatments are not. 2. FDA should listen carefully to advisory panels' suggestions, but take responsibility for final approval/disapproval decisions based on scientific evidence of safety and effectiveness.
- less influence from corporate sector in guiding policy decisions
- More funding, more positions. But the regulatory work of the FDA depends largely on the integrity of the scientific work (basic, applied and medical) of the pharmaceutical industry.
- I think that increased funding/staffing of scientists would help. I have not run into any scientists in FDA in my entire career who have been dishonest in their review of data or insincere in their proposals for policies or procedures. There is an opportunity to express opposing opinions even if sometimes compromises must be made for practical reasons. I do think that the agency needs to be careful that its relationship with the regulated industry remains open to public scrutiny to ensure a level playing field for the entire industry. I also think that some public interest groups go overboard with FOI requests and lawsuits which ties up resources that could be more productive in other areas. On the whole, I think there is a reasonable balance and that the agency is staffed with qualified, hard-working scientists who keep the public health mission foremost in their minds.
- Get rid of all the politicians. - Get rid of all the lawyers - Get rid of the various Interest Groups largely funded by industry
- As a science based Agency decisions should be based on science, not politics.
- Minimize the links between the Agency and the industry it regulates--primarily those that provide money from industry to the FDA and those that lead to future employment opportunities for FDA management. Alter the Agency culture or mind-set that puts greater value on satisfying a superior's demands than on the legislated demands of the FDA's mission ("preserve and protect the public welfare"]
- Industry puts too much pressure on managers, and reviewers are put under intense pressure by managers to approve products. Disapprovals are scrutinized closely at many levels and require a lot of time and effort, whereas approvals seem to fly through. Reviewers who closely scrutinize data can be seen as troublemakers, so there's less incentive to do a thorough review. Managers are so pleased with approvals. I'd like our work to be more independent of industry interests. I'd also like to see more resources spent in training FDA staff. Sometimes new reviewers make mistakes, sometimes industry is deliberately misleading in their submissions, but based on current regulations, we can't pull a product from the market until after we get adverse event reports. Mistakes on our end can't be rectified. It's very demoralizing to be told that one person's mistake sets the bar for all other products.
- I do not think the problem is with scientific integrity. I think the problem is having insufficient technical and medical personnel to meet the agency's mission. As a result insufficient time to do a good job, and an apparent powerlessness of agency management to correct the situation, creates in me terrific dissatisfaction. More and more the agency is treating its medical reviewer staff as a labor pool to be exploited. The general lack of knowledge of regulatory process and clinical trial science in the pharma community is also highly demoralizing. Pharma executives appear to be quite content with being ignorant of scientific evaluation of new drugs.

- Less meddling from congress, industry and advocates. Often they drive us to deal with perceived risk rather than actual risk.
- Difficult The problem starts at the top. There seem to be two major different, but equally ineffective types of "FDA leadership". There is the old school – those (mostly older men) who are generally well-educated and intentioned but unable/ unwilling to change and allow for technological or Agency innovation & education in our new societal paradigm and development environment; they are also unwilling or unable to leave the agency or retire or allow anything under their control to change/evolve. Some are intellectually lazy and unwilling to learn new processes outside of science. Most (in CDER) have spent their entire careers there and have created the convoluted process and bottlenecks that now hold the Agency hostage. They are relatively conservative (scientifically) and benign to public health compared to others, but they are fierce and enduring roadblocks to change. The other type of top leadership (esp in CDRH) is the one driving their own agenda and industry's agenda. These are the actively dangerous ones. Some are from industry, some were surreptitiously placed in the Agency through Congressional connections, and some are just personally ambitious and hungry to please industry so they have a nice job waiting when they leave the FDA. They are making "customer service" priorities for reviewers (not science and not proper workload). They put non-clinicians in charge of clinical trials. They are trying to get potentially dangerous, clinical software removed from FDA oversight and regulations (via pressure from Apple, Google and other major players). These are also "Leaders who micromanage and insert themselves into individual product reviews and threaten people to get answers they want and steer FDA responses in the direction they want (versus what the science implies). In fact, I have not seen anything that I would consider "real" leadership at the FDA - esp. for public health. I think Dr. Hamburg's poor handling of the inquiry after the compounding pharmacy debacle illustrated a third characteristic of "agency leadership" – the inability to provide clear answers or a course of action.
- We are so poorly served by our leaders, who are not scientists but fancy themselves such. Note that neither our former, or especially our current, "Chief Scientists" are actually scientists of any stature. This is appalling, and illustrates the overall problem.
- Stop hiring people from industry with false impressions on how they are "going to change" the FDA! especially stop hiring American Red Cross managers to work in the area of BLOOD at FDA.
- To remove the direct and indirect influence of the industry that FDA is supposed to regulate from its budget and decision-making procedures because the industry has direct influence on the members of congress who are supposed to oversee FDA's work. The presence of revolving door between the FDA and the industry in terms of employment, particularly management and upper management levels, also has a negative impact on the integrity of FDA's work.
- Eliminate or reduce the huge waste of money spent on major non-productive initiatives/contracts; Stop unfair support and grants to lobbyist organizations (CDISC, CFAST, for example) whose only interests are to influence FDA policies that would benefit their organizations but do a lot more harm than good to the industry and their scientific investigations; Remove obvious redundancies and inconsistencies among different Centers.
- The user fee legislation should be amended so that FDA review practices and policies are not influenced in any way by industry that is regulated by FDA itself. FDA resources are too limited

making for competitive funding as part of the prioritization of scientific programs. FDA needs better funding, not tied to industry. The bureaucratic and administrative burden upon scientists at the FDA has become increasingly problematic and interferes with the conduct of the research needed. Approval of research projects needs to be streamlined and simplified. Additionally, there is too much emphasis on shortening review times and meeting MDUFMA goals rather than on public health and safety. The customer service initiative is not meaningful in terms of scientific research and should be curtailed.

- Hi [REDACTED] I wanted to bring you “up-to-speed” on my findings. Many structures have eroded at [REDACTED] that should exist: i.e., Good Laboratory Practice (GLP) investigations and Conflict of Interests (COI) investigations prior to initiating toxicology studies. I contacted [REDACTED] to determine what mechanisms they still have in place, and I have communicated with [REDACTED] about GLP and COI. See http://en.wikipedia.org/wiki/Good_laboratory_practice about the purpose of GLP. See http://en.wikipedia.org/wiki/Conflict_of_interest regarding conflict of interests that can bias a study. Also, see email thread below. Additionally, our ability to have industry perform the necessary studies has also disappeared---hence, the request for a DATA CALL-IN mechanism to FFDA. I contacted [REDACTED], as per [REDACTED] recommendations. I also know to have such a legislative change one must demonstrate it to be a long-term pervasive problem for the agency. As such, I contacted [REDACTED], [REDACTED], and other offices of [REDACTED], and I am happy to say these centers and offices have identified data needs requiring a data call-in mechanism. We, FDA, should never be in a position to have to “beg” industry for data to determine safety, and if and when we receive studies to review, we should have the confidence in the data, because it has been performed at a GLP certified laboratory, objectively, by individuals who don't have a direct association with industry or who won't benefit in some way from the results of the studies due to conflicts of interests. Comments from Dr. [REDACTED], who assumed the [REDACTED] [REDACTED] role when our [REDACTED] inspector retired. However, [REDACTED] is a [REDACTED] supervisor, who reviews studies of staff scientists. How can [REDACTED] perform a [REDACTED] [REDACTED] from behind a desk in [REDACTED]? [REDACTED] reply to my remarks: In regards to your statement, “We did not perform a conflict-of-interest (COI) investigation of the laboratory nor a GLP certification investigation. We should perform these activities when we find out whom performed the work. These are standard operating procedures for federal science agencies where studies/data are submitted that would impact safety” ----- The FDA Bioresearch Monitoring (BIMO) and thusly the [REDACTED] BIMO does not perform conflict-of-interest (COI) investigations on laboratories that submit toxicology to the FDA and we do not certify laboratories under our GLP program. The laboratory that is chosen to conduct toxicology studies for a Sponsor is strictly a business decision between the sponsor and that lab Facility. After we have received the new [REDACTED] toxicology studies and If our management decides that these studies should be audited and the laboratories conducting these studies should be inspected, then these studies will be added to a “Potential Studies/Laboratories To Be inspected” List – managed by the [REDACTED] BIMO and may be inspected upon [REDACTED] Management's request.
- Get rid of the White House initiatives that the Agencies are responsible for regulating.

- I often find that our attorneys force us to dilute or delete certain information that should be disclosed and would clearly not fall into information that cannot be disclosed. They appear to be fearful of litigation.
- Stop CDRH policies regarding "early feasibility" studies and emphasis on post-market review (where FDA has no teeth) from pre-market review
- did you know that a device company can submit a copy of an article (no data - just an electronic copy of a published article) as "proof" of the efficacy of their product to support changes in the indications for use statement? I would recommend that device companies be required to conduct clinical trials for their devices. Keep the lobbyists, lawyers, and the politicians out of decision making. increased funding and staff. need longer periods of time to review drug applications. While there is a year to review the information submitted, there are so many additional requirements and layers of management for approval that it is difficult to complete the information on time.
- There needs to be an understanding that our mission should be to serve the public health, not the corporate interests that we are supposed to be regulating. There currently is no official understanding of that at all, though some lip service is paid to it.
- You could start by finding some more better managers. However, even the best managers have to deal with congress and stateholders (regulated industry). Better management will help make FDA employees more productive.
- Less interference from industry and consumer groups that blatantly have an agenda and do not tell the truth about their drug (efficacy and safety) or agenda. Flibanserin is a perfect example!
- Give less weight to Congressional pressure, or what is getting attention in the media and more weight to scientific opinion when deciding where to focus limited agency resources. Reduce the policy aspect of the job and allow the science to speak for itself
- Terminate PDUFA Generate funding from federal taxpayer's income tax
- I work in CDER. I think the mission of CDER would be improved by more attention to the public health impact of its regulatory decisions and priorities, rather than the present focus on making new drugs available rapidly. It is important to make new treatments available, but that should be in the service of public health rather than being an end in itself.
- During the Bush years, our mission shifted from making sure drugs were safe and effective to making sure they were "safe, effective and approved in a timely manner". (That made no sense because if a drug is safe and effective, it *will* be approved). We need to institute safeguards so that business interests don't influence decisions, depending on who is in the White House. I am also concerned that the dispute resolution process, although certain necessary, can unduly influence decisions if a Sponsor complains enough about our scientific conclusions.
- corective action for any wrongdoings we observe in the industry is limited by the regulations. The industry knows the regulations and find loopholes or regulations with possibilities for interpretation and thus they limit our actions. I came to the FDA after having read much about the agency being "in bed" with the industry. My understanding changed dramatically during the years I've been a FDA employee. All that remained is my frustration that the public in general, the American people do not have enough regulatory knowledge to understand our limitations who can not be blamed on a person/company/group of interests, the dedication and the effort FDA scientists make to preserve

the public health. After working at FDA I saw the cycle any regulation needs to go through to come into effect, and often had a feeling of "hands tied" not because of someone in particular, but because of the very nature of the regulatory process. The biggest service anyone can do to the American people is to educate as many people as possible, on what it involves to pass a regulation, what are the regulatory and scientific steps in the approval pr

- Congress should not attempt to impose their views (political or based on misinformation) on the work and scientific decision making. We have been hired and retained for our ability to review science and incorporate our work into policy to best serve public health, without the potential influence of special interests. Public awareness of that we serve the public first and foremost, not regulated industry. We believe in our public health mission and are dedicated to fulfilling our responsibility to that mission. The misunderstanding that we serve industry results in a lot of time spent attempting to dispell that myth.
- There is substantial and increasing pressure from Congress, business groups and some patient groups to lower scientific standards. It is having an impact -- people are afraid to do their work, and are bullied (internally) by senior management and threatened (externally) in a number of high profile areas. Scientific standards are being completely undermined by political agendas. Congress interferes with scientific decisions nearly constantly. The ability for staff to do their work in a science-based data-driven way is being seriously undermined.
- Keep politicians and other people who know nothing about science, or have no concern for the public well being out of it.
- Less politics and more public health
- The Agency should support sound, accurate scientific work/research irregardless of political pressures or industry influences.
- Give more weight to public health and safety and less to economic impact.
- Congressional mandates are driven by Congress, with little to no scientific backgrounds. The assignments we are given are usually related to public health concerns that previously happened the year before. If mandates were set by the FDA, more efficient and timely work would be completed that would benefit the public health, rather than the numbers of inspections and samples Congress requests. FDA seems to lag behind the current events based on the mandates. I feel that we still accomplish a lot of work and are still protecting public health but would be much better off without the influence of Congress or their lack of scientific knowledge.
- Risk based actions should be taken instead of benchmarks set by Congress.
- By ensuring FDA has final word in the regulatory decisions that affect industry. Allow industry to make comments and voice concerns; but allow FDA to have its regulatory authority.
- Less interference from politically appointed employees in the review process.
- Make FDA an independent agency (remove from HHS, make it stand-alone like EPA). Allow only ONE political appointee - the commissioner. Seriously evaluate the relationships between the heads of Centers (and in the commissioner's office) and industry. Also - the Administration (I mean the White House, DOJ, SEC or whomever) should review buy-outs and mergers in the drug industry with an eye towards drugs which will become sole-source. Appears to me that we (FDA)let a lot of manufacturing problems slide because any action will result in a drug shortage.

- The multiple choice questionnaire is not the best tool for doing this survey. It depends on which industry you are referring, as to whether industry is influential. I think the agency decisions regarding scientific work are extremely biased. The agency essentially lets "big Pharma" run the show, but comes down hard on the food industry, especially the small mom and pops. I think the agency decisions made recently regarding bacteria in the food supply, are ineffective. Bacteria exists in nature. If you eliminate the competing bacteria, it allows the bad bacteria to proliferate. The more you fight it, the more nature fights back., i.e. MRSA. The farmers cannot control it 100%, but yet the agency treats them as criminals when their products have "Salmonella" on them. I think the public would be best protected through education. Some scientific studies have shown that probiotics are effective against bacterial infections, but the FDA has never admitted it, publicly. If the FDA wants to prove they are concerned about public health, why don't they require soda manufacturers to admit that there is absolutely no nutritional value in their products? I also think the egg rule is nonsense. Eggs have a protective coating on them that lasts three weeks. If they are not washed, they are safe. The FDA mandates that eggs be refrigerated within 24 hours. This is misleading because there is no mention of washing vs. not washing. The food industry, for the most part, does not deliberately contaminate the food. The medical industry may not deliberately contaminate its products, but it deceptively hides information, and misleads the consumer through "excessive" advertisement of its products. The drug industry does not care about public health, they care about getting rich. The FDA allows physicians who represent pharmaceutical companies to sit on the decision-making panels. Why is that not a conflict of interest? As far as social media goes, I feel like I am not allowed to express a differing opinion at all. Just because I work for them doesn't mean I agree with them on everything. In my opinion, the agency discourages critical thinking.
- Reduce political and industry influence.
- By keeping politics and selfishly motivated outsiders out or given less influence
- Less influence by the administration
- Decouple the responsibility for premarket reviews and monitoring post-market regulatory compliance.
- Less reliance on "big business" motives, such as Big Pharma industry
- Keep high level industry executives out of FDA, especially in the pharmaceutical program area.
- FDA to use their expertise to approve drugs and devices that are safe and effective, and protect the public from those that are not. With that in mind, legislators shouldn't tell the FDA how to do its job. We need laws to allow us to do our job. It's very hard to build up a case against these commercial giants.
- I believe through User Fees, the industry is being given even more influence and consideration in the decision making process. As we had in the past, the FDA should not have User Fees. 2. As in the past, the Commissioner of FDA should not be a political appointee. This allowed the FDA to be more independent in evaluating the marketing application just on its merit and their impact on public safety and allowed FDA to serve out one and only customer and stakeholder ... the US PUBLIC
- Revise congressional mandates for field actions to be based on public health outcomes rather than arbitrary numbers of exams/inspections completed without consideration to actual health risk. Decision making at top levels needs to be based solely on science without political considerations. Do better at enforcing regulations equally between those companies/industries that are large and

have congressional lobbies and those that do not. Standardize policies and operations across the country rather than deferring to local district policy.

- Less influence by congress and business interests.
- Allowing the FDA Scientist to contact non FDA scientists to work together to achieve goals and to avoid the intrusion of the politicians without science background in in relevant issues.
- a regulation does not fit the violation then do not enforce that regulation. Common sense should be required before FDA ruins a company and destroys the lives of everyone associated with that company. Many times for an OAI inspection, the decision to enforce a regulation that does not fit the product/industry, is left to one specific HQ individual or a small group of HQ individuals that have no common sense and have NEVER been in the field. They do not listen to the practicality of bending the regulation to fit the product/industry, they just say "sorry that is not what the regulation says" and the case is over and another firm is out of business and lives ruined. I have observed this happen numerous times in the pet food industry, dietary supplements and produce industries.
- We are hampered by excessive oversight by the political class (through HHS) in an attempt to control the message,
- ink FDA should have more power to enforce the laws. I worked for the state in two seperate states and we could get compliance easily when customers know that you have the ability to "stop sale and hold" or "stop sale and destroy" or close a facitliy until correction is made. The people we inspect know that it takes an "act of Congress" to accomplish anything.
- Cater less to business interests and more to public health
- Decisions need to be data driven and not influenced by personal preference or political pressures. Too many decisions seem to be made without regard to the science. In addition, the agency is hobbled by a fear of "messaging up" and the ramifications or backlash that occur. Much of this is due to administrative issues and not the work itself.

Funding and Staffing

(Mentioned in 12% of coded responses)

- Additional staff, space and funding resources.
- more time and staff to full evaluate the scientific data/information we are supposed ot review. 2) more opportunities to go to conferences and CME 3) more value placed on protecting/supporting vunerable populations, not what congress wants.
- FDA has a great core of scientisits. They are competitive with any university or medical center. Despite this Scientists are continuously made to feel that the have to justify their existance. The state of mission critical science could be improved by: +Giving scientists more control over their budgets +Making funds and contractors available in multi-year installments so there is less wasted time and reduced uncertainty. +Reducing the beaurocratic burden of hiring personnel. +Reducing the beaurocratic burden of attending conferences +Reduce the number of roles each person is expected to fullfill.
- Il believe scientific research is underfunded and under-appreciated by the agency which impairs the FDA's ability to improve review processes based on strong scientific rationale.

- Allotment of more FTE to high-priority projects that impact public health
- The mission to protect and promote public health could be improved by allocating more resources to fulfill the myriad of growing responsibilities the FDA has been given. I completely trust the scientific integrity of the FDA.
- The mission of the FDA to protect and promote public health could be improved by devoting appropriate resources to answering questions related to safety and efficacy or effectiveness of medical products. The integrity could be improved by assessing the amount and quality of scientific oversight and examining how regulatory science priorities and metrics are evaluated. The prioritization (resources including time, money, and people) of scientific pursuits at the FDA is intertwined with the integrity of the scientific work. Thus, improvements to the prioritization process --- less burdensome, more transparent --- should also help to improve the integrity of the scientific work produced by the FDA. In some instances, less emphasis on justification of the scientific work that has already been determined to add regulatory value (by funding the project or otherwise) may enable scientists to pursue more questions and provide more results.
- Better funding, more opportunities to attend scientific meetings, hiring more FTE's to complete the work, elimination of personal vendettas of upper management
- put leaders in who have an engineering background rather than doctors. Doctors tend to look at devices differently than an engineer which makes a significant difference as to what works and what is hype.
- I see scientific work produced by the FDA belonging to three areas. 1) Data monitoring 2) Data mining and 3) Lab research. Lab research is inherently very efficient and generates expertise over the long term and is not well suited in its current approach for the mission of the FDA. We need to consider other approaches to efficiently using outside expertise. Also, Lab research is stymied by the uncertainties in the funding process, this needs to be fixed.
- Hiring qualified people (which includes salary and incentives to attract them), then allowing them enough autonomy (along with training and professional development), to do their best work.
- Reduce bureaucratic layers to restore the science to the scientist. Provide more funding to scientists to go to meetings to interact with other scientists. The Washington area has many great meetings where scientists from all over the country and the world come to discuss their research, and we are not even able to go because of "mission-critical" requirement litmus test, usually due to budgetary restraint rather than real mission criticalness.
- Decrease barriers to collaboration within the agency and with the scientific community. FDA leaders appear reluctant to make decision about regulating new technologies that could impact multiple areas (ie next generation sequencing technologies), resulting in years of delay in the integration of technologies in clinical settings. Part of the delay is due to the lack of transparency across FDA centers and other government agencies leads to replication. While replication is great when multiple independent studies confirm each other, often unintentional replication of studies contain design variables that make the results incomparable. At a conference that included the public and government agency presenters, I heard many FDA colleagues comment that the most important thing they took home was an understanding of how other FDA centers are trying to test or create standards for the new technology. The lack of funding for travel to scientific meetings is hurting your

ability to attract and retain top quality researchers. It is hard to stay abreast of the current scientific findings and gauge the relevancy of your research to the community without attending scientific conferences. Furthermore, most talented young researchers aren't willing to join an agency that could hinder their future career choices when the availability of permanent research positions with the FDA are so scarce.

- In my limited exposure to research in my division, I think the dual research/regulatory position is a very poor model for fostering productive scientists and producing quality research. In the end, the people I have seen that are supposed to be doing 50/50 research regulatory always are forced to do more regulatory work because those responsibilities have deadlines and there is little accountability for lack of production in the lab based on my experiences. Often, the research/reviewer is a very hard working individual who wants to do more research, but are forced to limit their lab activities due to the regulatory obligations. In other cases, there is no evidence of any research accomplishments and they are effectively preventing someone else from acquiring a position and performing quality research to advance the field and aid in the FDA's mission to better protect public health. I think a very serious alteration in the staff fellow model should be considered as right now I think it is very harmful to the productivity of many FDA labs and it can negatively impact the staff fellow's career as well. I honestly believe more pure research FTE positions would significantly help this situation and allow for people to not have to juggle both responsibilities. It is also frustrating to see the incredible amount of money that goes into acquiring lab equipment and materials when a better allocation of money would be in hiring more lab personnel. We have enough cool equipment and resources here at the FDA. WE NEED MORE PEOPLE.
- By Hiring more scientist.
- Increase the work force.
- more staff, bi-annual budgeting(budget stability/planning), looser travel restrictions, more/flexible project/on-detail work, more training,focus, and commitment to sci integ/dispute process by managers.
- Increase the budget of the research labs. To hire students and research fellows, and purchase the more expensive pieces of equipment we need, we write proposals to outside funding agencies, such as the military. I don't think it is a good use of taxpayers' money to fund us to write proposals. It also forces us to cater more toward the needs of funding agencies than public health. Also, please stop placing blanket restrictions on travel, and adding training requirements, because someone in some part of government abused a freedom or privilege.
- increased funding
- Would have to overhaul the regulatory process to allow more time for review and consideration of information outside the formal submission process. You would also have to greatly increase scientific staff
- I am largely a regulatory science researcher, who is occasionally involved in review of complex medical devices. I try to listen to the issues of my reviewer counterparts and how my research can aid their decisions. But that is not typical at FDA. The congress needs to fund FDA regulatory research, not FDA administration. We need long-term technicians, and staff scientists to aid scientists in focusing on long-term safety issues, and not be running after every hot button in the

news of what will affect FDA's appearance to the public, industry, and congress. While a hot button science branch is needed, a lot of the current hot-button studies are just PR junk to make us look good. Ex. 8/2014. First no Ebola research is funded in our center, but a big PR program is made to justify how we help Ebola products get reviewed. I tell mgmt this is unwise given the size of the rising outbreak. Mgrs that have no background in bioscience (engineers often) ignore our advice. Then suddenly no research funding, becomes lots of Ebola funding for research in 2015. I have interesting non-Ebola research results, but now I must gun for Ebola money. Scientists are scrambling for project funding due to poor upper management decisions made by our center. The current situation is our science is perverted due to lack of internal funding (oddly money is often siphoned by review to make "survey studies" and not basic research), and in desperation, science funding is obtained from the military (DARPA) and agencies for their pet projects, not FDA's needs. It is no surprise our reviewers think FDA research has no direction to help them in review. We hire newly minted Ph.D.s with little or no research experience and they turn into managers (cause science is too hard, and we have a patronistic structure of directors), to "direct" large research projects they have no expertise doing. The project fails.

- Hire more scientists to reduce the heavy workload. 2) Provide all employees the opportunity to continue scientific education. 3) Just because we are government workers doesn't mean we don't need salary increases. It was very damaging to the moral to not have our living expense increase for 8 years. I know it's 1%, but it really does add up with time.
- That could be great to make a final decision : does FDA need regulatory science, I mean laboratories which do research on regular base. In case the decision is yes, give the laboratories more money on regular base (not two times per year) and enough - so, scientists who work in laboratories will know they have enough money to buy all need instruments and supply for their research - they will spend the money for exactly happened needs (not in advance, for future) and will have a possibility to buy new, modern scientific instruments needed to perform the research on excellent level and more effective.
- Please fund staff so that they can attend Scientific Meetings outside of the Washington DC metropolitan area.
- Increased resources to execute the regulations.
- remove excessive administrative burden 2. fix the broken procurement process 3. fund the science
- more personnel -- too few research positions at CVM
- More funding, more positions. But the regulatory work of the FDA depends largely on the integrity of the scientific work (basic, applied and medical) of the pharmaceutical industry.
- I think that increased funding/staffing of scientists would help. I have not run into any scientists in FDA in my entire career who have been dishonest in their review of data or insincere in their proposals for policies or procedures. There is an opportunity to express opposing opinions even if sometimes compromises must be made for practical reasons. I do think that the agency needs to be careful that its relationship with the regulated industry remains open to public scrutiny to ensure a level playing field for the entire industry. I also think that some public interest groups go overboard with FOI requests and lawsuits which ties up resources that could be more productive in other

areas. On the whole, I think there is a reasonable balance and that the agency is staffed with qualified, hard-working scientists who keep the public health mission foremost in their minds.

- Provide more fund to scientific studies mainly based on the opinions from scientists, not from those from administrators.
- Allow and encourage staff in the review divisions (CDER/office of new drugs) to attend medical and scientific meetings to remain update with current scientific thought and clinical practice . This has been actively discouraged and underfunded since 2010 given recent government scandals regarding conference attendance. This policy is contrary to the FDA mission. Review staff providing reocmmendations and making decisions with such significant impacts (drug approval) should be REQUIRED to attend these conferences to maintain skills and remain up to date with current thoughts in his/her respective field.
- I do not think the problem is with scientific integrity. I think the problem is having insufficient technical and medical personnel to meet the agency's mission. As a result insufficient time to do a good job, and an apparent powerlessness of agency management to correct the situation, creates in me terrific dissatisfaction. More and more the agency is treating its medical reviewer staff as a labor pool to be exploited. The general lack of knowledge of regulatory process and clinical trial science in the pharma community is also highly demoralizing. Pharma executives appear to be quite content with being ignorant of scientific evaluation of new drugs.
- Increased resources (from appropriated funds, not fees). More hiring flexibility, especially for STEM positions. E.g. direct hire for mission-critical scientific position categories.
- FDA needs more staff to accomplish our mission. Perhaps the most critical issue for scientists is the extreme lack of travel funding. We are not able to attend meetings to share our work and to keep up with our field. This essential professional development is hampering the ability of staff to maintain their professional standing. If it continues, I am concerned that junior scientists will leave.
- The user fee legislation should be amended so that FDA review practices and policies are not influenced in any way by industry that is regulated by FDA itself. FDA resources are too limited making for competitive funding as part of the prioritization of scientific programs. FDA needs better funding, not tied to industry. The bureaucratic and administrative burden upon scientists at the FDA has become increasingly problematic and interferes with the conduct of the research needed. Approval of research projects needs to be streamlined and simplified. Additionally, there is too much emphasis on shortening review times and meeting MDUFMA goals rather than on public health and safety. The customer service initiative is not meaningful in terms of scientific research and should be curtailed.
- We need more staff. Short of hand often put me in a stressful situation and soemtimes I could not invest enough time as I want to do a thorough review.
- Additional funding for staff especially in regulatory science. Funding for travel and training has been slashed due to Congressional budget cuts which is incredibly unfortunate for FDA scientists and the public.
- The FDA should be making science based decisions, and it is for the most part. However we are hindered by limited resources (inadequate funding for test samples, lab space, hiring), ineffective processes for completing work assignments, incompetent employees who cannot be easily fired,

and changing priorities each time new leadership comes around (which seems to be every few years).

- Stop the continuing resolution BS for funding the agency. Also, ensure funding exists to send scientists to at least one scientific meeting a year. Reading about scientific advances is not the same as having an opportunity to discuss advances/scientific findings with our peers. The interactions with our peers is one of the best ways to stay abreast of current knowledge and state of the art technologies. Waiting 4 - 5 years between meetings is a great way to ensure the agency is behind the times given that scientific advances are occurring so quickly. It is also a great way to encourage people to leave government service since they are not getting the stimulation from learning/hearing about topics in individuals field of specialization. Furthermore, making decisions based on what was current 5 years ago affects the reputation and integrity of the agency.
- There are significant obstructions to the hiring process and the ability to travel to conferences is basically non-existent. To be able to share knowledge and learn from your peers about new methods and techniques is critical, to hire staff to fulfill research and data gaps is critical.
- Increased promotion and profile for internal FDA research including increased funding and expansion of research units that do not have review responsibilities. Separating the science from review influences is critical. Use of annual appropriations for funding has severe negative effects on the continuity and consistency of research within the FDA. Alternate way to provide funding would be significant improvement. Ability to do research purchasing outside many of the contracting constraints of the federal government would also improve the efficiency and efficacy of FDA research.
- We need more people on our team. The workload is too high for us to be effective with so few people. Our management do not get adequate sleep, food, or time to go to the bathroom between meetings. Our scientists are also overburdened, under tight deadlines and a high workload. In order to be more effective I think we need to triple our team size or at least double it. 2. We also need money for conferences and education. Due to time and budget shortages we are unable to attend conferences or receive adequate continuing education. Last year, we could only send one employee per office to the annual international conference for our field. We are poorly represented at this conference. 3. Our computing resources are not enough for the amount of data we process. Even with the best available scientific workstation I do not have enough available memory to complete some analyses.
- Increase the probability that regulatory review divisions can get "research" funding for regulatory research or to hire fellows to perform in depth data base reviews.
- did you know that a device company can submit a copy of an article (no data - just an electronic copy of a published article) as "proof" of the efficacy of their product to support changes in the indications for use statement? I would recommend that device companies be required to conduct clinical trials for their devices. Keep the lobbyists, lawyers, and the politicians out of decision making. increased funding and staff. need longer periods of time to review drug applications. While there is a year to review the information submitted, there are so many additional requirements and layers of management for approval that it is difficult to complete the information on time.
- Increased funding for research.

- More resources and some needed statutory changes.
- Give all FDA scientists an annual, guaranteed budget to attend scientific meetings. All FDA scientists should have a minimum of 10% of their job duty be to perform independent regulatory research. Require "expert scientists" in the FDA to spend 25% of their time training junior scientists. Make this something they get evaluated on in their performance review. In general, only expert scientists are going to scientific meetings. And they are so busy managing their careers that they are not bringing the level of scientific expertise up to their level in the FDA. Right now, those expert scientists have an ulterior motive (which goes unchecked) for doing this. When they retire, they get to draw a very high consulting salary from the FDA because they have given people the impression that they are irreplaceable. Or in other instances, they move into private industry and take a lot of federal contract work with them, again, because they made a niche for themselves in the FDA and decisions become dependent on their expertise - even after they leave. This has to stop! And it can with proper training in place within the agency. All scientists come here after being stellar researchers and clinicians. Don't let that go to waste because of the walls senior FDA scientists have put up to keep out competition for their career within the FDA.
- Terminate PDUFA Generate funding from federal taxpayer's income tax
- Increased funding for FDA scientist driven regulatory science research.
- m a medical scientist, involved in regulation of drugs and biologics. The FDA has a chronic problem related to its ability to recruit and retain talented individuals. In my experience, the problem is due to inability to "shoe-horn" scientists into a strict, linear administrative structure. This means that, during decision-making meetings or even general discussions, the weight of an opinion is directly proportional to the pecking-order level of the participants. This is extremely uncomfortable for someone who has held a senior-level academic position prior to coming to FDA, and as a consequence, such individuals usually don't come here and many, but certainly not all, of the medical staff are mediocre. Furthermore, advancement for free-thinking scientists is usually limited at FDA. The consequence of this is lack of retention of talented people. Finally, opportunities for meaningful educational experiences are limited by time and budgetary restraints. To improve this situation, these issues must be addressed in a serious manner, but after many years here, I am not optimistic.
- Need more staff!!!
- More staff, updated tools (software, etc)
- Better funding and additional employees
- By increasing the number of support staff.
- more staff, and more opportunity for advancement.
- FUNDING FOR TRAINING. They have taken it all away. Most of the field agents lack the technical background and ability to do complex inspectional work so the limited amount of personel capable of performing such a workload are being directed to go overseas and we aren't getting clear answers from CDER regarding our assignments. I am seeing discrepancies in the data submitted by pharmaceutical companies before I even leave the country to go do the inspection but no one at ORA can answer my questions and no one at CDER will attempt to answer my questions...pressured to approve drugs at record pace...I would like to see the workforce statistics...how many DEDICATED

GDUFA/PDUFA investigators are there total? ok and what percentage of 2014 GDUFA/PDUFA pre-approval inspections were completed by a NON-DEDICATED GENERAL CSO????????? I did 6 this year and its only my 5th year here with the agency....they have never let me do anything challenging before in my own district but when someone needed to be volunteered and sacrificed on the districts behalf i was suddenly qualified to go overseas for a month and inspect 3 multi-billion dollar corporations. Someone is trying to cover their ass before the public knows theres an issue and before Congress understands how bad they fucked up by passing the GDUFA/PDUFA regulations without actually reading them. unfortunately I cannot tell how high up the problem is...all mangement in the FDA lack Union protection and refuse to speak with me regarding many issues I am having right now at work that just suddenly started when I was directed to Asia for a month. I have heard that there are MANY griviences filed with the Union regarding the foriegn inspection trips which have just recently become an issue with us in the field.

- More resources to test, collect, and examine a higher percentage of imported regulated products that cross into the country.
- More money, time and resources need to be spent on research.
- More hiring ,adequate staff
- Provide resources for continuing education and assistance in obtaining professional certification (not FDA certification), for all employees including, but not limited to, financial assistance, excused time away from work to attend class or participate in online courses, etc. There aren't enough opportunities available for employees to advance their education and skills. We need more opportunities to do this while employed by the Agency without all of the red tape! Especially for ORA field employ
- More money for ORA laboratories, equiment and Training
- More money would be good.
- More funding be provided to FDA scientists to conduct regulatory reseach.
- Since we are reported to be an agency of science, putting the funding in place to keep the analysts up to date with current methods, instrumentation and training. As is stands right now we are grossly under funded in continuing education of scientists.
- More transparency; more staffing in field offices especially support staffing; more supporting staff for field recall coordinators.
- Transparency and allocating resources to complete timely research projects.
- Better allocation of funding. Example: Buying several hundred thousand to million dollar pieces of equipment for every lab then deciding it will not work or all testing should be done in one lab. Millions of wasted dollars in unusable equipment. Some employees are told that they don't have funding for conventions, courses, or basic equipment (new pipettes) while there are million dollar pieces of equipment in empty rooms. (currently 3 examples at my lab at this exact time.
- More resources. The Agency's mandate keeps expanding without additional funds. In addition, attrition of experienced staff keeps occurring, due in part to exceedingly limited funds for professional develoment or training, not to mention salary of federal se
- Recruit, promote and retain employees with experience from industry, that is from outside the government. Personnel and professionals from pharma, biologics and device companies need to be

recruited, promoted and retained. This organization lacks an appreciation for "real world applications" and instead focuses on credentials- letters after the name. It is indidous and counter productive. There needs to be more oversight for research funding, and the purchasing process is a nightmare.

Communication

(Mentioned in 8% of coded responses)

- More communications Well defined steps for performing the work and non-work related activities in agency
- Better communication between the management / reviewers / businesses and the public
- Establish proper communications among all scientists of different levels. Transparency at all levels is very important. Need to get feedback from team members about scientific work related issues, lessons learned and consider them for future work is very important step for improvement.
- Content reviewers for external communications should have a better understanding of the science that is being written about so they can make thoughtful and meaningful comments and edits. When the pulic relations team does not understand the science it is difficult to take them seriously and for their contribution to have value.
- current policies are dominated by regulation, which is important. However, these regulations make it extrememly difficult for an FDA scientist to be actively involved in the scientific community, such as visiting Universities to give talks, inviting speakers to give talks, traveling and going to meetings. In addition, collaborating with indivduals outside FDA (in my case, alomost exclusively academic instituions) is said to be important, but the legal requirements make this very difficult.
- Enhanced oppourtunities for FDA employees to keep abreast of the science, policies, and procedures they regulate. Better outreach and information sharing with industry and especially consumers.
- Integrity of the scientific work could best improved if open discussion is allowed on all levels. Principal investigators cannot dictate what outcome they expect from the project, rather, form hypothesis and test it through scientific process.
- In my specific area, there is a need for us to communicate with other researchers, but the restrictions on travel make that nearly impossible. Allowing us to attend two conferences a year would help us be aware of the latest issues in our field, make contacts necessary to efficiently and effectively conduct research, and disseminate our findings to those most interested and able to use and build upon them. All of that would help achieve the goal of protecting the public's health.
- By efficient communication and close cooperation, it will be best improved with our mission and integrity of the scientific work.
- Facilitate feedback to laboratories concerning results of sample analysis.
- I think some of the policies needs to be update and made more clear. I think the problem happens with interpretation of regulatory policies and procedures.
- FDA is seriously hampered in its efforts to fulfill its mission by inadequate appropriations from Congress. Congress needs to appropriate adequate funds for: Adequate scientific staffing; Salary increases competitive with those of comparable non-government positions; Adequate travel needed for: scientific training and professional development, oversight of regulated industry, development

of national and international standards, education and outreach to regulated industry In-house research directly related to FDA mission; Physical office and parking facilities designed to allow future expansion instead of being overfilled by the time they are completed.

- I think that the funding for PDUFA, MDUFA, and GDUFA should flow through another Agency who oversees the distribution of the funds to provide distance, avoidance of potential influence, and the appearance of impropriety. I also believe that an outside scientific panel of experts should be involved in setting of policy, at the Agency level and the Office level. Since 1999, the IOM, OIG, GAO, and multiple scientific panels have made recommendations for how to improve postmarketing. They have recommended increased use of automation, data mining tools, and increased collaboration with experts and other regulatory agencies. As of this date, none of that advice has been followed. The GAO continues to state that they have expressed concerns regarding the postmarketing safety process for 30 years.
- I think the biggest problem with science and integrity today come from people with little or no scientific background using alarmism and scare tactics to generate concern over fabricated issues. They prey on ignorance and use catch phrases to generate panic amongst the ignorant. This happens on every level... from social media posts to partisan political agendas. So far, I think we have done what we can to educate and correct misinformation, but we are limited in what we can do. Unlike the public that can spread misinformation without any sort of recourse, we are beholden to a higher standard to support our positions scientifically and with one voice. So long as we have congressional members that battle us and contribute to the scare tactics and misinformation, you will always have people who doubt the caliber of the scientists at the FDA and the decisions they make. We see it a lot on the veterinary side from special interest groups who suggest that we are allowing drugs to be put into food animals that are not safe for people to eat. I think as scientists, we will just keep making decisions based on evidence and hope that logic will overcome fear-mongering.
- More communication between regulatory officials and research scientists
- The work of the FDA could be improved by updating the outdated guidance / regulations / laws that govern the FDA. There are numerous outdated regulations related to the performance standards of medical equipment and many revisions to guidance documents. However, it is very difficult to get these through the center / agency / regulatory council etc... to make revisions and/or make them available to the public. There seems to be a general unwillingness to put forth updates, when in many cases they are not controversial and would benefit everyone (e.g., remove outdated regulations to reduce burden on FDA and industry).
- Regarding Tobacco Products the FDA needs to develop a set of studies and data that are required to answer questions and enable the industry to move forward with regulation. Currently the FDA may not be providing quite enough guidance to the industry. Congress writes legislation that indicates that they have no idea what FDA does or how it works.
- This is a challenging question. Striking a balance between responsibilities to the public health with the business concerns of the health industry, political interest, budget concerns, and workers rights is tricky, to state the obvious. The most obvious area for improvement is the review process needs to be more driven by concern for the public health, not the lobbying efforts of the pharmaceutical

industry that wants products brought to market faster, or the media driven health scares that are frequently used to rationalize pressurization of the review process and erode its scientific integrity. There is such a thing as fast track review for products that address a pressing public need.

Commentary on the processes and government decision making policies that affect the FDA mission should be restricted to qualified scientists. Congressmen and all government decision makers involved with health care regulation should be completely divested from the health care industry.

- Sharing stories through various venues of FDA actions that resulted in the prevention of foodborne illness or disease.
- I think a first step is to let the rest of FDA what scientific work is being done at FDA. I am a medical officer and review IDEs and PMAs and I don't know what research is going on at FDA.
- By aligning our reporting on clinical trials through our website with newly evolving standards for clinical trial reporting that are being adopted by journals and other sources.
- Allow more information to be shared with the public. Trade secrets are often not so secret.
- Better communication. Groundbreaking research can't move forward unless the scientists and management improve communication skills inside and outside of the Agency. Big disconnect between FDA communications and average health literacy of consumers
- Fire managers who retaliate against scientists who publish. Educate the public about the importance of scientific integrity to our economy (their jobs).
- I think FDA should use science to protect and promote public health. I am not sure about the FDA mission to generate original scientific work. I think FDA should be a scientific collector to make scientifically appropriate decision in the regulated fields and to appropriately inform the public regarding the health field. I personally feel that the FDA mission could be improved with a team of outreaching scientists able to present complex (and sometime controversial) health reality to the public with a balanced and respectful approach.
- I think the mission of the FDA could best be improved by greater interactions with stakeholders, including industry, the laboratory community, and consumer groups. Currently, only a small handful of senior FDA employees interacts with these stakeholders. The vast majority of FDA employees have a lack of understanding of the needs of these stakeholder groups. Programs such as the Experiential Learning Program should be expanded to laboratory and consumer groups to give rank-and-file FDA employees a clearer understanding of stakeholder needs.
- I think FDA should improve communications with the public sector in terms of the scientific work conducted, its mission and its goals, concrete needs of scientific work for example. Publications in major journals should be increased and reflect the work FDA does in collaboration with other regulatory and public health agencies, industry and the public in general. I think this will increase and improve the public perception and awareness of the work and challenges that FDA faces. The work the FDA does in the field of neglected diseases for example, should be better known and also increased through more collaborations.
- There are so many non-native speakers at the FDA, that scientific discussions are difficult or often not possible because of language barriers. There are many scientists at FDA that speak English so poorly it is not possible to understand what they are saying. In my opinion this is a serious threat to the scientific integrity at FDA.

- The corrective action for any wrongdoings we observe in the industry is limited by the regulations. The industry knows the regulations and find loopholes or regulations with possibilities for interpretation and thus they limit our actions. I came to the FDA after having read much about the agency being "in bed" with the industry. My understanding changed dramatically during the years I've been a FDA employee. All that remained is my frustration that the public in general, the American people do not have enough regulatory knowledge to understand our limitations who can not be blamed on a person/company/group of interests, the dedication and the effort FDA scientists make to preserve the public health. After working at FDA I saw the cycle any regulation needs to go through to come into effect, and often had a feeling of "hands tied" not because of someone in particular, but because of the very nature of the regulatory process. The biggest service anyone can do to the American people is to educate as many people as possible, on what it involves to pass a regulation, what are the regulatory and scientific steps in the approval process.
- More opportunities to do outreach to industry and consumer
- More communication and collaboration between Center personnel and the field. Mutual respect of differing ideas. Maintaining a stable workforce that is there is so much turnover in the Centers and many new people who have never had the field experience. The writing of FMDs should not be completed without field and QMS personnel review. Make it mandatory that at various level a response is required before any FMDs is released. Communicate better the role of QMS personnel to the FDA as a whole and how it should be integrated into every day FDA work, but also have a clear mindset as to the authority of QMS personnel that is what are they allowed to do and what are they not allowed to do.
- By communication.
- Making standards for scientific work products and communicating those standards throughout the agency (all employee levels and all employees processing scientific work products) to aid in daily decision making process.
- Those making the decisions need to connect with those directly affected by the decision to seek opinion and practicality (they do this with business and the public, why not with employees?). 2. I also think that the FDA ought to default to Public Safety first - in other words, a chemical is unsafe until proven safe, not the other way around.
- Somewhat more freedom in expressing individual opinions
- To realize that the mission of the agency to protect the public health involves all levels of inputs from Industry, stakeholders and the general public, like it touts during the regulatory process. Part of the fundamental aspects of assuring this model would include assuring ways to improve this process, such as grassroots meetings with various groups and actively soliciting and providing ways for inputs to be both obtained and evaluated/integrated in all aspects of the regulatory process.
- The multiple choice questionnaire is not the best tool for doing this survey. It depends on which industry you are referring, as to whether industry is influential. I think the agency decisions regarding scientific work are extremely biased. The agency essentially lets "big Pharma" run the show, but comes down hard on the food industry, especially the small mom and pops. I think the agency decisions made recently regarding bacteria in the food supply, are ineffective. Bacteria exists in nature. If you eliminate the competing bacteria, it allows the bad bacteria to proliferate. The

more you fight it, the more nature fights back., i.e. MRSA. The farmers cannot control it 100%, but yet the agency treats them as criminals when their products have "Salmonella" on them. I think the public would be best protected though education. Some scientific studies have shown that probiotics are effective against bacterial infections, but the FDA has never admitted it, publicly. If the FDA wants to prove they are concerned about public health, why don't they require soda manufacturers to admit that there is absolutely no nutritional value in their products? I also think the egg rule is nonsense. Eggs have a protective coating on them that lasts three weeks. If they are not washed, they are safe. The FDA mandates that eggs be refrigerated with 24 hours. This is misleading because there is no mention of washing vs. not washing. The food industry, for the most part, does not deliberately contaminate the food. The medical industry may not deliberately contaminate its products, but it deceptively hides information, and misleads the consumer through "excessive "advertisement of its products. The drug industry does not care about public health, they care about getting rich. The FDA allows physicians who represent pharmaceutical companies to sit on the decision-making panels. Why is that not a conflict of interest? As far as social media goes, I feel like I am not allowed to express a differing opinion at all. Just because I work for them doesn't mean I agree with them. on everything. In my opinion, the agency discourages critical thinking.

- Allow FDA scientists to teach and participate in peer reviewed, published research.
- empower persons in regulated industry to make wise risk decisions
- Better support and transfer of information to industry.
- The Centers of the FDA are not necessarily the hub of expertise that they claim to be. There are many capable analysts in the field laboratories that have greater, hands-on experience on a particular problem than any "expert" at the Centers. There should be a more collegial relationship between the scientists at the Centers and the field laboratories.
- Allowing the FDA Scientist to contact non FDA scientists to work together to achieve goals and to avoid the intrusion of the politicians without science background in in relevant issues.
- a regulation does not fit the violation then do not enforce that regulation. Common sense should be required before FDA ruins a company and destroys the lives of everyone associated with that company. Many times for an OAI inspection, the decision to enforce a regulation that does not fit the product/industry, is left to one specific HQ individual or a small group of HQ individuals that have no common sense and have NEVER been in the field. They do not listen to the practicality of bending the regulation to fit the product/industry, they just say "sorry that is not what the regulation says" and the case is over and another firm is out of business and lives ruined. I have observed this happen numerous times in the pet food industry, dietary supplements and produce industries.
- Have avenues for staff to identify potential public safety issues encountered in the field back to the centers.

Transparency and Accountability

(Mentioned in 5% of coded responses)

- Transparency with industry - continued collaboration of our expectations and their new technology. Sharing of experience from veteran reviewers and managers to new hires for the next generation.

- Establish proper communications among all scientists of different levels. Transparency at all levels is very important. Need to get feedback from team members about scientific work related issues, lessons learned and consider them for future work is very important step for improvement.
- By working more collaboratively amongst Centers to standardize practices.
- Promote transparency and open collaboration.
- Resolute support by leadership and management throughout the organizational chain -- from the Presidential Administrative level, through HHS, FDA, and all of its sub-components -- allowing the scientific staff to spend a substantial enough fraction of their time to keep up with scientific literature and conferences, to do relevant research and publish findings, and facilitating transparency and honesty in policy decisions.
- Everything can be improved no matter how they are run or organized. Greater transparency of the decision making process and issues involved in making a regulatory decision can only increase the public's understanding and trust in the FDA's mission. The agency and public health will always benefit from science based decision. I believe political pressure to even a small degree to delay approval of a drugs can have long term consequence on public's trust in the agency's mission.
- The mission of the FDA to protect and promote public health could be improve by devoting appropriate resources to answering questions related to safety and efficacy or effectiveness of medical products. The integrity could be improved by assessing the amount and quality of scientific oversight and examining how regulatory science priorities and metrics are evaluated. The prioritization (resources including time, money, and people) of scientific pursuits at the FDA is intertwined with the integrity of the scientific work. Thus, improvements to the prioritization process --- less burdensome, more transparent --- should also help to improve the integrity of the scientific work produced by the FDA. In some instances, less emphasis on justification of the scientific work that has already been determined to add regulatory value (by funding the project or otherwise) may enable scientists to pursue more questions and provide more results.
- Transparency is needed.
- By more frequent inquiry using Freedom of Information.
- Be trust worthy in the work you do for FDA.
- More transparency to the public.
- Decrease barriers to collaboration within the agency and with the scientific community. FDA leaders appear reluctant to make decision about regulating new technologies that could impact multiple areas (ie next generation sequencing technologies), resulting in years of delay in the integration of technologies in clinical settings. Part of the delay is due to the lack of transparency across FDA centers and other government agencies leads to replication. While replication is great when multiple independent studies confirm each other, often unintentional replication of studies contain design variables that make the results incomparable. At a conference that included the public and government agency presenters, I heard many FDA colleagues comment that the most important thing they took home was an understanding of how other FDA centers are trying to test or create standards for the new technology. The lack of funding for travel to scientific meetings is hurting your ability to attract and retain top quality researchers. It is hard to stay abreast of the current scientific findings and gauge the relevancy of your research to the community without attending scientific

conferences. Furthermore, most talented young researchers aren't willing to join an agency that could hinder their future career choices when the availability of permanent research positions with the FDA are so scarce.

- Keep transparency in our daily work. keep transparency in our work.
- Hold staff accountable for poor quality work
- Greater clarity about the justification of current methods and how they evolved into policy
- The problem is management. FDA is run by scientists who have no management skills. The attitude is do not rock the boat. Top down policy and lack of transparency, and leadership. Right hand not knowing what left hand is doing leading to secretive policies.
- I think when the review team and senior management disagree it should be public. this is a bigger issue with medical devices than with drug and biologics because individual reviews are not posted with devices. i think a better peer review process ought to be in place for the intramural research programs along the lines of NIH.
- Increase transparency and consistent decision making.
- find that our attorneys force us to dilute or delete certain information that should be disclosed and would clearly not fall into information that cannot be disclosed. They appear to be fearful of litigation.
- More transparency particularly from management with regards to budget, projects, who is working on what
- By increasing transparency. Frequent training. Providing more exposure to regulatory affairs. Providing regulatory training. In my opinion FDA higher authorities or the decision makers should revisit some of the issues, e.g., in many of the offices/divisions/labs people coming to FDA from various part of the world having J1 VISA and after a while being converted to H1 VISA, who are not-permanent US resident or not-US citizen. They are being provided with highly classified regulatory works and getting high quality regulatory trainings. Unfortunately many of the US permanent residents and US citizens are not allowed to do any regulatory works as well as not allowed to sit for any of the regulatory training sessions. I'm a US citizen. I joined [REDACTED] as an ORISE fellow (while I was a permanent resident of USA, waiting to be a US citizen). I was not allowed to do any regulatory work nor to sit for any regulatory training. [REDACTED]
[REDACTED] It is very disappointing and unfortunate. While joining FDA one would naturally think/expect to have a very deep regulatory exposure, the very uniqueness only FDA has on the earth. I suggest/request the policy makers to revisit this regulation and give priority to the US Permanent residents/US Citizens rather than the temporary foreign workers.
- Clearer goals and expectations from the scientists and establishment of a transparent, science based and public health centric policies.
- I have reached a point of frustration in my career at CFSAN that now I am willing to say what many of us think is the best solution to improve the integrity of our scientific work and fairness to young scientists: Remove our incredibly incompetent Senior Science Advisors. They are regarded by many as Industry Hacks, decades behind the times with respect to relevant areas of public health that should be mission critical to CFSAN. Of all the Centers, CFSAN is regarded as having the worst scientific leadership and the lowest morale among scientists. Concern over retaliation which we

have all witnessed prevents many of us from reporting the unethical and scientifically unsound actions of our senior scientific leadership, and then who would we report it to? Recently, those who complained to HR were labeled insubordinate. The mission of these leaders seemingly is to impede scientific discovery that may draw attention to the Center because it supports an unpopular action or decision unfavorable to industry. Why is it that as research scientists we have to go through a strenuous peer review process meeting the demands of publication, showing evidence of national and international scientific recognition, demonstrating significant impact of our published work and invited seminars and presentations, while our leaders (Division heads, Senior Science Advisors, etc.) are not required to go through peer-review, nor are they expected to publish scholarly manuscripts. They do not read the critical literature relevant to CFSAN regulated products and public health concerns, but simply respond to higher pressures in making decisions as to which research will be terminated or initiated. Our Senior Science Advisor even decides which research proposals will be allowed to be submitted to the Challenge Grants and other in-house scientific funding opportunities. I don't know how many of my colleagues will take the time to respond to your survey; however, I can assure you that very few are content with the scientific leadership and many have witnessed scientific misconduct, but all of them fear for their jobs.

- regarding food safety: I think FDA needs to audit private labs that test imported foods. Currently, some of these private labs seem to do a good job, but others do not.
- FUNDING FOR TRAINING. They have taken it all away. Most of the field agents lack the technical background and ability to do complex inspectional work so the limited amount of personnel capable of performing such a workload are being directed to go overseas and we aren't getting clear answers from CDER regarding our assignments. I am seeing discrepancies in the data submitted by pharmaceutical companies before I even leave the country to go do the inspection but no one at ORA can answer my questions and no one at CDER will attempt to answer my questions...pressured to approve drugs at record pace...I would like to see the workforce statistics...how many DEDICATED GDUFA/PDUFA investigators are there total? ok and what percentage of 2014 GDUFA/PDUFA pre-approval inspections were completed by a NON-DEDICATED GENERAL CSO???????? I did 6 this year and its only my 5th year here with the agency....they have never let me do anything challenging before in my own district but when someone needed to be volunteered and sacrificed on the districts behalf i was suddenly qualified to go overseas for a month and inspect 3 multi-billion dollar corporations. Someone is trying to cover their ass before the public knows theres an issue and before Congress understands how bad they fucked up by passing the GDUFA/PDUFA regulations without actually reading them. unfortunately I cannot tell how high up the problem is...all mangement in the FDA lack Union protection and refuse to speak with me regarding many issues I am having right now at work that just suddenly started when I was directed to Asia for a month. I have heard that there are MANY griviences filed with the Union regarding the foriegn inspection trips which have just recently become an issue with us in the field.
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- More transparency; more staffing in field offices especially support staffing; more supporting staff for field recall coordinators.
- Transparency and allocating resources to complete timely research projects.
- By telling the truth.

Training

(Mentioned in 4% of coded responses)

- Allow for sufficient training. I think most of us are overworked with constant deadlines that we can't focus on additional training or learning.
- An effective, individualized training of the staff.
- More trainings when scientific works are updated, in order to stay updated.
- By providing adequate staffing and training, clear and timely decisions on complex issues from upper management, particularly with regard to implementation of new legal requirements and additional staffing to support the increased workload for compliance with such new mandates. Relief from the restrictions on attendance of important scientific meetings for the purpose of training and to present work generated by FDA employees.
- Enhanced opportunities for FDA employees to keep abreast of the science, policies, and procedures they regulate. Better outreach and information sharing with industry and especially consumers.
- Federal travel restrictions have made it very hard for scientific staff to attend conferences. It would be better for scientific staff to have more ready access to scientific training. Our review load is so

high that there is little time to conduct independent research. I would like the agency to built at least 20% time for scientific staff to conduct their own research and attend seminars. Risk-benefit decisions for drug approval could be improved by use of more quantitative methods. Labeling for prescribers and for consumers, especially for safety could vastly improve to provide a more relevant information. The focus now seems to be citing everything to prevent potential lawsuits from consumers.

- Hiring qualified people (which includes salary and incentives to attract them), then allowing them enough autonomy (along with training and professional development), to do their best work.
- more staff, bi-annual budgeting(budget stability/planning), looser travel restrictions, more/flexible project/on-detail work, more training,focus, and commitment to sci integ/dispute process by managers.
- Hire more scientists to reduce the heavy workload. 2) Provide all employees the opportunity to continue scientific education. 3) Just because we are government workers doesn't mean we don't need salary increases. It was very damaging to the moral to not have our living expense increase for 8 years. I know it's 1%, but it really does add up with time.
- By offering more training
- Skilled well trained managers and good leaders who are willing to inspire the staff members and keep them scientifically strong.
- Industry puts too much pressure on managers, and reviewers are put under intense pressure by managers to approve products. Disapprovals are scrutinized closely at many levels and require a lot of time and effort, whereas approvals seem to fly through. Reviewers who closely scrutinize data can be seen as troublemakers, so there's less incentive to do a thorough review. Managers are so pleased with approvals. I'd like our work to be more independent of industry interests. I'd also like to see more resources spent in training FDA staff. Sometimes new reviewers make mistakes, sometimes industry is deliberately misleading in their submissions, but based on current regulations, we can't pull a product from the market until after we get adverse event reports. Mistakes on our end can't be rectified. It's very demoralizing to be told that one person's mistake sets the bar for all other products.
- Implemet the Equal Voice Principle across all centers within FDA. Training new scientific reviewers on issues associated with euqual voice in decition making-process.
- By increasing transparency. Frequent training. Providing more exposure to regulatory affairs. Providing regulatory training. In my opinion FDA higher authorities or the decision makers should revisit some of the issues, e.g., in many of the offices/divisions/labs people coming to FDA from various part of the world having J1 VISA and after a while being converted to H1 VISA, who are not-permanent US resident or not-US citizen. They are being provided with highly classified regulatory works and getting high quality regulatory trainings. Unfortunately many of the US permanent residents and US citizens are not allowed to do any regulatory works as well as not allowed to sit for any of the regulatory training sessions. I'm a US citizen. I joined [REDACTED] as an ORISE fellow (while I was a permanent resident of USA, waiting to be a US citizen). I was not allowed to do any regulatory work nor to sit for any regulatory training. [REDACTED] [REDACTED] It is very disappointing and unfortunate. While joining FDA one would naturally think/expect

to have a very deep regulatory exposure, the very uniqueness only FDA has on the earth. I suggest/request the policy makers to revisit this regulation and give priority to the US Permanent residents/US Citizens rather than the temporary foreign workers.

- The management needs training on the ethics we learned about in academia. No unnecessary credit grabbing. Giving people the credit they are actually due is really appreciated instead of sweeping their work under the rug without giving the person's work any consideration. Management should give people more opportunity because my experience in FDA is not what I had for experience in academia or in the contracting industry. It is clear that the playing field is not level and there is politics as to who management elevates and who management does not. I did not get a chance to be a Team Leader in GLP. I got limited opportunity to participate in generation on Guidances or science policy. I said that I was interested in being part of the Biosimilars team, and it never materialized. Management should be better at evaluating individuals fairly, not only evaluating people on the quality of work but also upon the quantity of work done as well because this factor varies, usually increases year after year. The people in management should also have a better command of the knowledge of the field compared to their subordinates. That is why they earn more money. Therefore, management should be held more accountable for their actions or lack thereof.
- I believe that scientists should attend refresher courses - some are very outdated
- Adopt a new pay scale like other industry-funded Federal agencies use. Make training and conferences again available to staff. Hire fewer attorneys and more scientists with business and/or management and public health experience
- FUNDING FOR TRAINING. They have taken it all away. Most of the field agents lack the technical background and ability to do complex inspectional work so the limited amount of personnel capable of performing such a workload are being directed to go overseas and we aren't getting clear answers from CDER regarding our assignments. I am seeing discrepancies in the data submitted by pharmaceutical companies before I even leave the country to go do the inspection but no one at ORA can answer my questions and no one at CDER will attempt to answer my questions...pressured to approve drugs at record pace...I would like to see the workforce statistics...how many DEDICATED GDUFA/PDUFA investigators are there total? ok and what percentage of 2014 GDUFA/PDUFA pre-approval inspections were completed by a NON-DEDICATED GENERAL CSO????????? I did 6 this year and its only my 5th year here with the agency....they have never let me do anything challenging before in my own district but when someone needed to be volunteered and sacrificed on the districts behalf i was suddenly qualified to go overseas for a month and inspect 3 multi-billion dollar corporations. Someone is trying to cover their ass before the public knows theres an issue and before Congress understands how bad they fucked up by passing the GDUFA/PDUFA regulations without actually reading them. unfortunately I cannot tell how high up the problem is...all mangement in the FDA lack Union protection and refuse to speak with me regarding many issues I am having right now at work that just suddenly started when I was directed to Asia for a month. I have heard that there are MANY griviences filed with the Union regarding the foriegn inspection trips which have just recently become an issue with us in the field.

- Provide more training on scientific rationale for activities we perform. In particular, more training on statistical sampling methodology.
- Ensure that scientists across all Centers as well as OC receive adequate support and training towards their continuing education so they stay abreast of the latest advances. Currently, such support is variable across Centers and OC and depends on the discipline/background of the supervisor who may or may not understand such needs and advocate these needs.
- Provide resources for continuing education and assistance in obtaining professional certification (not FDA certification), for all employees including, but not limited to, financial assistance, excused time away from work to attend class or participate in online courses, etc. There aren't enough opportunities available for employees to advance their education and skills. We need more opportunities to do this while employed by the Agency without all of the red tape! Especially for ORA field employees.
- Get up to speed on current technologies
- Improve the selection and training of District Compliance Officers to ensure the product risks from quality system and manufacturing deficiencies are adequately understood and represented in the consideration for regulatory action against violative drug manufacturing firms. Efforts to prevent drug shortage may have diminished the occurrence of public notification (Warning Letters) that would have been issued in the past following significant documented manufacturing and quality system deficiencies in the drug manufacturing process.
- I was unaware of most of the agency policies until I went looking for it.
- training would be good for the lower ranks GS9 and lower

Use of Contractors

(Mentioned in 1% of coded responses)

- The practice of hiring ORISE fellows to do research needs to be looked at. I am a Ph.D. scientist in a high-demand field working full-time on funded regulatory research, yet I receive no job benefits whatsoever. Because of a recent change at ORAU, ORISE fellowships can only be renewed year-to-year so I don't even have good job stability. The one year, no-benefits appointments make it extremely difficult to recruit good scientists because the jobs are not competitive. If the FDA wants to better fulfill the mission of doing regulatory research to issue guidance, they need to be hiring Ph.D. level scientists into FTEs. The "try before you buy" attitude is not conducive to finding and keeping talent.
- In my limited exposure to research in my division, I think the dual research/regulatory position is a very poor model for fostering productive scientists and producing quality research. In the end, the people I have seen that are supposed to be doing 50/50 research regulatory always are forced to do more regulatory work because those responsibilities have deadlines and there is little accountability for lack of production in the lab based on my experiences. Often, the research/reviewer is a very hard working individual who wants to do more research, but are forced to limit their lab activities due to the regulatory obligations. In other cases, there is no evidence of any research accomplishments and they are effectively preventing someone else from acquiring a position and performing quality research to advance the field and aid in the FDA's mission to better protect public health. I think a very serious alteration in the staff fellow model should be considered as right

now I think it is very harmful to the productivity of many FDA labs and it can negatively impact the staff fellow's career as well. I honestly believe more pure research FTE positions would significantly help this situation and allow for people to not have to juggle both responsibilities. It is also frustrating to see the incredible amount of money that goes into acquiring lab equipment and materials when a better allocation of money would be in hiring more lab personnel. We have enough cool equipment and resources here at the FDA. WE NEED MORE PEOPLE.

- Use less contractors
- Cancell contractors and take them as Federal employee and stop saving money in this field because this will affect directly the public health. 2. Fire any big mouth pretending that he/she is doing a lot of work and actually they are doing nothing.
- Less use of Contractors and more FDA Staff to cover regulatory issues.
- Permanent research staff instead of temporary contract or fellows that there is no intention of retaining. Research topics a discussion among research, program offices and center management. Currently topics too narrow to be of much use. In next few years many scientists will be retiring including myself and I see no move to hire/retain replacements.
- Minimize and be very selective when outsourcing to the private sector. Rely on agency professionals moreover than government contractors. Increase collaboration efforts with academic counterparts.

NOAA

Twenty-eight percent (667) of the 2,388 NOAA survey respondents provided written responses.

Funding and Staffing

(Mentioned in 26% of all coded responses)

- Bureaucracy is increasing and budgets are decreasing leaving little time and money to conduct the science we are mandated to do.
- In my opinion NOAA's major difficulty in fulfilling its mission is one of resources. Staff is retiring and not being replaced, we have no transition planning in effect. Workforce Management Office is not able to process personnel actions in a timely manner and the resulting pools of candidates are often inadequate. Access to NOAA ship time or funds to conduct research is at an all time low. Discretionary budgets to conduct agency science have dropped precipitously.
- Depend less on contracting workforce and STOP treating those contracting as second-class, disposable and expendable staff.
- Going back to the question of the impact of contractors on government work, the integrity of the scientific work could best be improved by ensuring that the expertise of the science stays within the government and is not outsourced. In my division, the expertise that is lost through the revolving door of contractors slows our ability to expand in both knowledge and the scope of the work. Our contract staff is excellent, and then it leaves due to under-investment in them while the contracting groups soak up available resources. Science agencies need to be able to invest in a strong workforce. This occurs when you have the ability to remove the weak performers and do what is necessary to complete the job/mission. Too much money is thrown away through contracting companies; as the contract staff perform critical roles. Reinvest in government and reform how employees are managed.

- More funding
- Provide more resources for NOAA Fisheries (vs. NOAA weather services) to fulfill its mission. Make sure workload is equitably allocated (not the case currently). Shift the focus from working on urgent things (which become urgent because of lack of resources and/or inefficiency of managers) to working on important things. When you cater to resolving urgent matters all the time, work is always done in a hurry, which generates anxiety and mistakes. This ultimately results in a negative emotion that generates tension. In contrast, working on something important is more meaningful and brings satisfaction because you see your time is well spent. How to reach this goal? Alleviate the workload of more seasoned scientists by devoting more resources to science (both material and human) rather than hiring more managers and bureaucrats.
- More money and more autonomy, respectively!
- Greater accommodation for career paths that don't involve going into management. 2. Reduce the importance of pursuing funding as a driver for determining what research gets done. 3. Reduce the importance of publishing at all costs. All of that would help with:
 - Increased funding and the ability to share information with the general public.
 - Overhead is too high within NOAA and this in combination with restrictions placed on who NOAA can receive and give money to significantly limit the abilities of researchers to engage in science collaboratively and on small but meaningful scales.
 - By letting scientists do their jobs and not forcing them to also be FOIA managers, contract managers, budget analysts, and policy wonks. I was told that my Ph.D. degree didn't matter -- that policy people matter, and that it's easier to teach a policy person a little biology than to teach a scientist to do policy work. At NOAA contractors are hired to do jobs that govt scientists can and should be doing and FTEs are given tasks like contract mgmt (up to 100% of their time) and other administrative duties that they shouldn't be doing. NOAA views FTEs (scientists) as chess pieces on a board -- give them any kind of job that needs to be done, regardless of their education, expertise, background, and skills -- and give the contractors scientific tasks; then hire the contractors as FTEs at grade levels above older, long-term, FTEs with graduate degrees. It's an outrageous practice. One colleague, a Ph.D. in marine biology, highly awarded, and with over 20 years service to NOAA, committed suicide after he was forced to do contracting work 100% of his time and report to someone with a high school education.
- Diversify the staff. Very little ethnic diversity harms the ability of the agency to complete its mission.
- Right now we have been hampered by decreases in funding that have hit everything from staffing to IT equipment to ship time. This loss needs to be reversed so that staffing and equipment levels can increase in a reasonable way.
- provide financial support so that our research priorities can align more directly with NOAA
- funding
- The staff at NOAA, particularly researchers, data collectors, forecasters, and many more remain a beacon of scientific integrity that needs little improvement, but NOAA managers need to continue to bring the best, brightest, and most honest talent into the agency to ensure this continues.
- Increasing the budget and personnel, paying employees what they are worth (raises, bonuses, etc.), promoting from within

- Hire more people to do the required/necessary and needed research. There are too few people hired after someone retires, dies or moves to another job. Then the volume and effort expended is much less and the agency and it's Science Centers produce less.
- Constant uncertainty over the operating budget from one fiscal year to the next causes inefficient allocation of resources and is harmful to core NOAA missions. Although my division has managed to 'do more with less' to some extent over the past several years, a lack of ability to hire / backfill positions is going to lead to a shortage of personnel with essential scientific abilities/ expertise in the near future. It also seems that an increasing share of the fiscal pie goes to 'support' divisions for operations and management rather than to funding essential research.
- Funding increased to allow adequate resources to carry out the job and reduce oversight of the science direction and budget by management. Give Division directors the ability to budget and spend the funding available as determined by their staffs and make them accountable for the funds. No one knows better how to get the most from the funds and no one will be better able to spend the funds wisely for the good of the science. Allow small annual carryovers in Division budgets to better plan for science. Year end spending to reduce budget balances is wasteful and would be eliminated if 5% budget carryovers were allowable from one FY to the next. Finally, get rid of the agency wide travel agreements. Put travel back into the hands of the scientific staff. we can get tickets at 50% or more off if we book ourselves instead of going through a government agency that issues costly tickets at the last minute.
- More funding for efficient and more thorough (i.e. annual field collection effort instead of every other year) data collection. More funding for scientific conferences without stipulations that you must present your work, that is, more flexible allowances for scientific conference attendance.
- adequate funding to carry out scientific mandates
- more funding
- Fully fund the National Weather Service
- Increased programatic support and funding. More flexibility for travel to conferences to exchange scientific information. Get rid of the group travel restriction.
- Actually hire FTE's!
- Allow more hiring of permanent personnel in a timely manner to allow training by employees who will be retiring in 1-2 years. Cutting specific programs instead of across the board budget cuts to handle decreasing budgets from Congress.
- Provide stable resources at the center level to effectively manage fisheries dependent and independent data so that the high level broad policies for metadata, etc can actually be carried out.
- Current/recent unknown and restrained financial support makes large scale/long term scientific work very hard to plan and execute, especially when further complicated by FTE and contractor fluctuations. Individuals I know are working longer and harder to retain the same integrity of scientific work with much sparser resources.
- however keep sustainable business practices in mind since NOAA doesn't generate any direct monetary value. NOAA should try to generate income of its own.. after all most of us are pretty smart.

- They should hire contractors who are underpaid and have been working for the agency for decades in these temporary appointments. Contractors are doing a lot of the outstanding science at NOAA and have very little benefits, pay and comfort of a steady position. Very few people know and consider this.
- Increase funding for basic monitoring of key components of biodiversity that are unexploited.
- More funding for applied research into management related issues.
- Allow offices to hire new talent before the season changes. New IT rules are cumbersome and difficult to understand. 508 compliance rules are difficult to wade thru and exceptions are impossible to get. It's not always reasonable to make complex equations and models fully 508 compliant. Remember the sequester fiasco and other budget uncertainties that have happened? Very difficult to efficiently conduct business under this kinda budget uncertainty
- Contract employees are disposable second class citizens when it comes to working for the US government. NOAA is no exception. The companies holding the contracts pay poorly and there are no benefits. Discrimination based on disability and age is prevalent among the contracting companies. At the same time, NOAA seems very forthright on the surface, yet these matters are largely ignored. It is a pity that the US government sponsors such conduct, and these problems ought to be addressed.
- Funding levels should be increased for expand the number of scientific staff so that more thorough review and analysis of available scientific data can be accomplished with the time frames established by regulatory processes.
- It might be improved by full funding. Our labs at the NWFSC are bordering on being out of date. Also due to poor funding, there's the implementation of a false economy in having a huge percentage of contractors to fill full-time positions, but they don't get the benefits or compensation that FTEs get (fewer and less, to clarify). Treating everyone the same would be a starting point for improvement.
- Facilitate new hires at wages/benefits competitive with industry.
- Increase funding and
- However, I do feel NOAA needs racial equality in the hiring process and too much of the budget is spent hiring temporary contractors for work Feds can do. The percentage of Hispanic, African American and Native American scientists working within NOAA as Federal Employees is below 2%. I have worked for nearly 10 years as a contractor for NOAA Office of National Marine Sanctuaries, mostly under contracts for non-governmental organizations that support NOAA Office of National Marine Sanctuaries (i.e National Marine Sanctuaries Foundation). In 10 years I have never had any of the benefits that NOAA Federal Employees have and was not given the deserved opportunity to become an employee. I have learned and enjoyed working with NOAA ONMS very much, and have supported NOAAs mission, but despite my hard work and commitment to raising ocean literacy and interest in ocean science careers among underrepresented youth (a NOAA Education Plan priority), and the fact that my work has been recognized (MERITO program winner of DOC silver medal award in 2009, Team Member of the year 2011), I have yet to see equality. I have seen a parade of Hispanic contractors work and be laid off for years in the West Coast sanctuaries and never hired. When I have asked and expressed my desire to be a NOAA employee, the answers have transformed from 'there are no Hispanics with the right qualifications back in 2007-1008, years later was budget cuts

in the Federal government (2009-2012), and more recently with increased operating budgets the answer is that I am over qualified'. I think for NOAA to generate good science needs to diversify its intellectual work force, and should be representative of its constituents.

- Reduce restrictions on funding of travel and cumbersome approval process for attendance at scientific conferences, including international travel. The degree to which this was tightened after the scandal of misuse of travel by a totally unrelated government agency is ridiculous. The inability to carry over funding from one budget year to the next makes it very difficult to conduct conference travel or any field work during the long period between the start of the fiscal year and final allocations of budget funds for that year (Oct 1 to at least Feb in most years, sometimes later if the budget battle in congress drags out.) We often do not have funds actually allocated to the science centers until April, then all spending must be completed by mid-August to allow for year-end accounting. This is totally ridiculous! If you are working on research that needs to be conducted during the winter season (which is often biologically necessary) you have to go through extreme contortions to pre-fund contracts and equipment. Then if unexpected needs crop up during field work, you have no funds to address them! This seriously hampers field research.
- NOAA has been hijacked by lawyers (OGC) who now make it extremely difficult to bring in external research funding. How can we keep our science staff if the research funds are choked off? The best solution would be to return authority for accepting research funds to the science divisions. The recent NESDIS data center consolidation has doubled the bureaucratic overhead on everything from buying pencils and pens, to travel, to IT procurement. This could be resolved by NCEI returning decision and purchase authority to the local operating units.
- NOAA should invest in smaller, more nimble and more versatile research vessels rely less on the big clunky expensive new FSV6 category that is not performing well.
- These folks generally do fine work, but funding for some programs is not very stable - which leads to inefficiencies in staffing and issues with continuity.
- Funding cuts have largely affected the ability of the Science Centers to undertake independent research and allowed Regional Centers to control research by controlling research monies.
- By increasing funding and hiring people into permanent FTE positions. The work that NOAA uses contractors for is generally long term. NOAA should change the hiring policy to hire people that are skilled and will be successful at their jobs. The job hiring process is very disheartening and give me little hope that I will ever move up at NOAA and be given the opportunity to get an FTE. Especially given that the government prioritizes hiring veterans with no applicable skills over trained scientists. The policy to give veterans jobs that they are not trained for is very bad.
- By getting a budget in a reasonable time instead of 3/4 through the fiscal year, so that we can plan effectively for our scientific work.
- Currently, the main issues I encounter are communication barriers between scientists and high level managers, and the lack of funding to attend scientific meetings and participate in outreach activities (and of course, the travel restrictions imposed after GSA spending abuse). I think communication issues will be resolved with active reorganization plans that are not yet implemented, and hopefully as time passes we will again be allowed to travel to meetings and outreach activities. I do NOT see

any active attempts to stifle the science or stop scientists from communicating their results, most issues are a direct result of the budget issues of the federal government in general.

- Resources (base funds from Congress) are needed to cover the salaries of employees. We are being asked to cover our salary in the scientific proposals that we write. Doing that makes us less competitive in the grants process because we are too expensive and many grants do not allow monies for salaries. Many funding opportunities are not open to gov't employees because of the assumption that our salaries and research are funded. Not true. Congress does not fully fund NOAA science. Add to that the 65% overhead we are required to take out and we can't compete for resources to do good science. Good science starts from the bottom-up. You need to have good researchers collecting data, yet those of us in the field get no support. Our salaries aren't covered, we aren't allowed to charge comp time or overtime so some of our long hours in the field are essentially pro bono. Too many resources are spent on contracts and contractors. In the amount of time it takes for a contract to go through, or even to add hours to a current contract, we could have hired a term employee and been collecting data. On top of that the FTEs that have been hired to handle the contracts could be better spent as scientific hires. The entire contracting process does not make sense for data collection especially for seasonal data collection. In many cases our research is seasonal or climactic. We need to be getting our equipment out there before the water levels rise or we need to be sampling when the salmon are running but far too many times the contracts are not ready. It makes no difference to someone sitting at a desk whether they process a contract today or tomorrow or next week or next month. But to those of us at the receiving end, it means our contracted field help cannot be hired in time so we have to work longer days to get the job done. We are being told to do more, with less, and you won't be compensated for overtime or comp time. The only way quality science is being done right now is because some employees actually care about the natural resources at stake, yet we feel like our agency is taking advantage of that compassion.
- Increased Staffing. Backfilling.
- An increased workforce (i.e. filling vacant positions) would also help greatly improve integrity as that increases morale among offices which makes work quality increase.
- Hiring of more qualified administrative staff. Less administrative issues to deal with. At times your overwhelmed with this and it takes away from your main objective.
- Here is where NOAA fails: Lack of funding for Up graded Buildings, Labs, equipment, boats. Too many contractors, whom many are great scientists, but they are temporary! Workforce is too heavy Contractors to FTE. When someone retires, more often than not, their work-science research may just wither and go away. They are not even replaced. When the DWH oil spill occurred in 2010, way too much Private industry involvement. The science was reviewed and protected by NOAA, but they were not the lead. Private Industry made a lot of money off the tax payer, when the Government had an agency (NOAA)that could in many ways provide research on Oil spill Damage, with the expertise from Exxon Valdez oil spill under their belt, cheaper and with more accuracy and integrity than private researchers and contractors, many under the hand of the oil industry. But NOAA was not used as it should have been-the excuse being private industry is cheaper! However, that being said, NOAA not replacing the retired workforce was caught flat footed in lack of current research

and knowledge of Oil spills effects on Gulf of Mexico and effects of toxicology on fisheries in the Gulf. Sequestration of funds has been a disaster and hampered science research by preventing funds for new research, improved equipment, very little training via conferences unless you are presenter, and the work force is too small. Finally--NOAA is a great agency! It needs to "advertise " itself! We have a great website, but we need to do more to connect Joe Q tax payer on the value of wanting to support such and agency! We write some great papers for the scientific community. We are fiscally dependent on Tax payer/Congress. Neither group read our scientific papers. How can we as an public Agency connect our science with non-scientist and make it RELEVANT to them? Government on the whole has become disconnected from "we the people". We are the Government, yet politics has destroyed that concept. NOAA as well as the USA Gov't needs a good PR firm!

- Fund the agency, fund staffing and focus on core duties better by putting more emphasis on them. NOAA is baking a cake with terrible batter but spends way more time and energy worrying about what color icing to put on it.
- I think that we could use more FTE employees to fill retirements, etc.
- Funding for research
- Provide better institutional continuity through decreasing reliance on short-term hires & contractors.
- Increase funding for NOAA
- Better funding for research. My Division has lost the funding to conduct shipboard survey cruises and is thus unable to maintain a 20-year fisheries-independent time series that is an important additional source of data for determining catch quotas.
- More discretionary funding for travel to professional meetings/symposia/workshops. More funding for improved observing systems.
- improve funding for travel to conferences and meetings. Having 30 hours of conference calls and webinars instead of face to face meetings is crazy. Ignoring international meetings and opportunities is similarly crazy.
- The best path to improvement is to increase both funding and staffing for field studies, data analyses, and writing/publications.
- There is great need to fund the science and hire more staff to execute the science. Scientist career and research development should be a significant part of the division and center level management responsibilities. They need to develop the human capital.
- More money, more hiring
- Passage of a budget by congress on time, for once. Fewer bureaucratic rules and requirements that are created simply to address "image" issues with congress or the public, but that serve no other purpose. More reasonable fiscal cycles.
- 2) The lack of scientific technical support to address even the simplest issues is being strangled by lack of funding
- NOAA's science needs to be base funded, and support staff need to be supporting the science, not the other way around.

- Right now I feel as if we have "pimped" our staff out to other agencies; we cannot initiate our own science within our own agency with our own resources because we depend on external contracts to pay for NOAA salary, NOAA vessels, and NOAA research operation
- Staffing and resource levels do not match at all with the mandates we have. Positions lost through retirement have not been retained. We need to start hiring good scientific support staff for entry level or technical level jobs. Good staff are burning out because they are asked to do the jobs of 2-4 people and there is no relief in sight. (5) NOAA can, and should be, a place where there are DREAM JOBS for well-trained scientists who are interested in serving the public trust by providing the best, world-class information to the public on how to properly steward marine and aquatic resources. I have seen my position devolve from that DREAM JOB to the NIGHTMARE as personnel conflicts remain unresolved, poorly-qualified individuals remain in key positions or high paying jobs. Wake up, NOAA. Your best people will leave you if you do not have measurable progress soon!
- There is an extreme lack of financial support at NOAA and there is an ever increasing burden on scientists to perform administrative tasks.
- Funnel funding to operational and research-to-operations items, and preserve the integrity of the observational networks.
- More staffing.
- More funding from Congress, less reliance on interagency agreements.
- Budget stability. Almost 3 months out of the year there are no available funds which make working in a live animal lab problematic and inefficient.
- We have no money to conduct the research we need to do to provide the information requested. None of my funds come from NOAA, it is all soft-money grants. Our mission is supposedly to monitor the ecosystems in our region - but that is all coming to a close this year when our outside money ends.
- A little less conformity to NOAA-wide protocols (that negatively impact our work). More "hard money" so that we can determine science path rather than just respond to "soft money" contractors path.
- More funding and less interference
- increase funding for NOAA scientists to allow continuity in research (i.e., permanent NOAA employees instead of short-term contractors).
- Cease the funding battles between NASA and NOAA. Clearly define which agency is responsible for monitoring the planet. Too much effort is spent in battles between the agencies over work to be completed and sharing of information.
- By supporting the staff that do the research, whether it's the staff themselves or by funding the correct research adequately. For example, social science is given lip service and too many hoops to jump through along with the stingiest budget. However, we are not managing fish. Fish don't listen to us. We cannot tell them where to go or what to do. We manage PEOPLE and so social scientists should be paid a lot more attention to and funded optimally instead of marginally.
- Allowing us to have the resources that we need would help. Often I have felt that we are told to research and investigate a problem/issue and that this problem/issue is very important, but we are

not allowed the resources (i.e. ship time, adequate equipment, personnel, etc.) to adequately complete the research in a manner that we can provide clear and concise results.

- Adequate personnel and resources. Graying of government is a big problem. Budget cuts have made getting the job done very difficult--both because of lack of funds to buy supplies and equipment, and the increasing workload heaped on the FTEs who remain in government now that many contractors have lost their jobs. And we not only have to do our science jobs, but comply with onerous additional administrative requirements in purchasing, personnel, etc. Fewer people, fewer dollars, more work and more busy work=bad/inadequate science!
- Quit hiring technicians just because they are vets. Hire because they know what they are doing and care about how well they do their job.
- Lack of funding is a real problem. Retiring staff are not being replaced. Morale is low. Recent improvements have been encouraging. Mission is being clarified and we are being encouraged to work for efficiently with other programs with NOAA. Funding is a stumbling block.
- Funding limitations with no adjustment to scientific work load is impacting scientists ability to collect quality data and produce information products based on the best data and meeting the IQA requirements. Work loads and scientific priorities need to be set based on funding availability to allow scientists the time to produce quality products.
- Hire more talented non-entitled people with a good handle on reality, who do not have to be politically correct or adhere to job site politics and who know biology and hold themselves accountable and follow quality controls. People who are good away from the computer.
- More FTE positions, less contractor positions = 40% more funding for science mission
- Funding is a major problem. I am part of a team working on an interagency report to Congress. A similar report was submitted in 2008. The 2008 report was well done; this report will be slip shod at best. NOAA is giving lip service to the entire process. But the problem is that NOAA has not been given funding to do this report, which calls for a research and action plan which will guide future activities of the federal government. So it can't produce a report which will actually fulfill the intended goals of Congress.
- Hire more staff to conduct fisheries stock analysis and socio-economics.
- Better funding to support long term monitoring efforts and to hire high quality scientists
- There is little resource to keep staff current on science developments,
- Fundamentally, we need the staffing and resources to accomplish our mission. We need better pre-decisional input from rank and file employees on NOAA/NMFS policies and practices (See NASA model).
- More funding.
- Obviously, more could be done with more funds from Congress. However, simply having a more stable budget would also help us to do better work. When budgets fluctuate wildly, it is difficult to plan far ahead; something that is essential when you're doing the type of work we do.
- Restore current equivalents of FY2010 funding level. Funding deterioration has reduced amount and quality of work, and there is great fear of upcoming budgets under new Congress. Also, hire government employees for inherently governmental positions instead of contractors. Stop diverting funds to private sector entities.

- We desperately need more money and more man power.
- The NOAA mission is severely compromised by lack of funding for research, replacement of outdated, obsolete, and broken equipment. There has been an ongoing attrition of qualified scientists with advanced degrees in critical fields, and no real effort to replace them. This has resulted in a loss of research capability and no ability to transition to future projects or needs. Replacement of NOAA FTE scientists with short term contractors reduces effectiveness and wastes scarce financial resources on employees that have no stake in their work.
- By allowing us to travel, especially in state, to meetings and conferences which will allow to interact with colleagues in other institutions. Stop cutting corners by removing low-waged personal that support higher-level researchers to satisfy budget concerns. Higher-level researchers depend on analysts to produce the high quality research our institution is renown for. They don't have time to all the research, and everything else you ask of them.
- improved funding to support ecosystem work timely passage of budgets so that research is better planned and maintained funding that crosses line offices so interdisciplinary research is fiscally supported
- penny pinchers. Make science important in congress
- People are retiring and positions are not being backfilled. We are told that we need to do less with less and yet management either won't tell us or doesn't know what less is.
- Provide the funding to match the requests for information.
- By not having drastic "scientific" findings drive your budget funding requests.
- We need funding to carry out basic research, let alone cutting edge research. Most of our instruments are either broken and can't be repaired or replaced due to lack of funding or are too old to get parts. Those are still running are close to the end of their life cycle. The heavy reliance of contractors or term appointments is a moral buster. We have hired excellent contractors and term appointments, spent time in training only to have no funding to extend the contract or no possibilities of hiring them as an FTE.
- GSA Travel scandal and budget issues has killed our ability to attend conferences and training to share scientific findings and ideas. It is short sighted to not see the benefits of this sort of interaction among colleagues. Webinars and other forms of communicating this information is a bandaid. It does not provide the synergy that face-to-face interaction and sharing does.
- Give the National Weather Service a budget that allows full staffing and therefore more time for training and scientific research. Do not pay Ratheyon unless they fulfill their contract with the NWS for AWIPS 2.
- We need many additional resources to do our work, e.g., FTEs, IT support.
- The main obstacle NOAA faces right now is a lack of funds to carry out our mission. This compromises our ability to maintain valuable time series, develop better science and science advice, and to respond in a timely manner to requests, needs, and mandates.
- and provide a budget capable of actually addressing the scientific needs for the issues under study.
- Passing the budget on time. Increasing our funding to keep up with inflation & to meet new challenges (climate change, ocean acidification, development of new fisheries, application of new technologies, etc).

- Budget cutbacks have terminated one of the three longest marine biological time series in existence. Even if restarted, the time gap will reduce the value of such a series. Better understanding of the value of these series at the NOAA decision making level is needed.
- Fix the base funding issues so that scientists can plan and conduct research projects in a reliable and timely manner. Being unable to make purchase card purchases for 5 months of the year greatly restricts the ability of staff to run experiments and respond to issues that may arise. This is particularly important in conducting field work.
- Enable scientists to focus more on the scientific mission and less on administrative and bureaucratic tasks (e.g., too much time is spent on safety, acquisition, and IT training). In many cases, administrative staff tasked with these roles expect scientists to be serving them, rather than the other way around, leading to huge inefficiencies and lost work time. Resolve budget and funding issues much earlier. Expand hiring of qualified scientists at all levels; ease the process of removing nonproductive FTEs
- with better methods to move research dollars through the administrative system. My division in particular does not have enough money to cover its expenses (including salary for federal employees). Therefore outside agencies such as the Army Corps of Engineers appear to dictate our science priorities because they can put up the money to pay our bills.
- I think budget constraints have significantly impacted the ability to share scientific findings between NOAA employees (mainly when it comes to conferences). What used to be shared/discussed face-to-face, is now conducted through webinars which often fall by the wayside as job duties or shift work gets in the way. In addition, many offices like mine are chronically understaffed. Scientific work/research is usually the first thing to go as staff members take on the extra workload left by the void in the office.
- Adequate funding. Hiring staff to fulfill mission and end chronic understaffing. Research funding goes primarily to fund contractors instead of to conduct research.
- The lack of the ability (or desire, at the top management level) to hire in our line office has hampered progress on several aspects of NOAA's mission. Many term appointments have been allowed to expire in the past five years, and several of those staff were retained as contracted employees, which in my case sent a signal to external partners that there is wavering NOAA commitment toward projects I am working on. Eligible employees have been encouraged to retire and those that did have not been replaced. There are severe restrictions on travel which prevent us from attending conferences and workshops where we often work with collaborators, establish new partnerships, reinforce existing ones, share research findings with a broader audience, and keep current in our fields.
- More rigorous review of how funding and appropriations translate into timely, publishable research—that is, review the degree to which HQ sends money to projects that never produce anything, and then correct those problem areas and inefficiencies by recruiting better people (or eliminating the project if it's no longer a priority). Increase funding and recruitment/hiring for integrative projects that focus on widely identified problems in ecosystem management; for example, stock assessments that incorporate multiple species or environmental drivers; integrative ecosystem assessments;

forecasting tools There are certainly some groups within NOAA who sit on public data and make it very difficult for others, even others within NOAA, to get access to those data.

- Increased funding Increased staffing
- By fully funding science initiatives within NOAA instead of always cutting them--this includes multi-year initiatives which is necessary to acquire proper resources and continue scientific progress.
- When NOAA makes a decision to hire a scientist because of a certain expertise, then that work should be sufficiently funded to allow the scientist to do her work. If funding cannot be obtained, then that scientist should be given the option to look for another job or change to a more well funded area of work within NOAA. It is extremely stressful and ineffective to work in atmosphere where contractors are hired to try to fill staffing gaps, but due to personnel practices, it is impossible to have an effective and healthy scientific discourse and interaction with these contractors. Our work is extremely underfunded, yet a decision was made to hire us. This leads to the feeling of undervalued and second class scientists although we work hard to represent our agency in the most professional way. Lately we have not been able to even give out appropriate cash awards or "on the spot" awards for our staff. We have had problems with legal review of our processes, such as hiring University work-study students. It is taking months to get answers to simple questions regarding hiring and payment of these students. Policies should be in place and staff to assist scientists with these policies should be available to answer questions. The scientific work at NOAA could be improved by: 1. Fully funding good and relevant science
- Congress should adequately fund the agency to a level that would allow NOAA to accomplish its mission and stop interjecting politics into some of the agency's areas of research (e.g., climate change).
- Better funding for the science needed to support our mission.
- need to change how FY funding is managed so we have a clear understanding of how to best invest money for agency improvements. We also need to clean up duplication of services among agencies.
- Better/more appropriate use of staff abilities. The number of Biologists that end up managing contracts, tracking invoices and balancing budgets is terrible. Rather than have Biologists doing biology work they are asked to become contracting officers which takes numerous hours per day. Along the same lines, the number of Biologists that are placed in positions of personnel management might actually be worse. Rather than putting "Managers" in management positions NOAA continuously place Biologists in positions where they are now supervisors regardless of their ability to actually "Manage" personnel. VERY inefficient system!
- More funding
- Hire more junior scientists. Fire most managers and modelers.
- More funding to adequately support mission and science; less on process.
- Stop reducing our budget. Start fostering growth. Stop pursuing the closure of field offices. The race to zero government will never work and if our budget continues to decrease we will become zeroes.
- There is the ever present and obvious need for more personnel and funding.
- More flexibility on annual budgets - spending requirements based on fiscal years (when we don't actually get funds until half-way through the fiscal year and must spend them before the end of the fiscal year) make for very inefficient spending and budgeting.

- More transparent determination of priorities and allocation of resources.
- Govt. budget cuts are killing us. We have hiring freezes and haven't been able to replace retirements so our work force is shrinking while our mandates are increasing. Our scientific integrity would increase if we could hire more people to work on projects because we just don't have the manpower to do things right.
- More funding for staff hires.
- Less tolerance for unproductive staff.
- More resources to help staff with their data management. There is not enough time and money allotted toward data management.
- We face serious budgetary constraints that limit our data (e.g. data holes in fisheries management such as adequate stock assessments). We also do not have the resources to travel or attend workshops to keep us current as far as what is going on in present and future science that is applicable to our jobs. The fear of tightening purse strings really limit what we can do.
- More staff and funding support is needed. Additional staff/funds or reallocation of existing staff/funds is needed. Eliminating some unnecessary middle management positions would allow some resources to be reallocated.
- Budgets have been severely cut and this is limiting our ability to hire staff (FTE or contractors). We are not able to hire young, new scientists with energy and enthusiasm - this is essential to keeping our products relevant and cutting -edge. Nor are we able to purchase relevant new technology - also vital to conducting research that is timely and necessary.
- more staff to do the job correctly, not just to get the job done. More technical assistance (chemistry, toxicology, veterinarian, statistical, acoustical, etc.) is needed to help biologists and office management (tends to be biologists) better understand the information the biologists must interpret for their jobs. too much work (section 7 consultations, pre-application and applicant meetings, MMPA IHA and LOAs, government to government meetings, coordination meetings, etc.) for too few people. More in-water projects, more listed species, more MMPA awareness (so apply for LOA/IHAs), so many fewer staff
- lack of funds / defacto hiring freezes are really impacting the ability of the agency to do its mission. There are an increasing number of empty offices, and the use of contractors is problematic in terms of institutional memory.
- Have NOAA's upper management understand what a budget is used for and request funds from congress to provide the funding to insure NOAA's mission can be attained. Example If an individuals Mission statement requires 70% travel Management needs to insure there funds to cover the requirement. The worst response to disapproved travel is, " NO Funding." How can there be no funding when 70% of the individuals mission is to travel?
- The unpredictability of funding from one year to the next is the single biggest obstacle to producing good science in NOAA. Establishing some means of smoothing budget fluctuations would help tremendously
- While we have a training budget that would allow attendance at training opportunities, we do not have the travel budget to attend anything out of town. This severely limits the ability to attend appropriate training (even in house training - at another office). The travel budget needs to match

up with the training budget to make the training budget effective, and keep staff current.

Enforcement funding also needs to be appropriate to the needs to protect the species for which we are responsible. This needs to include funding for inland enforcement (e.g. Columbia River basin, California Central Valley).

- Currently there is very high attrition due to retirements but refilling these vacant positions is mostly frozen. The end result is not enough personnel to do the job, wasted time hiring contract labor, wasted resources dealing with high contract overhead, and inability of contractors to fully fill labor needs due to restrictions on their duties.
- Managers of some "open" calls for proposals have predetermined who they want to fund. Don't waste my time if I'm not going to be funded from the beginning.
- NOAA needs a budget process, what we have is in shambles. Budgets need to be sent to the field offices immediately after Congress and the President approves a budget. Contingency planning within NOAA for Continuing Resolution years must include distributing funds immediately. 2) All staff should have a 51% weight in performance reviews of all upper management.
- It would be helpful to have administrators within NOAA that did not serve as a roadblock between scientists and funding agencies.
- The qualify peoples need oportunity.
- In NOAA, whoever controls the funding controls NOAA. Too often one person (alone or part of a group) is determining the direction of science by influencing how funding is allocate. This results in NOAA decisions being controlled by just a handful of influential or powerful people. Those people often are making decisions that are not based on science, but their own special interest. I would encourage NOAA to set up science advisory boards for each large funding effort consisting of science experts (in the field or sub field) from both inside and outside NOAA (1-2 academic scientist, 1-2 NOAA scientist, 1 user) that do not have a known conflict of interest by the decisions being made. Right now control of funding streams could lead to retribution for those that do not tote the party/NOAA line.
- Within my field of research, the agency is woefully understaffed. They need more social scientists.
- Providing time/resources for conferences/papers/etc that the engineers and operations people can do. I see a lot of news about what the scientists can do and would like to be more involved.
- Fill in leadership positions when people retire. Add new opportunities for young and mid-career scientists at the masters and phd levels. Fair distribution of agency resources across all labs and branches. Less favoritism and croneyism.
- Provide adequate funding to answer relevant scientific questions to the goals of the agenc
- Over the past several years, I think budget constraints have been the main issue in terms of fulfilling the mission of NOAA as well as scientific work, especially within the National Weather Service. Staffing vacancies have been very slow to be filled within the agency; there are some management positions that have not been filled for as long as a year or two. As a result, it has been difficult at times to fulfill the agency's mission.
- More resources are needed.
- Redirecting funds into improved data acquisition techniques and public warning services and away from climate change research.

- Revisit the concept of the mission of a national lab. The national lab is intended to tackle problems of longer timescales that universities can not address. Provide longterm funding for the national labs (NOAA and other). We cannot be as effective as we should be when our budgets are so uncertain on the annual timescale, and our management has to constantly fend off attacks from congress and other NOAA branches. Stop the use of shortterm hires to get "tasks" done. Research cannot be broken down into "tasks" or "deliverables". Hire young talent. Attract the best and the brightest. Until recently I had not seen a new NOAA federal hire in 15 years.
- Fix the way Congress and the White House run federal agencies. Give us a real budget, and stop using scientists as pawns in political wars.
- Too many layers of administration to simply present and/or attend a conference. The budget rarely supports me attending. NOAA policy prohibiting employees to attend conferences if they are willing to fund a portion of the conference fees with their own money (it's either fully funded or no-go) is extremely detrimental to science-sharing and morale. This should be addressed and corrected; official time should be provided regardless if the entire conference fees are funded by the parent agency or not.
- Simplify the overhead workload on rules regulations and spending.
- NOAA under funds its atmospheric research such that monitoring and research programs have been severely denigrated and hampered. Scientists don't have the opportunity to attend conferences, publish or report on work simply because the funding levels are so low that they don't have time or resources to report on findings or provide data and research as needed.
- Revamp the HR process to: a. acquire better talent (i.e., pay more) b. ditch employees who dont add value. My assessment is there are many employees who have been working in the same job for decades.... I love the expertise, but there in some cases it speaks to someone who is unmotivated. In these instances, we (NOAA) need to have the flexibility to get rid of these employees.
- By treating its employee better and ensuring that their needs are met.
- Misappropriation of funds is rampant at every level in NOAA, and that is a strong hindrance to all scientific research.
- Reduce the size of the NOAA Commissioned Officer Corps and totally remove them from shipboard operations. The NOAA Corps Officers do not stay in any one discipline long enough to be effective. If they are effective in a particular position they are rotated out within a couple years. This problem is particularly acute in the area of ship operations. Due to the lack of maritime experience and training the NOAA Corps Officers lack the seamanship skills and overall professional training to competently, safely and efficiently manage a seagoing vessel conducting scientific operations. It takes a civilian mariner over 1000 days at sea before they are considered as having enough experience to sit for their 3rd mates license so they can take charge of a navigational watch. A NOAA Corps Officer is deemed (by the NOAA Corps) to have enough experience to take charge of a navigational watch after only having 180 days of experience and no test is required. It is not safe for scientists or crew and they certainly do not have enough knowledge or experience to make competent nautical decisions in regards to science. This lack of qualifications and experience in shipboard management leads to missed mission days, frustration between the professional civilian mariners and scientists that work aboard the vessels because the managers "in charge" are not professionally trained and

experienced seafarers. If we are serious about accurate and cost effective data we must have trained professional mariners managing and operating NOAA's fleet of ships. The NOAA Corps is a very costly, top heavy and elitist group that may be effective managers ashore however afloat they are more concerned with self preservation and promotion than being professional mariners and while conducting scientific missions in a safe and efficient manner.

- Lack of sufficient resources 2) A complete disconnect between budget and salaries (this is true of the entire federal government) such that labor costs increase without any concurrent budget increases. This practice results in fewer and fewer resources available for actually doing science. 3) Ever stricter accounting rules which limit flexibility for the use of external (non-NOAA) funding for research. Our scientists are world-class in their fields, and many are able to attract significant amounts of external research funding from various sources. Bringing these funds into NOAA, however, is an extremely arduous and inefficient process.
- The team I work with is hardworking and very dedicated. They have accomplished a lot of good work for NOAA. But their efforts are chronically underfunded, and perhaps not very well appreciated by upper levels. Lack of resources appears to be a most significant factor in impeding scientific work and resulting progress in modeling-forecasting. NOAA needs more resources to step up to world-class modeling level.
- NOAA does and can do great science. Better funding plans. Throw out the stupid people in congress.
- A third item is the lack of support for full staffing of science and technology divisions at NWS regional HQ and HQ. These vacancies need to be filled with persons who have appropriate credentials and education levels. Case in point, at one NWS regional HQ , the position of division chief for the science branch has been vacant for almost a year and the staffing has been reduced by a third. This department is responsible for the review of prospective journal articles from field offices and forecasters. With the current staffing profile, this review process and approval for publication fees has slowed to a snails pace.
- Adequate staffing. Efficient and common sense use of tax payer money.
- Offices need to be adequately staffed. Far too many positions are vacant right now, requiring an understaffed office to try and meet demands necessary for the general public, and emergency personal to make informed decisions. This puts more emphasis on maintaining basic office functions, and limits any research potential by directing that energy away from moving the agency and professional field forward and instead applies it as a bandage to cover (inadequately) the needs of the moment.
- The biggest deterrent to scientific progress and integrity over the past 5 years in my agency (National Weather Service) stems from financial issues and budget cuts. In 2012 agency wide budget cuts, banned employees from attending conferences, symposiums, and other scientific meetings where ideas and research are shared and collaborated on. While this ban was eventually lifted and relaxed, budget cuts continue to have dire impacts to personnel and staffing quantities, limiting the time and availability for attending these scientific meetings. For the most part, a relaxed environment is available within my agency to present scientific ideas and research with the liberty to be innovative, even if the science may be somewhat controversial. Again, the biggest barrier to

scientific progress in my agency is directly related to financial stress and a lack of a sufficient budget for staffing and the financial encouragement to engage in scientific-related activities.

- I believe that the integrity of the scientific work produced by NOAA could best be improved by changing the way scientific studies are funded. Currently, the vast majority of funding goes to those projects and endeavors attempting to prove AGW, therefore all results are skewed in FAVOR of AGW. This false premise should not be incentivised. Scientific research at NOAA should be funded equally for those trying find real answers to the climate change question and not just those attempting to prove AGW. Much more funding should be provided for scientific study into solar, underwater hydrothermal vent, and Decadal Oscillation effects on climate variability. NOAA, your organization, and all other concerned scientific bodies should IMMEDIATELY STOP the negative attacks on scientists who have reservations or concerns with the lack of scientific certainty of AGW and instead devote resources for examination of ALL possible causes of climate variability.
- Our agency recently spent about \$1 billion on a software upgrade (by Raytheon) which only marginally improved our ability to do our jobs. It has widely been considered a waste of money and a gift to Raytheon. If this money were invested in research and technology in meteorology, we probably could have made significant investments in improving our understanding of the science, which could eventually lead to better forecasts and warnings
- Research and other funding is too limited, and this affects our ability. Another consequence of poor funding is the lack of support for the research libraries, leading to inadequate access to the literature.
- Stop Congress from telling NOAA how to spend its money.
- a more stable budget environment.
- Improvement in NOAA's mission accomplishments and the integrity of its science could, in my opinion be improved by have a more stable budget. Instead of the budget process 1 year at a time, more stability could be realized by having at least a two year (preferably 5 year) budget cycle.
- Collaborative research is critical to NOAA in how our funding mechanisms are set up. NOAA is really funding starved as much as it is limited in other ways. There just never seems to be enough research funding or funding to do routine operations and data collections the correct way. This seems to be linked to NOAA's being in the Department of Commerce as much as anything, as it is a weird fit when attempting to sell budget requests to Congress.
- Increase budget for all types of training and ensure that offices are fully staffed. Some positions in the NWS have been vacant nearly 2 years without replacement. Training and travel budgets are almost non existent.
- Improve recruitment and retention of scientific research talent by lessening bureacratic burdens such as lack of travel funds to attend scientific meetings and improving on the sub-par scientific support provided by contractors (e.g., computer programming & IT support)
- Providing adequate funding for training to keep up with advances in the science.
- Commitment of actual funds to support scientific initiatives.
- I can comment only on work at our division, which is long-term monitoring of constituents that affect radiative forcing, i.e., the main drivers of climate change. Our basic, fundamental measurements are chronically under-funded.

- We have been chronically short staffed the last few years with about a 10% reduction in workforce since 2011, so the balance of operational work with research/etc. is heavily in favor of pure operational work. Sometimes it is a struggle simply to fill the required number of operational shifts, leaving little time for admin/research/etc. At least travel to conferences has started up again after a "drought" of a few years.
- Workforce management is broken, hiring is beyond ridiculous, it's a joke. , we have the money, the will and we cannot hire. It's killing us.
- On the ships we are understaffed and overworked. Most of the departments started out the 2014 season half staffed. We need clear and realistic goals that budget time for training, communication of our work, and professional development. With adequate staffing and realistic goals we can complete our mission efficiently with time to better execute communication to the agency and public. Our direct products are quality, but we could do them more efficiently.
- The problem filling federal positions comes both from the troubles associated with getting positions approved and posted, and with the inability of the job search in identifying appropriate candidates (in a recent round of job postings, very few highly qualified candidates actually made it through the USAJobs filter -- highly scientifically qualified applicants did not proceed past the first round of application weeding out because they didn't have veteran status).
- More funding to do basic research. Pure research and new ideas are sidelined for applied research and lack of funds. Trends in NOAA are to move more science resources to foster research to operations work, where operations seems more and more private sector than gov sector. Overall government decision making is short term and not long term. If NOAA's work showed that long term considerations need be addressed it would help if they were addressed. But the political system is not always allowing these things to be addressed. It becomes very frustrating as a researcher when you find that your work is not given the light of day. Too much tie-in with defense contractors in the satellite weather area. Way too much funding goes to the the contractors to launch and operate weather satellites and far too little \$\$ goes to how to best use these data. Small good projects that can provide valuable data regarding water vapor changes globally (tied right in to thermal changes) are not getting traction or funding is dwindling on such technologies that are cheap, developed, and proven to work. The end result of the above is to eventually wear down the good scientist to the point of giving up.
- However, field employees are not afforded adequate time to evaluate meteorological and hydrological events. There are significantly fewer field employees than when I was hired in 1981. Therefore, the available time for extra work and studies is limited. Employees are expected to - and do - perform scientific studies and write papers while continuing in strict shift rotations. Many significant events are, therefore, not captured in the body of operational research. NOAA/NWS has placed little to no emphasis on university training or retraining for field scientists to maintain currency on developing trends and/or technology. In the Washington metropolitan area, there are many programs for NOAA employees to enhance their skills and, thereby, their careers. There are leadership programs that prepare employees for future leadership roles. Field employees experience highly political competition for any such opportunities, primarily due to the demands of

shift work rotations in the offices. The training opportunities are disparate from one office to another and from the field to the regional and national headquarters.

- It is very difficult to transfer these days. Many people are "stuck" in positions and locations that impact morale. High morale employees are more productive than low morale employees. The lion fish program is an utter failure. There are lots of NOAA approved brochures designed to inform people about the lion fish problem in the Caribbean but not a lot of action by NOAA to reduce the population of lion fish in the sanctuaries. NOAA staff needs to be more proactive and physically get involved in extracting those invasive species from sanctuary waters. Yes...I am suggesting that NOAA employees get in a wetsuit, gear up and get in the water. Did anybody really get a degree in Marine Biology to design brochures?
- We need more staff at all levels. And our budget has been essentially flat for years. Much of our science is funded by external dollars.
- Provide better resources and leadership. There is far too much administration in Silver Spring that does little to nothing and actually impedes our ability to do our work. I think the administration at headquarters should be cut in half at least and forced to consider how their administrative decisions especially related to IT and purchasing impair our ability to conduct science and require undue amounts of our time. We also have ineffective leadership as directors of labs and centers, because the pay is not enough to attract the best scientists to go into administration. Additionally, NOAA does not adequately fund internal NOAA scientists at anywhere near the level necessary to conduct the science necessary for NOAA to do their mission. There is far too much sent to external partners in Academia whose institutions have lobbying authority. The problem is the academic institutions are not as aware of NOAA's needs and the science they conduct with NOAA funds is not always responsive to the agencies needs. This would not occur with internal funding of NOAA scientists that are more aware of the agencies science needs and work directly with NOAA decision-makers and resource managers to ensure the science is used to better NOAA trust resources and the country's well-being.
- Having also worked for NASA, I think one of the biggest differences (outside of billion dollar differences in appropriations) is that NOAA is not an independent agency. We are terribly challenged by our bureaucracy at both bureau and department levels. It is REALLY hard to get funds out to our academic partners - even those who have been competitively selected (e.g., our Cooperative Institutes and RISAs). In addition, sometimes policies are inconsistently applied across the lines, which can make it difficult to collaborate
- Ensuring that adequate funding is available for existing agency missions as well as for the development of new missions and expansion of current ones.
- An increase in funding from congress. Getting budgets at the beginning of the fiscal year rather than months later.
- more funding funding going to where it's supposed to go. most of the problems i see/hear about are before the science gets done - money gets moved around/siphoned off by management for uses other than which were intended (i.e., to cover costs of groups who are unable to stay within their budget, although admittedly the budgets have basically stayed the same for the last 10(?) years so it is hard to maintain projects let alone address new challenges).

- Disallow Congress from having direct input to NOAA's budget and agenda. Remove budget restrictions that require balanced budgets at the lowest levels of the organization. In other words, allow budget carry-over, and allow the NOAA administrators to move funding to help individual labs balance at the EOY. Last, require DOC lawyers to fast-track all MOUs and external funding. Delays caused by DOC lawyers have become an embarrassment to NOAA. For example, I obtained external funding to refurbish a monitoring network from DOE and it took three years to actually get the funds. What do they think we do while waiting?
- With weather forecasting, satellites and marine oversight, there is not enough money to go around, and research funding is often the first thing cut.
- Morale is usually pretty low. Climate research is a particular low-morale field because funding seems subject to political whim. Right now, there is a severe computing resource shortage that is not likely to be solved in the next few years, and this will slow a great many projects that could yield improvements in forecasting, seasonal prediction and atmospheric chemistry.
- Some more resources to do our jobs. Speeding up of the hiring process for new employees. HR back in the DC area is either understaffed or not working efficiently. If you have funds for new employees, and a need for them, it should be possible to hire qualified people in a timely fashion.
- Double NOAA's budget to support instrumentation and computational infrastructure development. More satellites, more supercomputers, more scientists!
- NOAA has dozens of small, underfunded programs that are each supported by different constituencies/laws/budget lines. T
- However, the steady erosion of research and development funding, both internal and extramural, is driving people away from science that supports the agency's missions,
- We should be given adequate resources to conduct our research. At present, we are dependent on soft money, to the detriment of our research. Headquarters seems to absorb any and all increases in base funding that come along, passing little or none through to the research laboratories.
- More funding
- Additional funding for more weather and marine observation networks surrounding the U.S. territories.
- Fund more research and technology advancement.
- More research funding.
- Better funding for fundamental research from Congress.
- Increased field staffing to enable more opportunities to attend scientific meetings and conferences.
- Use own engineers for NOAA new projects
- We need a clear statement of our mission from congress and appropriate funding to carry out that mission.
- Also, ensuring center and region leadership are appropriately and legally distributing received monies would mean programs would be funded as they were intended, giving those programs the ability to operate and perform as they should.

Management and Leadership

(Mentioned in 21% of of coded responses)

- Bureaucracy is increasing and budgets are decreasing leaving little time and money to conduct the science we are mandated to do.
- Depend less on contracting workforce and STOP treating those contracting as second-class, disposable and expendable staff.
- Senior leadership needs to be more decisive and get out of their "defensive crouch" regarding Congress and appropriations.
- The check box I clicked saying that delays and new administrative rules and procedures hamper the release of scientific information - refers to an overly risk-adverse approach by leadership in which decision making is overly layered and centralized and is largely reactionary to what they think congress or OMB may perceive as a misuse of funds or result in some criticism from outside. As a result there are layers of process and procedures that place restrictions on conference travel, implement draconian hiring policy's, and impose layers delays on getting approvals for acquisitions. The motivation is not in an efforts to suppress the science, but it can have that unattended effect at times. As an agency NOAA leadership, needs to learn how to delegate authority down to local levels. Further up the chain Dept of Commerce needs to do so as well - as many of the unnecessary restrictions stem from DOC policy. It would be particularly helpful if DOC requirements for legal review on almost each and every agreement be delegated to NOAA - AG's at a local level. Good luck with that eh ?
- Place the needs of listed animals (MMPA and ESA) ABOVE the need to further one's career, get published, or find funding.
- I feel that top-down politics is far too heavy relative to the mission of NOAA and especially within NOAA Fisheries. It is absolutely ridiculous how the failure of a completely different part of government leads to heavy restrictions across the board. Best example was the GSA debacle. Everyone suffered because of a top-down perspective that everyone needed to sacrifice to avoid any additional red flags. Travel for science was severely crippled and has led to a long term loss of advancement in all NOAA sciences. Blanket decisions of this nature only cover the asses of those that are not doing their job in the first place.
- I would like center and division leadership to be selected not by favoritism or seniority or "brights" but by their ability to evaluate the center and/or division abilities and talent and align scientist to accomplish NOAA missions. I have been here 30 years and I have not had brilliant inspired creative listening type "leaders"what happened to having inspired charismatic creative bosses who can grasp the tools (staff) given to them and catalyze positive mission driven science. Why am i competing with a division "boss" for research money: division leaders LEAD!!! and INSPIRE!!! and help the division move towards NOAA inspired accomplishments and goals.
- Faster and more decisive decisions by upper level (regional and national) managers. Less regulated use of technology particularly software requests
- Entire NOAA Leadership change
- NOAA needs more open minded scientists in managerial positions.
- Decrease red tape/bureaucracy,
- CUT RED TAPE! ELIMINATE THE BANE OF LIABILITY STOPPING OUR MISSIONS

- There are a lot of good scientists, but the management is very low quality. They don't know how to manage money and they don't distribute research dollars based on merit, rather management takes it for their pet projects or gives it to their buddies. So a lot of funds are misappropriated through incompetence and a kind of informal good old boys kind of network, or at least that is how it appears on the outside. I think there are a lot of problems in that money that is or intended to be allocated for specific projects or goals, gets allocated to other projects to cover budget shortfalls of other projects. It really comes down to some basics, no transparency, no accountability. Management is composed primarily of failed scientists, or scientists who are on the downward slide of their career so they go into management to get a pay raise and a better pension, but they don't really have the skills to manage, and they don't always stop being scientists, so they end up in a conflict, where they don't have the time or skills to be scientists, but they have access to the money, so, well, not great decisions get made under those circumstances. Not the most corrupt place in the world to work, but the incompetence of the "managers" really hurts the ability of the agency to do its work.
- Quit dumping more and more administration duties on to research staff.
- Create awards directed toward SCIENTIFIC achievement as opposed to simply playing nice with others or participating in yet another Agency workgroup or strategic planning group.
- Right now, the branch chief, [REDACTED] [REDACTED] [REDACTED], has a box for anonymous comments that I don't think observers know about or else don't remember. I think there is a way to send anonymous e-mails too, but I don't think I have been informed on how to do that during my [REDACTED] years with the program. However, the branch chief has been the ring leader for a lot of the current issues with the program management. [REDACTED] is a nice person and in all likelihood means well, but [REDACTED] has been causing a decline in the reliability of observer data. I have recently contacted [REDACTED] about these and many other concerns about my workplace; however, their response was as follows. After careful consideration, we decided to refer your allegations(s) to management officials at NOAA. We have requested that they conduct a thorough and independent inquiry and provide a response to us, including a detailed explanation of their review process and any corrective action, if any, they take as a result. Upon receipt of their response, we will review it for sufficiency and may seek additional information if necessary. We will notify you when the case is closed.
- There needs to be more of an opportunity for career advancement without going into supervisory roles. It seems like too often scientists who are after career advancement (e.g., increased salary) go into supervisory positions to achieve that - individuals whose personalities are not suitable for that role. And they are then given little to no training to help them fit into that role.
- The entire enterprise needs to model itself more on European agencies (e.g., EUMETSAT) that have now advanced ahead of the US. My guess is that in Europe the bureaucracy is more efficient with more competent and ethical employees in leadership and support staff. Leadership needs to advocate on the behalf of scientists up the chain, and they need to be strong in doing so. Instead at NOAA there seems to be a top-down approach to science, and that's not how science works. It's almost as if NOAA is no longer interested in real scientific research. At top cabinet levels we have transient/incompetent/unethical SES employees who are in it for themselves, and thus they "kiss ass", looking out for their own ass rather than the integrity of the science of their agency. There is

also a lot of waste in the bureaucracy. And there are "dead-weight" lower-level federal employees who really need to retire, but who are otherwise untouchable. NOAA needs to move away from the "tenured" employee model to a performance-based model.

- Remove the draconian restrictions DOC insists on placing on activities of foreign nationals. Nothing is more global than the oceans and atmospheres, yet in the last ~ 5 years NOAA (at DOC insistence) has placed severe restrictions on how scientist who are not US citizens (students, post-docs, visiting scholars) can function in NOAA facilities.
- Less bureaucracy, more administrative support, more time to do science
- Addressing the often contentious relationship between the scientists and managers, where both positions are valid but disagreements aren't facilitated with any leadership.
- To carefully examine the performance of individual leaders for real productivity beyond number of publications, conference attendances, etc, and look into issues affecting team performance and honest science output.
- Decrease the massive volume of bureaucratic requirements, training, and excessive safety training that does little to improve safety but is extremely expensive and increasingly interferes with our ability to accomplish our mission. Stand up to the Regional Fishery Management Council and not allow them to bully the agency into decisions that are harmful to the stocks and ecosystems they are supposed to be helping to protect.
- Corporate NOAA has moved most decision-making to a centralized location rather than allowing high-level managers within the NMFS Science Centers and Regional offices conduct the work they used to do, which they did very well. There was not performance issue among SES employees at these levels that supported this change -- just an apparent need by top NOAA officials to control. Unfortunately, NOAA leadership now works on many issues that should be left to the Regions and Science Centers which take up all their time; this is time that should be spend on working to find ways for the Organization to do better by improved support for employees and managers. At the same time, Corporate NOAA has shifted many costs out the offices across the nation that used to be covered from a central location, but shifting those costs did not come with increased budget for offices. Therefore, the amount of time and resources that employees, administrators, and managers who are responsible for the core work of NOAA has seriously deteriorated. Also, basic services, such as workforce management and the contracting arm of NOAA, have been seriously degraded over the past 15 years. Workforce management is broken. Even when managers can finally get some leadership group in Silver Spring to approve a hire, it takes far too long to fill the position. This impacts our ability to do the work and causes many tasks to be taken on by employees who are already overworked.
- Ensuring clear separation between the processes for communicating scientific findings and the processes for communicating management decisions based on those findings. For example: I work in the National Marine Fisheries Service. NMFS scientists sometime serve as part of Biological Review Teams or Status Review Teams, to provide analysis for determining species 'status' under the Endangered Species Act (e.g., whether species should be endangered, threatened, or not warranted). This process would work better if the scientists were left alone to conduct risk assessments, and then the policy makers were left to make status determinations based on the

scientific analyses. However, there have been instances of too much influence of managers in the risk assessment itself. This has not always been bad (in some circumstances it can be useful), but there are cases where the managers have a vested interest (for political or budget reasons) in the outcome of the risk assessment. This can pose problems. And at the very least, it can look bad (public perception).

- If NWS management addressed the glaring scientific deficiencies in the agencies gridded forecast product.
- I can't speak to all of NOAA, but I feel the public could be better served if the Fisheries Service or any living natural resources management agency for that matter were managed under the Dept. of Commerce.
- More regional decision making and organization; delegation of work to senior technical staff
- More funding for applied research into management related issues.
- This is from the NOAA IT Strategic Plan 2005-2010 The NOAA IT organization will move from a silo based structure where each Line Organization manages its technology with little involvement from the enterprise, to an applications and process structure where application and system integration occurs across NOAA and where there is enterprise involvement in standards, project management, and system development. However, in 2015 we have more "silos" than ever. I think this is primarily due to internal rivalries, especially competition for funding. It seems like the best way to get huge funding is through large data systems. This creates a tendency to try to take over other systems and/or build your own from scratch. By "system" I mean hardware specifically. This dwarfs the money spent on software and research. Of course, the biggest hardware systems are satellites. Next after satellites is the data distribution and archives system CLASS. This was originally an attempt to create an enterprise system consistent with the goal of the strategic plan cited above. Now it's more or less the sole domain of a single Data Center and if they could get away with it (or as soon as they can get away with it) they would take direct control of the whole system and add its funding to their budget. Now the other data centers don't want to be at the mercy of the big data center, so they will each have to build their own distribution and archives systems. More silos, bigger budgets, more power and prestige, not better data management nor better science.
- I think the mission of NOAA and the integrity of the scientific work produced could be significantly improved (at least within some programs) by hiring competent biologists who are well trained in scientific research to manage and serve as program leaders--in my specific program this has not been the case.
- Downsize administrative requirements and bureaucratic data calls caused by Congressional inquiries. Weekly brushfires from NOAA Headquarters directly interfere with completing scientific work in a timely manner. These should be handled at the HQ level and not passed through a chain of 6 levels through line offices.
- Reduce restrictions on funding of travel and cumbersome approval process for attendance at scientific conferences, including international travel. The degree to which this was tightened after the scandal of misuse of travel by a totally unrelated government agency is ridiculous. The inability to carry over funding from one budget year to the next makes it very difficult to conduct conference travel or any field work during the long period between the start of the fiscal year and final

allocations of budget funds for that year (Oct 1 to at least Feb in most years, sometimes later if the budget battle in congress drags out.) We often do not have funds actually allocated to the science centers until April, then all spending must be completed by mid-August to allow for year-end accounting. This is totally ridiculous! If you are working on research that needs to be conducted during the winter season (which is often biologically necessary) you have to go through extreme contortions to pre-fund contracts and equipment. Then if unexpected needs crop up during field work, you have no funds to address them! This seriously hampers field research

- Remove all Ph.D's out of management positions
- 2. require 360 evaluations during performance reviews
- 3. increase transparency of personnel decisions.
- NOAA has been hijacked by lawyers (OGC) who now make it extremely difficult to bring in external research funding. How can we keep our science staff if the research funds are choked off? The best solution would be to return authority for accepting research funds to the science divisions. The recent NESDIS data center consolidation has doubled the bureaucratic overhead on everything from buying pencils and pens, to travel, to IT procurement. This could be resolved by NCEI returning decision and purchase authority to the local operating units.
- Too much "administrative process" involved in approval and release of various documents...should be streamlined and delegated to the lowest possible authority.
- It seems to me that at upper levels of management, what is actually happening on the ground is often misunderstood or misrepresented. I don't know how to change this - I don't get the feeling that there is any desire by upper management (e.g. science center and DC level) to change this. There is also a very strong chain of command. For instance, I think there is gross mismanagement of the NOAA ships (very difficult for ships to maintain crew, the ships frequently break down, some of the ships were offline for many days at sea last year - all in all a huge waste of taxpayers money), but I don't feel that there is any way for me to say this without becoming a "whistleblower." I just want to be a scientist and do my job.
- I think that overall, NOAA is moving in the right direction regarding providing the public with credible and accessible science that truly represents the work of the scientists within the agency. However, at smaller scales within NMFS (e.g., at the regional level) some groups are more successful than others at promoting science for the sake of science. This appears to me to be directly related to the apparent incompetence of the managers set over the various programs that do the actual science. Whether the ineffectual management is the fault of the individuals responsible or part of some inertia within the system that they cannot overcome, the result is the same. Scientists in our group do not feel valued, do not feel that they can trust their managers, and consequently have extremely low morale.
- My work has been hampered by constraints of Natural Resource Damage Assessment from the Deepwater Horizon spill, which has impeded my ability to both do my job and communicate science. I believe the process, which was supposedly vastly improved after Exxon Valdez, should be substantially revised.
- The agencies decisions need to be guided more by the science and less by having to worry about what lawyers are going to do. Administration needs to always remember (especially in a NOAA science center) that their primary purpose is to help the scientists do good science not simply

operate from a position of fear of having a lawsuit against them. Without the science there wouldn't be anything to administer. Over the past 5 years the priorities between the scientists and the administrators has been completely turned on their heads. The administration should be there to help figure out ways to help not hurt the process of doing good science.

- Remove NOAA from the Department of Commerce and create a new cabinet level department of science and technology.
- My situation may be unique. I work in one part of NOAA that is not typically the focus of NOAA work. The problem I see with the integrity of the scientific work here is that it relies in large part on managers. That in itself isn't necessarily bad but in this case, the particular managers are not "good scientists" in that decisions are based more on the likely outcome with respect to controversy rather than the outcome for the natural resource. Although there are levels of supervision above these managers, they also appear to rely on the managers as knowing and using "best science." Thus the managers are not questioned and the result is management actions based on poor decision making using the available scientific data. There are, of course, many divisions within NOAA and I am sure many of these demonstrate integrity in the scientific work produced. However, NOAA supervisors must give equal consideration to the "science" of all divisions and require the same level of integrity from each.
- There are way too many procedures that do not apply to the customers needs. Trying to give the customer what they need as well as fulfill the requirements of NOAA makes it hard for us to do our job accurately.
- Fewer bureaucratic rules and requirements that are created simply to address "image" issues with congress or the public, but that serve no other purpose
- Filling out the lower and middle management levels with personnel who have strong scientific backgrounds that will be less easily swayed to make decisions that impact programmatic requirements that over-emphasize non-scientific input.
- consistent personnel policies within the organization -improve the NOAA Work Force Management hiring procedures -enforce the IT policies with regards to personnel use and not shove the personnel IT violations under the rug
- Realignment of goals and personnel are a fact of life. Sometimes the realignment of agency goals seems to be at whim of Congressional leanings - "Knee-jerk science" - an environmental event happens[or an event happens to the environment], the agency is expected to explain why it happened; what is the timing and cost of recovery, what are the long term effects, how can it be prevented from happening again; and have the answers before the next crisis occurs and diverts the attention of Congress. 4) Likewise, personnel are realigned to meets the needs of the agency's change in goals. Far too often, these realignments occur at the line office level where an employee, highly recognized for their expertise in their area of science, is realigned within that line office to an equivalent position in an unrelated area of research and without the appropriate training to accomplish the goals and needs of that position in a timely fashion. The ability to realign personnel across line offices is extremely rare [exceptions are high level management]; typically movement between line offices occurs though normal hiring practices - competition for an open position. In both of these cases, realignment within a line office or competing for a position at a sister line office,

NOAA, and it's line offices, turn a blind eye to the investment it's made in an employee and ends up with highly trained scientist performing as novice in an unrelated area of science, or and highly trained employee utilizing their skills and expertise in an under-rated position. As a result, NOAA loses on the personnel level, due to low moral.

- Ensuring basic modicum of resources/tools to do the job are provided (e.g. basic computer and software resources, publication charges, admin staff support, are available via 'base' rather than having to provide these basic tools via project-specific 'soft money'). The distraction of ever-growing burden of security/safety/administrative requirements amid dwindling staff resources also greatly impairs productivity.
- Management does nothing, even when constructive, face-saving solutions are offered. I have observed other highly paid scientists with inappropriate relationships with contractors leading to fiscal gain for contractors, wasting hundreds of thousands of Federal dollars and done poor-quality science. I have personally experienced gender discrimination and retaliation in the NOAA workplace which directly affected my ability to provide scientific data to the Agency, asked repeatedly for corrections, and received none. I have never in my professional life experienced such blatant good-old-boy networking and favoritism as I have here.
- Management does nothing, even when constructive, face-saving solutions are offered.
- Managers often fail to recognize real problems in their nascent stage, and their aversion to doing ANY conflict resolution has institutionalized a hostile environment where bogus complaints and subsequent high-level investigations waste tons of time that should be spend on science. Real problems are never addressed. Things are so bad I have been actively seeking other employment for the past few years
- There has been a general trend of increasing administrative burdens on scientific/technical staff within NOAA. This impairs the ability of scientists to conduct their research effectively. In the past, administrative staff supported the scientific/technical staff by taking care of paperwork, procedures, and general program function. But as the internet technology has enhanced direct communication and connected all NOAA employees, more and more administrative tasks have been delegated to the scientific/technical staff (who are not really trained or experienced in handling administrative matters). This is inefficient and takes away precious time and effort from conducting needed research. NOAA research was far more effective when the administrative staff were responsible for administrative duties, and scientific/technical staff could focus on the science for which they were trained.
- More effective management.
- I think that leadership needs to improve it's decision making process, or actually maybe start by making decisions, total lack of leadership is crippling us. A recent effort to try to respond to our dissatisfaction led to a 2 hour long review of the survey that was taken. This is not an answer to an increasingly disgruntled staff.... this is another waste of our time and a clear sign that we mean nothing and nothing will chage. Decisions are made on political whims and not for the best interest of the scientists. There is an extreme lack of financial support at NOAA and there is an ever increasing burden on scientists to perform administrative tasks. Administrative decisions are whimsical and change with the wind. This simply does not result in good science or happy people.

- Less bureaucracy, more science. Too many mandatory, complicated systems for managers, too many meetings on how to fill out credit card slips, employee reviews, etc.
- reduce training of procurement and inventory control - empower (and better compensate) administrative staff.
- Hold senior management accountable. They seem to be immune to the policies and like to intimidate
- Reduce administrative clumsiness
- Focus on NOAA's core mission and services.
- stabilize change in management and office priorities, revise agency view of being only in the information management segment of science, agency has long been stove-piped within itself and with too narrow and selective engagement with other federal entities, increase focus on addressing the nation's scientific needs rather than sequestering budget.
- Travel, especially foreign travel, is so micro-managed with irrational quotas and unrealistic time-lines, that it is more efficient to just take leave and go on travel that seems necessary to accomplish scientific goals. It would benefit science and NOAA if travel restrictions were made simpler.
- Need more experienced scientists in upper management. There is very poor understanding of scientific method and what it takes to conduct research at upper levels in many agencies, which are run by Silver Spring lifers.
- Recently implemented scientific integrity policies should help reduce misconduct through time, particularly obvious misconduct among higher level staff; however, mid-level supervisory discrimination remains strong, particularly, regarding subjects of water resources and dams. Over time managers have unilaterally simplified or reduced job descriptions to limit scientific discourse, research, and the maintenance of expertise. Biologists now typically go many years without agency supported or funded training in their fields. New scientific discoveries that expose or measure the continued loss of water and its effects on salmon are silenced by supervisors at lower and mid-levels and then delayed or prevented from release to science journals and public by a few staff within a science center. Again, the new integrity policies are a breath of fresh air and should help; however, retaliation remains too easy. Lower and mid-level supervisors continue to remove or alter science from decision-making processes and promulgate opposing policy by silencing or skirting experts that disagree. Regarding water decisions, unwitting inexperienced biologists or even non-biologists are rewarded for ignoring or hiding effects in support of policy. Reduce biologist shopping by supervisors. Train mid-level supervisors on integrity policies; in my direct experience the new policies have been ignored. Increase scientific review of water and dam management decisions. Ensure policies are based on credible scientific information. Limit the unilateral alteration of job descriptions after supervisors choose a different direction and refuse to hear any more science regarding the issue.
- I seems that fewer and fewer NOAA administrator are either scientists or have actually engaged in scientific research. Many do not understand the kinds and amounts of work that it takes to provide information for sound management decision or data for key model input. There is less and less respect for the science enterprise, the people who engage in it and their efforts. We are finding it necessary to fund some of our own work and pay page charges for journal publication out of pocket.

Fewer and fewer new staff members are attending scientific meeting, building a network face to face, or getting continued training they need to stay current. It is not quite so difficult for the scientists who have been in service for quite some time. We are invited to give key note or plenary talks so our travel is paid (if NOAA will let us accept the travel) but the young staff members are the ones who are not able to self fund meeting or training opportunities.

- Leaders should be informed of "real science". Wish and whim of our new leadership is how we are currently moving forward. They get what they think they can afford, not what is truly important. When the top leader of an agency has no idea how a given discipline is carried out it is no wonder there is no support. Leadership should be trained in the sciences they direct. Our communication is one way. When it breaks down it is "our fault". Almost Dribblesque in nature. Upper leadership should really take the time to understand the tenants of science not pretend too.
- Cutting down on bureaucratic red tape. For example, travel to scientific conferences has been restricted the past few years. It has become easier within the last year to travel, but sometimes approvals are not granted until just a couple weeks before the scheduled travel, which means airfares are unnecessarily expensive. This process can discourage scientists from even requesting travel, which means fewer are attending conferences and are thus unable to as effectively communicate their research and receive feedback from others in the field.
- There are rules such as IT security issues that restrict the use of tools that have become almost essential to scientific progress. For example, many scientists use backup software programs like DropBox to back up their data or to collaborate with scientists within and outside of NOAA. As soon as the slightest vulnerability is detected, we are told not to use the program at all. I don't think anyone within the upper levels of management realizes how useful a tool Dropbox can be to scientists. Similarly, using personal computers or hardware can greatly improve my efficiency, but these options have been taken away from me because of security threats. I believe that the small risk of potentially losing data or exposing PII should not completely outweigh the myriad benefits that more freedom with computer use can provide. We are underfunded. Instead of spending my time on writing proposals to pay my own salary, I could be doing research. Scientists in our organization are in this unique position - we are the reason this organization exists, yet we are the only ones that are not funded.
- Remove the administrative and bureaucratic burden on the employees so we can get our work done. Hire the contractors who are already doing government work so they can contribute more fully. Provide us the resources we need to stay informed and to support the work we are trying to accomplish. Often managers move forward with the "best available science" when the science is insufficient for a determination (e.g., sturgeon up-listing). Support the collection of data so that NMFS has the information needed to make informed decisions that are not subject to large degrees of uncertainty. Start treating the employees with respect and define the divisions between the science, management, and headquarters so employees know their role within the agency. Have the leadership communicate with the staff so we are aware what is being discussed. Leadership often does not know the issues well enough to make decisions and the result is failure due to leadership's reluctance to be transparent about policies/decisions they are contemplating.

- Remove 35% of the bureaucrats in the field offices and 50% of them in DC. In particular, the regional offices are overstaffed and inefficient.
- I generally feel that the scientific integrity at NOAA is good. However, I think that creating avenues that allow for more involvement of industry in the scientific process would be useful. For example, involvement with data collection, data interpretation, and discussions on what is important to them with regard to management. Management Strategy Evaluation is a process that allows for more involvement, when done correctly.
- We have to have a mechanism to both evaluate and reassign supervisors and team leads. Too many people are in decision-making, leadership positions that are ill-suited, ineffective, and at times make poor decisions that impact the entire division.
- Remove the bureaucratic hurdles - single most hampering issue.
- In my experience, NOAA operates with a military-like hierarchy, which comes off as nothing but rule-heavy management by people who are not necessarily respected. This has been particularly true since the advent of pay banding. The intense micro-management that the current reviews have necessitated fosters mediocrity and stifles creativity. Apparently, Silicon Valley has discovered this to be true and many of the most successful companies are doing away with this type of management style. While emphasis on "products" may be appropriate in a commercial business environment, there is absolutely no cross-over for employees in a scientific research field. The attributes read like gibberish and performance plans have become a challenging exercise in pretending to be getting at something meaningful.
- Improved leadership is needed. People with scientific skill and understanding are needed in leadership positions. People who listen to and trust their scientists are needed. NOAA needs to do self assessments to see if it is using the latest and best science. There is little resource to keep staff current on science developments, and managers in particular do not progressively increase their knowledge as science develops.
- Separate the Science Center to form a different Agency. DOI has USGS for its science wing. DOC has NOAA who does science and regulates based "inhouse" findings. A conflict of interests could be argued at any/every decision point.
- Rein in satellite program. Put weather, climate, and ocean functions in Dept of Interior. Consolidate fisheries management in Agriculture.
- Improve the moral of people
- Increasing number of managers from non-scientific background is a big issue. It is very difficult for them to understand the details of the research.
- Needs complete overhaul. Need to get competent scientists in leadership rather than incompetent leaders. The focus has strayed far from research. The CAPS system has destroyed us. Get rid of all awards -- they are most often given for the wrong reason and thus continue to erode morale. Establish a team of SCIENTISTS, elected by the scientists not leadership, that reviews the state of the science from the ground up.
- more reasonable security procedures that encourage collaboration and interaction with foreign scientists rather than hyper-restrictive policies that discourage interaction changing publication and

media policies that require several levels of pre-screening of all publications, presentations, and interviews by NOAA scientists

- The science staff are here to address what is put forth in the action plan. For NOAA fisheries, the action plan should address the long term sustainability of the fisheries. The admin staff are here to support the science staff is addressing the action place. During my time here it is clear that the managers are more concerned with making life easier for the admin staff by pushing more admin duties onto the science staff. This means that I have less time to do what I was hired to do - research. This needs to change.
- Remove leaders who are political animals and penny pinchers. Make science important in congress
- Not hire scientists to high level administration positions. If this practice continues, they must receive formal training on how to manager large organization. Too many rules, IT security, etc. hamper our productivity. Support staff do not always support us. Overhead for outside contracts is way too high (over 125% or so) making it difficult to secure grants when a funding agency can go to a university with half our overhead. Plus, I do no see the benefits of this high overhead in terms of support staff. We rely too much on outside funds to support our mission. Our lab receives millions from BPA and the Army Corp of Engineers to research the effects of the CR dams on salmon, which seems like a potential for conflict.
- yet management either won't tell us or doesn't know what less is.
- In the past, there used to be a management track and a scientific track for professionals. At some point, someone thought that money could be saved if the two were collapsed. Big mistake. There are very few research professionals out there that can do both research and management at the level needed by NOAA and the American public. As a result, we have managers who refuse to give up their science research efforts and basically do a horrible job of managing and leading their office. Ineffectively run offices lead to mission creep, and in some cases, mission collapse. Let the scientist that are excellent researchers do what they do best - research. Don't shoehorn them into a management position in order to get that next raise/promotion.
- Cut down on scientists doing administration, get funding approved sooner and to the field offices before the fiscal year is more than halfway over. Make management decisions clear and timely, select managers that are not the best scientists, they do not make the best managers/supervisors.
- I think that certain decision-making authorities are delegated to one individual that inevitably results in a conflict of interest (e.g., Regional administrator has signatory authority on both a fishery management plan and the ESA consultation evaluating the effect of the FMP on listed species.).
- Mission could be improved by better management of business processes and less administrative burden.
- Reduce mangement (as in Regional managers) input on scientific questions.
- The integrity of scientific work will only be improved through better leadership,
- By reducing bureaucratic red tape. By improving the flexibility to bring on new staff and affiliates into science centers and labs. By improving scientists ability to travel to attend scientific meetings and collaborate with colleagues. Currently, staffing and funding seems heavily weighted towards middle management and outreach as science centers and labs struggle to maintain staffing and monitoring and research programs. As we make attempts to improve the way we manage fisheries,

protected species and their habitats, much of the funding and staffing for new initiatives is focused process and communication and little is left for the substantive content - the science to inform these new approaches. Core policies and the tools used to implement those policies seems to be geared toward making the job easier for those who are at NOAA to support the NOAA mission (IT staff, acquisitions and grants staff, and management) without regard to how those core policies affect the staff who carry out the mission (scientists and technicians, permit reviewers, etc.). Over the past several years, dealing with internal policies and management tools seem to be hindering scientific work rather than supporting it. In addition to these issues with internal policies, mid-level managers seem to think that science is like a vending machine. They should be able to insert funding into a project, push a button, and get a nicely packaged, ready-to-use tool that is immediately ready for use by natural resource managers. In fact, the science needed for natural resource management tools takes some time to develop, then scientists and natural resource managers need to work collaboratively to refine the tools to ensure that they will be useful. Over the past several years, managers at NOAA seem to have MBAs (and MBA like degrees) with an under-appreciation of the science. Basic research is de-emphasized and production is over-emphasized.

- NOAA needs to reduce the centralization of the management of the scientific work produced in order to maximize innovation and productivity according to the nations regional needs.
- Having had a variety of positions in academic research, at a software company, and at JPL, my observation is that NOAA/NESDIS is badly run, especially from an engineering perspective. I don't know enough about the rest of NOAA to comment. I know that NESDIS is taking steps to improve, and I hope this will be successful. In spite of that, most of the people at the data center where I work are friendly, have great technical skills and accomplishments, and there are many fine scientists. My main concerns are the organizational problems and lack of effective leadership which leads to a lot of waste. The forthcoming data center consolidation is one of several things that is causing low morale. I think the consolidation will be a good thing in the long run but there are many technical and organizational obstacles to overcome. I also believe the positions that I and several of my colleagues hold would be much more effective if we were federal employees. We are well paid but that money is wasted if our advice is not taken and our knowledge is not used. The program I work on is underfunded and placed too low in the organization, where it does not have sufficient positional authority to perform its mission (even though that mission itself is not clearly defined). I don't see anything significant with regard to scientific integrity, only that these problems make it difficult to deliver high quality data and information products to those who could use and learn from them.
- Also, the administrative burdens have increased the past few years, as have restrictions on computing. The computing restrictions have made it difficult to work effectively on our computers (modeling often requires more than what can be done if the user is not able to attain 'local administrator' status), and to communicate and collaborate with external partners. For example, Dropbox is no longer allowed and there are no suitable substitutes that have been approved. This service allows easy file sharing with collaborators external to NOAA and it also increases productivity for employees by having a file repository that can be accessed across any platform and is integral to

employee's file system. All of these factors contribute to a decline in the integrity and productivity of NOAA's scientific endeavors.

- Reduction in bureaucratic minutia
- reduce administrative regulations that impact time dedicated to science;
- Reduce higher level micro-management. Independent action is disproportionately discouraged because of fear of deviating from higher level directives. The lack of delegation in our LO causes great inefficiency in scientific production and results in low morale.
- Providing scientists with the support needed to understand processes so that the scientists don't need to spend much of their day doing administrative tasks rather than science
- Management caves under pressure from above instead of fighting for and protecting their people and projects.
- Science is about inquiry and discovery, yet NOAA treats its scientists as cogs that are limited to ginning up specific support for specific policy-related needs. If we want to follow a line of inquiry that we see is important to the NOAA mission, we need to go hat in hand to our supervisors, who, if it doesn't fit into their strategic plan, will withhold resources, remove science duties from our performance plan, or give us poor performance evaluations. As a result, there is NO scientific advancement coming from within NOAA. I for example, was hired as a scientist, but have never been permitted to perform scientific research - and when I attempt to do so, I am punished.
- Many NOAA scientists lose interest in their jobs because there is no science career ladder. Many scientists are capped out in their pay grades, and the only possibility for advancement is to leave science to take a managerial position. The end result is either scientists with low morale or scientists who become managers, reducing the science pool.
- In my opinion, NOAA Leadership does not feel compelled to implement or enforce environmental laws and regulations. It also does not feel compelled to follow workforce laws or policies (including scientific integrity and whistle blower policies/laws). Perhaps this would change if NOAA was litigated more often on poor decisions that are not based on science. This lack of fear of litigation has become more pronounced in recent years, either due to reduced litigation or more political pressure, which makes any amount of litigation risk acceptable. Unfortunately, change will not come from within, because employees that question poor decisions are punished.
- Horizon management, reduce mid-level management. Reduce format and provoke risk and contribution. Critical on travel performance and work performance realization. rules of team work discipline training. Strengthen the role of Inspection of general Council.
- less on process.
- There also seems a great lack of accountability and reward system at all levels. Favors and promotions and responsibilities seemed to be based on knowing people and favoritism rather than previous experience and qualifications. This can result in shoddy work done by people without a strong grasp of the scientific principle and reasoning behind the work. Also, performing your job well often means being stuck in a rut without the opportunity to expand or learn because you are too valuable in your current position.
- Avoid micro-management of staffers by superiors who do not know what you are doing.

- Get rid of the Group Travel requirements for attending conferences and workshops. When people screw up, punish them and not everyone else. We waste too much time with these requirements.
- A refocus on Operations.
- And evenly distributing emphasis on the triumvirate of primary items.
- More transparent determination of priorities and allocation of resources.
- Internally. The entire organization needs to clean up its act. The higher-ups need to be held accountable for many things, which impact each and every person below them. Nepotism needs to end. The fear of reporting violations and concerns needs to end. Evaluations from lower staff need to be performed on a yearly basis (Manager 360 as an example).
- More communication between senior leaders and staff regarding NOAA objectives, stronger leadership (ability to guide and make decisions and clear administrative obstacles out of the way of working scientists so they can conduct research)
- Better leadership to make difficult decisions
- Additionally red tape and the review process hinders the process quite a bit, but I don't know how this can be improved.
- By not having managers without the appropriate scientific expertise make decisions about what belongs in or constitutes good or acceptable analyses/science, particularly analyses/science used to support policy decisions. Expertise not authority should determine who makes those decisions, and the former does not convey the latter even though some who have the former think it does.
- Honestly it's NOT restrictions of our ability to publish, speak out about, communicate results that is hindering our progress. It's administrative rules and regulations that are sucking the energy from staff, and making them feel 'why bother' to try if we're just going to be told no. I realize this is not the focus of this survey, but it's really the main issue affecting morale and productivity. Example 1: Academic group A invites NOAA employee to present on his/her area of expertise at focused workshop. Group A has funding to cover NOAA employee's travel, but office of legal council will not allow this because at some point in time, group A received funding from NOAA. Example 2: Hosting international visitors requires full time supervision of the visitor. Foreign post-doctoral researchers are not allowed keys to access the building but must be escorted in and out of the building each day. Even Canadians.
- Resolve/improve the completely dysfunctional appropriations process for NOAA and other federal agencies; remove highly counterproductive travel restrictions for scientific meetings; restore confidence in senior NOAA leadership among scientific staff.
- Reduce the layers of management (administration)
- Reduce the number of inefficient and ineffective documents that are intended to establish "politically correct" policies and regulations that could make it extremely difficult, if not impossible, to accomplish the scientific work correctly and efficiently.
- Remove excessive administrative and tracking requirements that distract from doing science.
- Have NOAA's upper management understand what a budget is used for and request funds from congress to provide the funding to insure NOAA's mission can be attained. Example If an individuals Mission statement requires 70% travel Management needs to insure there funds to cover the

requirement. The worst response to disapproved travel is, " NO Funding." How can there be no funding when 70% of the individuals mission is to travel?

- It would be helpful to have administrators within NOAA that did not serve as a roadblock between scientists and funding agencies.
- The agency needs to break down the barriers among its line offices. It likes to talk about the "One NOAA" concept, but in reality there is no such thing. The artificial barriers between the line offices and between some NOAA programs and related ones in other agencies (like the USGS and NASA) cause a great deal of inefficiency and frustration that impede progress. NOAA's organizational structure is influenced heavily by the Navy, and as such its decision makers place too much faith in the chain of command. A more horizontal structure like that used by the USGS would better serve a scientific agency like NOAA. NOAA decision makers seem more concerned with protecting their own limited jurisdictions within the agency than with actually advancing science or serving the public good. They only feel accountable to their immediate managers rather than to their coworkers and colleagues. NOAA is a very flawed organization at its very core, which is a shame because its mission is so important. Despite its flaws, NOAA does great work, but this comes at a significant cost in terms of dollars, time, and goodwill.
- Some sort of continuity in headquarters leadership. HQ people continually change, resulting in frequent re-organizations, changes in mission, poor decisions about scientific priorities, etc.
- In NOAA, whoever controls the funding controls NOAA. Too often one person (alone or part of a group) is determining the direction of science by influencing how funding is allocate. This results in NOAA decisions being controlled by just a handful of influential or powerful people. Those people often are making decisions that are not based on science, but their own special interest. I would encourage NOAA to set up science advisory boards for each large funding effort consisting of science experts (in the field or sub field) from both inside and outside NOAA (1-2 academic scientist, 1-2 NOAA scientist, 1 user) that do not have a known conflict of interest by the decisions being made. Right now control of funding streams could lead to retribution for those that do not tote the party/NOAA line.
- If congress allowed the agency to become a stand-alone agency rather than a sub-agency of the Department of Commerce.
- Less strategic planning that goes nowhere. Less science direction and research mandates from upper management.
- Leadership that doesn't turn over every 2 years and try to leave a legacy of yet another strategic planning process that only they understand.
- Take the fishery management councils out of the regulatory decision-making process.
- Eliminate top down pressure to conform to administration politics.
- re-write/improve the Magnuson Stevens Act. Everything we do hinges on this piece of legislation.
- NOAA in the past 3 years has taken a very top down management style. Leadership develops plans with little credence given to input from the field staff who do the work. NWS has gone so far as to hire a contractor at \$4.7 million/5 yr to facilitate communication with our union, instead of talking to us and letting us be part of the decision making process. This is a big difference from 5 years ago. So the bottom line is allowing employees a say in the decision making process.

- Cut the administrative "red tape". It eats heavily into our ability to get the job done. Have NOAA administrators of *various* levels visit the research labs so they can be educated on how we work. They are absolutely clueless on what it means to do research. The language of their memos makes this abundantly clear. They should be supporting us. Instead they make us perform unnecessary work for them. The tax payers deserve better. And I am convinced that 80+% of the scientists (at least in our division) give the tax payers more than what they have paid for.
- Consistent leadership at top levels. High turnover erodes institutional knowledge.
- Simplify the overhead workload on rules regulations and spending.
- The "One size fits all" IT and IT Security policies of DOC and NOAA are becoming an increasing source of friction for NOAA's science mission.
- Let scientists do science and prevent the administration from running interference.
- Take better care of those who actually work for NOAA and are working hard to accomplish the missions
- The requirement for prior approval before speaking to media is the most mission-hampering rule inside NOAA. It is not actually all of NOAA, nor all of NWS. But it is all of NCEP (my zone). The rule is so extreme that answering a media question directly about the color bar on my public -- managerially approved -- web page resulted in some hazard to my then in progress promotion. Ultimately I did get the promotion. But the policy remains in place, and has been reaffirmed even after NOAA released its new (under Lubchenco) policy which a naive person might think was encouraging NOAA scientists to answer media questions. More generally, NOAA and NWS management has long held a 'one voice' policy regarding speech in public. In practice, this has turned in to only one person within NOAA/NWS being allowed to speak in public about any given topic. Many of the areas of political concern have little scientific controversy (e.g. the globe is warming, arctic sea ice is decreasing, ...), so this is more a matter of demoralizing the many people who have been approached by media, who have technical expertise on the question, but are not allowed to speak. In areas where there is legitimate scientific controversy (e.g., "Why is antarctic sea ice expanding?", "Does the declining arctic ice pack lead to a more meandering jet stream?"), the 'one voice' policy leads to misrepresenting the science, since only one person may answer. Suppressing voices leads to public confusion as to what is truly known, versus what is management's line.
- Greater trust between NOAA administration and scientists. The usage of performance measures, as NOAA does is restrictive, and perverts the purpose of the scientists. I think of it this way--the scientists' job should be to imagine and study new things, i.e. their imagination should extend beyond the imagination of the people who are inventing the performance measures. Therefore, by studying new things out of the reach of the performance measures, they are not doing their jobs as stated by NOAA management.
- After February, 2010, a change in the management of the Hydrology Lab resulted in serious restrictions to work that had been previously designated as a top priority for NOAA
- Finally, given paralyzing bureaucracy, senior leadership defers all decisions that could result in improved science and operations. Instead of focusing on mission and change, NOAA focuses on budget and adhering to outdated and irrelevant policies and procedures.

- Better management practices. As plain and simple as that.
- Less middle management, better agency to agency relations
- Consistency at the upper levels is also greatly desired. Region to region discrepancies in policy set a poor standard and hamper advancement.
- I spend a lot of time dealing with paperwork, passwords, CAC cards, training, etc... Less administration = more science.
- Keeping lawmakers and politicians out of pure science. Is this possible though ?
- Get rid of silly draconian IT rules.
- Mission & integrity could be enhanced by improve recruitment and retention of reasonably competent managers at the approximate level of director and deputy director of research labs. Good scientists don't necessarily make good managers. Items (a), (b) & (c) contribute to reduced morale.... not a mission enhancer. (d) NOAA's current administrator and chief scientist seem to be on the right track, so enabling their visions to be more readily implemented at NOAA sites outside the beltway in a timely fashion likely would be a net benefit.
- a less-exclusive focus on reports to managers, resource managers, etc. Both are important - but one should ultimately rely on the other.
- More resource put toward science and less toward administration. NOAA has too many managers relative to the number of scientists. It has become more bureaucratic in the time that I have worked there.
- Put those in career managers' position who has faith in their job.
- As an employee, I am reviewed yearly by my supervisor regarding my abilities and performance. Yet I have no venue through which I can express my review of his performance, neither as a scientist or as a manager. This should be a "two-way" street because upper management is missing constructively critical information regarding the people working under them.
- It is very difficult to transfer these days. Many people are "stuck" in positions and locations that impact morale. High morale employees are more productive than low morale employees. The lion fish program is an utter failure. There are lots of NOAA approved brochures designed to inform people about the lion fish problem in the Caribbean but not a lot of action by NOAA to reduce the population of lion fish in the sanctuaries. NOAA staff needs to be more proactive and physically get involved in extracting those invasive species from sanctuary waters. Yes...I am suggesting that NOAA employees get in a wetsuit, gear up and get in the water. Did anybody really get a degree in Marine Biology to design brochures?
- Promoting qualified personnel especially in terms of dealing with the media A 1341 non-meteorologist in a management making public statements against IPCC findings is very disturbing, especially considering the lack of education of the individual (no degree in field of so-called "expertise"). We do not base our science on tabloid publication reviews, we base it on sound scientific integrity. Better management of managers speaking outside of their area of expertise is needed.
- Provide better resources and leadership. There is far too much administration in Silver Spring that does little to nothing and actually impedes our ability to do our work. I think the administration at headquarters should be cut in half at least and forced to consider how their administrative decisions

especially related to IT and purchasing impair our ability to conduct science and require undue amounts of our time. We also have ineffective leadership as directors of labs and centers, because the pay is not enough to attract the best scientists to go into administration. Additionally, NOAA does not adequately fund internal NOAA scientists at anywhere near the level necessary to conduct the science necessary for NOAA to do their mission. There is far too much sent to external partners in Academia whose institutions have lobbying authority. The problem is the academic institutions are not as aware of NOAA's needs and the science they conduct with NOAA funds is not always responsive to the agencies needs. This would not occur with internal funding of NOAA scientists that are more aware of the agencies science needs and work directly with NOAA decision-makers and resource managers to ensure the science is used to better NOAA trust resources and the country's well-being.

- Having also worked for NASA, I think one of the biggest differences (outside of billion dollar differences in appropriations) is that NOAA is not an independent agency. We are terribly challenged by our bureaucracy at both bureau and department levels. It is REALLY hard to get funds out to our academic partners - even those who have been competitively selected (e.g., our Cooperative Institutes and RISAs). In addition, sometimes policies are inconsistently applied across the lines, which can make it difficult to collaborate. It is also hard to ensure that the scientific findings are shared across the NOAA service branches. Great science work can be undertaken within a line office (e.g., climate change, hydrologic processes), but it is not necessarily utilized by other line offices that could benefit from it (e.g., fisheries management). You don't know what you don't know - and the lines are still terribly disconnected, so things are missed. NOAA's regional teams have helped, but you can't solve this problem with a handful or two of volunteers. People are also very pressured to do more. It is hard to just read everything and keep up on the state of the science.
- For Management to listen to the people under them, allow staff to be apart of the team. To give staff opportunity to educate themselves, to be able to move upward in the agency. Age discrimination is alive in NOAA, however invisible. I am personally and older scientist within NOAA, have felt this over the last 10 years when applying for advancement within the agency.
- Despite some of the recent arguments to fragment government (erode Federal oversight), this is the opposite direction we should be working in. We have 122 Weather Forecast Offices that are designed to not only handle local issues, but also communicate with one another. Outreach is a great part of the local system and cannot lose sight of what our local outreach does for us. But the Federal guidelines are extremely important and their consistency is key in maintaining and increasing our credibility from office to office. I believe it is best to maintain local offices in order to stay involved in the surrounding communities for which they provide forecasts, while upholding the Federal standards and regulations. This would streamline operations and prevent 122 different managers from creating their own local ideas, which ultimately changes the understanding of our overall mission. I do admit that some local issues are quite a bit different from office to office. However, local forecasters should not be subjected to confusion, due to large variations in operational settings from office to office. We need more consistency and ideas need to be funneled through a regional/national system, prior to being allowed into the operations scheme. At the same time, regional and national systems need to be more in tune the ideas and provide good responses

when ideas are brought to the forefront. You cannot sit on these things. Otherwise, local office will continue to improvise, leading to the same problem we have now....inconsistency.

- NOAA has a high quality science staff that produce top-notch research even with a relatively small budget compared to other agencies (like NASA). Management of NOAA is very poor, starting with my direct supervisor and going all the way to the top.
- Better management at the top. (Lately, things seem to have improved. But the NPOESS process was a huge and costly disaster. The feeling is that we are still paying for it.) Better communication at middle levels (this is really not a significant problem for those of us at the ground level.) Some more resources to do our jobs. Speeding up of the hiring process for new employees. HR back in the DC area is either understaffed or not working efficiently. If you have funds for new employees, and a need for them, it should be possible to hire qualified people in a timely fashion.
- Improve efficiency. Administrative services, especially Workforce Management, but also Budget, Acquisitions, etc., are a nightmare and have declined markedly since the agency has been centralizing administrative functions over the past decade. Things were done much more efficiently with the regional administrative service centers. Back in the mid-2000s, NOAA hired a company, Booz-Allen, to report on the need for centralization. The B-A report was later slammed by the inspector general, but NOAA leadership at the time decided to go forward with most recommendations. Three sets of NOAA administration so far continue this ill-advised path and the agency is getting tied in knots, where once it could conduct day-to-day business smoothly. this is by far our biggest headache and it greatly hinders our mission.
- Better leadership from Administrators
- There needs to be a wholesale change in the upper management of NOAA. The current middle to upper level staff is too concerned with the usual bureaucratic games of empire building and self interest and is therefore willing to bend to the political wind in order to obtain increased funding at the expense of integrity. Look into how Louis Uccellini got Bill Proenza fired (first from NHC then from NOAA) and you will see how slimy the actions of this self-interested group works. I can't think of any other way to change this other than clearing house and bringing in people who respect the truth and want what's best for science and not themselves.
- No single entity unduly influences the agency but the combination of NGOs, industry, Congress, OMB, and Commerce results in watering and wearing down and splintering of the agency's efforts. NOAA has dozens of small, underfunded programs that are each supported by different constituencies/laws/budget lines. There is no single law or act that defines the agency mission so every new Administrator is free to redefine that mission. The missions of the Weather Service and Fisheries Service overwhelm the agency mission. The budget for satellites overwhelms the budgets for everything else. The agency represents almost 65% of the Commerce budget but there are virtually no advocates for the agency in the Commerce leadership. After almost 35 years, the agency still functions as less than the sum of its parts. Perhaps it might be better, after all, to break it apart and put the pieces into other, more appropriate departments or agencies. There is absolutely nothing wrong with the scientific integrity of the agency compared with other agencies or academia. There are good scientists and less-good scientists but overall, the work done by NOAA scientists or funded by NOAA is of high quality - some of the best in the world. However, the steady erosion of

research and development funding, both internal and extramural, is driving people away from science that supports the agency's missions, The average age of NOAA scientists is increasing and the overall number of NOAA scientists is decreasing. At some point, the agency will lose critical mass in all but a few key areas - weather, fisheries and maybe climate. All the rest will be lost - marine ecosystems, coastal habitat, harmful algal blooms, oceans and human health, aquaculture, deep-sea biology, etc. These are unique to NOAA and there is no one else to fund them. Once the programs and scientists are gone or have moved on, it will take an enormous effort to recreate them.

- More willingness of management to make decisions, especially decisions that carry the risk of failure. There are many centers of excellence at the lab level in NOAA, but above the labs one finds timidity, get-along, unimaginative thinking that stifles innovative ideas from below. One finds administrators and project managers who are thinking of their next career move, not about accomplishing something, and are so highly risk-averse as to paralyze them and the rest of us.
- By implementing the same pay scale across the entire agency. There are some that are restricted from advancing in their careers despite significant achievements due to inequities in using 2 different pay scales. It is difficult to establish a culture of equality amongst NOAA scientists when one line office is restricted from enjoying the less restrictive advancement potential that is afforded to others doing the exact same type of work.
- Less policy and administrative steps would allow more time and resources to improve science
- sclerotic management devoted to preservation of its position, will suppress views and science not in line with its interests
- By providing more regulatory guidance to the incorporation of scientific research into daily operations.
- Also, ensuring center and region leadership are appropriately and legally distributing received monies would mean programs would be funded as they were intended, giving those programs the ability to operate and perform as they should.

Respect for Science and Scientists

(Mentioned in 17% of coded responses)

- Cross-check by same science peers at the state level.
- By letting scientists do their jobs and not forcing them to also be FOIA managers, contract managers, budget analysts, and policy wonks. I was told that my Ph.D. degree didn't matter -- that policy people matter, and that it's easier to teach a policy person a little biology than to teach a scientist to do policy work. At NOAA contractors are hired to do jobs that govt scientists can and should be doing and FTEs are given tasks like contract mgmt (up to 100% of their time) and other administrative duties that they shouldn't be doing. NOAA views FTEs (scientists) as chess pieces on a board -- give them any kind of job that needs to be done, regardless of their education, expertise, background, and skills -- and give the contractors scientific tasks; then hire the contractors as FTEs at grade levels above older, long-term, FTEs with graduate degrees. It's an outrageous practice. One colleague, a Ph.D. in marine biology, highly awarded, and with over 20 years service to NOAA, committed suicide after he was forced to do contracting work 100% of his time and report to someone with a high school education.

- All science staff should be able to publish but at NOAA it is mostly the science center staff that can do this. This policy approach stifles careers and people.
- All adhere to the Information Quality Act and all information distributed to the public pass peer review.
- I would like to see NOAA produce an annual summary of the "state of the science of global warming" and links to research that supports conclusions reached by both the global warming and anti-global warming camps. This summary should be an awareness of both sides of the argument that the reader can use to decide for himself which one to support based upon observed facts, current forecasts, and model uncertainties. Similarly, an annual survey of the data networks should indicate areas where data is sparse or dense, where instrumentation has a long period of record or is relatively new, and indicate which critical data are used in which models as baseline climatic information for comparison to forecast changes. I don't think these should be costly, intensive reports. Simply "state of the state" reports that can be compared annually to indicate trends, policy changes, etc
- Allow the scientific staff to brief Public Affairs personnel on the state of science topics.
- Let the science speak! Why are we required to support the President's non-scientific stance on any science topic. I vividly remember that I had to adjust several presentations from pre-inauguration to post-inauguration. Obviously the science didn't change between 10 am and 11 am on inauguration day.
- Social sciences, including economic analysis, human behavior, psychology, communications, and anthropology needs to be considered on equal footing as physical sciences.
- I work with the NE observer program. We don't know exactly how our data is used only generalizations for use in discard estimates and stock assessments. I feel the data is not used appropriately because of poor understanding by those that use the observer data of what the data is and what its limitations and potential sources of error are. Each data field is defined but a number of fields are vaguely defined so that even the observers often misinterpret what was supposed to be recorded. Fish weights are the currency of commercial fishermen, so for me it is appalling to see the decision making being made by NE observer program with regards to manipulating grades in training and waiving standards for observer trainees, the secrecy of decision making by the observer program data quality team, poor decisions made by the data quality team, how ineffective current management is at ensuring consistency amongst editors in regards to understanding of the definition of data fields, the lack of an efficient process for communicating and updating observer program information based on new things seen by observers, the lack of adequate communication between the branches of NMFS that use observer data, and the lack of acknowledging and addressing issues brought up by observers/editors. This inaction and lack of acknowledgement in combination with a number of contract and policy changes has demoralized observers and editors and has caused many to leave the program altogether at a high turnover rate. I've seen other reviews of the program of the last couple of years that praises the observer program's standards, but the one standard they don't know about is that the observer program has allowed exceptions to just about all of their standards, at least in recent years. While the NE Observer Program looks good on paper and probably does provide a lot of high quality data in comparison to other US observer

programs, I would consider it in a state of disaster. I think the program needs some of its federal employees replaced and others to be guided in a new direction that upholds its standards and ensures the quality of its data. I also think the program needs to be better about taking corrective actions on federal employees who do not fulfill their responsibilities or who have contractors under them complete their work for them. I think in the early stages of reform, the program will need transparency and oversight of its decision making until federal management issues are resolved. I believe that existing standards the observer program has for its observer workforce would likely be good at ensuring good data quality, and I would say that the first step of improving the observer program is to actually enforce the standards that it already has in place and to build on them when issues are recognized. I also believe there should be a better way of allowing contractors to give feedback about issues/concerns they have with the program and for the program to have better communication about acknowledging issues and what reasoning they have for any action/inaction about submitted feedback.

- Less "filtering" of information as communications are reviewed by higher level supervisors. I find most communications lose their utility and contain less useful information as they are reviewed at higher levels.
- greater enforcement of data management policies and prioritization of data analysis and synthesis to provide timely information over additional raw data collection.
- here seems to be a top-down approach to science, and that's not how science works. It's almost as if NOAA is no longer interested in real scientific research. At top cabinet levels we have transient/incompetent/unethical SES employees who are in it for themselves, and thus they "kiss ass", looking out for their own ass rather than the integrity of the science of their agency.
- Encouraging submission of study results to top-tiered journals. Hiring 1 statistician for every 5 non-management employees. Improved laboratory and vessel platforms.
- Limit the work to programs that directly relate to the earth's oceans and atmosphere.
- More Scientists involved in the decision making process with regards to logistics on any projects but particularly those involving quick response such as natural disasters, conversely, those tasked with providing logistic control whether it be equipment, IT or documenting field collections should have time in field.
- To carefully examine the performance of individual leaders for real productivity beyond number of publications, conference attendances, etc, and look into issues affecting team performance and honest science output.
- Greater ability for scientific interactions at meetings and conferences, etc. Travel restrictions have gotten ridiculous.
- Ensuring clear separation between the processes for communicating scientific findings and the processes for communicating management decisions based on those findings. For example: I work in the National Marine Fisheries Service. NMFS scientists sometime serve as part of Biological Review Teams or Status Review Teams, to provide analysis for determining species 'status' under the Endangered Species Act (e.g., whether species should be endangered, threatened, or not warranted). This process would work better if the scientists were left alone to conduct risk assessments, and then the policy makers were left to make status determinations based on the

scientific analyses. However, there have been instances of too much influence of managers in the risk assessment itself. This has not always been bad (in some circumstances it can be useful), but there are cases where the managers have a vested interest (for political or budget reasons) in the outcome of the risk assessment. This can pose problems. And at the very least, it can look bad (public perception).

- Stick to the science and engineering,
- Streamlining of the review process would increase efficiency of the publication process.
- By evaluating other relevant research on the topic at hand.
- Need better monitoring data with which to detect trends and make decisions.
- so that more thorough review and analysis of available scientific data can be accomplished with the time frames established by regulatory processes.
- Give us more time to work on scientific advances. If you want NOAA to have more scientific advances, send us to conferences more often with no restrictions. Stop relying on GPRA metrics which are usually set too low to begin with. Accelerate the scanning of weather-related documents, as government-related archives and libraries are in the process of slow elimination. Right now, my specific agency is apathetic to the broader scientific community, with several workers that started "circling the drain" towards retirement by the age of 40. 40! Recently, there has been an acceleration in this "circle the drain" mentality with how OPM has been managing our hiring since November. Our management has surprisingly little say in the questions picked or the wording of job announcements, which has caused talented people not to make panels for promotions. Our weather forecast models aren't verified in real-time for all forecast quantities (including surface temperature and dewpoint) in an easy to access manner, which limits our skill forecast-wise. There is a strong vein of climate change/global warming denial that does not seem to be represented by the organization as a whole. We are forced to send global warming-related questions to CPC (the Climate Prediction Center) in order to remain unstained by the controversy. If you want advances within the agency, ban the ability to watch sporting events within the work place, which takes up a significant amount of time internally -- sometimes half our forecasters are watching Penn State/Baltimore Ravens/Washington Redskins games in real time. This could be accomplished by severely limiting the ability to access .com sites and eliminating access to ESPN and Comcast. We have a number of people also watching movies and television shows online during non-busy times. Ban the ability to watch YouTube.
- I also think that many programs need assistance with database management, since (at least within my program) much of the current database is outdated, cannot be updated from within due to lack of knowledge on how to do so, and much of the 30+ year data set is not accurate and contains many errors (I am finding some of these myself as I work with the data and go through error checking), and I am aware that some of these data sets have been used for publication.
- increased opportunity for travel to scientific meetings
- Scientists no longer have adequate time thoroughly complete scientific work and production of manuscripts because of too many administrative demands and dependence on contract employee to adequately complete tasks required. Adequate time is not available to digest information, compile synthesis of data in topic area due to administrative demands on each level of a scientific

team (due to lack of permanent employees). Scientific products, although completed, are usually not given enough time to produce the best results, especially in a collaborative nature. For example, to attend scientific conferences often we are not given permission until the week before a trip (including foreign travel). That uncertainty leads to hesitations in efforts to collaborate. Most of the processing of samples within our laboratory is conducted by temporary contract labor. The time required to manage those labor concerns leads to less data produced in a timely manner. This hinders scientific products and institutional memory. The constant threat of Congressional cuts requires us to think of science less and less each year.

- The science is generally good and is the best available (in my field). I should not be ignored or circumvented.
- Reduce restrictions on funding of travel and cumbersome approval process for attendance at scientific conferences, including international travel. The degree to which this was tightened after the scandal of misuse of travel by a totally unrelated government agency is ridiculous. The inability to carry over funding from one budget year to the next makes it very difficult to conduct conference travel or any field work during the long period between the start of the fiscal year and final allocations of budget funds for that year (Oct 1 to at least Feb in most years, sometimes later if the budget battle in congress drags out.) We often do not have funds actually allocated to the science centers until April, then all spending must be completed by mid-August to allow for year-end accounting. This is totally ridiculous! If you are working on research that needs to be conducted during the winter season (which is often biologically necessary) you have to go through extreme contortions to pre-fund contracts and equipment. Then if unexpected needs crop up during field work, you have no funds to address them! This seriously hampers field research
- NOAA has been hijacked by lawyers (OGC) who now make it extremely difficult to bring in external research funding. How can we keep our science staff if the research funds are choked off? The best solution would be to return authority for accepting research funds to the science divisions. The recent NESDIS data center consolidation has doubled the bureaucratic overhead on everything from buying pencils and pens, to travel, to IT procurement. This could be resolved by NCEI returning decision and purchase authority to the local operating units.
- More dynamic sampling of the ocean instead of grid systems and ecosystem based models
- We are making decisions based on models with very limited data. The amount of survey data needs to be drastically improved. In addition, the time lag from data collection to availability is quite long. By improving these aspects, the models would be more reliable; thus, the regulations based on the model would be more appropriate and scientifically driven.
- for existing data -- Need to be provided adequate infrastructure resources to provide data easily to partners (internal and external to the agency) and the public. IT security measures are hampering scientist's ability to easily collaborate and share findings. 2) for future data - adequately fund research platforms
- The push for weather forecast precision (hourly forecasts for many elements, and down to 2.5 km resolution) hurts the forecasts accuracy and conveys a false estimate of the state of the science. This is especially the case in complex terrain. Also the NWS/CR is requiring the use of the 'superblend' model for initializing forecast elements for the 4-7day period. This has problems that are not

addressed for complex terrain. The NWS is more concerned with a seamless forecast across County Warning Areas, than with accuracy. They could improve accuracy if they allowed individual offices to have more control of how they produce the local forecast.

- There seems to be too much filtering of proposals and manuscripts that are submitted or that are advanced at the science center level. These decisions are being made by a committee and are rarely transparent, particularly with proposals. Rather than a proposal being judged on scientific merit by a reviewer, it first goes through the center and a decision is then made as to whether or not a proposal will advance. If the decision making process is not transparent then peoples confidence in the process will erode. There is also an air of 'big brothering' when it comes to speaking to press.
- The landings of the important mollusks (oysters, northern quahogs, softshell clams, and bay scallops) have fallen by 85%. The effectiveness of the stewardship by NOAA is obviously lacking. As an aside, the declines in these stocks has led to a general weakening of moral among NOAA personnel. Moral is quite low. The scientific work in NOAA could be improved by toning down the thrust to survey abundances of the stocks, and then begin to identify to causes of the declines in abundances. The declines are not due to fishing or overfishing, though this is the usual reason given. Rather, it is due to large changes in the environment, much of it caused by a large switch in the North Atlantic Oscillation. If NOAA scientists would begin to identify the changes, the agency would have a much better idea about how to manage the environment, fisheries, forecasts of the future could be much more accurate.
- Better funding for research. My Division has lost the funding to conduct shipboard survey cruises and is thus unable to maintain a 20-year fisheries-independent time series that is an important additional source of data for determining catch quotas.
- The agencies decisions need to be guided more by the science and less by having to worry about what lawyers are going to do. Administration needs to always remember (especially in a NOAA science center) that their primary purpose is to help the scientists do good science not simply operate from a position of fear of having a lawsuit against them. Without the science there wouldn't be anything to administer. Over the past 5 years the priorities between the scientists and the administrators has been completely turned on their heads. The administration should be there to help figure out ways to help not hurt the process of doing good science.
- Conducting more basic scientific work instead of just surveys, assessments and monitoring.
- This applies to the National Marine Fisheries Service. Other aspects of NOAA may be organized differently. The Fisheries Science Centers (FSC) seem to have a challenge between conducting "pure" science and conducting science that is relevant to management of the resources. The FSC need to more closely align their work to support the line/management offices. Line office staff includes scientists who may not be doing original research, but they need to be able to access and synthesize existing information in making compliance analyses, permitting decisions, and in drafting policy recommendations for management, and they need to be fully aware of work/studies underway at the FCSs on a real time basis. There needs to be better collaboration between the FSCs and the line office staff, not just in the focus of the work done by FSCs, but to directly engage line office staff scientists in the FSC research and projects. Presently, line office scientific staff are limited in developing publications for journals unless the FCS approves the publication topic. This is an

obstacle because it creates an added layer of approvals and review, and FSC staff have delayed or obstructed publications related to policy development and science integration, from an applied perspective as seen by line staff, because they saw an opportunity to leverage this topic into additional research. Better collaboration could improve this, and a change in policy that would not allow the FSCs to constrain publication by line staff scientists is needed. Line office analyses need to be conducted by scientists who are perceived to be highly professionally qualified, which includes publications as well as presentations at scientific conferences. Travel restrictions also limit attendance at professional scientific conferences, even if staff would propose to present a scientific paper.

- Encourage expertise to be utilized across programs.
- 2) NOAA must find a way to more efficiently document, correct, and, if necessary, dismiss poor performers or those who violate scientific integrity acts, have personal conduct that fails to follow Federal ethical and moral standards. The CAPS pay-for-performance playing field now bases promotion SOLELY on the ability to push 1st authored publications into peer-reviewed journals. I personally have witnessed the continual promotion of a scientist who does not proof █████ work, run any QA/QC on █████ data, who has sampled █████ without appropriate permits, who has operated NOAA vessel unsafely, and reported to work inebriated on several occasions - because █████ can pump out publications even if the █████ ID is incorrect on papers dealing with █████ change!!!
- I think that there needs to be more emphasis in scientific excellence.
- Improve the analysis of ocean and atmosphere environments for better clarity regarding composition and its changes, causes of changes, and effects of changes, and communicate these internationally to foster cooperative international efforts.
- NOAA chases headlines; research deemed "cutting edge" or "high technology" or through some other means might lend itself to splashy pubs and news coverage receives preferential treatment in terms of funding and staffing rather than more prosaic research but which may be more closely aligned with NOAA's actual mission of managing and conserving marine resources. NOAA continues to spend a lot of money on research avenues which have PR appeal but even after many years have very little to show in terms of usable data or findings.
- Produce more specific policies about, for example, climate change, use of best available science, implementation of recovery planning under ESA.
- Eliminate appointed positions. Foster better relationships with academic institutions and NSF. Added value placed on peer-reviewed publication in quality journals. Better staff opportunities for travel to scientific conference
- My understanding is that NOAA has decided to downgrade its support of chemistry and toxin research. This is a problem on many levels. A government funded (taxpayer funded) group that does not want to look at what is happening at a basic chemical level, does not truly want to find the cause or be responsible for potential remedies to problems in or on our national waterways. What is the purpose of maintaining that designation.
- and increase funding for NOAA scientists to allow continuity in research (i.e., permanent NOAA employees instead of short-term contractors)

- The peer review process for journals should be the standard of excellence. If NOAA feels there are some journals with more integrity than others (I certainly feel that way), then they should identify the names of journals NOAA employees can publish in without needing a review and review any publications intended for lesser journals.
- More investment in in house research, which will attract better scientists.
- Need more experienced scientists in upper management. There is very poor understanding of scientific method and what it takes to conduct research at upper levels in many agencies, which are run by Silver Spring lifers.
- Congress, Management and Budget, and Industry need to champion science and technology. Scientific capacity building, investment in R&D is severely lacking and actually, deteriorating. There is a tendency to politicize everything and the regulatory side of the house makes many decisions without any scientific basis or scientific consultation. Science is required to support management actions but not be subservient to it.
- I seems that fewer and fewer NOAA administrator are either scientists or have actually engaged in scientific research. Many do not understand the kinds and amounts of work that it takes to provide information for sound management decision or data for key model input. There is less and less respect for the science enterprise, the people who engage in it and their efforts. We are finding it necessary to fund some of our own work and pay page charges for journal publication out of pocket. Fewer and fewer new staff members are attending scientific meeting, building a network face to face, or getting continued training they need to stay current. It is not quite so difficult for the scientists who have been in service for quite some time. We are invited to give key note or plenary talks so our travel is paid (if NOAA will let us accept the travel) but the young staff members are the ones who are not able to self fund meeting or training opportunities.
- By supporting the staff that do the research, whether it's the staff themselves or by funding the correct research adequately. For example, social science is given lip service and too many hoops to jump through along with the stingiest budget. However, we are not managing fish. Fish don't listen to us. We cannot tell them where to go or what to do. We manage PEOPLE and so social scientists should be paid a lot more attention to and funded optimally instead of marginally.
- Leaders should be informed of "real science". Wish and whim of our new leadership is how we are currently moving forward. The get what they think they can afford, not what is truly important. When the top leader of an agency has no idea how a given discipline is carried out it is no wonder there is no support. Leadership should be trained in the sciences they direct. Our communication is one way. When it breaks down it is "our fault". Almost Dibertesque in nature. Upper leadership should really take the time to understand the tenants of science not pretend too.
- Often managers move forward with the "best available science" when the science is insufficient for a determination (e.g., sturgeon up-listing). Support the collection of data so that NMFS has the information needed to make informed decisions that are not subject to large degrees of uncertainty. Start treating the employees with respect and define the divisions between the science, management, and headquarters so employees know their role within the agency. Have the leadership communicate with the staff so we are aware what is being discussed. Leadership often does not know the issues well enough to make decisions

- There needs to be a greater understanding of the importance of the use of economics and other social sciences in making informed policy and resource management decisions. In addition, NOAA scientists need to recognize that their role is to provide information that will assist the decision makers make better decisions, it is not to make policy and resource management decisions or to get upset when the final decisions differ from those they would have made because the decision makers considered a broader range of issues or made different value judgments. For example, in the case of fisheries management, decisions should almost always be based on more than biological information.
- Public trust of NOAA and other science sometimes stems from lack of data, and the expression of a lack of certainty by scientists, which is often exacerbated by insufficient data. All this is to say that NOAA needs to ramp up field observation programs to enhance science and the strength of scientific findings. That would go a long way to improving our ability to track and predict changes in public trust resources, and bolster the credibility of government science services.
- My answers reflect my personal experience within a particular branch of science (tsunami science) which involves both oceanography and geophysics and therefore straddles the gap between NOAA and USGS. This is an area where political and business interference is (thankfully) minor, but in which NOAA's own history guarantees problems. NOAA contends that all tsunami issues can be satisfactorily handled through oceanography alone, and rejects the idea that geophysics (specifically, seismology) might make any contribution. That contention is daft. Official NOAA policy promotes naive and obsolete science, leaving the public poorly served. Similar demarcation conflicts exist between the two agencies in hydrology (stream flow vs. groundwater), fisheries (fresh vs. salt), and elsewhere. The only solution I see is for NOAA and USGS to be combined into a single entity, as was unanimously proposed in *Science* (v. 321, p. 44, 2008) by every surviving former USGS Director and NOAA Administrator
- Where applicable, each division should have a long term science plan in place that integrates data sets to produce higher quality products with substantial impacts and should also contain the flexibility for short term projects.
- Streamline the review process for publications
- People who listen to and trust their scientists are needed. NOAA needs to do self assessments to see if it is using the latest and best science. There is little resource to keep staff current on science developments, and managers in particular do not progressively increase their knowledge as science develops.
- Make understanding "human dimensions" of ocean management a priority by hiring more non-economic social scientists -- i.e. whole divisions of permanent positions that can make substantial research contributions, not just piece-meal hiring of individual, temporary researchers. Along with this it will be important to recognize that social scientists may contribute perspectives and findings that may be controversial and challenge established paradigms and structures -- of management as well as natural science.
- More QA

- Well truth be told I am unable to participate in my [REDACTED] research. Ever since the [REDACTED] by the [REDACTED] has been forbidden. This is purely an educational [REDACTED] with underwater webcam s showing the public many different marine ecosystems.
- Establish a team of SCIENTISTS, elected by the scientists not leadership, that reviews the state of the science from the ground up.
- Meeting NOAA's mission in the 21st century will require us to obtain increasingly more information from limited resources. Whenever possible we should work from the outset to design experimental and observation studies that can be analyzed with most appropriate statistical methods to obtain the greatest information for the least cost and effort. In some cases, however, unforeseen natural disasters or man-made catastrophes such as oil spills may require us to use entirely different approaches. Therefore, we must position ourselves at the forefront of quantitative ecology in order to capitalize on any and all available data sources. For example, volunteer citizen science is already helping us to understand trends in abundance and changes in phenology due to climate change. Unlocking the true potential of the expanding wealth of citizen science data may require ever-evolving forms of analyses.
- Stay the course of seeking the truth and going where it leads us.
- Scientists need more time to conduct research
- Stop tailoring research and results to conform to accepted, but flawed, ecological theories. Instead, collect data to create ecological theories.
- Replace the automated weather equipment systems with human observers to improve accuracy
- More reliable resources, improved technology, less politics, more consistent review and implementation procedures.
- support of more open-ended science questions instead of small, short-term questions that are immediately applicable. Without foundational science, applied science will wither on the vine.
- prioritization of data collection,
- All scientific work at NESDIS is dependent on satellite RF communications, data, and spectrum management. There has been no government spectrum management until just one month ago. The selection of an intelligent spectrum manager will go a long way to stop the degradation of satellite communications; however, the degradation that started 5 years ago will take many years to reverse its downward momentum.
- Based more decisions on the science and demonstrate why that is better than political concerns in the long run.
- We tend to have a lot of organizational inertia. That is we are slow to respond to evidence, even strong evidence, that our previous science was wrong. I am specifically referring to our assessments of the size and status of fish stocks. We also are very defensive of our science and the process
- There is a perception within our science that outside groups (primarily fishermen) should not be listened to and that they do not bring anything to the table. This is wrong and it sets back our science substantially and our ability to communicate it. I think it is important in this survey to recognize the distinction between the type of industry we regulate and the type of industry impacted by BOEM or EPA regulations. Our industry is highly knowledgeable about the scientific

topics of interest to us (fish population abundance and distribution) and has a genuine long term interest in maintaining fish stocks as many of these are family businesses.

- More rigorous review of how funding and appropriations translate into timely, publishable research -that is, review the degree to which HQ sends money to projects that never produce anything, and then correct those problem areas and inefficiencies by recruiting better people (or eliminating the project if it's no longer a priority). Increase funding and recruitment/hiring for integrative projects that focus on widely identified problems in ecosystem management; for example, stock assessments that incorporate multiple species or environmental drivers; integrative ecosystem assessments; forecasting tools There are certainly some groups within NOAA who sit on public data and make it very difficult for others, even others within NOAA, to get access to those data.
- Increased follow through in supporting the recommendations made by internal expert advisory panels
- Additionally, creating federal science environments which are only focused on obtaining grant funding as part of their performance does not allow adequate time to be devoted to research, but instead draws the attentions to self-serving grant proposals.
- Allow scientists more opportunities to attend scientific meetings and interact with other scientists outside the agency.
- Get rid of the travel cap. We are unable to travel to essential meetings to share our scientific findings. We need to participate in conferences with other colleagues in order to improve and share our work.
- 4. Allow us to replace antiquated equipment and provide support for service contracts for existing equipment. We cannot stay abreast of the most current science with old equipment. A grants process would allow headquarters to review proposals for the most essential equipment replacement needs.
- 5. Provide a reliable and worthy reward system for work well done. I have been told that the "On the Spot Awards" for excellent performance is "not done yet by our center" and that it is under legal review. I am extremely disappointed that there are few good ways to acknowledge good performance (my staff does not want time off awards which seems like the only option these days).
- Science is about inquiry and discovery, yet NOAA treats its scientists as cogs that are limited to ginning up specific support for specific policy-related needs. If we want to follow a line of inquiry that we see is important to the NOAA mission, we need to go hat in hand to our supervisors, who, if it doesn't fit into their strategic plan, will withhold resources, remove science duties from our performance plan, or give us poor performance evaluations. As a result, there is NO scientific advancement coming from within NOAA. I for example, was hired as a scientist, but have never been permitted to perform scientific research - and when I attempt to do so, I am punished.
- NOAA can remain the authoritative source for environmental scientific information by focusing more on the quality of the scientific software that creates that information. My recommendation is to adopt the Capability Maturity Model Integration (CMMI), a software process improvement model of best practices organized into common process areas designed to achieve certain quality goals. The CMMI was developed by the Software Engineering Institute, a Federally Funded Research and Development Center operated by Carnegie Mellon University (CMU) under contract to the federal government. The CMMI is now maintained by the CMMI Institute, also operated by CMU, and is in

the public domain. Large improvements in quality, productivity, and schedule adherence has been demonstrated by organizations that have adopted the model and implemented selected practices.

- and emphasize the use of best available science by rewarding those who bring that to their work.
- Develop and institute a policy to standardize the guidelines for authorship of scientific products. Inconsistencies between groups occur, where some supervisors impose authorship on most(all) products coming from their unit regardless of their involvement. Most scientific organizations have guidelines for authorship, many of which are geared more to the academic environment. In the federal system, where much data collection occurs without clear or implied 'ownership' the roles and inclusion of authors can become muddled. As far as I am aware there is not an agency wide policy on this. Since publication is a major part of our mission, It would be good to have annual reminders of such a policy to those who publish scientific literature.
- High quality, driven by scientific fact & highly credible
- Listen to the employees. Stick to the science, for science's sake. Eliminate the politics. Let the findings stand for themselves.
- Scientific work is limited largely by the disciplines of fisheries science and fisheries economics, whose practitioners are technicians and not savvy of the underpinnings of their respective disciplines.
- More collection and use of data pertinent to management of the fisheries.
- Less restrictions on travel to scientific meetings
- We face serious budgetary constraints that limit our data (e.g. data holes in fisheries management such as adequate stock assessments). We also do not have the resources to travel or attend workshops to keep us current as far as what is going on in present and future science that is applicable to our jobs. The fear of tightening purse strings really limit what we can do.
- Also, insufficient support is given to the social sciences (economics, anthropology, etc.).
- Trust the integrity of the scientists who are the ones to conduct scientific work
- Provide scientists more freedom of conducting scientific research
- travels to scientific conferences are still very limited this year, which should be improved.
- The travel ceiling has severely limited our ability to conduct field research and has prevented the attendance of any scientific conferences.
- Also in my agency, I think scientific work (research) could be more efficiently applied (operations). The Research to Operations process is in dire need of help.
- NOAA is often is sharply criticized in public forums (press, media, etc.) about very specific issues by politicians, industry groups or academics. The response time by NOAA to such criticism is often significant and the tone of the response rather softened. Often, the scientist most familiar with the issue composes a response that is iteratively watered-down and softened as it is passed up the through successive administrative levels before release. One result of this lag time and the weakened response is that the public tends to accept the initial criticism as legitimate, however inaccurate it may be. A second result is that critics have no reason to believe they will be held accountable for their statements. This process is a major impediment to the public's perception of the quality and perceived legitimacy of science being conducted at NOAA.
- More flexibility to do self-directed research, especially if funded from grants.

- A commitment from American society as a whole to respect scientific work and not to attack their integrity just to win political points.
- Easier access to a wider range of scientific journals; More generous, and speedier, support for software requests; Greater encouragement for, and less obstacles in the way of, publications; Encourage scientist from NOAA to spend occasional periods of time at other institutes at home and abroad in some kind of exchange programs, likewise hosting scientists from those institutes for comparable periods.
- More emphasis on scientific analysis at NWS WFO's instead of side projects, social media emphasis, and unnecessary redundant or scientifically unreasonable implementations.
- It is important to get people to National Conferences. Travel restrictions and limited budgets have severely limited people to get to the national conferences (AMS, NWA, etc.) Also, the timeliness for travel funds to attend these conferences is extremely poor. Group travel authorized through the DOC to NOAA to NWS field offices is less than a week in some cases (i.e. the 2014 AMS Severe Local Storms Conference 3-7 November 2014). The scientific work needs to be discussed at these forums, so it can then be placed to potential publications, policy, etc.
- Too many layers of administration to simply present and/or attend a conference. The budget rarely supports me attending. NOAA policy prohibiting employees to attend conferences if they are willing to fund a portion of the conference fees with their own money (it's either fully funded or no-go) is extremely detrimental to science-sharing and morale. This should be addressed and corrected; official time should be provided regardless if the entire conference fees are funded by the parent agency or not.
- Garbage in garbage out principle ... it would be nice to see some emphasis put back into the Cooperative Observing Program as it provides a tremendous amount of useful data. However, the equipment is antiquated and needs modernized.
- Include a more evenly diverse group of organizations for non-federal advisory committees.
- Stop hiring cooperative institute scientists who know that they can be dropped (effectively fired) without any justification or reason whatsoever. The current system allows incredible control over scientific studies, if only by innuendo. "That doesn't sound like it's in NOAA's best interest" can be heard as "Publish that, or say that in public again, and you won't have a job in three months."
- Properly tabulating data correctly, and raking it not based on political agenda (trying to prove climate change) but to let the data describe the actual historic situation. As an example, NOAA released that Summer 2014 was the hottest on record. It was not. It was 29th in the last 100 years. It also falls in the natural cycle. They also released that this winter so far was the warmest on record. It is not. It is about average.
- Full access to scientific journals. The subscription prices have been the excuse that the NWS has used to restrict access to the full spectrum of scientific journals. NWS offices do not have full web access to journals in complementary fields such as hydrology, coastal restoration/hydrologic processes, engineering (ASCE journals) etc. At one point recently, our staff was told to identify articles they needed to complete rebuttal questions from reviewers in the peer review process. Once these articles and their respective DOI numbers were identified then they needed to send the

list to the NOAA library in Boulder where a librarian would download the articles and then send them paper copies (not electronic) via regular mail (not Fed-EX or UPS). We can do better.

- Additionally, the review of articles in a majority of cases is being conducted by persons who have never published in a professional journal which includes the peer review process. This is severely limiting the opportunities for field forecasters to publish their operationally relevant research. This in turn leads to limited visibility for the NWS and the visibility for scientific issues that potential collaborators could assist with.
- Re-initiate minimum standards in data collection equipment and sources. Upgrade field equipment, at least into the 1990's.
- Focus on basic science; less "sloganeering"
- Integrate programs - explore the connective tissue between all data and modeling programs
- Provide adequate training and resources for science and research to operations. Currently very few scientists are allowed to participate in major scientific activities, and the process is very cumbersome due to GSA managers abusing travel (Las Vegas GSA Managers' conference); additionally, severe budget shortfalls have significantly reduced ability to conduct science and training.
- Let scientists do science
- The only real problem I have run into was, in the interest of computer security (which is a valid concern, of course) that I lost the right to add-ins in Microsoft Excel. I had a project that depended on a Microsoft Excel add-in, the Data Analysis Tool Pak. Not sure if this fits exactly with what you're asking, just in case though, it was one way in which my science work has been affected. It would be nice to find the proper balance between IT security and system usability.
- reduce the number of weather prediction models, reduce redundancy in the work of different NOAA sub-institutes
- Close collaboration between research community and operation community.
- Methodology and buttonology should not eclipse scientific understanding.
- Stick to the Standards.
- As a social scientist in the agency, given that the agency's mission relates so strongly to the well-being/resiliency of the U.S. citizenry (at least on the weather side), I feel strongly that social scientists need more of a voice in management decisions. For example, new policies for warning practice or communication are frequently generated and implemented without consultation from social scientists. Optimally, social scientists would be the people generating new policy ideas and testing them before recommending something for implementation. In part, this isn't happening because there is not a strong social science infrastructure in the agency. That could easily be changed. Physical scientists making these decisions on their own is wholly inappropriate (and can be dangerous).
- Adherence to the Truth and sound scientific principles.
- I think if each of the NOAA labs and centers had dedicated social scientists on staff (not just limited to environmental economics) that would enable NOAA's to better educate and communicate the value and integrity of the work.

- NOAA needs to improve its data collection and handling. Its software is crude and labor intensive. Its websites are poorly organized and incomplete. GIS platforms are very labor intensive, limiting the amount of work that can be done. Not enough man-hours are devoted to developing its operational efficiency. Ideas and creativity are stifled by insisting on nation-wide committees with regard to development of tools and programs. To fix this NOAA needs to double its effort to improve its modeling, archiving and data processing capabilities.
- It needs to double its information processing personnel who now have more than a year's back log of work. NOAA is no longer able to keep up with the advancement of technology in the public sector. Innovation is now so slow that some of their software and resources are obsolete before they are even fully implemented. Suggestions for improvement often take more than 1 to 2 years to implement and many are denied due to lack of resources. If NOAA is to keep up with the science they must be ahead of the general public. Also personnel are having to deal with a multiplication of diverse communication platforms which is very time consuming. (Think Facebook, Twitter, Hootsuite, telephone, internet web pages, NOAA Weather Radio, live media, NOAA Weather Wire, IPAWS, EMWIN, CB radio, and newsletters, none of which are well integrated into operations, but most of which are mandatory.)
- I think NOAA could allow some more highly respected researchers to branch out a bit on their own to find non-standard results that could establish new insight/policy.
- Reduce conference travel restrictions.
- The integrity of the scientific work could definitely be improved by easing the onerous "security" procedures required for domestic and foreign visitors to NOAA laboratories. The walls between NOAA scientists and scientists from both academia and industry have become higher and thicker in the last 15 years, to the detriment of the breadth of expertise available to NOAA for the fulfillment of its mission.
- Consistently maintained field sensors and gauges.
- Additional clarity is needed in how to best implement findings related to social sciences. Much research has been conducted on subjects such as public response to warnings, but how these findings can be implemented is uncertain, particularly since individual responses to hazardous weather are so varied.
- The best suggestion I could give would be to increase the amount and variety of data collected. There is a trend of reducing data collection, increasing focus on certain data sources. Some of these sources are deeply flawed from a scientific standpoint, others are poor or marginal. This reduction in data collection seems to be motivated by numerous different reasons, from reducing personnel and oversight, to simple budget considerations. There is also a tendency to shift data collection to contractors with little to no oversight, or to rely on automated systems with known flaws that can have a large impact on data quality. Often, use of flawed automated sensors seem to have no attempt to correct or compensate for the flaws. Operations that still exist to deal with the limitation of sensors in data collection are slowly being terminated, despite no appreciable change in cost. I have also witnessed a national change in data collection sensor systems with no real attempt to compensate for the different performance characteristics or biases between the two systems. It is unnecessary to say that this could have a large impact on the scientific accuracy of results obtained

using data from these two systems, if the age of the data used extends into the time period of the previous system.

- More input from the field offices. That is where the work is done.
- Forecast and estimate verification are areas of great weakness within NOAA. Hydrologic forecasts and estimates of precipitation need to be verified against known quantities. This will allow NOAA to establish the current performance levels of their estimation techniques and allow them to test new methods against the current standards. Hydrologic verification remains an almost invisible man within NOAA. Some steps are being taken to verify probabilistic forecasts. The only problem is that you can not really verify a single probabilistic forecasts. Any single probabilistic forecast will always be correct. It must be verified within the context of dozens or hundreds of forecasts using identical methods. The emphasis on probabilistic verification has reduced the emphasis on the verification of deterministic hydrologic forecasts. This is an area that NOAA has long neglected due to its complexity. Both verification programs are essential to maintaining the quality of the hydrology program within NOAA and developing and testing new techniques against those currently in use.
- With respect to modeling, and more specifically atmospheric simulation for numerical weather prediction, NOAA (like many U.S. government agencies) gives software engineering short shrift, leaving it to committees of repurposed scientists -- in other words, non-experts with respect to the technology. This, despite the fact that high-performance computing has always been a central enabling technology for earth-system modeling and will only become more important to the enterprise in the coming decade as HPC moves towards Exascale computing. The way HPC technology is managed at NOAA, particularly from a software engineering point of view, is a national disgrace.
- More focus on the use of basic science, and particularly basic physical science, to improve numerical models used by policy makers and the weather service; and improved access to computational resources to improve these models.

Political and/or Corporate Interference

(Mentioned in 12% of coded responses)

- Occasionally you can see political influence through the budget process, but nothing out of the ordinary or clearly unethical. Now and then you can see advocacy groups having undue influence with mid-level managers (non-profits as opposed to industry groups), but that is about it.
- The center director of the ██████████ Fisheries Science Center should support and back up the findings of scientific staff / research instead of succumbing to pressure to adjust fishing regulations to suit the needs (or greed) of the industry.
- More use of scientific results in decision making; less political consideration
- with whomever we are able to obtain funding from,
- Why are we required to support the President's non-scientific stance on any science topic. I vividly remember that I had to adjust several presentations from pre-inauguration to post-inauguration. Obviously the science didn't change between 10 am and 11 am on inauguration day.
- Stop bowing to congressional pressure and political influence.
- More agency independence from political influence.

- By standing up to political pressure, not caving because of the threat of controversy, and abiding by the statutes and regulations to the letter.
- Take away business influence whose economical interests contradict impacts of scientific results
- If agency management focused on science rather than politics and special interests. The number of buoys currently not functional and out for long periods of time without being fixed is a key example of the need for agency management that understands what is best needed to put science at the forefront.
- Separating political agendas and the interests of regulated industries from the actual research being conducted by agency scientists. It is hard to move forward if there are internal agendas that must be overcome to get to the actual science.
- However, there have been instances of too much influence of managers in the risk assessment itself. This has not always been bad (in some circumstances it can be useful), but there are cases where the managers have a vested interest (for political or budget reasons) in the outcome of the risk assessment. This can pose problems. And at the very least, it can look bad (public perception).
- Less meddling from congress
- Change the membership of the Fishery Management Councils to include more non-fishing interests.
- To be completely free of political interference, and to have a much larger budget.
- The premeditated outcomes from negotiations and political wrangling prior to Fishery Council meetings needs to end, and NOAA needs to stick to what their mission is, not what their mission is.....right now.
- Direct research endeavors towards science needed to make informed policy decisions. Do this without using top level or external influence to bias the results.
- and decrease level of outside influences.
- Create some sort of non-governmental oversight committee to ensure integrity is maintained and not influenced by corrupt...agenda driven politicians.
- Over past year have read of a number of situations that to my opinion show what could be bias from NOAA decision makers to support economic growth or politicians will (i.e. decline to establish a National Marine Sanctuary in Alaska, BP Oil Spill response). Maybe the fact that NOAA is an agency within DOC is controversial.
- Administrators of federal agencies should not be political appointees but rather selected by a non-partisan board, as in the Canadian governmental model. This would reduce the political pressure on agency decision-making. And especially for science-based agencies, would improve the extent to which the agency relies on science to base their decisions. NOAA's, and more specifically NMFS's, creation as a hodge-podge agency has created an uncomfortable marriage in implementing federal mandates that are in opposition to one another. Two conservationist mandates - the Endangered Species Act and the Marine Mammal Act mandates NOAA to conserve species, while the Magnuson Stevenson Act mandates NOAA to extract resources sustainably. Because the lobbying groups for conservation are less well-funded and/or more poorly organized, or perhaps because conservation takes funding whilst resource extraction contributes to GDP, or perhaps because fishing advocacy groups are more vocal, the two mandates are not given equal weight. As such, protected resource operations at NOAA should be transferred to Fish and Wildlife Service.

- NOAA's mission is compromised by conflicting goals. On the one hand, under the Endangered Species Act they are charged with protecting marine species (including salmon, steelhead, and sturgeon in freshwater environments), but on the other hand they must not impede economic opportunities. This puts the agency at odds with special interest groups, NGOs, and water users. The integrity of NOAA could be improved by adequately staffing area offices with scientists that are trained in statistics, fishery modeling, risk assessments, and water law. NOAA's mission could be improved by working closely with the media to educate politicians and the general public about how these fish became listed in the first place.
- Also leave politics out of scientific research. Admin needs to be highly non-partisan in decision and policy making/enforcement. Politics hinders much of what we could be doing. Despite being political appointees, politics needs to stay at home.
- When the DWH oil spill occurred in 2010, way too much Private industry involvement. The science was reviewed and protected by NOAA, but they were not the lead. Private Industry made a lot of money off the tax payer, when the Government had an agency (NOAA) that could in many ways provide research on Oil spill Damage, with the expertise from Exxon Valdez oil spill under their belt, cheaper and with more accuracy and integrity than private researchers and contractors, many under the hand of the oil industry. But NOAA was not used as it should have been—the excuse being private industry is cheaper!
- We have to communicate the science and not let politics by other agencies (federal or state) unduly influence decisions.
- Remove the conflict of interest that exists within the National Marine Fisheries Service where the same decision maker (both at the regions and HQ) about Fishery Management Issues is also the decision maker about Protected Resources and Habitat Conservation Issues. In the Southeast Region Scientists and Resource Managers within the Protected Resources and Habitat Conservation Divisions are often forced to alter their findings if it would shine a negative light on the Sustainable Fisheries Division or on the Fishery Management Councils. I am aware of numerous cases where the Regional Administrator over ruled findings by the staff in the other offices because it would have forced changes to Fishery Policy. The regional administrators have significant conflict of interests in that they manage programs that are supposed to be the watch dog of each other.
- separate NMFS fishery management functions (Magnuson Stevens Act) from protected resource functions (ESA MMPA). make these true action and consulting agencies, not one agency wearing 2 hats.
- Remove the politics
- It would be really nice if the political and/or slanted AGW influences were taken out of what should be truthfully reported to the public and let them decide.
- Decisions are made on political whims and not for the best interest of the scientists.
- The presentation of scientific findings must not be influenced by political appointees with an agenda. The science should speak for itself and not be suppressed because it does not support the views of special interests such as multinational oil corporations or others who believe the planet exists for their convenience and profit. Or, for that matter, those who believe that climate change is

part of the 'end of times', and preventing global warming would just piss off a higher power and prevent them from making it to heaven in a timely fashion.

- Congress, and the members thereof, impede NOAA's scientific work by threatening the funding of the agency over findings that conflict with their personal views. Less interference from the political side of government would greatly improve the integrity of NOAA's scientific work.
- More funding and less interference
- I think the industry is too involved in the decision making process and they are treated as our customers. I think the whole nation is our "customer", although I hate that term, and we should have proportionate representation on the regional fishery councils of society as a whole. The councils, as they are now, have a majority of people who have a vested interest in the fishery, and there is no way they can make an objective decision when their finances are at stake.
- The mission of NOAA should be adhered to regardless of political pressures or 'inconveniences' found within the regulations governing our responsibilities. This would appear simple, but too often our management is quick to try to appear like "the good guy" and then let NGOs and the legal system fix our intentional mistakes (for political reasons mostly). The scientific integrity was better in the past. Systems such as agency scientific integrity and review processes open a door for managers and non-scientists to influence the science being released. It's a perfect example of identifying a problem that was not really a problem and then creating a "fix" to the problem that actually creates a problem.
- Sticking to science and leaving out political issues.
- Leaders of NOAA are political appointees who are put in place to ensure political agendas are achieved. There is pressure to 'fall in line' with political goals and objectives. Science should be immune from advocacy.
- Stated support by Congress - publicly, and loudly The current climate of Congress (non-scientists) questioning scientific basis of regulatory actions by Executive Branch of federal govt undermines public's perception and acceptance of science as a useful tool in solving vexing natural resource management issues. The current Congress panders to the uneducated, right wing "believers" who only accept what 'they can see'. The perfect example is the decadal census of US which was proposed by Census Bureau to be conducted via surveys to be more accurate, efficient, inclusive, and lower cost, but due to the lack of support for statistics by Congress and public the Census Bureau was forced to abandon any survey methods and count all individuals, including in person visits to the hard-to-reach sub-populations (very expensive). Very sad to see the US plummeting in world ranking of math and science expertise. This week (Jan. 30) there is a massive backlash against Nat'l Weather Service, NOAA because their forecast model consensus missed the mark on a major storm projected to hit NYC, but it did so on the high side - prediction for many inches of snow, blizzard conditions that would have paralyzed the city and cost millions to manage. The actual storm moved further east and resulted in some wind, only 8 inches snow to NYC. But the public and govt officials complained about the poor prediction by NWS! Pathetic.
- Remove all political agendas and influence by those without expertise in a designated field of study.
- Remove leaders who are political animal
- less politics,

- If NOAA could focus strictly on science and not also on promoting commerce.
- When it comes to decision making, political and business pressures enter in, but these are always, in my experience, at a higher level.
- Stop giving in to political and industry pressure when making scientific decisions!
- Avoid politics. We do not embark on certain paths due to fear of the "political fallout", whether it is true or not. I say let's do it and see where the chips fall, but managers will not put their neck on the line, even though it will not likely result in their firing. The pervasive sense of "fear from above" is misguided.
- Leave politics out of it
- remove the influence of business on NOAA policy
- The best way I can think of for integrity of scientific work to improve and the impact of scientific results on policy decisions to increase is for NOAA to have better communication and representation with elected officials than industry has, which I don't think is the case now.
- Congress should adequately fund the agency to a level that would allow NOAA to accomplish its mission and stop interjecting politics into some of the agency's areas of research (e.g., climate change).
- Eliminate political appointees from the organization, to ensure the focus stays only on science.
- Stick to the science, for science's sake. Eliminate the politics. Let the findings stand for themselves.
- By having career civil servants as administrators of NOAA instead of political appointees.
- Less political influence.
- Remove political appointees from the heads of the scientific agencies.
- Reduce the influence of non-science, biased members of public who have a monetary interest in decisions.
- Ignore congressional politics.
- Those people often are making decisions that are not based on science, but their own special interest
- Right now control of funding streams could lead to retribution for those that do not tote the party/NOAA line
- NOAA is often is sharply criticized in public forums (press, media, etc.) about very specific issues by politicians, industry groups or academics. The response time by NOAA to such criticism is often significant and the tone of the response rather softened. Often, the scientist most familiar with the issue composes a response that is iteratively watered-down and softened as it is passed up the through successive administrative levels before release. One result of this lag time and the weakened response is that the public tends to accept the initial criticism as legitimate, however inaccurate it may be. A second result is that critics have no reason to believe they will be held accountable for their statements. This process is a major impediment to the public's perception of the quality and perceived legitimacy of science being conducted at NOAA.
- Managers and politicians tend to oversimplify arguments and to slant arguments in response to perceived political wings.
- Eliminate top down pressure to conform to administration politics.

- Electing a Congress that is not hostile to science and accepts the conclusions of the vast majority of climate scientists.
- Removal of political influence would be helpful.
- Get away from the political influence and let the pure "science" and data dictate the facts.
- Fix the way Congress and the White House run federal agencies. Give us a real budget, and stop using scientists as pawns in political wars.
- It would be nice if NOAA officials - and their line office leadership - would stop playing the politically- and fiscally-driven practice of sensationalizing research findings for the purpose of ensuring future funding. While I fully understand the "inside the beltway" mentality of chasing headlines and polls in the funding process, the politicization of the environmental sciences is a step backward for ALL scientific professions. Recent media releases by NOAA and other Federal agencies (e.g., NASA) proclaiming in banner headlines that "2014 Was Earth's Hottest Year On Record" are not only misleading and manipulative, but were more deceptively described as "Earth's Hottest Year EVER" in social media posts by the agencies. This type of hyperbole only serves to inflame the political opinions and arguments of the layman and diminish the integrity of the agencies making such misleading statements. As a scientific agency, NOAA - and ALL other science-based agencies - need to tone down the rhetoric and state the facts without a political slant, and with the acknowledgement that, as financial analysts are quick to point out, "past performance is not necessarily a predictor of future results."
- Disengage from politics
- Making it not based on political agenda (trying to prove climate change) but to let the data describe the actual historic situation
- The requirement for prior approval before speaking to media is the most mission-hampering rule inside NOAA. It is not actually all of NOAA, nor all of NWS. But it is all of NCEP (my zone). The rule is so extreme that answering a media question directly about the color bar on my public -- managerially approved -- web page resulted in some hazard to my then in progress promotion. Ultimately I did get the promotion. But the policy remains in place, and has been reaffirmed even after NOAA released its new (under Lubchenco) policy which a naive person might think was encouraging NOAA scientists to answer media questions. More generally, NOAA and NWS management has long held a 'one voice' policy regarding speech in public. In practice, this has turned in to only one person within NOAA/NWS being allowed to speak in public about any given topic. Many of the areas of political concern have little scientific controversy (e.g. the globe is warming, arctic sea ice is decreasing, ...), so this is more a matter of demoralizing the many people who have been approached by media, who have technical expertise on the question, but are not allowed to speak. In areas where there is legitimate scientific controversy (e.g., "Why is antarctic sea ice expanding?", "Does the declining arctic ice pack lead to a more meandering jet stream?"), the 'one voice' policy leads to misrepresenting the science, since only one person may answer. Suppressing voices leads to public confusion as to what is truly known, versus what is management's line.
- Throw out the stupid people in congress.

- Some other research work on a new NASA satellite for soil moisture estimation (SMAP) was banned. The reason, I later learned from several sources was simply that the new chief of the Hydrology Lab had been supporting a competing mission that didn't get funding, not because of the lack of relevance of the SMAP observations. This same chief put misleading information into the 2015 President's budget, information that contradicted direct scientific results
- Stop Congress from telling NOAA how to spend its money.
- There is an unspoken political pressure on at least some NOAA scientists. Our funding is largely dependent on politics and I believe this could jeopardize the integrity of some work. I do not see an easy solution since this relationship is embedded in the government structure.
- Allow both sides of an argument. For example, there are a great number of scientists in NOAA that deal with meteorological data every day, that study it, research it, and are skeptical of AGW (Man-made Global Warming). Yet, NOAA will beat down anyone (at least since about 2010) who does not go along with the standard that AGW is occurring, the "science is settled". No it isn't. Any scientist that says the science is settled is not a true scientist, they are politically motivated. Scientific discourse causes improved research and more accurate outcomes. That is why we continue to research RKW theory for organized convection for example. In this survey, yes NOAA carries out their mission, research findings, etc., sure they do, for the one side of an argument. There are current projects that investigate the role of Ozone and the restriction of CFCs, sunspots and solar radiation, that are suggested to impact climate change. Most of these are in academia, but I have yet to see NOAA acknowledge these as plausible mechanisms that potentially impact climate change and deviate from ANY narrative that is not in line with AGW and the IPCC report. I understand that these projects may not be directly associated with NOAA, but NOAA can get involved, and does, with academia as much as it wants. In these cases, it will not because it does not pass a political litmus test.
- The political influences literally take the science out of the experiments, out of the best approaches, out of the improvements, out of the job satisfaction. It no longer becomes science anymore.
- Break from political, business and advocacy group pressure. Stop catering to the "bean counters" and find another way to fund science without favors. To return science back to "pure", it has got to be separated from outside influences...other than objective interest. Making poor decisions before the science is done, then expecting the science to magically support those decisions is beyond ridiculous.
- Satellite observations consume a disproportionate fraction of the budget at both NOAA and NASA and often have inadequate ground truth. Special interests (i.e. aerospace lobbyists) push for satellite missions, but expansion of in situ networks is neglected despite value and enabling advances in technology.
- Getting people in elected positions to better understand the science before deciding on the politics.
- Remove the stupid assholes that lobby for their oil drilling, like Koch brothers, and other asshole institutions that lobby against GLOBAL WARMING even though the facts are dead straight in their faces.
- There is too much political pressure to say everything is caused by climate change. NOAA needs to focus on providing scientific information, and not sensationalizing stories just to get funding.

- Also, by keeping political influence (including selection of administrators) to a minimum
- You know how many people advocate a "wall of separation" between church and state, following Jefferson's letters? I firmly believe there should be strict, impenetrable wall of separation between science and politics--including in NOAA. Politics should never--in no way, shape or form--affect scientific decision-making by either NOAA management or scientists themselves. Political appointees need to stay out of scientific decisions completely and let the scientists do science, period. NOAA scientists also have a responsibility to avoid conflicts of interest and politics in terms of public advocacy or lobbying for their areas of research. Climate-change research, for example, has gotten much too politicized, with scientists straying into political advocacies related to their research (a blatant conflict of interest) and managers failing to take impartial, independent stances on such science.
- Integrity can be improved by stopping the flow of misinformation by organizations such as yours that continue to spew forth falsehoods about GLOBAL WARMING for POLITICAL GAIN, FOR MONETARY GAIN!!! Organizations such as yours enjoy silencing and ridiculing scientists who produce fantastic research that disproves your theory of GLOBAL WARMING. You ask questions in your survey that are clearly focused on why your GLOBAL WARMING theories are not being MANDATED AGAINST THE AMERICAN PUBLIC by closing factories, trying to damage any kind of fossil fuel industry that you can (example: the coal industry). You same folks (or your parents) were trying to tell us back in the 1970s that we were going back into an ice age and we must stop the same fossil fuel related industry back then because of the terrible pollution that it causes. What? Now you say, "No, the earth is not cooling - it is actually warming."??????? You are called environmentalists. Your environmentalism is on the level of RELIGION and you try to destroy anyone that is opposed to your viewpoint through ridicule. What you do IS WRONG! IT IS ORGANIZATIONS SUCH AS YOUR OWN THAT ARE SILENCING RESEARCH THAT PROVES THAT YOUR THEORY OF GLOBAL WARMING IS WRONG!! I am tired of your hypocrisy - you worry that your GLOBAL WARMING message is not being mandated on American citizens and American industry - that your message is being subverted. IT IS YOU THAT ARE SILENCING THE OPPOSING VIEW. Listen folks - THE EARTH IS NOT WARMING!
- Stop trumpeting the alleged anthropogenic global warming mantra when there is no conclusive data to support those arguments.
- Less political influence
- The current middle to upper level staff is too concerned with the usual bureaucratic games of empire building and self interest and is therefore willing to bend to the political wind in order to obtain increased funding at the expense of integrity.
- decreasing political influence
- You didn't ask about White House influence. There has been a pronounced shift from the beginning of the Obama administration to now. Initially it trumpeted transparency and since there have been a series of communications that are strangling diversity of opinion. It is abundantly clear there is only one opinion.
- Less politics, more science. We are supposed to be the science experts. And good science allows for debate and discussion of controversial science issues.

- awareness within the professional community of congressional decisional impacts on NOAA operations, both direct and indirect (e.g., by budgeting manipulations).
- Eliminate influence of white house, DOC so science speaks.
- The NWS was just forced to accept an inferior version of a forecast model presumably due to the sunk cost principle. It became politically unacceptable to throw away the garbage project. Now we are stuck with it. American forecast models are an embarrassment and getting worse.
- OAA could be more even in describing science and scientific conclusions. It seems apparent that NOAA provides only the portion of the truth that support its chosen position, but not all the truth around the science or scientific implications.
- Almost all scientific information or advice is influenced by politics from the Executive Office
- Reducing political influence would definitely help.

Communication

(Mentioned in 9% of coded responses)

- More communication and public outreach on the data and products we already provide. Additional research into the best way to communicate our products utilizing the latest social science research.
- Increased funding and the ability to share information with the general public.
- Get the message out, become more a part of the fabric of the nation as NASA is. Our world is a fascinating and marvelous place, NOAA has a place in collecting, preserving and understanding the ecosystems in which we live and protecting them for future generations. NOAA should not do work to placate the politics of the nation, even though the money comes through them (the politicians) the agency has an obligation to be above the politics, working toward understanding the environment for every living thing that inhabits this gorgeous planet. It wouldn't hurt to show the terrible side of development (meaning anything from resource extraction-to pollution-to overpopulation-etc) in juxtaposition with the successful enactment of policies that worked. (Hopefully there are some out there!) People need hope and need to be shown how science can work for the betterment of everyone. Here is a question, it used to be that society had a firm belief in science and it's ability to deliver humanity to a better place, what happened to that faith? When did science become a battle to prove itself? Well, I am not a scientist but I appreciate a chance to say something. I love my job!-helping the scientist make the most of their visual communications needs
- Transparency and better communication of science to a basically ignorant media and public.
- informing all employees, at least once a year, that they are permitted to provide the results of their work to the public, along with the procedure(s) to be followed when doing so.
- my supervisor acquiring an attitude, with a demeanor that easily can be interpreted as approachable, of allowing discussion of how data will be used relative to scientific integrity. With this discussion, the scientist could develop understanding of management's position(s) and have more information to determine the level of scientific integrity in the situation. At this time, the situation is perceived as being risky to initiate a conversation.
- BETTER COMMUNICATION AND COORDINATION BETTER PROCEDURES THAT ALL AREAS FOLLOW CONSISTENTLY

- encourage public outreach for ALL scientists.
- I would like to see NOAA produce an annual summary of the "state of the science of global warming" and links to research that supports conclusions reached by both the global warming and anti-global warming camps. This summary should be an awareness of both sides of the argument that the reader can use to decide for himself which one to support based upon observed facts, current forecasts, and model uncertainties. Similarly, an annual survey of the data networks should indicate areas where data is sparse or dense, where instrumentation has a long period of record or is relatively new, and indicate which critical data are used in which models as baseline climatic information for comparison to forecast changes. I don't think these should be costly, intensive reports. Simply "state of the state" reports that can be compared annually to indicate trends, policy changes, etc.
- Allow the scientific staff to brief Public Affairs personnel on the state of science topics.
- Better communication. Everything in this world is improved by better communication. Whenever there is a problem, whether it be small or big, usually has something to do with the lack of, or poor communication.
- NOAA continues to improve linking its mission to broader societal needs by improving its communication of weather and climate to improve Americans' understanding of impacts on land and at sea, and the ability for people to take appropriate short and long term action to protect assets and further educate their communities. This needs to be accelerated over the next decade, as more Americans live closer to the coast than ever before and own more property of value; events like Superstorm Sandy (2012) and Hurricane Ike (2008) exposed the vulnerability of American coastlines to destruction from wind, sea, and rainfall flooding.
- Less "filtering" of information as communications are reviewed by higher level supervisors. I find most communications lose their utility and contain less useful information as they are reviewed at higher levels.
- Increase the level of communication with internal and external partners.
- Improving communication at all levels from a "need to know" basis to a "we're proud to share". Treating the scientists like they are valued.
- Ensuring clear separation between the processes for communicating scientific findings and the processes for communicating management decisions based on those findings. For example: I work in the National Marine Fisheries Service. NMFS scientists sometime serve as part of Biological Review Teams or Status Review Teams, to provide analysis for determining species 'status' under the Endangered Species Act (e.g., whether species should be endangered, threatened, or not warranted). This process would work better if the scientists were left alone to conduct risk assessments, and then the policy makers were left to make status determinations based on the scientific analyses.
- Improve direct connections to the public through outreach Require some level of outreach by all employees Encourage collaborations with universities and research institutes Promote the means to (more often and better) present results at scientific conferences
- Regarding climate change, NOAA should build a website that integrates and synthesizes for the public the multitude of data streams on climate change from fisheries to coral to sea level rise to SST

to copepods to solar flares. A synoptic view is needed to tell the true story of how rapidly the climate and ecosystems are changing and how they are all related.

- I am not really involved in that much scientific work being produced by NOAA. We produce scientific data to the public via our nautical products. This always could be improved by getting faster processing systems and streamlining the workflow process.
- More freedom to talk without first having to provide "talking points" and draft charts for others to review/approve.
- Also communication about issues that are of concern can help - many of us at the basic research level are not informed of issues where policies or information are blocked unless they affect our particular workgroup, and mostly the upper management folks deal with those issues.
- Currently, the main issues I encounter are communication barriers between scientists and high level managers, and the lack of funding to attend scientific meetings and participate in outreach activities (and of course, the travel restrictions imposed after GSA spending abuse). I think communication issues will be resolved with active reorganization plans that are not yet implemented, and hopefully as time passes we will again be allowed to travel to meetings and outreach activities. I do NOT see any active attempts to stifle the science or stop scientists from communicating their results, most issues are a direct result of the budget issues of the federal government in general.
- NOAA's mission could be improved by working closely with the media to educate politicians and the general public about how these fish became listed in the first place.
- NOAA is a great agency! It needs to "advertise " itself! We have a great website, but we need to do more to connect Joe Q tax payer on the value of wanting to support such and agency! We write some great papers for the scientific community. We are fiscally dependent on Tax payer/Congress. Neither group read our scientific papers. How can we as an public Agency connect our science with non-scientist and make it RELEVANT to them? Government on the whole has become disconnected from "we the people". We are the Government, yet politics has destroyed that concept. NOAA as well as the USA Gov't needs a good PR firm!
- We have to communicate the science and not let politics by other agencies (federal or state) unduly influence decisions.
- Better outreach is needed to communicate the importance and relevance of NOAA science to the management decisions being made to protect and manage resources under NMFS jurisdiction.
- Communication
- Building partnerships with communities world wide to educate and gain knowledge from experts of those communities.
- With better communication across line offices and with better communication to regional and field offices from headquarters.
- Where we can improve is on making our science more accessible to the general public. Unlike NOAA, I think NASA does an incredible job of showing taxpayers how the work they do is intrinsically valuable and can be applied to helping mankind. That agency integrates science with communication and education. Scientists in our laboratory are rewarded or promoted for publishing in journals that most Americans simply don't have access to, in a language that is complex, technical, and nuanced. The extent of their communications is mostly to their peers and to resource

managers, and in many respects, rightfully so. However, our mission could be improved if we focus on giving the public easier ways to find, access, and understand our science beyond what is conveyed in a scientific conference or in a scientific journal. We need more writers, social scientists, app developers, visual designers, web designers, social media specialists, illustrators, videographers, and artists to help tell NOAA's story--that we are experts not just in giving the weekly weather forecast (as many of us in the outreach field have experienced, "NOAA" is synonymous in the public's mind with the Weather Service). We are silent groundbreakers, tackling issues such as climate change, oil spills, ocean acidification and their effects on marine life, habitat, ecosystems, seafood, fisheries, tribes, coastal economies, and human health. Unfortunately, the breadth and depth of what we do in our agency is simply not well known or understood by the public.

- Provide opportunity or require divisional staff and science center staff to meet in order to prioritize a list of potential studies to be sure the studies are related to the division's goals. For example, provide more opportunity for sustainable fisheries division staff to meet with science center staff to align fishery management issues with scientific studies that support fisheries management. Too often science center staff are driven or pushed by supervisors to publish SOMETHING in order to fulfill publication goals rather than looking to conduct quality science that supports fisheries management and real-time issues.
- Better cross-pollination across NOAA line offices. Presently, there is ZERO interaction even when line offices share a building, been there done that, so I know that it is happening
- It can't; What I believe to be at issue is the misconception held by certain stakeholders and parts of the public that NOAA has no integrity. As a NEFOP observer, I have had the opportunity to talk with captains and deckhands on the subject. Although the level of contempt was variable, all of them believed that NOAA has an agenda and that they cherry-pick the science that agrees with their views. While I disagree with the notion, I know that there's always one bad apple that spoils the bunch. At some point in their careers, a scientist was or will be tempted to play with the data to secure grants, to please a superior, or even avoid being fired. It's up to the individual whether or not they succumb to the temptation. Institutions such as NOAA are built upon decisions like this, and if enough bad decisions are made then the institution as a whole loses face. It's impossible to placate all the detractors, but data transparency and open communication can go a long way.
- Simplified Education on new findings so that we can better educate younger people so that they take more of an interest in science and can relate it to their lives now so that we create a life style change to better our environment.
- Allowing greater freedom of communication. We are essentially muzzled by the inability to communicate about our research and field work via social media.
- Maintain the current public process that provides for regular, open public meetings and the ability of NOAA scientists to discuss findings with the public, including affected parties.
- Many of our customers (the general public and the private sector) do not trust the NWS because we are associated with NOAA. We have had great difficulty communicating and teaching science, especially with marine interests, due to the policies and foci of the oceanic side of the agency. This contradicts and impedes the mission of the NWS.

- Inform the public about the science NOAA conducts - transparency in science is a great tool to ensure integrity through sharing what we know, what we don't know and how we try to understand what we don't know.
- Information sharing!
- GSA Travel scandal and budget issues has killed our ability to attend conferences and training to share scientific findings and ideas. It is short sighted to not see the benefits of this sort of interaction among colleagues. Webinars and other forms of communicating this information is a bandaid. It does not provide the synergy that face-to-face interaction and sharing does.
- By allowing freedom of thought and expression by its scientists.
- Encourage staff biologists to publish findings.
- We are doing it in the NWS right now. Using social media, focusing on decision support services and high-impact events, etc.
- Communication and training during orientation of new employees and occasionally for existing employees
- more public communication to tout NOAA role in fish/food supply, weather, safety, environmental oversight, and other impacts on daily needs of people.
- Greater communication between Headquarters and Operations.
- The best way I can think of for integrity of scientific work to improve and the impact of scientific results on policy decisions to increase is for NOAA to have better communication and representation with elected officials than industry has, which I don't think is the case now.
- Secondly, NOAA has practically eliminated the ability for its scientists to communicate their findings. NOAA implemented group travel restrictions and office travel caps that effectively prevent scientists from attending science conferences. The few slots NOAA allows to major science conferences are largely filled by managers seeking to be seen and to deliver the findings of their scientists in a way they see fit.
- and communication to the public.
- More communication between senior leaders and staff regarding NOAA objectives,
- There is a disconnect between southern state and federal management-- particularly regarding recreational fisheries. And it's due to culture. One could point out that this is a long standing issue of state's rights vs federalism. Recreational fishing issues have long been glossed over in Silver Spring. I believe there should be more outreach and exchange with constituents. Especially in SEFSC, NOAA Fisheries should be present at forums and fishing shows, speaking to Congress, and working with state partners more effectively.
- NOAA is often is sharply criticized in public forums (press, media, etc.) about very specific issues by politicians, industry groups or academics. The response time by NOAA to such criticism is often significant and the tone of the response rather softened. Often, the scientist most familiar with the issue composes a response that is iteratively watered-down and softened as it is passed up the through successive administrative levels before release. One result of this lag time and the weakened response is that the public tends to accept the initial criticism as legitimate, however inaccurate it may be. A second result is that critics have no reason to believe they will be held

accountable for their statements. This process is a major impediment to the public's perception of the quality and perceived legitimacy of science being conducted at NOAA.

- Make it easier for scientists to set up web sites to communicate their results directly to the public.
- Better communication between the politicians and scientists and between the top managers and scientists.
- Increased communication between branches of NOAA.
- . Recent media releases by NOAA and other Federal agencies (e.g., NASA) proclaiming in banner headlines that "2014 Was Earth's Hottest Year On Record" are not only misleading and manipulative, but were more deceptively described as "Earth's Hottest Year EVER" in social media posts by the agencies. This type of hyperbole only serves to inflame the political opinions and arguments of the layman and diminish the integrity of the agencies making such misleading statements. As a scientific agency, NOAA - and ALL other science-based agencies - need to tone down the rhetoric and state the facts without a political slant, and with the acknowledgement that, as financial analysts are quick to point out, "past performance is not necessarily a predictor of future results."
- Give NOAA scientists more opportunity to discuss their opinions. They are in the front line and have the first hand experience, and most of the times they know which is the best way for NOAA scientific work to be successful.
- Better communication would be better.
- The requirement for prior approval before speaking to media is the most mission-hampering rule inside NOAA. It is not actually all of NOAA, nor all of NWS. But it is all of NCEP (my zone). The rule is so extreme that answering a media question directly about the color bar on my public -- managerially approved -- web page resulted in some hazard to my then in progress promotion. Ultimately I did get the promotion. But the policy remains in place, and has been reaffirmed even after NOAA released its new (under Lubchenco) policy which a naive person might think was encouraging NOAA scientists to answer media questions. More generally, NOAA and NWS management has long held a 'one voice' policy regarding speech in public. In practice, this has turned in to only one person within NOAA/NWS being allowed to speak in public about any given topic. Many of the areas of political concern have little scientific controversy (e.g. the globe is warming, arctic sea ice is decreasing, ...), so this is more a matter of demoralizing the many people who have been approached by media, who have technical expertise on the question, but are not allowed to speak. In areas where there _is_ legitimate scientific controversy (e.g., "Why is antarctic sea ice expanding?", "Does the declining arctic ice pack lead to a more meandering jet stream?"), the 'one voice' policy leads to misrepresenting the science, since only one person may answer. Suppressing voices leads to public confusion as to what is truly known, versus what is management's line.
- I think NOAA needs to improve their collaborative efforts in the field as well as increase their communication efforts. There needs to be more outside communication and dissemination of information to the public and policy makers.
- Focus on basic science; less "sloganeering"

- The National Weather Service has made significant strides in the past couple years to improve communication between the field offices and HQ. It would be nice to see the same commitment made by our parent agency NOAA.
- NOAA has to allow the field to communicate more efficiently with the public...at a faster pace. The legal aspects, and occasionally the economic ones, have a huge impact on our technological turnaround and product improvement.
- Improve on communication and decision making and also the implementation of stream lining services. Products need to be more consistent agency-wide (NWS).
- NOAA must take a leadership role in public education on climate change. There is a woeful lack of credible data on the subject, as is witnessed by recent polls showing over half of Americans do not believe in man-made climate change. We have the most "boots on the ground" in the National Weather Service to give the American people the best data available on the subject so they can make up their own minds, however this is only happening in rare cases and is not driven or even supported by senior management within NOAA.
- Greater emphasis by all Agency Programs, on publication of results in scientific peer-reviewed literature, i.
- NOAA should keep communicating honestly about the limitations of the data and models used to observe/predict climate change.
- would enable NOAA's to better educate and communicate the value and integrity of the work.
- Better communication between upper management and the forecasters in the field needs to take place. Right now communication is poor and decisions being made by upper management are largely a mystery to us in the field. Two way communicate is essential. Since those working in the field are ultimately in the best position to know what is needed to best carry on our mission, those working in the field should have an opportunity to become involved in the decisions that affect the agency as a whole.
- especially in terms of dealing with the media A 1341 non-meteorologist in a management making public statements against IPCC findings is very disturbing, especially considering the lack of education of the individual (no degree in field of so-called "expertise"). We do not base our science on tabloid publication reviews, we base it on sound scientific integrity. Better management of managers speaking outside of their area of expertise is needed.
- NOAA may also wish to consider designing a basic science curriculum for schools making safety procedures and hazards communication terms a mandatory part of training received in primary and secondary education classes. There should be no need to send personnel to each primary and secondary school in the United States (of which there are over 93.000) each year to insure that NOAA's mission can be accomplished by a knowledgeable public.
- . It is also hard to ensure that the scientific findings are shared across the NOAA service branches. Great science work can be undertaken within a line office (e.g., climate change, hydrologic processes), but it is not necessarily utilized by other line offices that could benefit from it (e.g., fisheries management). You don't know what you don't know - and the lines are still terribly disconnected, so things are missed

- Congress and advocacy groups need to understand that man made climate change is real, and is going to have devastating impacts in the not too distant future.
- Communication with the public has greatly improved since the Bush days. I feel free to respond to media requests without seeking anyone's approval, although I will usually contact our press relations person for advice on how to respond to requests. During the Bush years, we were told not to use the term "global warming", but instead use "climate change" for example. Also, our scientific publications were subject to review by headquarters (if it attracted attention). I have not heard of that going on recently.
- NOAA could improve their mission by providing clarity on how best to use and implement social media as it relates to the National Weather Service mission of protecting lives and property.
- Products (in my case, weather forecasts) that are better catered to user's needs. A more consistent message (forecast) among all divisions and NWS forecast offices/national centers of NOAA will create better trust.
- Better communication skills within the agency, especially from the headquarter/administration to field offices and national centers would be a big asset in improving the effectiveness of the mission.

Use of Contractors

(Mentioned in 6% of coded responses)

- They should hire contractors who are underpaid and have been working for the agency for decades in these temporary appointments. Contractors are doing a lot of the outstanding science at NOAA and have very little benefits, pay and comfort of a steady position. Very few people know and consider this.
- Contract employees are disposable second class citizens when it comes to working for the US government. NOAA is no exception. The companies holding the contracts pay poorly and there are no benefits. Discrimination based on disability and age is prevalent among the contracting companies. At the same time, NOAA seems very forthright on the surface, yet these matters are largely ignored. It is a pity that the US government sponsors such conduct, and these problems ought to be addressed.
- contractors to fill full-time positions, but they don't get the benefits or compensation that FTEs get (fewer and less, to clarify). Treating everyone the same would be a starting point for improvement.
- However, I do not think decisions on big issues are taken by the lead of line office I have worked with. However, I do feel NOAA needs racial equality in the hiring process and too much of the budget is spent hiring temporary contractors for work Feds can do. The percentage of Hispanic, African American and Native American scientists working within NOAA as Federal Employees is below 2%. I have worked for nearly 10 years as a contractor for NOAA Office of National Marine Sanctuaries, mostly under contracts for non-governmental organizations that support NOAA Office of National Marine Sanctuaries (i.e National Marine Sanctuaries Foundation). In 10 years I have never had any of the benefits that NOAA Federal Employees have and was not given the deserved opportunity to become an employee. I have learned and enjoyed working with NOAA ONMS very much, and have supported NOAAs mission, but despite my hard work and commitment to raising ocean literacy and interest in ocean science careers among underrepresented youth (a NOAA Education Plan priority), and the fact that my work has been recognized (MERITO program winner of

DOC silver medal award in 2009, Team Member of the year 2011), I have yet to see equality. I have seen a parade of Hispanic contractors work and be laid off for years in the West Coast sanctuaries and never hired. When I have asked and expressed my desire to be a NOAA employee, the answers have transformed from 'there are no Hispanics with the right qualifications back in 2007-1008, years later was budget cuts in the Federal government (2009-2012), and more recently with increased operating budgets the answer is that I am over qualified'. I think for NOAA to generate good science needs to diversify its intellectual work force, and should be representative of its constituents.

- too much of the budget is spent hiring temporary contractors for work Feds can do
- Use of contractors has removed the opportunity to mentor younger career scientists. Passing on institutional knowledge is an important process, and there is a tendency to "reinvent the wheel" rather than take advantage of prior experiences. Current system of keeping Science Centers and Regional Headquarters distinct has helped maintain the scientific credibility of the agency. Funding cuts have largely affected the ability of the Science Centers to undertake independent research and allowed Regional Centers to control research by controlling research monies.
- By increasing funding and hiring people into permanent FTE positions. The work that NOAA uses contractors for is generally long term. NOAA should change the hiring policy to hire people that are skilled and will be successful at their jobs. The job hiring process is very disheartening and give me little hope that I will ever move up at NOAA and be given the opportunity to get an FTE. Especially given that the government prioritizes hiring veterans with no applicable skills over trained scientists. The policy to give veterans jobs that they are not trained for is very bad.
- Too many resources are spent on contracts and contractors. In the amount of time it takes for a contract to go through, or even to add hours to a current contract, we could have hired a term employee and been collecting data. On top of that the FTEs that have been hired to handle the contracts could be better spent as scientific hires. The entire contracting process does not make sense for data collection especially for seasonal data collection. In many cases our research is seasonal or climactic. We need to be getting our equipment out there before the water levels rise or we need to be sampling when the salmon are running but far too many times the contracts are not ready. It makes no difference to someone sitting at a desk whether they process a contract today or tomorrow or next week or next month. But to those of us at the receiving end, it means our contracted field help cannot be hired in time so we have to work longer days to get the job done. We are being told to do more, with less, and you won't be compensated for overtime or comp time. The only way quality science is being done right now is because some employees actually care about the natural resources at stake, yet we feel like our agency is taking advantage of that compassion.
- The integrity of NOAA could be improved by adequately staffing area offices with scientists that are trained in statistics, fishery modeling, risk assessments, and water law.
- As a contract employee who works side by side with the federal employees, I believe the contractors should receive the same treatment as government employees. We all work together to provide the agency with the best possible data for decision-makers and the public.
- Too many contractors, whom many are great scientists, but they are temporary! Workforce is too heavy Contractors to FTE. When someone retires, more often than not, their work-science research may just wither and go away.

- I think that we could use more FTE employees to fill retirements, etc.
- Provide better institutional continuity through decreasing reliance on short-term hires & contractors.
- Allowing contractors to participate in more training within the different units, in order to have better equipped employees that could multitask in any unit when there's a need, increasing and improving the productivity of the agency. Provide Long term contractor positions...this will highly impacted the morale of the employees, by showing that their commitment and years of work within the agency and the job they performed is highly appreciated.
- Permanent scientific technical staffing is being reduced and relying heavily on contract employees; the result of this is the lose of basic "corporate" knowledge. The scientific technical staff are the ones who "get their hands dirty" (i.e. doing the fieldwork and running the experiments) collecting the data needed for the researchers (and NOAA management) to address and answer the questions and accomplish NOAA's mission. Too many of the technical scientific contract employees grow tired of the uncertainty of their positions, and move on to other jobs with more stability. Contractor positions are dependent on the annual budget, when funding is reduced contract positions are one of the first areas to be cut, thus reducing the ability of NOAA to accomplish it's mission.
- We are forced to compete with for-profit private consulting firms who can turn products around rapidly but whose scientific integrity is questionable
- our own resources because we depend on external contracts to pay for NOAA salary, NOAA vessels, and NOAA research operations
- This is NOT what should be happening in a Federal Agency. We have sold our integrity. This is having direct effects on providing high quality, timely data for ESA-listed species that NOAA is supposed to be studying and managing
- By hiring young scientists into Federal positions so that they may gain the experience needed to become effective NOAA Federal leaders in the future. In my NOAA laboratory, most of the scientific research is performed by cooperative institute affiliates who make valuable contributions, however, they rarely stay through the entirety of their career. As a result, NOAA is losing its knowledge and experience base as Federal staff retire and are not replaced with new, young scientists who could make NOAA their career, and NOAA appears unlikely to build that knowledge and experience base for the future.
- budgeting is an issue, NOAA can only contract on an annual basis, a lot of scientists that are currently working as contractors are not able to focus on their research but worried about their funding issue. A longer contract than 1 year will be better.
- increase funding for NOAA scientists to allow continuity in research (i.e., permanent NOAA employees instead of short-term contractors).
- I believe that having more full time staff, as compared to contractors would be beneficial. Contractors move around too much to be familiar with the company's needs 100%, and don't have the same opportunity to grow upwards in their career. The better adjusted an employee is, the better the data and outcome will be.
- Hire the contractors who are already doing government work so they can contribute more fully.
- More FTE positions, less contractor positions = 40% more funding for science mission

- Also, hire government employees for inherently governmental positions instead of contractors. Stop diverting funds to private sector entities.
- Convert contractors to federal employees.
- Less reliance on outside contractors and grantees to do core NOAA work
- For congress to provide budget for permanent employees, instead of contractors.
- Overhead for outside contracts is way too high (over 125% or so) making it difficult to secure grants when a funding agency can go to a university with half our overhead. Plus, I do not see the benefits of this high overhead in terms of support staff. We rely too much on outside funds to support our mission.
- e.g., FTEs,
- Bring the civilian contractors back to federal employment status and
- Give NOAA the ability to hire permanent staff, rather than forcing the reliance on temporary positions or contractors.
- I also believe the positions that I and several of my colleagues hold would be much more effective if we were federal employees. We are well paid but that money is wasted if our advice is not taken and our knowledge is not used. The program I work on is underfunded and placed too low in the organization, where it does not have sufficient positional authority to perform its mission (even though that mission itself is not clearly defined).
- Research funding goes primarily to fund contractors instead of to conduct research.
- I am a contractor, and not a high-level one. Many of these questions I have no idea of the answer to...but I see every day that the lab where I work is crippled by a lack of funds and poor management. My department is approximately 50% contractors, doing work that should be being done by FTEs. I have been working as a contractor for nearly 10 years, and NOAA is being badly hurt by not having enough staff and by having so many positions filled by contractors who have many limitations placed on their movements and work. I am not protected by the NO FEAR act. Management is managing too many people, there is too much paperwork and everyone feels like they can't get any real science done.
- Change the permanent federal employee policy. Many federal employees are not working as good as contractors because the federal employees cannot be fired or laid off. (note: I am a federal employee)
- Federal policies on contracting also interfere with our ability to do the best work we can.
- I think NOAA has an over-reliance on contractors. Not sure why it has gone this route, assume it's to hold down longer term costs, but it really takes it out of the work force, which is by-and-large, contractors, who are unsure if they will be around in 6 months or a year.
- the use of contractors is problematic in terms of institutional memory.
- The end result is not enough personnel to do the job, wasted time hiring contract labor, wasted resources dealing with high contract overhead, and inability of contractors to fully fill labor needs due to restrictions on their duties.
- Fewer contractors.

- More FTEs. If a contractor has been on staff for more than 3 years isn't it time to commit?? This is a horrible way to do science in general and especially big government science at the space and time scales at which national science should be conducted .
- More federal positions than contracted work.
- NWS has gone so far as to hire a contractor at \$4.7 million/5 yr to facilitate communication with our union, instead of talking to us and letting us be part of the decision making process.
- Some of the work was taken away from full time employees and given to outside contractors
- Our agency recently spent about \$1 billion on a software upgrade (by Raytheon) which only marginally improved our ability to do our jobs. It has widely been considered a waste of money and a gift to Raytheon. If this money were invested in research and technology in meteorology, we probably could have made significant investments in improving our understanding of the science, which could eventually lead to better forecasts and warnings.
- Improve mission by moving satellite functions (and their bloated budgets) out of NOAA. Cost overruns on missions such as NPOESS directly benefit contractors but indirectly hinder all other agency functions.
- The cooperative institutes and contractors are a powerful tool for NOAA. However, currently too large a percentage of employees at my lab are contractors. This is not the result of hiring too many contractors, rather its the result of the federal hiring freeze and inability of my lab to fill federal positions.
- Too much tie-in with defense contractors in the satellite weather area. Way too much funding goes to the the contractors to launch and operate weather satellites and far too little \$\$ goes to how to best use these data.
- There is also a tendency to shift data collection to contractors with little to no oversight

Training

(Mentioned in 4% of coded responses)

- More training opportunities.
- Management staff need training on how to interpret science and apply it to decision making.
- I feel with additional training in areas of concern would greatly impact NOAA presence within the scientific field.
- More emphasis on continuing education for scientists - & distributed more uniformly across divisions. I've experienced conditions in which some supervisors support/promote continuing education while others do not. There needs to be more of an opportunity for career advancement without going into supervisory roles. It seems like too often scientists who are after career advancement (e.g., increased salary) go into supervisory positions to achieve that - individuals whose personalities are not suitable for that role. And they are then given little to no training to help them fit into that role.
- Enhance training at all levels including new hires to keep up to date on the latest trends in their respective fields.
- To further equip any organization, there will always be a need for continuous training and educating.

- to allow training by employees who will be retiring in 1-2 years.
- Implement a structured mentorship program for incoming scientists to advance their skills and establish collaborations
- It is also clear to me that some programs within NOAA do not provide clear, positive and high quality mentorship to young scientists and do not hear or value opinions and experiences outside of the current facility/state.
- Provide training* by leadership and ethics attorneys to all science staff on NOAA's scientific integrity policy using actual situations as examples. */ I am not referring to a multiple choice "class" via computer.
- Allowing contractors to participate in more training within the different units, in order to have better equipped employees that could multitask in any unit when there's a need, increasing and improving the productivity of the agency.
- More training opportunities tailored to local sites and work divisions, for example have staff choose the type of training they wish to receive
- . Added opportunities for staff to seek higher education.
- Training on rights of scientists relating to media and the public
- More training for data collection technicians.
- GSA Travel scandal and budget issues has killed our ability to attend conferences and training to share scientific findings and ideas. It is short sighted to not see the benefits of this sort of interaction among colleagues. Webinars and other forms of communicating this information is a bandaid. It does not provide the synergy that face-to-face interaction and sharing does.
- Leadership - at the SES level needs to be educated and held to the scientific integrity policy. And scientists themselves could benefit from knowing more about it. In my own group, this integrity policy has been violated - on numerous occasions.
- Better understanding of the value of these series at the NOAA decision making level is needed.
- ?Renewed emphasis by NOAA top management and Regional management that scientific integrity needs to be promoted at all levels. ?Perhaps develop and publish case studies where specific matters have been settled by courts or administrative procedures. ?Publicize recent examples where OIG or similar independent groups have reported on settled cases.
- mprove access to training and professional development activities
- educate policy makers in science and scientific integrity. Currently managers and policy makers are woefully unprepared to deal with the complexity and technicalities of the science used to manage natural resources.
- There is a significant lack of manager training
- Provide more scientific training at all levels,
- Scientific learning, training and operations
- This severely limits the ability to attend appropriate training (even in house training - at another office). The travel budget needs to match up with the training budget to make the training budget effective, and keep staff current.
- Contracting Officers need to be educated on the mission. They have no concept of the work being performed. Often their timeliness constructs the necessity of critical missions.

- More money toward continuing education and conferences.
- Have NOAA administrators of *various* levels visit the research labs so they can be educated on how we work.
- Provide better training on NOAA policy.
- But I am not aware of any specific training about scientific integrity. Up until 2010, the research work on hydrology at NOAA had no issues of scientific integrity. After February, 2010, a change in the management of the Hydrology Lab resulted in serious restrictions to work that had been previously designated as a top priority for NOAA. Some of the work was taken away from full time employees and given to outside contractors. Some other research work on a new NASA satellite for soil moisture estimation (SMAP) was banned. The reason, I later learned from several sources was simply that the new chief of the Hydrology Lab had been supporting a competing mission that didn't get funding, not because of the lack of relevance of the SMAP observations. This same chief put misleading information into the 2015 President's budget, information that contradicted direct scientific results
- Provide adequate training and resources for science and research to operations. Currently very few scientists are allowed to participate in major scientific activities, and the process is very cumbersome due to GSA managers abusing travel (Las Vegas GSA Managers' conference); additionally, severe budget shortfalls have significantly reduced ability to conduct science and training.
- Increase budget for all types of training and ensure that offices are fully staffed. Some positions in the NWS have been vacant nearly 2 years without replacement. Training and travel budgets are almost non-existent.
- By offering training and a career ladder within the National Tsunami Warning Center. Currently, all training and all meeting opportunities are being assigned to the less experienced employee,
- More transparency in activities conducted by scientists, more transparency in mid-level leadership, more training.
- Providing adequate funding for training to keep up with advances in the science.
- To give staff opportunity to educate themselves,

Transparency and Accountability

(Mentioned in 3% of coded responses)

- Transparency and better communication of science to a basically ignorant media and public.
- It really comes down to some basics, no transparency, no accountability
- Increase transparency of personnel decisions.
- Have more transparency between NOAA admin and the employees
- If the decision making process is not transparent then peoples confidence in the process will erode. There is also an air of 'big brothering' when it comes to speaking to press.
- Increase transparency and accountability of our decision making.
- More transparency from management

- Transparency is key - that and making the science accessible to the lay person. So much of the distrust comes from the inability of scientists to convey not just their findings, but to also convey the issues and questions be asked - and why. It is also important to show the applicability of the science outcomes, how they are applied and why data is interpreted as it is.
- It can't; What I believe to be at issue is the misconception held by certain stakeholders and parts of the public that NOAA has no integrity. As a NEFOP observer, I have had the opportunity to talk with captains and deckhands on the subject. Although the level of contempt was variable, all of them believed that NOAA has an agenda and that they cherry-pick the science that agrees with their views. While I disagree with the notion, I know that there's always one bad apple that spoils the bunch. At some point in their careers, a scientist was or will be tempted tempted to play with the data to secure grants, to please a superior, or even avoid being fired. It's up to the individual whether or not they succumb to the temptation. Institutions such as NOAA are built upon decisions like this, and if enough bad decisions are made then the institution as a whole loses face. It's impossible to placate all the detractors, but data transparency and open communication can go a long way.
- Keep telling the truth
- the result is failure due to leadership's reluctance to be transparent about policies/decisions they are contemplating.
- Inform the public about the science NOAA conducts - transparency in science is a great tool to ensure integrity through sharing what we know, what we don't know and how we try to understand what we don't know.
- transparency is decision making process as to which NOAA activities are high priority clearer articulation from leadership what research should be cut during budget deficits
- Someone could hold senior decision makers accountable for making decisions in direct opposition to scientific evidence. This seems common-sense. The degree to which it is not adhered, even in a very public decision-making process, is nearly shocking.
- clearer policies regarding confidentiality of data collected on industry boats
- The higher-ups need to be held accountable for many things, which impact each and every person below them. Nepotism needs to end. The fear of reporting violations and concerns needs to end. Evaluations from lower staff need to be performed on a yearly basis (Manager 360 as an example).
- NOAA decision makers seem more concerned with protecting their own limited jurisdictions within the agency than with actually advancing science or serving the public good. They only feel accountable to their immediate managers rather than to their coworkers and colleagues.

- Trusting staff and lower level management to doing their jobs properly and holding those who do not do their work (properly or at all) accountable to their actions rather than pushing them to other positions or organizations.
- A second item is accountability for implementation of findings from NWS service assessments. In six service assessments for flood events, the assessment team has made similar recommendations for improvements to the hydrologic forecasting capabilities of the NWS. None of these recommendations have been implemented.
- Transparency.
- More transparency in activities conducted by scientists, more transparency in mid-level leadership, more training.
- Transparency
- by increasing transparency
- Increase transparency
- Policies and procedures that are transparent and promote scientific integrity.
- Improve accountability and oversight of scientist.

Collaboration

(Mentioned in 1% of coded responses)

- Everyone should work happy and help one another for better improvement of NOAA mission
- I would like to see a little more collaboration within my agency, and advanced knowledge of scientific work before it is made public.
- Encourage more collaboration and reduce restrictions surrounding conference attendance
- More internationally collaborations with other countries.
- A more collaborative approach, rather than having multiple fiefdoms doing very similar/parallel work. It often seems like "vanity" science is being conducted rather than something overtly purposeful and objective driven (well, it's usually purposeful, but probably less effective/efficient than it could be). When it becomes a battle between individuals or groups (who are supposedly working toward the same goal) rather than ideas, the science suffers.
- Further linkages as proposed since the 1970s between parts of federal government addressing intrinsic value of natural resources (parks, marine protected areas, habitats, ecosystems)--linkages between parks of Dept of Interior and Commerce to avoid historical stove-piping within extraction or use-based institutions
- By lifting the administrative restrictions and guidelines that make it difficult for us to travel, attend conferences, be invited to participate in workgroups, host international visitors and travel overseas ourselves, collaborate (i.e., we are not allowed to use drop-box which is a standard collaboration tool in our scientific world)..... All of the rules and restrictions are rendering it difficult for outside groups (academic/nonprofit/agency/etc) to collaborate with NOAA scientists.
- I think that scientific work done by those in NOAA could be better collaborated by agencies within NOAA.

- More collaboration between NOAA Scientists and data collection divisions and other scientific organizations; i.e., Universities, USGS, State Science boards, NASA.
- needs to improve their collaborative efforts in the field
- It is also hard to ensure that the scientific findings are shared across the NOAA service branches. Great science work can be undertaken within a line office (e.g., climate change, hydrologic processes), but it is not necessarily utilized by other line offices that could benefit from it (e.g., fisheries management). You don't know what you don't know - and the lines are still terribly disconnected, so things are missed. NOAA's regional teams have helped, but you can't solve this problem with a handful or two of volunteers. People are also very pressured to do more. It is hard to just read everything and keep up on the state of the science.

Whistleblower Protection

(Mentioned in less than 1% of coded responses)

- It seems to me that at upper levels of management, what is actually happening on the ground is often misunderstood or misrepresented. I don't know how to change this - I don't get the feeling that there is any desire by upper management (e.g. science center and DC level) to change this. There is also a very strong chain of command. For instance, I think there is gross mismanagement of the NOAA ships (very difficult for ships to maintain crew, the ships frequently break down, some of the ships were offline for many days at sea last year - all in all a huge waste of taxpayers money), but I don't feel that there is any way for me to say this without becoming a "whistleblower." I just want to be a scientist and do my job.
- Whistleblower laws and science integrity policies help in terms of being able to bring issues to light but our scientists need to be informed about the details of these policies (updated yearly).

These are the open responses from each agency for the following survey question:

Question 40. Is there anything else you would like to share with us regarding scientific integrity at the [AGENCY]?

CDC

- Low epidemic may progress to medium or high in the future
- CDC should not sacrifice the laboratory science due to the recent safety incidence. On the contrary, more real bench work sciences should be emphasized and invested. After all, we can not fully understand science simply based on statistic and epidemiological works.
- CDC scientists generally work with the highest level of integrity that I have seen in the field of health research. Colleagues do work for the right reasons. Problems come in when someone wants to exert too much control — but I think that’s largely isolated and personality-driven. From the field (where I sit), I have not been aware of business pressures, although I would not be surprised if they existed. We are definitely affected by congressional meddling, which mostly results in delays in release of funding rather than changes in programming. Barring occasional personality-based issues I bring up above, the current administration (both Executive Branch and CDC leadership) is much more transparent than the previous one. I experienced true and systematic censorship of science in my years working under Bush and Gerberding. I definitely feel much more open in this regard under Obama and Frieden.
- In general, CDC science is done with integrity and reported appropriately. However, the types and fields of work being performed are highly regulated and this limitation is suffocating for many scientists. Moreover, the recent overresponses to several episodes involving laboratory safety at the CDC were a perfect example of how Congress causes senior management to undertake ill considered and heavy handed administrative actions that affect the ability of bench scientists to perform their jobs and use their training. It is no longer respected that scientists do know what they are doing and the mistakes should not be taken as an indictment of the whole agency. Similarly, requirements originating in Washington regarding laboratory materials and quality management systems have become very onerous. These actions in turn have led to a waste (net loss)of scientific resources, an increase in unneeded administrative personnel, a wholesale waste of scientists’ research time, and very little to show for it but more records. Unfortunately, this model is now being propagated nationally. I worry for younger scientists coming into any environment where materials management is more important than the quality and innovation of the ideas and advances achieved by the science being performed. The paucity of scientific awards for outstanding science at the CDC relative to administrative/epidemiology awards is shocking.
- The main concern I have is about Congressional interference in scientific and epidemiological studies that relate to gun violence (i.e., cutting the funding for this type of research). This is a clear example of political interests preventing the advance of public health knowledge and practice.
- I think CDC scientists strive to work at the highest level of scientific integrity
- Most scientists at CDC show a substantial degree of integrity. The lack of integrity that I have seen often originates with management officials who are risk-averse and reticent to displease their

supervisors by creating controversy. Innovation has stagnated in many Branches/Divisions because of this, and poor business practices that hinder the progression of public health science continue unabated. Managers protect and promote their hires at all costs, even when it is obvious that the hire is not performing their duties as well as they should. Highly skilled laboratory scientists are not promoted from within, and are denied training and networking opportunities while epidemiologists are rapidly promoted and have endless opportunities for travel, conferences, details, etc. The system is broken.

- I did note during the page with possible low integrity, negative influence from outside. I have had one bad experience. Our team wrote a paper in collaboration with a researcher at a government research entity in the UK. At the very end of the peer review, she had to submit it to her supervisors again. They returned it with an opinion that did not match our findings and it had already been accepted for publication. I don't see that happening at CDC.
- Despite personnel problems, overall, I think the agency operates with a high degree of scientific integrity.
- The corruption is more systemic than simple direct interventions on behalf of private interests, especially at CDC (at least from where I'm sitting; I don't know what conversations go on in the front office). Some of the questions here are non-specific with respect to level in the organization (branch, division, center..) and therefore responses are ambiguous.
- Be fearless in disseminating the truth!
- Generally speaking, the research seems to be fairly sound.
- I witnessed the suppression of a paper that was written by a co-worker who has since retired. The study was completed. The paper was written. The paper was approved for publication up the chain of command of supervisors. The paper was in its final form and ready for publication. A final management decision was needed before it could be published. That final decision was to keep the paper internal. Since then new management has come into place and I have not seen this repeated. But I am concerned that if federal research agencies do not rid themselves of politics and cronyism then the public will be denied the scientific facts.
- It needs a deep audit.
- It is amazing that the scientific integrity is well guarded and guidelines provided (sometimes too much). However they are needed to protect the public and the political image. There are many steps and many hoops to get materials, research and publications out, however, we deal with it by making contingency plans and sometimes working day and night to get things out in a timely fashion so they can be cleared on time.
- Policy makers don't seem to consult the scientists actually doing the work/research.
- Often decisions are made based on flawed thinking and without regard for what has contributed to past inefficiencies and failure of progress.
- It is becoming too political.
- I can't believe I am saying this but things got WORSE under a democratic congress and executive branch. That was not what I expected, but it absolutely got worse, especially around the time of the last election. The Obama administration is under horrendous pressure from conservatives to not do science at all, it seems, so I am grateful for all they have done to allow us to do the science.

- I think that the introduction of within-agency completion among staff for funding of projects is counterproductive to fostering teamwork on projects. Lack of understanding of what it takes to complete field research and investigations in the field as well as the time needed to develop answers to public health questions undermines funding support for agencies. Demand for instant sound bite answers that present answers to people/politicians/constituents that may have unrealistic expectations or who cannot/may not wish to understand the complexity of CDC's work is interpreted as unresponsive.
- Overall, I think it's pretty good. However, there some CDC divisions in which scientific integrity and rigor are not so highly prized. For example, in a previous job I had in a different center a few years ago, I was asked to review a study protocol. I found that the methodologic design was weak and biased and said so, and refused to clear the protocol because I thought the study as designed was a waste of time and money. However, my supervisor told me to rubber stamp it and to clear it. I was told that the division director had decided that the protocol was fine the way it was and wanted it cleared ASAP. I was criticized for being a trouble maker. I was ordered by my supervisor to approve the protocol without making any changes and to sign the clearance sheet.
- The science at CDC is exceptional and the scientists that I work with are dedicated to integrity in science..
- Empowering and mentoring LES to be scientific.
- Emphasize to all incoming employees the brand of the CDC: it is of utmost importance that the name "CDC" should be synonymous with scientific integrity, rigorous research, consistent and clear messages, intelligent policies, and an unwavering commitment to improved public health.
- Although many programs are good to exceptional, scientific integrity is compromised in some programs.
- I am honored to work at the CDC and think the agency has some of the finest scientists with the greatest integrity and mission to improve the quality of life.
- I've never felt that I couldn't pursue a promising scientific lead, nor have I ever been pressured to 'fudge' my data.
- In the Freiden and the Gerberding Administrations, there have been major losses of scientific integrity with regards to allowing scientists to speak openly about some of the pitfalls of CDC, and the ways we have addressed those pitfalls. Now everything has to be "sweetness and light" and even internally, CDC portrayed as the World's "salvation" in public health research. Employees must be allowed to show how some methods have not worked, how there have existed some set-backs and failures, and the process of analysis and improvement is part of scientific integrity. The Atlanta Administrators do not trust their scientists... and CDC Public Information Officers want to hide and suppress anything that doesn't make CDC shine. It truly affects morale, and morale affects performance.
- More than half of questions are appropriate to managers, supervisors and directors. I had difficulty in providing answers.
- I would not recommend a young scientist come to [REDACTED] because resources are so scarce. We get one trip to a conference each year (if presenting a paper). A young professional cannot fully develop here any more. Over the last 10 years there has been a shifted emphasis from addressing important

research gaps with full blown studies to shorter term projects that are more applied or practical and are current “hot topics”. Dr ██████ has harmed ██████ by this emphasis. He always avoids controversy and won’t take a stand (e.g. ██████) for fear of political pressure. He no longer supports ██████ legal right of entry into workplaces and bows to industry pressure regularly. ██████ needs a real leader like Dr. Frieden.

- OMB should not be involved in the scientific process. Further they should listen to data. For example, incentives tend to be money savers in the long run because it shortens them amount of time people have to spend recruiting. However, incentives are being declined because they are deemed unnecessary despite ample evidence that they are. More money is being wasted by doing the research without proper support. It is in an injustice to the tax payers to not make sound decisions based on science but rather decisions based on politics.
- The people actually doing the work have a lot of integrity.
- I think the clearance review process should be improved. This process should include people outside of the division too.
- Most CDC workers are very dedicated to their mission and their work at protecting public health. Making sure the agency hires scientists in management and policy positions is critical because those with 269science269s science degrees only do not appreciate the importance of scientific integrity. They also tend to micro-manage scientists.
- I will like to see the overall ESHCO Safety program improve.
- I think we are generally a highly credible, science-based agency. But sometimes we are encouraged not to pursue certain areas of research because of politically sensitive issues, or not to release our work because it could hurt the administration’s policies or upset lobbyists. If we were to be truly transparent and work with integrity, we would be able to talk more fully to others about the work we’re doing without worrying about who could possibly misinterpret it or who it might anger.
- In my experience the CDC frequently fails to follow Human Protections regulations. Even when given direct interpretations from the OHRP, CDC will choose instead to bend the rules to suit its needs. The CDC IRB is a revolving door to other better positions within the CDC. On two occasions I am aware of, CDC IRB employees who worked closely with a department to “find the answer that suited the department’s needs” were later rewarded with jobs in that department. HHS OHRP would do well to seriously and thoroughly investigate the CDC concerning adherence to human protection regulations.
- Keep all management staff up to date!!
- Its important to ensure that all CDC staff understand ADS regulations and other requiremenets.
- Research work and publishing should be encouraged.
- good.
- I think scientific integrity at the CDC under current director, Tom Frieden, is excellent
- “Scientific integrity at the CDC” is very broad, both in terms of it as a construct and the potential of how this construct varies across the agency. There is tremendous variation across the centers, institute, and offices in a multitude of ways (e.g. identified mission, role of agency, etc.) that are readily apparent so there my be significant variation in scientific integrity—and the different

constructs represented within this survey. If you do this again, I suggest querying respondents on their current CIO. Thanks,

- Thank you. —Conflict of interest policies have been developed but could be synthesized for consistency across the agency.
- really impressed with it
- The restriction of website in the CDC intranet doesn't allow us to do some research. For example we can't access PubMed, Google Scholar, and so on in the office.
- Public health has had to operate in the interface of science and politics. The recent permission to examine gun violence by CDC's Injury Center was a welcomed change. It is harder to voice a dissenting opinion at the agency now, though. Each agency has its own tactic for dealing with people who have fallen out of favor...CDC is no different.
- I'm proud of the integrity of CDC science.
- About 10 years ago NIOSH began commissioning National Academy of Science (NAS) reviews of its various research program areas. These reviews gave the outward appearance of being in-keeping with NIOSH's mandate to do rigorous science of public value. In fact the NAS reviews were an elaborate resource drain on the many programs up for review in the 5 or so years of their existence — an enormous cost in agency funds and staff energy that should have been devoted to research. In the end, programs were not improved — ostensibly the justification for the NAS reviews — but our institute director got to appear to outsiders that he was introducing more rigor and accountability to the agency. Only after several years in which the NAS reviews introduced no tangible value and their drain on resources was clearly unsustainable, did the institute finally phase out of this “program requirement.” More recently the agency has announced they will be adopting the Institute of Medicine systematic review process. Another superficial “win” for the institute director as he again places unsustainable mandates on programs who already adhere to rigorous procedures and levels of review in issuing policy recommendations. This latest directive is destined to fail, just as the NAS reviews were destined to fail, but first we'll waste money and time until that fact can no longer be denied. Makes me wish I were eligible to retire.
- Update and provide annual collections of research and study done by CDC — Transfer research into practice and suggestions
- at NIOSH OMSHR — it seems management bows down to regulatory govt groups like MSHA and the large mine companies.
- I think it is high in my C/I/O at least
- Scientific integrity is much better than it was under the Bush administration. There was a lot of political meddling in what was 'allowed' to be done, said, and published. The last 6 years have been much better — current administration lets us do our work.
- fabulous job, I love working here
- I believe that science and research has trumped the ability to hire and train staff with the practical field experience. It jeopardizes the agency to serve our partners in local and state health departments and reasons to 270 because 270(s) such as Ebola
- Women scientists are discriminated against on many levels — unequal starting GS levels, slower promotions, unnecessary delays to publication, bullying complaints ignored.

- The use of new media to reach sensitive sub-populations. We've been curtailed a great deal in this area. Some of the concern comes from the HHS level.
- Many in important positions do not understand science well or do not have an open mind. They like to control and influence and intimidate their subordinates.
- CDC Director says one thing but does another in many cases.
- I truly believe that scientific integrity is supported at CDC, and I and others I have worked with would very often ask ourselves if there was anything that we were doing outside of what we should be doing.
- CDC is doing a lot of work in country, however only activities with high impact are focalized. I think that CDC in country should encourage the production of scientific work for every activity that is done to show the amount of support provided in country.
- I think training is needed in the scientific integrity policy. Career pathways are needed for support staff to attract and retain capable people to support CDC science work at intermediate and higher levels.
- I would ask if it is possible to make available same training (online) so that we better know the scientific integrity regulation at the CDC.
- The politicalization of Lyme disease is particularly damaging and frustrating. Advocacy groups often influence their legislators on this topic but do not have a clear understanding of the science behind diagnosis and treatment of this disease. Legislators then pass directives that are well-intentioned but misdirected. It is sometimes difficult to present scientific findings related to Lyme disease because advocacy groups often follow up with incensed and vitriolic responses. At the end of the day, all of this negatively affects the health of the general public.
- We go through an incredible pre-peer-review before any manuscripts ever make it to journal submission. We must also document any outside activities/potential conflicts of interest in great detail. I feel confident about the quality of science coming out of the agency, but the tradeoff is that we are not often agile or on the leading edge in our fields.
- Scientific integrity of scientists at CDC is of the highest order. Bureaucratic processes in the agency and the Federal Government may be necessary, but slow down the work.
- I have yet to see any real science brought conducted and implemented in my short time at CDC. This is quite depressing and disturbing, given this was a dream job for me.
- In my experience, the scientists at CDC are extremely dedicated to their mission and act with great integrity.
- A little more trust that we as employees know how to handle integrity issues would be much appreciated.
- I believe that scientific integrity at CDC is very high.
- While most of CDC has strong scientific integrity, it is not clear to me that DGHA, particularly the DGHA science office, shares these standards as the DGHA science office seems to make decisions based on political and PR reasons rather than scientific ones.
- Stymied by bureaucracy and arcane clearance procedures that are inefficient and questionably effective.
- the Documentum process is still screwed up and takes too long.

- We do the best we can in an environment where political pressures on scientific work are constantly increasing.
- Rank and file staff scientists are not protected from retaliation by management in situations where there may be a difference of opinion. Management is able to strong arm the scientists they supervise without repercussion. Management supports management and employees have no support in most cases.
- One question asked “The use of government contractors for scientific work is harming the effectiveness of the CDC” and I wanted to say more I think that being a contractor in the government can be demoralizing and leads to inequalities that have a negative impact on teams. It creates a class system of have and have-nots in the workplace. Where the government employees are on top and the contractors are held to different constraints. Also when contracts renew, often people come back but lose all their annual leave and must start over with hardly any leave like a new employee. It also seems like the contracts are awarded to smaller firms that meet some “criteria” for being selected, such as minority owned or small business then they get bought by a bigger company soon after the contract is awarded. It seems like this has happened 2 or 3 times that I know of. It seems like cost cutting measures are being employed on the backs of the actual contract workers to win a contract. It feels unethical to me, to run a workplace like this. Also, sometimes a contractor gets hired as a full time employee. It seems like this only happens if that person has a “champion” who brings them across. It doesn’t seem like a level playing field.
- Integrity only goes as far as folks care. There is no incentive for anyone to care other than out of the goodness of their heart. Many do, but many are just here to get a paycheck and therefore could not care less about mistakes. Fostering an environment of caring about mistakes, being open and honest about how to fix things would be much better.
- The CDC needs to work with their scientist in a way in which they work together and share knowledge and findings. Scientists within the CDC are very territorial and this has caused many good projects to dissolve and fail. Also the CDC allows other scientist to behave in such a way they created bullies and there is no punishment within the CDC for issues of scientific integrity.
- The atmosphere is excellent for conducting high quality, relevant scientific work in most parts of the agency. However, the fear of negative reaction from Congress, OMB, the White House, and the public; and the lengthy, stultifying clearance processes often to HHS, has prevented high quality public health work with social media, the internet, and traditional media, and decreased our ability to issue some guidance and editorials.
- A major hurdle in getting anything out is the onerous review process.
- I worry all the time about the hiring practices here. With wild disregard, Chinese, Russian, Pakistani, Korean, and other nationals are hired INSTEAD of AMERICANS. There are 90 million AMERICANS out of the workforce now and you cannot tell me suitable candidates from OUR COUNTRY cant be found. There is cronyism all over the place. In our group alone — we have a [REDACTED] [REDACTED] as the Branch Chief. I cannot tell you how MANY CHINESE NATIONALS [REDACTED] has hired. And in the same breath we are told here that most of the cyberattacks come from CHINA, RUSSIA, KOREA. THIS is a major irritant for me, as I am highly patriotic of my own country, and this is a public agency — in the public’s trust to spend US taxpayers money. I have seen these nationals clamor to get permanent

positions here — and they frequently do. It galls me to no end. There are so many college students in this country who graduate in science and cannot find a job — YET H1B VISA people from all over the world are CELEBRATED and given the red carpet entry in here. I can't stand this. I am planning to retire with [REDACTED] years of service in [REDACTED] — and leaving govt forever — these practices are truly disturbing. FOREIGN NATIONALS HERE ARE NOT GOOD STEWARDS OF TAXPAYER MONEY. They are on the take in research they get from here to send back home — waste money and if they stay could care less about taking a job a native American could otherwise have. It's totally vile and disgusting and I will never understand it. Crony government hiring their OWN citizens. Over AMERICANS.

- I'm not aware of significant integrity issues in my division.
- Be more open with the policy issues CDC OD has on a particular issue. Just saying there are issues without clearly articulating what those issues just frustrates staff and impacts morale.
- I think it is extremely high. It is sometimes challenging to emphasize what the science is telling us but, at the end of the day, the science wins out. CDC is a terrific agency and I am proud to work for it, despite any misgivings I may have.
- Scientific integrity at CDC is very good at CDC
- This ethical topics are usually tricky because they can be termed as team work, delegation and other managerial term to cover it up. Therefore, there is a thin line to make a difference
- I feel privileged to have contributed to science through the publication of my article, "[REDACTED]" because it contributed to change in [REDACTED]. The country has decided to implement option B+ recommended by the World Health Organization as from April, 2015. This will save more lives and reduce both maternal and child morbidity and mortality.
- CDC staff need more training and participation on scientific issues as we know scientific research have evidence based
- Most people are sound on scientific integrity, although there are certainly biases and hopes among scientists and program staff that interfere with evidence-based decision-making. And most top-level staff are decent. There are just some people placed highly who are poor at governance and apt to cope through bullying and bluster.
- No freedom !
- CDC is funded by Congress, and hence is not independent of the political framework of Congress.
- The CDC should be making the NRD process more fluid instead of being overly sensitive about past infractions. Time-sensitive projects are delayed, and often objective reviewers know very little about the protocols they are reviewing, which also costs the project time. They make irrelevant comments and it is really ecausing for the agency. CDC should really make sure that subject matter experts are indeed experts before they are assigned to review protocols and manuscripts. I understand that human subjects protection is critical, and data credible, however this process has becoming a lumbering dinosaur, which keeps CDC from remaining cutting edge.
- I am proud to work for CDC and feel that whatever faults we have, we do better than most agencies or universities in maintaining our integrity.
- Be more proactive and open to diverse cultures

- The CDC's reliance on contractors is far too great. Excellent scientists leave, regardless of whether they'd like to stay because their contractor role has been fulfilled. Those that can be extended are kept in limbo for many years without being afforded competitive benefits. For example, contractors often have no paid vacation days. Whereas a FTE with a similar job description may get 3 weeks of vacation + sick leave. This causes considerable morale issues among the second class citizens at the CDC.
- Making more and more rules on top of rules on top of more rules won't stop people from breaking rules. News flash: people who disregard rules don't care if you make more rules!
- Overall, I am proud to work at CDC, love my job, admire and respect my coworkers! I do not think there are brighter, more dedicated people in any other US agency or the world. We constantly strive to produce the most accurate results and provide innovative solutions to public health problems. While I understand that management must identify some metrics by which to judge the productivity and effectiveness of the agency as a whole, I think more thought should be given to applying metrics designed for business use. Generally, we do not provide a tangible product for a specified sum in hopes of turning a profit. Instead, we strive for a nebulous ideal (a healthy populace) using funds allocated by the whims of Congress that we must spend completely (though not necessarily for good value) if we hope to receive a similar level of funding the next year. I think a new method of evaluation is in order!
- My only main concern is how politics shapes what topics CDC collects or communicates on its website. For example, in the past, there was a moratorium on research related to public health and firearms. Also, in the past, information about condom use was not communicated on the website because it wasn't politically popular. I was not personally involved in either of these topics; however, in my opinion as a citizen, I think this kind of information should always be conveyed regardless of political popularity.
- Seems like leadership doesn't believe the scientists don't have any integrity. Because of a few individuals mistakes and activities, the entire work force is being punished. Suddenly no one working here can be trusted to have ethics or integrity.
- In the past six months I have attended two events where CDC scientific staff discussed the impact of climate change and what was being done about it. Both of these events discussed climate change as a phenomenon that will have a huge impact on the health of all Americans, however the discussion only involved strategies for mitigating the effects of climate change rather than how public health could be involved in preventing climate change from happening. Public health's fundamental role is to prevent negative impacts before they start. If public health wants to save the most lives and prevent the most disease, we have to work to prevent climate change from happening, not accept it as an inevitable outcome to be dealt with. If this was any other issue we would be working to prevent the cause. I can only assume that it is anti-science political and economic forces that are scaring CDC away from taking a meaningful stand on this issue.
- No Combined Team work is very important in order to achieve a goal. Higher official should take interview/ discuss directly to the employee once a while in order to review the status of the employee to know whether any discrimination, neglect, etc. happening by the Team Lead or other employee. If found something like that the steps should be taken immediately to correct it. If it is

continued, that will affect the productivity of the team as well as decrease the reputation of the centers.

- I have utterly no confidence that the Whistleblower protections have any real worth.
- Most everyone I have encountered in my career is highly ethical. I am disappointed in the tone of this survey.
- The scientists are excellent
- In fact, scientific integrity has remained high over the 30+ years I have been here. To the contrary, excessive fear of doing or saying anything controversial has made the review process at CDC a major barrier to getting new scientific findings out in a timely manner.
- I feel scientific integrity at CDC is excellent — It is part of the reason I choose to work here. I have great pride in my agency and the integrity of the work that my colleagues conduct.
- Integrity is a tough thing to approach. I do not think the CDC oppresses scientific findings or favors some over others, although I do think administrators do have too much power determining what is relevant science worth funding and what isn't. However, the integrity of an individual scientist is something nobody can control. There are always bad apples, whether in academia or government. The difference is that people in academia wash out because they peer review process in publication as well as observations made by their institutional peers, but the people in government are here forever because they can't be fired once they are hired as FTEs!!!
- I feel of all the places I have been employed, the CDC takes great interest in making sure that science done has a great deal of integrity.
- Science at CDC is dependent on funding. For example, although MNCH is a priority issue the DRH has very little money for international work. I have seen money go to staff that were hired illegally to conduct research for CDC. The research that was conducted was based on studies done in the 1980s. The studies had no direct link to scientific principles but because they wanted to hire this individual they made it possible for this person to conduct the study even though the scientific evidence already existed. In other words the science was not novel and it wasn't even clear that it needed to be done. I think there needs to be safeguards in place that can monitor the misuse of government funds to hire people to conduct research that may not be warranted.
- In a science based agency there are going to be a lot of people with a bias toward being factually correct, precise, etc. this bias can lead to an unwillingness or inability to work with uncertainty, to communicate effectively with the public about uncertainty or ambiguity, and a fear of being seen as wrong. CDC culture today is characterized by a fear of looking bad, of being wrong, and of making mistakes.
- Great opportunity for improvement.
- Science can't have integrity until it is informed by practice, and CDC needs help in this area.
- There is what may seem like a contradiction within my answers. I say that the administration or OMB has interfered and slowed down getting scientific information out to the public but then I say that things have gotten better in the last five years. This is not a contradiction because this administration has brought a great deal of attention to the scientific work that me and my colleagues do (which is wonderful) but it has come with a price, which is the interference. It is no

surprise that if the administration is tied so strongly to a particular issue that they would be very cautious about what is being said about that issue by agencies.

- Many of coauthors on publications do not meet CDC criteria or scientific journal criteria for authorship. 2. Programs will force coauthors onto publications for internal political reasons. 3. If a scientific manuscript does not support preordained agency views, it is unlikely to see the day of light. For example, a paper disputing that salt does not affect cardiovascular disease incidence is unlikely to leave the agency. 4. Many people in the internal chain of scientific review are very unaccomplished scientists. 5. Selection of external panels is highly biased. Only people who are known to support a certain point of view are invited to participate in and organize various panels, committees, etc. Therefore, such panels, committees, etc are likely to pretty much rubber stamp agency positions. 6. Also, the same networks of outside “experts” are routinely invited by CDC personnel to populate committees and panels. Fairly incestuous. 6. Because the agency is pretty much seeded with liberals, there is little diversity of opinion. Furthermore, diversity of opinion is not exactly appreciated which has an impact on the science. 7. Many of the so called CDC experts mentioned in the press are often very inexperienced and junior scientists.
- The worse I’ve seen it in 17 years here. Politically driven and risk averse
- Individual scientists wish to be good scientists, but existing clearance policies and other regulations are prohibitive.
- There should be high standards to avoid ethical lapses in the accurate interpretation and communication of results. Although I am sure it exists, I think it is very infrequent that scientists have their work disrupted or discontinued for purely political reasons.
- I am very proud of being a scientist at CDC.
- There is too much pressure by the Agency and Administration to demonstrate impact/outcome when not enough time has been allotted to implement an intervention to get credible results. For example, the budget process involves working on three budget years at once — present, past and future. Often, funding was just appropriated and a month later we are asked to complete some reporting process on accomplishments and funded organizations have barely had time to put staff in place to begin the implementation process. No one wants to hear that position descriptions had to be written, positions announced and competed, interviews conducted and then a person could be hired. Another example is that everyone wants outcome/impact, but no one wants to wait for or allow the evaluation/analysis needed to show the impact. Also, we often know what works based on the science, however, we don’t have enough resources to implement and cannot ask for resources — these decisions are often made outside the science. I would love to see a survey of how many lawmakers are making decisions based on the science and the good of the public versus business or advocacy.
- Scientific evidence ranges from strongest evidence to emerging practices where we need to build the evidence.
- In my experience, scientific integrity is very high in the parts of CDC with which I am familiar. Political interference and the occasional poor manager can degrade overall performance on occasion, but most work at CDC is handled well by motivated people who are generally competent and in some cases, exceptional. Overall, I continue to regard CDC very highly as an organization.

- I think CDC does a pretty good job of trying to use science to make good public health decisions, but sometimes lets politics and political correctness get in the way of portraying the actual truth about various topics. Whoever is in charge in D.C, and our own personal beliefs should have no place in making good public health decisions. This is happening on so many fronts now at CDC that it is frightening. We are mirroring the culture rather than speaking the truth on many issues.
- CDC's mission is excessively driven by its perceived need to look good through visibility of its programs and campaigns. The effectiveness and/or soundness of these campaigns are often in doubt when viewed from a public-health perspective. But if they pander to the prejudices of certain legislators or executive officers, they acquire visibility and funding far beyond what they deserve.
- There is a high degree of professionalism and integrity among CDC scientists all the way up the chain. Non-scientific staff, including policy and communications staff, are also highly motivated to protect public health.
- BUREAUCRACY PUT LIMITS TO SCIENTIFIC EFFORTS OF EMPLOYEES
- Scientists who have been here for decades can do what they want. Management is completely inefficient.
- The quality of the science has remained consistent during my time at the agency. However, managers seem to think they can only present positive information and see to fear having open and honest discussions about potential problems or issues. This has led to making statements that are incomplete or do not fully address an issue.
- I think most of the people at CDC have sufficient integrity to do their job well. It is complicated to do good work, present the results as they are, knowing that people might pick up some minor bits and run with them, based on whatever bias they have. You have to be very careful how you present your information so that it's not just accurately stated, but accurately received. That can be a headache since the media and the general public don't have much of a knowledge about science. But I think most scientist keep working hard to find the right balance. I have seen some people get a bit lost in their personal mission, they get excited about something they find out and are reluctant to let go if it turns out not to hold up, but I worked at a university before and it's the same there, that's just human nature.
- CDC likes to package certain finding in a certain way. I have seen certain conclusion arrived by a research we have funded that get packaged by CDC in a way that seems to be correct on the face of it but not exactly correct.
- I'm hoping that with a new Surgeon General, that the CDC will be able to investigate gun violence and injury prevention as statistics are increasing stale. This is where Congress interferes.
- We need to improve and stand strong.
- Clearance systematically slows down and modifies scientific findings/language. We need to rework this system as far as logistics and practicalities are concerned. Thanks.
- Many of these questions were very peripheral to my work. Perhaps a better selection of individuals to reply to this questionnaire would help improve its accuracy and the integrity of the process.
- I believe the vast majority of the scientists at CDC are passionate, dedicated, and committed to doing the best science possible. I also believe leadership at the lower levels of the organization are doing the best they can to navigate an increasingly micromanaged and political organization.

- As I answered the survey questions, I wanted to learn more about what internal training on scientific integrity is available for CDC staff. I did not recall undergoing such as a required training. Nonetheless, I have just learned that “Scientific Integrity and Quality Overview Course” was launched in 2014 and is currently available to us. I also found an official CDC guidance on the subject dated 2012. I plan to explore these.
- Many of these questions are phrased in a biased way as if there are problems at CDC with scientific integrity. Thus they are misleading.
- This survey asked several questions that were not clear
- Thanks for the survey. Public health remains one of government’s more respected roles yet we still face many challenges. It’s good the UCS is asking these questions.
- You all need to stop over analyzing every little thing. I think all these surveys are just making everything about my job worse.
- Regarding the survey, I would have liked options to say that I don’t know for some of the questions. Since I’m not leadership, I don’t know precisely how leadership makes decisions and selected “undecided” rather than answer something I don’t know. Regarding scientific integrity at CDC, I think it’s excellent. I have no personal knowledge of any breaches or issues of integrity regarding science and think that’s something that is generally very well done here. In fact, it’s a point of pride for many at this agency that we let the science guide our actions and policies.
- I think scientific integrity alters depending on who the CDC Director is and the CDC Center Directors are. With 3 CDC Directors, I have seen significant changes on what is presented to Congress and what is not.
- You should rely on the internal review process within each CIO as sufficient, coupled with the peer-reviewed process of medical/public health journals.
- -Some rating questions in the survey did not give an option of “don’t know” when that was the most appropriate answer and so I left them blank
- Constant budget restrictions and budget cuts are severely limiting the level of scientific progress at CDC, which directly impacts the quality of science and its integrity
- CDC should not under any circumstance compromise scientific integrity and ‘sugar-coat,’ ‘stretch,’ or ‘ignore’ scientific findings as a result of external pressures.
- My experience is that CDC has a clear conscience on how it reports what works. I think many scientists are slave to the broader publication world that is hesitant to publish what doesn’t work. I also think, aside from the manuscript process, CDC does not learn enough from its own work and applies even less of it to future projects.
- Generally what you see from CDC will be right; safeguards and checks are happily bureaucratic — slow but effective if not efficient. It’s what you won’t see that is the problem and will continue to hurt the agency. If you want a timely flu forecast and regional description, go to Google Flu, not CDC. Same for many, many maladies. CDC is at least a decade behind on web-based technology and is slipping further everyday.
- I really doubt that you (and I mean you, who is sending this survey) are actually qualified to ask such questions. Please read the following article: “Why Most Published Research Findings Are False” by John P. A. Ioannidis PloS Medicine, August 2005 | Volume 2 | Issue 8 and try this

http://www.washingtonpost.com/national/health-science/the-new-scientific-revolution-reproducibility-at-last/2015/01/27/ed5f2076-9546-11e4-927a-4fa2638cd1b0_story.html After reading this, you may then realize the great depth of scientific misconduct. Enjoy!

- When I began at the agency nearly 20 years ago, I had a very clear sense (because of the culture in the agency) that I was here to serve the public and that although I had scientific expertise and thus was in a position to determine the best use of tax payer funds for scientific programs and studies, that this job was not about my personal scientific interests. I was here to contribute to filling a critical public health need — thus, all of my work was structured around a public health mission and I always felt it was my obligation to be as true to that mission as possible. Today, I see more corruption than ever before. And the culture has changed. Policy and communications people often want to direct science (sometimes around topics they heard discussed at a night out with their friends). Management seems much more interested in furthering their own careers and thus, if someone from industry wants something, work priorities are often shifted.
- There are a lot of survey questions about communicating with the media. I'm not sure CDC employees would particularly want to communicate with the media. Public communication is a skill and the media is not always kind. Many would defer to communications specialists to get the right consistent message out to the public the right way.
- There are numerous policies to ensure the integrity of the science, but not sure if there is much support by senior CDC leadership on controversial topics such as climate change
- Encourage publications.
- Political considerations have taken over as the overriding determinant of what will or won't be reported to the public about public health issues. International health concerns have been prioritized over national health concerns and have received funding which could be better used domestically. Funds have been given to international entities without proper oversight or accountability.
- Not at the present time
- For the most part, the scientific integrity at CDC is not a problem. This is an important agency, with a very important mission. The problem is the limited resources (budget, staff, technology, travel, etc). There is so much more that CDC could be doing.
- I was confused by several of your questions and could not find an appropriate response; #4- my topic of study has so far been non-controversial, so I don't know. Having no basis on which to make a decision is not the same as "undecided". 18 & 19- sorry, I'm down in the weeds and don't know to which practices or decision makers you refer. 20- what do you mean by an "action"- an agency action, or a program we run or work that we do (or would do)? To the former, no; to the later, yes to many. I'm sure you don't want these comments, but it was your decision to survey a bunch of detail-oriented, specificity nuts.
- The agency does a good job under a constantly increasing level of micromanagement by the Congress and the Administration. This is driving by both political interests and special interest groups. The agency stands up and pushes back appropriately. Focus on accusing the agency is misguided, wrong and not helpful for the success/mission of the agency. The focus should be on pulling back the intrusion from Congress and the White House so that we can work.

- CDC has great scientists but if the topic is controversial, their work is heavily scrutinized. Plus, there are too many limits around what can be investigated and reported. I came to work at CDC so I would be able to make a difference on a larger scale. It is very disheartening to feel so stifled. It takes the joy out of doing research.
- Policy work is very important; however, policy cannot reshape scientific work to fit its means. This leads to reducing the scientific message.
- As I am a fellow some of the questions were not applicable to me or have little information regarding them to make a precise answer.
- The Agency needs to encourage multi-disciplinary and systems-thinking approaches to advance public health research. In public health, we seek for the source of the problem and, many times, we don't use that perspective and fail to explore innovative approaches within the CDC.
- If CDC is practicing poor science, it's not because of external pressures but due to the poor quality of CDC's pampered scientists, who by the way, get the all the awards, rewards, and prestige. Please do something about it. I would ask CDC leaders to send a few of their top notch scientists to any average American University on detail for a few months to see and learn what it means to do research in the real world...
- The CDC is a noble institution with a noble mission and I'm exceptionally grateful to be a part of it. I only desire to do more.
- I am frequently struck by an apparent mismatch between the assigned roles of CDC staff and their skill sets. For example, a health scientist in an epidemiology branch unable to understand the difference between prevalence and distribution in a population. Or, a data analyst who thinks that a point estimate does not need to be included within a 95% confidence interval. Most disturbingly CDC staff seem to stay in these roles for very extended periods, without consequence for poor performance, because their managers lack the will and the means to address these issues. As a person relatively junior in my career, it has saddened me to learn that CDC, or at least the branch I work in, is not a place to learn from the best and brightest in my field.
- Reduce the amount of scientific policing that is implemented by management. Scientists should be allowed the time and opportunity to conduct and communicate the appropriate science in their field. SME's are often treated as staff there to serve management rather than recognizing that they are highly educated, successful, and motivated individuals who are leaders in their field. Having persons with no scientific background make decisions about the activity of scientists is completely illogical and hinders productivity and impact.
- The gridlock in Congress and the standoff between the White House and Congress has been problematic for us. It's hard to follow an executive order or mandate without appropriations attached.
- It varies widely by division/branch, etc. We have leadership in our division recently who have increased oversight and clearance to a degree that many are unhappy with. It's nothing the agency has done, but certain people have too much power to make decisions based on their particular perspectives and whims, not based on what makes good science. As a whole, I think CDC's scientific integrity has increased, but in my division, it's decreased because of key leaders who are very influenced by politics and not wanting Congressional scrutiny over policy.

- It's rare to be told flat out that you cannot publish on or speak about a particular topic. What is common is the intense scrutiny over how things are worded. That can be good in the sense there needs to be some agreement about what gets said. It can be troublesome if wording changes alter the tone or intent of what is said. That rarely changes the science itself, but how the science gets presented can get tinkered with. A perfect example is the CDC Vital Signs that gets published every month. They seem pretty innocuous, but it involves an incredibly intensive 4-5 month vetting process where literally every word gets scrutinized. If there is anything remotely controversial (e.g., politically) in it, it tends to get deleted, even if it's technically correct. If the science behind something controversial is rock solid, then there are fewer issues, but if there is even a hint of doubt or disagreement, you can publish as a scientific article, but it would never be put forth as CDC policy or as coming from CDC the agency itself (as opposed to you expressing your scholarly opinion as an individual scientist).
- I think scientific integrity means different things to different managers in my center. My responses can only be considered for my center, and should not reflect on the agency as a whole.
- The OMB and clearance processes are unacceptable to conduct any timely science. The paperwork reduction act (OMB process) has only created more paperwork and bureaucracy on the government side, and it prohibits good, timely, science.
- I am proud of the work and confident in the scientists and SMEs working toward the health and safety of every citizen in the US and globally.
- I would like CDC leadership to more carefully use the CDC authorship guidelines. I get pressure all the time to include my supervisor as a "final author" when they have not made any contributions and have no expert in the work I am conducting. I have resisted and used the CDC authorship guidelines and then get harassed by them and their supervisors for not being a team player. I point out that I do not care because I am following the guidance of the agency and HHS and will not be bullied into doing anything different. Each year this comes up at my [REDACTED] review. I had [REDACTED] publications this year and my reviewing official told me "I would like to have this many publications with my name on them." I told him he was welcome to participate in the writing groups and would be asked to indicate up front the expertise he would bring and would be expected to work on all aspects of the projects. He was clearly not pleased and told me there would be consequences and interestingly enough I found out a week later that a major portion of funds our programs have received in the past would no longer be available.
- Great place for scientific work but the need for scientific integrity is something we all need to remind ourselves of
- CDC as a great institute is going to disappear. In some years, all those who can leave will
- I have thankfully never been hindered in my work by someone wanting to "hide the truth." Have been hindered by other sloppy scientists, but never by malice. Rules around the study of guns (e.g., NRA) has impeded some of my work.
- Need more consistent standards regarding issues like statistical reliability for materials coming out of the agency.
- The problem, to the extent there is one, is rarely a matter of positive pressure to misrepresent or suppress collected data; rather, it's a problem of questions NOT ASKED because we "know better

than to ask them” (i.e., it’s the quashing of questions, rather than results, that’s our biggest problem).

- CDC is highly credible and uses the best scientific knowledge. To my knowledge, CDC scientists never feel pressure from CDC leadership to alter or suppress findings. Congress is actively hostile to many valid CDC efforts, such as researching gun violence or climate change. As a CDC scientist, on matters relating to science policy it is sometimes difficult to talk to media or engage in speaking opportunities due to a rigorous approval process and unwillingness of CDC leadership to take a science-based stance on some controversial topics. This doesn’t affect our research or presentation of research; it affects how we can talk about the policy implications of the research.
- It is stellar.
- I personally have been told not to share important scientific findings with the press. I currently have 1 website and 2 manuscripts caught up in the political morass of CDC. I truly hope the whistleblower case regarding autism and the MMR brings the IG or an Ombudsman to CDC to investigate what is happening within the agency.
- In comparing experiences with other federal agencies and academics and non-profits, scientific integrity seems extremely high at CDC.
- Scientists are not permitted to give much input into organizational practices.
- The reporting and disciplinary process for scientific integrity issues is too cumbersome. In the cases I have witnessed the formal process is not used....people are let go with a different justification than lack of scientific integrity. The whistleblower becomes a victim of the process by having to invest a tremendous amount of time and effort in what seems a no-win situation. This leads to an unhealthy attitude of boldness on the part of some investigators. If there are no consequences, there are no boundaries.
- I believe the number of scientific experts relative to the number of managers and ADS’ at CDC has become abysmally low.
- There are too much politics and political correctness driving what is done and how “science” is interpreted, rather than actually relying on science. Lip service is given to science, but politics and political correctness are winning out.
- 99.9% of CDC scientists at all levels have exceptional scientific integrity. Now, due to fears of higher level government intervention and castigation by news media if every small mistake or accident is not thoroughly reported, CDC is more public than ever about reporting every incident, minor or major, which makes us look worse, because we can’t just handle them.
- CDC is the premier national public health defense agency, and holds the most respect and deservedly so, as we combat public health threats and national chronic disease prevention, we need more opportunities to partner with our best public health research universities and national organizations to foster best practices and build a stronger PAC for influence on policies that will result in an improvement in the health of our nation and the world.
- The individuals have integrity about their science but are not well-informed about quality best practices. They don’t know that what they are doing is not supported by evidence of efficacy or effectiveness.

- My responses re: the influence of business/advocacy and political interests are specific to firearm research in violence prevention and the influence of the NRA and Congress—both directly and indirectly (by changing what we are permitted to do and say by leadership even today). I have not seen any general scientific censorship issues otherwise.
- CDC takes scientific integrity extremely seriously. This leads to administrative burdens (levels of review, multiple agency review, etc.) that can slow down scientific production. Seeking ways to preserve the integrity while reducing administrative layers is important.
- Remove the politics and do what is right for everyone, not just small interest groups
- Most people strive to demonstrate scientific integrity. But there is a thin line between science that lacks integrity and bad science. And pressure not to say anything in clearance that might make people feel back is pressure to pass on bad or inadequate science. And less than stellar scientists are not good at recognizing poor science or scientific limitations or at mentoring more than stellar scientists.
- the Scientists are fine, doing awesome work in the face of overwhelming odds, it's the administration that is the failure

FWS

- Due to budget cuts, the FWS has largely become a "paper tiger" where a lot of staff time is spent reading and writing (e.g. permits and/or consultation documents) but not doing much actual field work, science, or conservation (in ES). We still have quite a few very good scientists, but unfortunately not all of them do actual science. Instead we rely heavily on the states and Tribes to collect and analyze data, and we just take it as is and refer to it in our regulatory documents. Increasing numbers of listed species coupled with increasing economic/development pressure generates a great deal more ESA Section 7 (regulatory) work, and in many offices it's become the main focus of staffing and time. Actual conservation ends up getting less focus. I think a lot of FWS staff realize this because we have staff meetings about "getting out in the field more" and doing actual science, but we also realize that our current regulatory responsibilities generally don't allow it.
- Overall the issue isn't scientific integrity (that I'm aware of) but the inability for the Service to conduct it's mission with significantly limited staff resources.
- Rather than many of the situations listed here (hypotheticals of FWS misusing scientific information to make a policy/management decision), I see the opposite. Managers are hesitant to base decisions on science in fear that the science is uncertain or biased. More training on how science needs to be incorporated in decision making in high-uncertainty situations is needed (e.g., scenario planning, adaptive frameworks, double-loop learning).
- Despite evidence of past actions to uphold a scientific integrity policy within the FWS, the policy remains incompletely developed (even weakened by recent changes) and implemented.
- Most land management decisions seem to be based on "gut" feel rather than science. In my opinion, rigorous data collection, followed by analyses to support management decisions is the exception rather than the rule at most refuges.

- The problems are deep and cultural. They need to be fixed at high levels (e.g., Regions). If the problems are addressed and resolved at high levels, it may be possible to regain some integrity for the FWS within Regions or as a whole.
- There are more and more instances of science not driving the decisions of the agency. In my opinion more employees are not feeling safe in bringing up scientific integrity issues.
- It is very tough to prove a negative, which is what the ESA section 7 regulations essentially require us to do. (I.e., the proposed action is likely to result in jeopardy to the species.) Because of this and because jeopardy biological opinions are not popular, I question the effectiveness of the section 7 in protecting wide-ranging species. I think this also comes into play in listing/delisting decisions. (E.g., after publishing a proposed rule to delist a species, we receive new information that indicates it is actually in decline but we proceed with the delisting anyway. Also, we established the criterion that we will use only a 5-year horizon when considering whether sea-level rise may affect a coastal listed species.) 2. In any case, the FWS needs to focus more of its resources on implementing recovery and develop more efficient consultation, listing, and recovery-plan-writing processes to make the best use of its resources. We spend far too much time issues bromides about landscape-level conservation and reviewing things to death than actually implementing recovery actions. 3. I think the multiple choice portion of the survey is fairly poorly developed. I answered undecided about some things because none of the other choices fit; some of the questions just don't fit my situation or those of most other folks, I imagine. First, most of us are not scientists, as in the sort of folks who conduct experiments and publish results. Generally, we use existing information to issue opinions about how project activities will affect biological resources and then defend our opinions to superiors, project developers, politicians, and a host of more highly paid consultants. Maybe I am dull but I found it difficult to categorize the sort of things I talked about in 40 and 41 in the multiple choice sections. 4. Last, one place where I think the questionnaire falls far short is the issue of whether we have adequate staff to do the work that is placed in front of us because of our legal mandates, other issues that we should pursue to conserve wildlife in general, and pursue recovery of listed species and important habitats. The answer is unequivocally no; sequestration has really damaged our ability to get things done. Our bizarre hiring procedures do not help either, when less qualified people appear at the top of hiring lists because they are rated by administrative people who have no clue about the sort of personnel we need to hire.
- Most people at the refuge level are not even aware of the act. We should all receive training in it every year during our required training period.
- I think the vast majority of staff and upper-level management now have, and have always had, high scientific integrity. Most FWS employees love natural resources and want to conserve them using the best science available. Your questions suggest that you think we are unduly influenced by industry/business, contractors, and political forces. I disagree. However, when we solicit comments on a draft NEPA document or a proposed rulemaking (which can be commented on by anyone, including industry, business, state and tribal agencies, conservation NGOs, academia, individuals, etc.), it is sometimes the case that we are provided with data or other information that cause us to rethink a course of action. I don't believe that constitutes the negative influence that you seem to be concerned about in your questions. Questions 1 & 2: The duties you list focus more on things that

would be done by a research scientist. FWS hasn't been able to do research since that function was taken from us years ago and put under USGS. Nevertheless, we do science by consulting published literature, working with others (often by giving them grants) that monitor and study fish and wildlife, sometimes by analyzing data, and generally by pushing a lot of papers. Those duties should be included in your definition of doing science.. Q5: You should define the term contractor. I took it to include individuals, educational institutions, agencies, or organizations that we provide grants to, and I certainly disagree strongly that such entities are harming our effectiveness; they are greatly increasing it. Q16: Your question suggests that a major focus of FWS is making decisions that affect public health. We focus much more on the well-being of fish and wildlife than we do on human health because the latter is done by other agencies.

- The Whistleblower protection does not seem to protect biologists from retaliation. In Region 2, employees experienced retribution from two actions within the past few years; these incidents have been reported by the media. I have been dissatisfied with resolution to some biological issues many of us are having with a particular employee in the Regional Office who seems to be protected by supervisors. Our scientific integrity would improve if we were adequately funded and had more biologists to conduct work we need to complete.
- Despite its endorsement and championing of Strategic [Habitat] Conservation, leadership applies strategic tools inconsistently and--if it is not forced to do so--avoids controversial arenas where even simple Service position statements would advance the Service mission of wildlife conservation. An example is the Service's position on domestic cat ownership behavior and Trap Neuter Release programs. Despite overwhelming scientific evidence that domestic cats are the number one (by an order of magnitude) anthropogenic source of direct mortality of birds and native small mammals, the Service refuses to take leadership regarding the practice of subsidizing owned and unowned cat populations via outdoor cat feeding stations on or near public lands or to institute national-scale policies benefitting wildlife and human health.
- Due to dramatic cuts in funding, the USFWS dismantled the Environmental Contaminants Program and with it a legacy dating back to Rachel Carson. It will be difficult for the USFWS to maintain its expertise in wildlife toxicology and continue to carry on the work of Rachel Carson and others in protecting fish and wildlife from pollutants and in restoring habitats damaged by past contamination.
- Regarding Whistle Blower training, yes we have to take it every other year. But after taking it, I am actually more confused as to my rights. It appears that most federal employees are not protected under WB regulation and law. I actually feel like I get more info on WB, and would probably consult an organization like Public Employees for Environmental Responsibility if I got into a serious WB situation. There is a definite fear of retaliation in this agency and a feeling that you cannot go over the head of your supervisor to the next level if there is a problem. Not so much that you will be fired, but that your career will go nowhere if you stir the pot. Management protects management in this agency.
- Very political internally, promoting people who make management look good but aren't good scientists. This is very bad for morale.

- The FWS has made real improvements in the policies governing this area under the current administration; however, the training for agency staff to understand the new policies has been limited. I do believe there is an honest desire to elevate the scientific credibility within the agency, all the way to the top; as noted many times by Director Ashe..
- Get back to basics: In our line of work, fishing is fishing, regardless of the efficiency of the gear being used; if fishing was catching 100% of the time, it wouldn't be fishing.
- I've said too much already.
- I did not like the following question in this survey as it did not allow for an appropriate answer - "The FWS collects the scientific and monitoring information needed to effectively meet its mission" - the answer is we do as much as we can with the funds available. There is not adequate funding provided for monitoring. Monitoring is an essential component of understanding the effectiveness of the actions (e.g., restoration, invasive species control) we implement on Refuges, yet limited funding is available for such monitoring. The FWS mission could be better achieved if we expanded our capacity to monitor the effects of our actions and document the lessons learned based on monitoring results.
- The scientific integrity at FWS doing good job, but budget problems need to stop. This will make their work smoothly.
- I was unaware that the Service itself has scientific integrity.
- I am ashamed of the agency I joined ■ years ago. Within Ecological Services, it has never been easy to be other than the troublesome stepchild, not providing ducks and fish for sportsmen but stopping development. The old-line FWS folks never trusted ES, and saw the new group of young folks with different direction as a threat to the FWS they lived in. Then, the cowardice of the upper level decision maker to not stand up behind their decision and why they made it instead of making the biologist change the science just destroys morale. With the new SSA, I have a hope (maybe false) that FWS can regain the integrity our biologists so dearly deserve
- Uncertainty in scientific information is being used as a smoke screen for making decisions that are not the most beneficial for species conservation. Scientific integrity continues to suffer because of lack of resources and staff. The Fish and Wildlife Service suffers from a culture of fear; fear of industry, fear that we are going to lose the Endangered Species Act if we enforce it too strongly, and fear of high level managers who make decisions based on politics rather than the best science.
- The field offices used to be relatively sheltered from politics. That seems to be changing for the worst. Non-management employees do their best to provide the best scientific information to management employees. Our management employees are most susceptible to being influenced by politics.
- Only because "integrity" has been attacked by those who are regulated can such a question be asked.
- I believe that scientific integrity within FWS has been a priority and its importance has been emphasized from upper level management to field managers for many years.
- Micro-management of Conference attendance at the Assistant Secretary level is appalling. Let managers wear their big boy pants and manage.

- I do not believe that the actual implementation of scientific work produced by FWS is questionable or in need of much improvement. If improvement is needed, it is how the results of the scientific work is looked at, reviewed, and applied within the service. How is the Service using the science? Is the science readily accessible to the Service?
- I believe the greatest improvement to our scientific integrity (as an agency, as a society) would come through additional investments in ecological monitoring. We are not failing in being a good scientists, good citizens. We are failing at adequately tracking the rate and cause-effect relationships of what is changing environmental and why. Admittedly, such investments are expensive and must be made strategically. We consistently fail to adequately coordinate/fund broad-scale monitoring work and adapt accordingly.
- It's all fine and good to have an official scientific integrity policy that is sent out to all employees. However, when you still have supervisors and managers going against the science and making decisions due to political reasons, it becomes obvious that the policy is not adequate enough in face of actual senior management and supervisors. Granted, the instances of violation are small, but they do still exist and have still happened.
- It is not very often that Service employees can publish a paper while working for the Service. The process to get something published in a Scientific Journal is very rigorous and requires approval from very high up. And most of the time it is difficult to get approval from a supervisor to spend time working on writing a paper to publish. This leads to the USFWS from being seen as an expert at times in what we should be one of the top leaders in science on the topic. The Service will also attract employees that have not published anything, thereby resulting in no one having the experience to get something prepared to be published in a well known journal.
- The FWS employees are expected to produce reports, etc. to answer scientific questions yet slowly the resources for the work are being removed. One case in point is the fact that more and more journals used for references in scientific research are being removed from the list of journals that are free access through the FWS. The tools for the job are being taken away, funding, personnel and journal access.
- It's improved significantly from the previous administration but still can improve more.
- My experience has been that there is high scientific integrity at the staff level, but that integrity may become compromised as a decision or person moves further up the management chain.
- I understand that the scientific research arm of the Service was given over to the USGS some years before I started working for the FWS. This is highly problematic given the baroque rules the USGS uses regarding data sharing. When we need a research question answered, we give the USGS some money to help us answer it, and then we don't have any idea what they've found until their work is published. Sometimes a timely partial answer is much better than a more certain, but tardy one. It would be great if we could have the ability to do scientific research in-house.
- I'll be perfectly honest: I have worked the majority of my career in the private sector, and strongly feel that the private sector would be more effective in implementing the types of restoration projects I am involved with. I feel that the Fed Gov't should employ [appropriate/reasonable] environmental regulations, and provide oversight. I believe that a more localized, community-based, "bottom-up" approach would provide for more scientific integrity. I do not feel that key

environmental acts (e.g. CWA, ESA) are being administered appropriately and are too often based on poor science (or no science). And a final note: the State of California is even worst.

- It really feels like you are digging for dirt. I really don't have any dirt to offer you - there isn't any. We hate the travel restrictions and bureaucracy. I have watched my leadership truly grapple with some incredibly tough decisions. I was consulted on the biological aspects of those decisions. Sometimes the biology won, sometimes it lost out to budgetary constraints and other difficult decisions. I have always respected the final decision because I was involved in the process and the justification for the final decision was shared with me.
- I am proud to work for the USFWS. I honestly feel that the USFWS is scientifically credible and has international credibility. I trust my leadership and their scientific credibility. I am not a lemming!
- I think FWS is a great agency with very good integrity.
- No the Service, at least in my region, stresses scientific integrity and getting and using good science almost on a weekly basis. I stress it in my office and make sure others understand that corners can not be cut and good science should always be a goal when conducting research.
- This survey is encouraging in that it is raising the issue of scientific integrity and how our agency's credibility (and ultimately public support) hinges upon scientific integrity and questions whether it is being applied at every level within the Service.
- Over the integrity of the people within the Service is high.
- great policy, but little application in the field (the real world). There are so few opportunities to interact with policy makers that current science simply does not matter. If current science is brought up as a point of integrity because it has either been avoided or disregarded, the higher ups simply disregarded as flawed (to which the opinions have no merit) or because it has not been published. Data is data, it cannot be refuted but it can be improved, however, the acknowledgement of applicable data seems to be purposely avoided by Joint Ventures in order to further their biased positions. Why do we do science if it will be ignored? Modeling exercises purposely exclude expert opinions because field experience is not valued. Many are currently pushing forward concepts simply to make themselves look more important. Supervisors should be held accountable, but the only way to perform effective evaluations is to conduct wide-spread interviews with partners that can express opinions without retribution. And, don't say the within the service retribution does not occur because for 1) supervisors don't want to hear anyone else's opinions; and 2) nobody else's opinions matter so why ask.
- Having an electronic library of our references would be really nice. Our file system and reference library are disasters!
- The Scientific Integrity process within the Fish and Wildlife Service is a sham. It is held up as a golden idol while it is not effectively implemented. Whistle blower protection practically and pragmatically does not exist. Management on the whole is more highly concerned with circling the wagons to protect themselves and their individual self-interests instead of acting for the health and well-being of fish and wildlife and all our natural resources.
- I did not answer a lot of questions above because there is no unknown option. It is very clear to me that updating conservation concepts and the emphasis on placing resources for these purposes will not come from inside the agency. As I noted above, our leadership, or should I say management

because there is a difference, does not have what it takes to make significant change. I am sure the political pressure to do so is significant. Thus, it will take pressure from outside interests in conservation to make it happen. I suggest you take the time to develop a strong coalition of non-governmental organizations and private individuals who have conservation interests to push for change. Otherwise it will be business as usual and conservation will suffer significantly. By the way, I am completing this at home on a personal computer. I don't want to chance that someone who has the possibility to monitor my work computer could see these comments. I feel threatened enough not to do so.

- We need to take the public's opinion of our organization a lot more serious.. For example, our scientific research and work (I work with salmon in the Pacific North West) is so far from what an average person knows or cares about that it makes us seem bad and wasting time and money. Perhaps we need more public outreach? Also, the whole hiring and promoting process is so horrible our organization is losing excellent people. I have worked for state agencies and they are much more appealing to work for. They offer benefits for seasonal workers, promote from within, better structured. I feel like we trip over our own feet here at the USFWS with all our policies and protocols. Times are changing and we need to keep up!
- Significant improvements in science based decisions with Director Dan Ashe and new policies. The rest is up to the American People to support FWS.
- It's hard to have scientific integrity at the FWS when the hiring practices don't always allow the most qualified person to be hired at the lower levels where a majority of the data is collected.
- In my experience, the scientific integrity of people working in the National Wildlife Refuge system, managing federal lands, is impeccable. Refuge system biological staff do this work because they love it and often go above and beyond to improve habitats and increase the health and numbers in wildlife populations.
- I used to think my job was the noblest and most rewarding job on the planet, and I was eager and proud to wear the uniform and could not wait to get things accomplished. I now feel betrayed by the leadership of my own agency, accomplishments taking years, my personal reputation, and my relationships with the public in the making, are being wiped out at the whims of politicians with nothing but acquiescence on the part of FWS leadership. I am ashamed to put on the uniform.
- Most people I believe try to do the right and honest thing. I think some of the scientific integrity questions that are raised have a hidden agenda behind them, facts are taken out of context, or are questionable at best. But those with an ax to grind will find an example, however flimsy, and work the spin to get the desired result.
- Political pressure changes the "optics" used by the agency leadership when science based policy implementation of decisions creates controversy - not concerning the science, but in the decision and its consequences.
- Historically, the FWS had a much stronger involvement and capacity in resolving issues based on scientific findings. The Service was considered to be the expert on many species and for many issues. Now, the Service leads through cooperative involvement with multiple partners and stakeholders, and this has "watered" down our scientific delivery, respect, and active involvement in scientific activities. Over the years, the Service has focused more on acquiring good "negotiators"

that are beneficial to partnerships and more broadly accepted approaches, with less emphasis on acquiring the best scientists. An added effect is the number of at-risk or focus species and threats that require the Service's attention; without expanded staffing, there is insufficient time to properly evaluate species and trust resources, as well as the consequences of decisions or pending threats.

- I work with some very good scientists who conduct their work at a high standard and share it without hesitation to anyone /group of interest.
- From my somewhat limited experience the biggest threat to scientific integrity is the practice of selective science, i.e. This research already supports my position and therefore it is trustworthy and vice versa. Also, the fear to not address sensitive issues scientifically because it is politically troublesome is really affecting my work right now. We are avoiding the science because it doesn't fly in the political world right now.
- FWS has an extremely top-down management structure which makes it easy for science to get lost in decision making. When disagreements arise between an FWS scientist and an industry project proponent, the discussion often gets "elevated" to the next higher stratum of management, in which case the decision becomes almost purely political because the managers don't understand the technical basis of the science well enough to advocate for the scientist's position or to know when an industry consultant is wrong, and because the manager's goals are usually different from the scientist's (i.e. "win-win" versus "follow the best science," or "reach an agreement" versus "don't back down.") Also, scientists at FWS are outgunned when we deal with industry project advocates. Industry can afford whole teams of "experts" to press their points of view in meetings and written discussion, whereas FWS scientists divide their time between multiple projects, and are rarely working in a team setting that includes moral and professional support from another scientist.
- We have lost confidence with Senior Management at both the Regional and Washington Office level. In the past, those of us in the field felt that Management would back up our decisions as long as our science was sound. They are now so risk adverse that they refuse to make controversial decisions for fear that Congress will cut our budget. We feel like we're by ourselves out here in the Real World while our leadership is worried more about the perception of our decisions.
- One aspect of scientific integrity within FWS that needs to be addressed is the ability of divisions/programs within the FWS to work together. In my experience, the overall integrity and effectiveness of the FWS is frequently diminished when different programs within the FWS are uncoordinated, and not working together.
- I think the FWS promotes scientific integrity and does a good job in that regards, at least in Ecological Services, not sure about Refuges.
- I am hopeful we are implementing lessons learned.
- I think the scientific integrity at the FWS is very high.
- Our agency needs to think and act more at landscape (LCC) scales, but agency leaders continue to pull us toward conservation of individual trust species - in part, based on misguided interpretation of trust resource conservation responsibilities and how these could be executed to increase efficiencies and effectiveness. 2. In my Region, there is too much reliance on the false hope of species propagation and/or species translocation as a solution to species recovery and conservation needs, and far too cavalier an attitude supporting implementing such plans mostly in scenarios

where scientific understanding/data is grossly lacking; major concerns for genetics, disease risks, cost efficiency/waste, and even time lost to these unproven and unlikely but "feel good" solutions.

- The FWS would greatly improve if all employees in my office were present at meetings and decision-making. In my case I have a classification of GS-4 for the past 10 years and with a degree in biology and I was never involved in the meetings and decisions shots. No keeps me informed q from decisions taken in my project, which hinders me to help people when they have any questions. In my case I feel discriminated against by the grade of GS-4 even if I occupy academic preparation and experience for perform with excellence in my work.
- In general, I think scientific integrity (at least in refuges), is quite good. However, given the extending reach of politics in the last 20-30 years, unfortunately FWS has become (like so many other fed and state agencies), hog-tied by political waffling...see delayed response to Climate Change.
- In my view it is not so much scientific integrity as it is a pervasive misunderstanding of the role of science and the role of our policies, statues, etc, which often interpret societal values with out making that clear. therefore the science and the policy or the science and the decision often appear counter or conflated.
- Enforcement is poor because the FWS often is not willing to "rock the boat" if they think Congress or the administration might object. Changes to conservation legislation that might lessen protections are always an agency concern. In addition, concerns that unpopular actions in the eyes of Congress may adversely effect agency budgets.
- I think the biologists in the field have high integrity. It's the decision makers who manipulate the science to appease political appointees (Governors, Congress, others).
- Currently there isn't any subversion of science in our agency, like there was under Bush-Cheney. There's always push-back from extractive, ag, and ranching interests (supported by the states and some members of Congress). What we don't have is adequate funding to do the research that is necessary to fight back against these interests - with indisputable science.
- I thought the years of [REDACTED] where horrible but these last 4 years have only been marginally better. We have not had a good director for years and our Regional Director is horrible. [REDACTED]
- I have great managers in Region [REDACTED]...allowing me and my coworkers to do whatever we can to increase work efficiency and improve products and processes. The trust is amazing, and it goes both ways.
- My perception is that a vast majority of FWS field biologists have considerable integrity and report things the way they see them, and interpret their data in a responsible and technically-correct way. Issues arise when managers who are trying to avoid controversy, or are trying to curry political favor with state fish and wildlife directors, intervene and "massage" or alter field drafts to accommodate political agendas, or actually direct field staff to cease and/or alter activities which would benefit conservation of a given species (i.e., the recent case in OK). One past example is the situation with [REDACTED] and the [REDACTED] a number of years ago. A more current example could possibly be the removal of our immediate past [REDACTED] Program Coordinator [REDACTED] from his duties via a directed reassignment which he chose to decline. You might want to check into

that situation and see how much integrity was exercised in that case, which is current and ongoing. It is hard for field staff to operate freely in an atmosphere of scientific integrity, when Regional Office officials advise the field that they must "have no [management or philosophical] daylight between you and your state fish and wildlife director" and "you can't say NO to the state, but rather you must say, YES, IF" when disagreements arise over management issues. Needless to say, this tends to dampen field enthusiasm, lower morale, and discourage the reporting of results which run counter to state politics and/or the desire of influential stakeholders. There was a time when field staff who were doing the right thing and exhibiting integrity could depend on being supported and defended by the chain-of-command up to and including their Regional Directors. I'm not so sure that is currently the case, especially when state directors can tell a Regional Director, "I can't work with that guy," and the next thing you know, "that guy" is no longer in his position. Or, to use another recent example, a state director calls the RD and say that he wants an accurate fact sheet on [REDACTED] [REDACTED] taken down off the field station web site, and the Field Supervisor is told to take it down, despite the fact that it reflects reality.

- Adoption of new initiatives, e.g., surrogate species, priority species, described as "science based", but lacking any scientific vetting by rank & file FWS biologists or academia.
- Overall, I believe justified science is supported by management but politics still gets in the way of making the best conservation decisions
- We do very little science in Ecological Services. The scientific arm of the agency was taken out by Secretary Babbitt under the Clinton administration and given to USGS.
- Often listing decisions are made without input from FWS experts withing programs outside of Ecological Services. In one such instance I was actually told that if I wanted to provide input on a decision that I could use the public comment period once the draft notice hit the Federal Register.
- Its a work in progress and some progress is being made. Given the state of affairs in the world today and the increasing pressure from climate chaos and over population, the challenges for management to get the decision right are going to increase exponentially. Thus, the tension between management and staff scientists is going to increase as there will be more pressure to make decisions quicker and in favor of humans (economics and 'all politics are local') which does not blend well with obtaining and correctly applying quality science to a vexing issue.
- I think there is a lot of good science available to be used when making management decisions. However, adequate funding to implement science-based management is almost always lacking. Additionally, when science is lacking to answer a particular questions, adequate funds and resources should be put into fully investigating and answering the question, rather than a 'what can we get by with' approach. Often we can't really get by on this minimal information.
- Biologists should be better trained in teasing out bad science from the good.
- ESA decisions should be bolstered by science and not conjecture (tend to have weak science supporting very critical decisions). The ES offices need increased capacity to do this including, primarily, the hiring of non-biologist science expertise including physical scientists, hydrologists and geoscience experts. 2) Inventory and monitoring is a long term commitment and needs to be addressed with the NWRS to ensure that it is a sustainable program (able to last through political cycles).

- The people I work with are very dedicated to doing good science.
- Regional level management seems more interested in political and private interests than science or their own agency when it comes to making tough decisions. They do not seem to want to take a stand.
- Only qualified personnel should be reviewing employees publications. Specially when science based publications are submitted to peer-review publishers, with qualified reviewers and some "bean-counter" within the FWS, or an outside contractor who do not have a clue of the subject, rejects the publication because it affects its personal interest.
- Stay focused on the mission of the Service.
- Politics are more influential on decisions that don't have good science. Best way to keep politics down is to do good science and build good relations with those whom may be impacted by decisions. Move at the speed of trust and don't carry the science like a side arm ready to shoot others.
- It's a must!
- FWS management appears to be more concerned about protecting management than protecting science. FWS managers protected supervisors in my office that were proven to violate the scientific integrity policy. Staff had warned those supervisors that their decisions were not scientifically sound or defensible but they intentionally ignored that input and took steps to limit any further input from staff. Staff that continued to provide advice faced personnel actions and other forms of retaliation. Regional office management continued to support those supervisors for some time even after they were documented to have violated the scientific integrity policy. Staff that reported and supported claims against the supervisors faced continued retaliation and filed complaints with OIG and OSC. Three staff were considered whistleblowers and protected by the whistleblower protection act. The FWS has been extremely slow in offering and processing any settlement for the whistleblowers and have not apologized or completed settlements 2 years later. The two supervisors in my office that were proven to have violated the policy were removed from our office, but were put on details that could be considered promotions and allowed to work from home with no disciplinary actions taken.
- Our National decision makers usually disregard quantitative science/research/biology in favor of politically correct decisions/options that have little quantitative science behind them in their decision making.
- Decisions tend to be political and change with the administration. FWS needs to stick to the science. We are a science based organization. If we can't stand up to the public or politicians, no one will and the wildlife and our mission will suffer greatly. Managers need to be stronger individuals. Yes-men are degrading our agency.
- Science is a lot more gray than black and white and we try to present gray areas as black and white. This makes us lose credibility with the public.
- Ecological Services in Texas does not promote compliance with the ESA for private lands.
- I do not think the issue you are really concerned about is science. Instead, it sounds like you are dancing around the issue of how values (society's) are incorporated into decisions. the best science available is still only part of the equation, but we are restricted from explicitly incorporating other values (such as regulatory burden, health risks, etc) into our decisions. this results in a decision still

being a black box, because these considerations then must be incorporated in a way that is unclear. This is unfortunate, but will be the status quo until our society come to grip with the need for values based decision making and devises a way to change our policy to explicitly incorporated these competing values into our decision making space. A good source of background to ponder this is Structured Decision Making by Gregory et al.

- They have made great strides to improve scientific integrity. Unfortunately limited staffing, law suits and regulations get in the way and drive the priorities.
- There needs to be improved communication between science and business in the Service. Additionally, increasing communication with scientific integrity, data management, records management offices, and business (programs) is important - perhaps include scientific integrity information in the yearly FISSA training?
- Trust nothing and verify everything that comes from the FWS.
- Scientific integrity claims by those outside of our agency should go through an initial round of investigation very quickly (i.e. 30 days) to determine whether the claim is valid. If enough information suggests there may be a valid claim, then a full investigation should occur. We spend too much time on scientific integrity allegations that have no merit. This unfairly puts our staff in a very stressful situation for much longer than is needed. The current process to review these cases and make findings takes too long. We should give deference to our employees just like we give deference to the species we protect.
- I have no real complaints as we are under-staffed for all we would like to accomplish. Overall, I think all employees do the best they can based on a limited staff and funding. I work with professionals that maintain a positive attitude every day, so it is easy to go to work every day.
- Unfortunately, we will always be subject to the sway of the political moods. Particularly with this new Congress, we are not likely to receive additional resources and so will continue to slip behind.
- I think the FWS scientists (as a whole - always some odd ducks) work well with what they are being asked to provide; and what is generally being asked for by administration; however, the degree in which I see the agency becoming "introverted" in oversight, training and "group think" is not healthy -- there are professional societies and efforts which should be a more open forum for professional development and peer review efforts. Our own journals, our own FWS training which could be provided via academia would be more effective, more open and MUCH MORE enabling for a future DIVERSE culture of science based staff.
- Upper management talks the talk but does not always practice what they preach.
- I've never been discouraged as a scientist in FWS. My degree and expertise is valued and recognized.
- The service needs to increase its scientific expertise, in terms of having more practicing scientists, but potentially more important, administrators and managers who both understand science and can articulate their information needs clearly to scientists so as to increase the direct utility of the scientists' work to the agency.
- The FWS made a commitment to more science-based decisions several years ago. This commitment continues to grow under the current leadership. The limiting factor is not integrity it is resources (i.e. funding).
- There needs to be better leadership within the agency, period.

- The current administration is supportive of science, unlike the previous one where "inconvenient truths" were unwelcome. I know and respect the Secretary and the Director. I know of relatively few instances of political interference, but I work in the Pacific Islands, where conflicts with vested interests are few and of little national interest. The wolverine decision is the most questionable recent action I know of.
- Thank you for putting this survey together. I will encourage others in my office to complete it.
- It is strong, but as with the comments previously, work quality and capacity will suffer with staffing losses, just a simple fact. With the coming challenges Climate Change presents and the ever increasing admin-overburden to the regional office and field levels that come with our hyper-tech-connectivity and the irresistible urge to track and online-train for ever damn thing we do, we're about to reach true bureaucratic gridlock. Customer service internally and externally is suffering and so is morale.
- Based on where I work (a "Technology Center"), it's quite high.
- There are a lot of truly competent scientists and leaders in the FWS. Unfortunately, the people who have the loudest voices and who can tell everyone how wonderful they are tend to rise into "leadership" positions, and they are not necessarily those who would be good leaders themselves. If people would start recognizing and promoting the true talent in the "lower ranks" (i.e., first-level or non-supervisory employees up through GS-12 levels) based on their ability to lead their peers, improve morale, make logical decisions in a transparent manner, and demonstrate their knowledge of scientific integrity, the FWS could be a truly great conservation agency, like what it *claims* to be today.
- The Bay Delta Conservation Plan and all related activity to operation of the Central Valley Project has been totally disconnected from science. The FWS has become a pawn of the water purveyors.
- Questions 16 -22 in this survey are too narrowly focused. In my experience the pressure is much more subtle from FWS management. It frequently involves situations where data is limited, which occurs frequently. In those circumstances industry pressure on managers to compromise at the expense of vigorously protecting the resource can be intense and is regularly successful to varying degrees. The threat of political fallout, especially budget repercussions may keep top management from setting the proper tone within the agency. Whatever the underlying cause, this manifests at the ARD and RD levels.
- It is my opinion that the FWS strives to use the best available science in making listing decisions.
- There seem to be isolated issues in some regions. Each of the regions is different. In general, there is a lot of value and support for science capacity with USFWS. There is a desire to do more than we can with current budgets. The budget cuts have harmed science capacity within the service, because science capacity is deemed a less essential service than land management or legal mandated (e.g. ESA). Non-statutory programs have suffered, especially at the field level.
- There is fear within FWS that if sufficiently agitated by a FWS decision, the current congress may weaken existing laws and regulations, or reduce budgets further. Senior FWS leadership appears to be balancing effective conservation against this perceived risk.
- We need a Director with a science background as we are a scientific agency!

- All your questions were aimed at political and business influence to lessen conservation. But we primarily face the opposite force - law suits from environmental groups that insist the answer must be that this species will be harmed and must be listed as endangered. This is where facts are ignored. We are spending too much time on administrative records to fight off a law suit because we said the animal doesn't occur there and the project will not cause affects - but the folks who want to fight the project - insist that it will cause problems. It is important that we have good science to present - but the insistence on outside advocates that they have the right answer and we must be influenced by politics if we don't agree with them is not true in my experience.
- Scientific integrity is paramount in the FWS, budgetary limitations reduce the physical impact of conservation efforts, but I've never seen or heard of any lack of scientific credibility.
- I have been with the agency for about 5 years, and in my Field Office have found a high degree of scientific integrity and rigor. The major problem has been steadily decreasing budgets and staffing, which spread scientific staff too thin across too many projects simultaneously.
- I don't know too much about how controversial findings are handled by RDsa or the Directorate Team and HQ.
- I would like to comment on a previous question regarding whether or not FWS employees must seek approval for interviews with the media. I don't think there were not enough options provided for answers to that question. My understanding is that the answer would depend on the issue that the employee is being interviewed about. I have been interviewed before about non-controversial issues and, at the time, did not seek approval to do so. For interviews regarding controversial issues (e.g., proposed listing of a species under the ESA), we are required to seek approval first, to the best of my knowledge.
- Most everyone wants to do the right thing, we are crippled by inefficient systems and the inability to modernize agency culture.
- I think the FWS values and tries (and generally succeeds) to uphold a high scientific standard, but we are overwhelmed by bureaucracy and political interests.
- We have differing goals among programs, offices, and management levels. Provide/develop a base communication plan for all projects when multiple offices are involved. It should develop side boards for FWS staff to work cooperatively, prior to, openly displaying disagreement in front of our partners. Our goals should be the same or at the very least crosswalk to one another. Bad science and decisions get made because of poor judgement when ego's of project leaders, managers, or technical staff gets involved in different offices in the battle of who is right. This causes distrust with the public and can cost the Service much more in terms of money spent and stressed out folks. A cooperation/communication plan might get a less expensive but a more scientifically credible outcome. This kind of plan would be particularly helpful when there is Refuge or Fisheries or other science staff involved with any ESA listed species and the Ecological Services is responsible for recovery, consultation, habitat conservation planning, etc.... Allow permanent staff in the service to attend the Stepping up to Leadership program to further develop the Team of the FWS.
- For the last several months I have sought legal counsel on whether to file a scientific integrity complaint against the Service concerning a recent Endangered Species Act permit issued by the Service. I have sought EAP advice on how to deal with the stress and personal cost associated with

this decision. I have sought assistance, advice, and representation from PEER. I have viewed Scientific Integrity webinars and read the policy. I have discussed this with DOI CorePlus. My immediate supervisor is supportive and may join in the complaint. However, this is a major, career-changing decision that could affect the remainder of our careers with USFWS and with our conservation partners, so I don't take it lightly. I understand my Whistleblower protections, but have been made aware in no uncertain terms by management of how futile a complaint would be and the reprisals that could occur if a complaint is filed (even though this is illegal). As trained, I have strived to find and employ the best available science, only to have it edited out of NEPA and ESA documents. I have been threatened with reprisal for keeping an accurate administrative record. Because I have tried to have meaningful discussions concerning the science with management, they have told me "you are no longer trusted or respected." Management has implemented other tactics to intimidate and silence the staff. For example, I have lost my ability to discuss issues freely with the media and have been instructed to "keep to the talking points" developed by management. Management has spread rumors about me to impune my reputation. They accuse me of being "too sciency" or too thorough as if these were bad things? Management has sent representatives (on the guise of being on detail) to spy on our office and report back to them. On numerous occasions we have been threatened with reprisal and have been harassed. At times we have had to work in a hostile work environment and have considered filing an EEO complaint to this effect. I have been told on numerous occasions "not to write anything down" or "do not put anything in writing" so that we will have a sparse administrative record. Funding support for research with academic institutions has dried up. We receive no support from the LCCs who's priorities are established by a working group consisting of state wildlife agency administrators - the same people who consistently oppose the Service on many endangered species listings (the same inherent problems exist in many state agencies as the Service). Our solicitors have refused to sign concurrence on some permits and documents. They too are ignored, not trusted, or respected.

- I think many of the decision makers have an inadequate background in science, and are not fully capable of evaluating scientific results as they relate to policy decisions.
- The U.S. Fish and Wildlife Service is a great agency to work for.. However there needs to more focus on collecting and using good scientific information in making good and if need be controversial decisions. Our mandate is to protect fish and wildlife species. In recent years it seems like politics is preventing us from completing our mission. It seems like we are less willing to take a stand on controversial issues. Sometimes this is related to politics and the potential loss of support (funding, staffing, {e.g. sequester} potential law suits). When decisions are made that try to appease all sides (e.g. environment and industry) or prematurely without considering all the facts or engaging staff the end result is often ineffective or the ability to effect change is delayed so long (law suits) that meaningful change does not occur in a timely manner. Repeated examples of this can lower morale especially if staff at lower levels are not empowered or felt appreciated.
- Yes - less frequent polling of employees
- More of a question: If climate change science is undeniable (and I believe that it is based on research), how can we keep operating as if it's "business as usual" when it comes to species declines? We need to act urgently and decisively to prepare ourselves for the catastrophic

consequences of climate change and we're moving at a snail's pace. It's disheartening given that we're driven by "best available science".

- There is far too much waste of money in LCCs and handing that money out for duplicative research. A total waste of funds for much of it.
- Starting in ~2000, the USFWS, particularly Refuges, started upgrading its biological staff to be on par with other Federal agencies. At that time, many of the biologists in the NWRS were 9/11; now the norm is 11/12 and we have quite a few more PhDs in field offices. Also, in more recent years, the Service has rebuilt its science capacity since the "divorce" with what is now USGS in 1992/3. We now have Science Applications at the ARD level, Landscape Conservation Cooperatives, the NWRS Inventory & Monitoring Program, and the Journal of Fish & Wildlife Management/Monograph. These are all great steps in the right direction. However, the implementation of these programs was compromised by having a poor pool of candidates to draw from and because the Service Directorate is dictating the direction of science (SHC surrogate/priority/representative species). Frankly, all of this new capacity has not greatly affected what we do in the field nor have new funds been directed to the field other than what is passed through as grants from LCCs and other new programs. Science is done at all levels and by all branches in the agency, but research and monitoring at field stations is still the heart of applied science. Within the agency, I have seen the appointment of poor program leads beginning to backfire. Rather than appointing PhDs to science positions, candidates are being pulled from general management. Consider doing a follow up survey to assess the distribution of PhDs within the agency.
- A question asked if I was adequately trained in the FWS's Scientific Integrity Policy. I said "undecided" because, while we are all encouraged to read and follow it, there is no formal training. Most people don't have the time to read it so don't. The agency should develop an on-line mandatory training course on the policy. We are required to take mandatory training on topics like defensive driving, EEO/Diversity, Whistleblowing, IT security, etc. For a science agency, seems like our Scientific Integrity Policy should be required training.
- In my view, our agency does a very good job protecting scientific integrity. The reality is, you can only do so much when faced congressional threats to your budgets and hearings driven by political rather than scientific motivations.
- Management positions are being filled by people who lack scientific knowledge or skills and thus lack the appreciation to use science in decision making process.
- I believe that the value of science in these endeavors cannot be overstated, and although in my experience scientific integrity has not been horrible, it has not been as revered and supported as it should have. That is just my impression, from limited experience.
- Do the Landscape Conservation Cooperatives, fws.gov/pacific/Climatechange/lcc/, have a clear mission, Was much of the climate change work already addressed by the Joint Ventures working across agencies and NGOs. Did the funding for the LCC come from funds targeted for other sources?
- I think that most FWS staff is basically honest. Problems arise when there is not enough staff/time to discuss the issues with relevant staff or other offices, especially in the Regions. We need more staff to address issues in a timely manner. We also need to be able to track issues/documents as they

move through the approval process. Changes made late in the approval process often introduce unintended consequences that border on scientific integrity.

- Unethical leadership more interested in agency politics, bowing to pressure, and career advancement at any cost, thus scientific integrity taking a hit, hindered, and further declining.
- I wish the FWS could conduct surveys like this one. FWS surveys are a waste of time as they completely avoid the pressing real conservation issues we and future generations face. The FWS should not allow taxpayers to complete their own official surveys at tax payer cost.
- It is highly situation specific. Often the most interference with scientific comes from a culture of promotion that does not reward scientific accomplishments, resulting in a management structure that is ignorant of science as a profession. Often, the greatest issue with FWS management is fear of uncertainty. While this is understandable in hostile political climates, it does lead down a path to management actions that are unlikely to help species and landscapes of conservation concern.
- My impression is that the FWS is all too ready to defer to political/industry interests when making decisions relative to complex biological issues. If there is not a clear and explicit negative effect to a biological resource, project proponents tend to get the benefit of the doubt, regardless of the volume or nature of scientific information that suggest that negative effects could occur as the result of a project.
- Scientific and professional integrity are nice but inconvenient "notions" to mgt overall. Don't think that all these bad leaders came from outside, most are "career" FWS folks that have abandoned the FWS mission and most of its responsibilities under various authorities in exchange for promotion reasons. You will almost certainly get similar responses from my colleagues in the FWS Northeast, Midwest, Southeast and Prairie- Mountain Regions, but this plague is probably in all of the other Regions as well. If you had another question in this survey, you would have most likely received a 99% vote of "No Confidence" for FWS Leadership. So first, thank you for asking! Clearly you have correctly identified very serious issues in FWS. The agency is brimming with fantastic, dedicated, creative experts, who are NOT tree huggers, but reasonable, intelligent, conservation-minded people trying to do a noble profession. Please make good use of this survey and help to restore the dignity, integrity, and former scientific excellence this agency has been known for. We are counting on you. Again, THANKS for caring!
- The governmental agencies are influenced too much by politicians and large corporate lobbyists at the upper levels. They do not take into account that the species affected do not live in Washington D.C.
- The problems with integrity are not at the biologists/refuge management level. The problems come from regional offices and political influence or fear of it. Studies like this one are used to accuse the rank and file, rather than where the weakness and vulnerabilities lie, that is to say regional and headquarters leadership.
- In a nutshell, the agency claims scientific integrity but only uses and highlights this when "Science" is consistent or otherwise favorable to the political whims that the agency is told to serve. It is so important for outside "watch groups" to hold FWS accountable to the science, to question and challenge its decisions, and ensure that long-term public interests outweigh short-term and finite political motivations in decision making. This is not easy to do, but it's the core of dis-satisfaction

within an agency where people who have dedicated their personal and professional lives to conservation see the "baby being given away with the bath water" daily.

- I am extremely concerned about the lack of scientific integrity at the senior management level the FWS (regional directors and ARDs). I know of a number of instances where they have disregarded scientific data and changed conclusions to make more politically palatable decisions, where they have ignored or not sought out the advice of biologists before making a decision, or where they have directed biologists to draft documents with a specific conclusion despite the lack of data or scientific justification for that conclusion.
- The Service's scientists are among the best in the world. However, the Service has lost its way in regards to how science is used in the decision making process when the issue is politically charged. Despite the fact that we had a seemingly friendly administration, the Service's senior leadership appears, time and time again, to abdicate responsibility to uphold scientific integrity in the decision making process. Consider the Oklahoma Field Office fiasco and the lack of response from leadership. Then there is the wolverine decision and the use of uncertainty as a means to find a politically expedient solution when the weight of the evidence and our guidance points to giving the benefit of the doubt to the species. Consider the fact that Service biologists were prohibited from providing written comment on the proposed 4(d) rule for the northern long-eared bat. These are just a few examples from the headlines, but I've seen it occur many times on smaller issues.
- Our leaders need to be more assertive when making scientifically supported, yet controversial decisions. Most of the time we have the science to make good decisions, but we often lack the political will when those decisions are opposed by outside groups (federal and state agencies, NGOs).
- Generally, scientists in the field are very dedicated to scientific integrity.
- The service lacks the capacity, expertise at times, and will to to enforce existing protections under ESA. The will and capacity to enforce ESA issues has shrank while the number of listed species is growing. USFWS does not communicate the urgency of the climate situations facing the nation's wildlife --- or the magnitude of the extinction crisis.
- Regardless of what the scientific integrity policies are "on paper", they are useless if they are not embraced by agency management and are not made part of the "management culture". Embracing the "spirit" of scientific integrity policies has not occurred to any significant extent among agency managers and therefore the "letter" of the policies doesn't really matter. There are a multitude of ways managers can punish staff scientists for not conforming to the political wishes of management that leave no "fingerprints" substantive enough for a scientist to "prove" the punishment ever occurred. FWS has a program called Advanced Leadership Development Program (ALDP). Essentially, this is a recruitment and indoctrination program for agency managers. A program to screen-out potential leaders who would put loyalty to the agency mission above loyalty to their superiors within management. This program also tends to be one that self-selects, early in their careers, those employees who are most self-obsessed and careerist...at any cost to the Public Trust Resources they are entrusted with... employees whose ambitiousness is a much stronger personal trait than their integrity (of any form). Ultimately, until ALDP graduates come to believe that their over-sized personal careerist ambitions are more critically linked to scientific integrity and agency mission than

to preserving their supervisor's political "decision space" nothing will change. And political decision space refers to both internal agency politics and external politics. A discouraging current case in point: Currently, within the FWS endangered species program the number one prime directive managers have communicated (of course with no paper trail) to those who are formulating the new agency scientific framework for species status assessments is to be sure that such new framework will not lead to any scientist-directed species status pronouncements that would in ANY MANNER reduce ANY MANAGER's "decision space", i.e., the full range of options for managers to make decisions unencumbered by staff scientific analysis must be preserved by the new framework. FWS top managers (Regional Directors and up) refuse to accept the notion that their decision-making space should, in any way, be defined (narrowed) by science. So the framework can direct the collecting of facts, but cannot direct any "So what?" expert scientific analysis. The full "So what?" analysis and decision space is to be the exclusive domain of top managers who are not the agency's top experts for that particular scientific investigation.

- It is really a function for USGS now. FWS does little science anymore. RIP Rachel Carson
- I think our field biologist do their best everyday. It is only when they get caught up by the RD and Director in their fear of offending the state. FWS is old news.
- We have a lot of freedom to publish and Service scientists conduct some good science. However, our leaders generally refuse to read anything more than a one-page summary, and they rarely ask questions or delve into what was done, which makes it difficult for them to make informed decisions.
- Very poor scientific data collected or available for most decisions, so I feel this agency does force conclusions to get to a decision. Peer review is nonexistent or very low quality....basically all the things you found in the report from December 2014. Not sure how to fix much of that except we should not be making such serious decisions, and no one seems comfortable with dropping a package (candidate, uplist, downlist, or delist).
- FWS employees are under substantial stress due to vacancies and less than skeletal staffing on national wildlife refuges. Sequestration has diminished forces to pitiful numbers on many refuges.
- I have been impressed with the commitment to scientific excellence of the scientists and managers I have worked with at FWS. The major limiting factor is a lack of resources to fund the short-term research we need as well as the long-term monitoring necessary to track progress on the ground.
- The ability to exhibit scientific integrity is very rare at the USFWS. Business and politics takes precedence over science. I no longer feel good about working at the USFWS, and wish that I could get a new job elsewhere.
- There needs to be stronger and swifter consequences for those found in violation of the Scientific Integrity Policy. The case of the two supervisors from the Tulsa Ecological Services office is a good example. Once the review panel determined there was scientific misconduct, they should have been dismissed immediately. It is critical that we maintain the trust of the public. Strongly enforcing this policy is a cornerstone for maintaining that trust.
- It doesn't exist. The upper management has NO CLUE what scientific integrity is. They use the term incorrectly and too much to "support" their decisions.
- Morale is very low resulting in disengagement of employees from FWS's mission

- For question number 24 - the answer is "sometimes." If the subject is controversial, or may be controversial, I would contact external affairs before providing a media interview. If the subject is not controversial, "pre-approval" is neither expected or required.
- Although regulatory decisions must be made using the "best available science" I fear this is not often the case--the scientific information that is reviewed is either not comprehensive (relative to what is available), or there simply isn't enough information available--especially with regard to rare species. Also, I think that career regulatory staff are not often trained in current scientific and statistical techniques--even if the relevant information is available--and that the current decision making process suffers as a result. Finally, when I first started working for the Service, I observed a permitting project where there were major differences of opinion between the Field Office Biologists and Regional Office Staff regarding impacts, credibility of data, appropriate mitigation, etc. Although I have since relocated to a new office (and am no longer involved with this project), my understanding is that there was never an independent dispute resolution process initiated for the terms and conditions of this permit. At the same time, members of the Field Office were told that their management structure was being re-organized, and that their office was being moved 45 minutes away to a new site--a move that would effectively force several of the involved biologists to retire. The feeling at the Field Office at that time was that the relocation and management changes were retaliatory.
- Revise the FWS scientific integrity policy
- I believe all instances of scientific "intrusion" that I am aware of have been completely non-targeted. That is they were not intentionally attempting to undermine the scientific process.
- I work w/great people and respect them tremendously. Real smart hard workers. It's the personally ambitious climbers who get into management that are the problem. 10 years ago that wasn't the case so much in this office and Region (for the most part). I am considering retiring asap and just put up w/my meager pension and go fishing. I couldn't go to work for a consulting firm. They are the pits. Just fulfilling recipes for their clients (industry). Career change? I would be much more comfortable if this was an anonymous survey. Management in any agency or business do not like folks who speak to authority and call them out.
- From individuals in field stations to the highest ranked regional staff I have interacted with, everyone strives for high scientific integrity and does their best with resources available.
- The scientific integrity at the FWS is extremely high when we get to practice science. The problem is that resources have been so severely reduced at most locations that most effort is being directed toward just getting by on a day to day basis.
- Almost everyone that i work with is trying their hardest and is not engaging in undermining scientific integrity; in fact, we all wish for more scientific participation and review. Our biggest problems are upper management incompetencies (most of them are ego driven and out of touch with how to lead) and the lack of staff (more skilled the better) to perform the ENORMOUS amount of work we are expected to do. Most of us are literally doing the job of at least 3 people, which leaves us harried, stressed, and incapable of putting much pro-active thought into our very important work. We remain as a result, reactive instead of proactive. If we had more staff to distribute our massive

workload, we would be better able to conduct higher quality scientific review. Thanks for this opportunity.

- Regional and National decision makers in the agency are heavily influenced by political interests. Decisions appear to be made on political rationale that is not supported by independent or agency scientists. Look at recent FWS decisions on renewable energy projects and water projects.
- Our Region has been sued by the [REDACTED] and a settlement was reached to address [REDACTED] species. While the ES Program has the lead for this work, Fisheries plays an integral role as the majority of the species are aquatic. Director Ashe has implemented a competitive pot out of the extra \$6M Congress provided to the Fisheries program, but the majority of these funds went to other Regions where the focus is on Pacific salmon or the Great Lakes. Because the Director has limited the comparison to FY 2012 budgets prior to the lawsuit, our Region can't compete on fair ground because we had little ability to ramp up for recovery and restoration prior to FY 2013. Further, our base funding was pulled when the COE began covering some of the mitigation costs, so we have lost a significant number of employees that we cannot replace under the FY 2015 allocation the Director has distributed. If we had Organic legislation, the Director would have to do what Congress directs, not what he thinks is best.
- By far the most disgraceful action of the FWS in regards to blatantly and openly ignoring science has to do with the refusal of the FWS to take a national position regarding feral and free-roaming cats. It is discouraging and disheartening to hear the Director of the FWS repeatedly pretend like there is not clear and indisputable science on this issue. This is a clear case of where the FWS is standing by letting native birds, mammals, and reptiles be decimated for political purposes. I grow so weary of hearing about how we are a science-based organization, and then see the FWS repeatedly cower from the science of feral and free-roaming cats.
- The FWS Inventory and Monitoring (I&M) initiative seems to have been an attempt to increase scientific integrity in Refuges but it seems to have created resentment from Refuges and the initiative is struggling to be successful in some areas.
- I have found the agency to be very protective of my scientific integrity, and to not ask me to change or modify anything I feel is not supportable. If something needs to be done that I am not comfortable with, managers take it upon themselves to make the changes under their names and responsibilities. This is wholly appropriate. We are not simply a scientific organization, but a part of the Executive Branch of the government. We as an agency do have to deal with social and political issues and ramifications. We should be responsive to President and Congress. Since the last Bush administration, I do not feel that we have been unduly pressured to alter or change any scientific information to fit any agenda.
- I think that overall we are doing a pretty good job on this and certainly better than in the past. I have personally seen a true attempt by managers to make decisions that are scientifically sound, though at times these decisions are tempered by politics. I think the fear of lawsuits tends to get managers to try to move toward the middle on issues which leads to less protection than the species and environment deserve.
- People are being told not to talk about the impacts of fracking in Texas. We are being stonewalled by state agencies and receiving no help from the people in the FWS whose job it is to help us.

- The National Wildlife Refuge System is making some progress, but it still needs to do more in order to provide for taxa such as small mammals (including bats), reptiles, amphibians, non-game fish, and insects. Many refuges lack a baseline inventory of these species. Furthermore, harmful practices such as predator control and the use of anticoagulant rodenticides (e.g., D-CON) should be abolished on National Wildlife Refuges. Fencing on National Wildlife Refuges should have a "wildlife friendly" configuration, and this should be a strict mandate.
- USFWS should use science and its own scientific integrity policy to address feral cats at the national level! They constantly kicked the issue down the road.
- Most of these problems, when they occur, come from the influence of congress or political appointees in the agency, rather than from managers, researchers, and middle management IMHO.
- I am not involved in many of those types of decisions so I cannot comment any further through lack of experience and information.
- Scientific integrity is excellent. Resources to carry out good science are not usually adequate.
- In the office where I am located, we are not allowed to do field or lab work to collect data. Rater we mine the existing data in published journals and reports and develop our conclusions/decisions based on existing information, even when it does not address the question we are directed to answer. If there is no information to directly support a position, we state there is no information and dismiss the position. As an agency, we tend to do what is easiest rather than what is right or best. Frequently, information on a particular issue (e.g., petition to list) must be overwhelming to decide to list a species, although downlisting or delisting does not have the same standard of overwhelming information to prove that a species has recovered..
- Most of the employees work at the FWS because they want to contribute to conserving nature. Many also realize that there must be compromises along the way to aid local economies, human development, and energy acquisition. However the balance can swing too far in either direction if outside influence is exerted, especially on those at higher levels.
- Proposition 1 in CA was backed by the head of the FWS in Washington. However, ask any scientist in California if it was a good plan and they would certainly say no. This leads me to believe the head of the FWS must be taking money from big agriculture to have his current opinion. Proposition 1 is a agriculture bill disguised as a drinking water bill. It will destroy the beautiful waters of northern California to grow corporate almonds that aren't even sold in this country. The head of the Fish and Wildlife Service scientific integrity has been bought, and an investigation needs to be launched. Conduct a poll of scientist in CA about Proposition 1 and you will see I am completely spot on with my claims. And because of the inability to talk to the newspapers or media, no FWS employee in CA could say anything about how Proposition 1 was the worst plan for the people and environment of CA.
- The Service maintains a high level of integrity.
- Fisheries Resource Offices were necessary in history because many hatchery managers did not have a college education. Once a bachelors degree became a positive hiring requirement in scientific series at OPM, the need for fisheries resource offices should have either decreased or disappeared. We now have retired-in-place 'professionals' in positions in fisheries resource offices that do not reflect the current science of the day nor the mission of the USFWS as a whole. We in the field have

to do constant battle with such personnel to move our facilities into the 21st century using current science and technology. This is where scientific censorship comes into play.

- I think it is strongly supported at the highest levels but outside pressure (Congress, other agencies, NGOs) can be hard to overcome.
- Reduced workforce have reduced ability to publish work of the FWS. Need to keep encouraging peer review studies by FWS employees as means of maintaining and enhancing our scientific integrity. When contracting out research often projects not getting fully completed partially analysed data, preliminary data not fully peer reviewed and never finalized.
- I understand that decisions are made for political, socio-economic or scientific reasons. But when those decisions are based on something other than science, FWS should express that and not try to hide behind the false pretenses of science based decisions. Too many times policy decisions are made for non-science based reasons but in order to get support for their decision, the blanket explanation for the decision is relayed as 'science based' even when it means bending what the data actually says.
- I have been with the FWS for three years, working as a research professor at a university prior to this position. I have seen a positive response by refuge managers and others to work being accomplished by the inventory and monitoring program in this short time. I think that is a reflection of the type of individuals that have been hired into these positions, who seek to develop practical approaches wildlife habitat monitoring and modeling in a way that is question driven.
- The current leadership does take scientific information into account. Where the evidence is indeterminate, or the data are insufficient or unclear, the current leadership is amenable to discussion and debate and willing to hear opinions from staff.
- If there are exceptions to scientific integrity, then there is no scientific integrity at all.
- It used to be WAY worse under the George W. Bush administration. We have progressed significantly from then.
- My agency operates with a fairly high degree of integrity. We sometimes think our decisions are apolitical when obviously support of clean air, water, soil, healthy ecosystems and wildlife populations is explicitly a political act, benefiting the majority of the people, often challenging the industrial and business interests. Those interests seek to maximize profit and externalize costs to the detriment to the general public.
- My impression of how the FWS views "science" is as some sort of entity that can be applied by just saying, "We used science". A number of years ago, scientists were removed from the FWS and put into then BRD (eventually USGS). I think that crippled the FWS' use of science because it created a culture in which "science" was done by another agency. Recently, the FWS has created a new division called Science Applications effectively creating the same ridiculous culture...science only takes place over in Science Applications. I think the FWS could be improved by returning to a place where science is integrated into all facets of the agency.
- In our particular office, biologists on staff review one another's reports. We are not allowed to post them on our refuge website because we've been told that the reports don't pass the test of peer review. It's unfortunate, because it's difficult for anyone seeking our findings to locate them (but we

are, at least, able to have them posted via an LCC). That is a cumbersome, illogical, and inefficient method to disseminate our findings.

- There are extremely good scientists within the Service. There are extremely good conservationists within the Service. There are few who are able to manage which hat they are wearing at any given point in time. There are managers who seem to fear the implications of decision and are paralyzed by uncertainty. There are technical staff who fear making wrong decisions because of uncertainty and are paralyzed into inaction. As scientists, we will never have all the answers or know enough. We can do the best job we can with the information that we have in hand and advocate for the resources to improve our understanding and support management's decisions. As managers, we should have faith in our technical staff (many who are highly competent) to provide us with the best scientific information available and assesses different conservation actions/solutions. This is an interactive process between people and so there must be healthy respect and consideration for respective roles and challenges associated with each. Last comment - Your survey has some missing answers to many of the questions that leave the respondent "hanging". The questions are set up to only problems in one direction. Technical staff can avoid making recommendations or make overly conservative recommendations due to uncertainty or the inclusion of conservation policy into the technical recommendation. I fear that your survey is somewhat biased and its results will not address the issue in a constructive manner; will not benefit the good scientists that the Service employs and may in fact worsen conditions within the agency. If you wish to make us better, you have to come at this from a perspective that includes science, policy, and management.
- It is bizarre that FWS promoted an individual with no science background and no degree in fish and wildlife conservation to be the "Assistant Director for Science Applications." Personally and professionally, he is a good guy. However, it is a very weird appointment given his lack of science credentials.
- Purge current leadership and promote technical leadership from within the agency, not appoint political hacks, who hire their friends. Reinstate positive education requirements for technical positions, which have been removed - making it possible for a music major to be a refuge manager, overseeing technical staff and multiple conservation programs. Animal Planet degrees are not sufficient background - the Service has been woefully dumbed-down in the past few years. And for the Alaska Region specifically, morale is so bad we hired a contractor here to identify the problem - which anyone employed here can tell you - LEADERSHIP, LACK THEREOF!
- In general, the F&W biologists are smart (some of the smartest in the federal gov.) and they make the right choices. When the Washington Office and upper management get involved, the political debacle shows clear. It's sad that an agency with so much to offer, so much responsibility is itself divided among it's own layers. Consider this... the further you venture from the species in question, the less protection those employees want to offer. How many listed species are in Washington D.C.??? Any wind farms in D.C.? How about transmission lines or pipelines or clear cuts?
- The need for peer review of all science used in management is a high hurdle. Science that guides management typically includes population level analyses to address whether an action will impact a population. Population level studies typically have a high degree of uncertainty and so are very difficult to publish or pass a peer review. We are typically asked to show statistically significant

effects and prove cause-and-effect mechanisms before we can make recommendations. Uncertainty partially stems from inadequate funding of important study elements and the lack of long-term population level data sets. In many cases, there are multiple environmental stressors that affect populations, particularly fish, and providing evidence on each stressor separately is difficult. Peer review is also difficult because most reviewers want to show their expertise by pointing out every uncertainty with an analysis rather than focus on the reliable results. In some cases, reviewers that work for non-FWS agencies are biased against the FWS usually over jurisdiction issues. Peer reviews are also expensive and so FWS management prefers to publish. However, most publishers do not want population level studies. A better process is needed.

- There seems to be more science at the lower levels and less science at the higher levels of the organization.
- You can't have scientific integrity and resource management if you don't know what you have, where it is at, why it is there, when it is there, and how many are there. Otherwise we have scientific fiction.
- Yes, I believe we do the best we can with what resources we have available. Some obscure species have limited information published on them. We don't have a choice but to use that limited information, regardless of the author(s) affiliation or background.

FDA

- Unsure of FDA criteria for scientific integrity?
- Allow for adequate study and analysis of homeopathy and complementary medicine therapeutics including acupuncture and energy medicine.
- I have observed only the highest level of scientific integrity from my staff and my management.
- These comments reflect my experience under my previous division at NCTR, under the Division for Bioinformatics and Biostatistics, which I left recently.
- Unfortunately, I don't expect any change ...
- allow scientists to go to meetings and to share research data with other investigators.
- Overall good - but I've seen instances where decision makers pre-decide to prioritize "a" to the detriment of "b" - which I suppose is their right since they are the decision makers - but "b" might matter too and isn't given the weight of consideration it should receive.
- Overall, scientific integrity at FDA is very high. There is free scientific discussion and multidisciplinary collaboration.
- I have worked at both FDA and NIH as a research scientist. In my opinion, the very strong public health mission attracts a different kind of scientist to the FDA than at NIH. They are generally very committed to the mission. While certainly research productivity and publication are required for career advancement, there are also other measures of accomplishment by which scientists are measured, such as regulatory review activities and the relevance of the research to the FDA's public health mission. This is a long-winded way of saying that the type of scientists at FDA are less about aggrandizing their own career, and more about making a difference for the good of public health. I think that as a driving force also tends to attract scientists who are less likely to take actions that would negatively impact the integrity of the science. When it comes to regulatory decisions, the

safety of the patient/subject is always paramount. Again, this motivates scientists to be very grounded and thoughtful in approach scientific-based regulatory decisions.

- I haven't observed in my relatively short time here major concerns over scientific integrity. My concerns are more as I've described above, with bureaucratic issues slowing down our ability to do our jobs, and limited restrictions or too many hoops to jump to ever have the chance for additional career development opportunities.
- public trust
- More scientific training opportunities and availability of resources inside and outside the organization for improvement of risk assessment (toxicology).
- I refused to be an author of a manuscript where I was not involved through out the life span of the project and I was not sure of the data presented in the paper.
- I do feel the agency I work for is too concerned about using specific trade names or active ingredient names in articles, press releases, or public presentations because it could upset the companies. It seems to me some other agencies under the FDA are not as concerned about this and use specific names in their articles or press releases. So I am not sure why the agency I work for is so concerned about this.
- some of the questions are poorly worded, it is hard to answer them.
- the equal voice initiative is fair and very effective
- Scientific integrity is getting better at FDA!!
- Scientific integrity is vry good at FDA.
- A high rate of turnover in management and scientific disciplines is taking a toll on science-based policy development versus what is documented for purposes of risk estimation.
- The Food, Drug, and Cosmetic Act is a powerful tool for public good. Unfortunately, its intent is being systematically subverted by weak leaders. This is not to say (as some of my colleagues incorrectly assert) that all FDA managers are bad, but there are weak leaders at all levels of management. We are often accused by our industry stakeholders of ignoring the law and due process and "making up the rules as we go along." To often, there is an element of truth in that. Part of the reason is political pressure (the power of the purse strings), but in many cases, the decision-makers simply don't understand the law. Regulated industry and the larger healthcare sector squawk when our arbitrary decisions go against their interests, but nobody squawks when our decisions benefit big business at the expense of the public health. We FDA scientists and engineers are well aware of the rights of whistleblowers, but we are also painfully aware of the limitations of whistleblowing. Unfortunately, much of the malfeasance I have witnessed is the result of perfectly legal, but morally bankrupt decisions by leaders who are guided by political concerns and/or blind to the root causes of our ineffectiveness. In recent years, many FDA scientists and engineers who had the talent and passion to bring about meaningful change have left the agency because they were being systematically denied a voice in important decisions by the senior leadership.
- FDA is increasingly requiriing employees to waste time with many requisites to complete required various trainings
- Restrictions on travel and unbelievable bureaucratic huddles have made it incredibly difficult for FDA scientists to share their work in a timely manner and interact with the greater scientific

community, especially for international conferences., The travel process at FDA is basically broken and a real waste of resources.

- To be super clear- my comments only relate to my personal viewpoints and experience in my little corner of the agency. I don't experience any issues that would negatively impact scientific integrity. A lot of effort goes into making sure the data we put out are accurate.
- Obviously, restraints are imposed prior to publication. However, once guidance is published, during the comment period, the scientific research process which substantiates the guidance is completely transparent.
- we take whistleblower training but unfortunately have seen in reality what happens to whistleblowers. So even though training tells us one thing, these poor people are not actually protected and their careers are ruined.
- The Agency has some of the most intelligent, progressive, and veracious scientist, but too often they include a "Heavy Handed" approach to the decision making process. I believe that in every regulatory action the Agency takes with industry there exist an opportunity to further recognize innovation, encourage excellence, and advance science, but too often we are short-sighted in our use of a hammer rather than a helping hand.
- I think the integrity of the non SES scientists is in tact; once information reaches SES and political considerations, the integrity is unclear.
- Scientist should make real discoveries first priority, not publications neither self-reputation.
- I haven't seen any instances of outside influence affecting scientific decisionmaking in review. Outside interests do affect policy through lobbying and other activities, in the sense that Congress may end up questioning or blocking a policy if it is not modified. However, we also take into account the opinions of all stakeholders, and I believe we do so appropriately, when policy is developed.
- Scientific integrity training should be provided for all new employees and those who never had one. Principal investigators should have required training on scientific integrity as well as how to manage disagreements and conflicts.
- It is very good.
- If a software acquisition does not meet the stated requirements, decisions need to be made early in the acquisition process to discard and move on to other solutions.
- Sometimes there is an attempt to distinguish scientific pursuits from regulatory policy. New scientific information, and in particular regulatory science information, always has some influence on policy. Often the influence is small, and the policy implications of new information are negligible. Sometimes, however, the new scientific data alone may have regulatory impact. Therefore, in my opinion, scientific integrity includes the choice of what to investigate, how the investigation is conducted, how the results of scientific investigation are disseminated, and how that information is used in regulatory decisions and policy making.
- For the most part the scientists are top-notch. The largest barrier is inability to hire and therefore retain staff (eg, great staff fellows do not get hired so move on)
- management tends to disregard valid reviewer concerns when it does not match their preceptions.
- It is very frustrating to have external forces such as Congress completely derail efforts to improve public health. It takes long enough as it is for activities to occur in FDA, and with administration

changes, we become the wagging tail on the dog. Politics should not have such a sweeping effect. There are some factors that are truths that should not be dictated by which party is in office or what industry wants. Scientific integrity can be better upheld if more of management had scientific and technical expertise to support scientific conclusions. However, not enough people at FDA have the expertise to make the right decisions or to stand up and be able to justify why particular decisions are incorrect. This is due to lack of expertise (hiring inexperienced people, not retaining experienced people, underpaying compared to industry salaries), lack of time (get those reviews done now), and lack of (pardon me) stones to do the right thing. It is easy to trash FDA or any employer, but FDA decisions affect the health of millions of people around the world. Let those with scientific and technical expertise do some of the leading and let people take time to investigate and tackle the hard questions. Much of science isn't plug-and-chug but MDUFMA forces some scientific activities to be force fit into ticking clocks. There are some great managers here who fully support the scientific process and support the folks who make the effort to pursue the science and engineering in the right ways. There should be a way to reward these types of activities so they would become more acceptable. If my management is reading this, you know me well enough to understand that everything I say is out of concern of what I and we have seen happening over the last several years. The good people we've respected for integrity have gotten frustrated and left. Decisions are made without the right input because it might be perceived as slowing down the effort. Somehow, someone please change the culture so that the slowness of FDA is due to time spent in scientific and technical consideration rather than our current woes. How can we reverse the notion that we should avoid addressing things that are hard? That we shouldn't ask the questions that we know have challenging answers? Oh boy, I've been trying to get promoted as a technical leader, and this might kill my chances, but I'm giving up.

- Businesses do not have influence, generally speaking, at the staff level. Businesses have increasing influence as people rise in rank/position.
- Several of the items in this questionnaire were worded to elicit a biased opinion. For example, responding to the suggestions by industry are not always bad, as they can serve to raise the bar for public safety. Similarly, suggestions from Congress are not always good or helpful, as they may force the Agency to take a position prematurely before a sufficient body of evidence has accumulated. The literature may be conflicting, woefully inadequate, or nonexistent in either supporting or refuting a question - but a decision must still be made, since advocacy groups or other interested parties demand an answer to a particular issue. All of these situations can test one's integrity, and general surveys that do not allow for nuanced answers do not help.
- Science, more than precedence, should be the guide with respect to the process used for making critical decisions.
- In my policy field, the question is not whether integrity is undermined but whether the economic analysis sees the light of day outside the Agency. If the findings suggest the Agency could do more, I will not be able to publish the work outside. But the work is not wasted because I then work internally to make the changes. This fact explains the apparent discrepancy between my inability to publish freely and my high job satisfaction.

- I don't think the basic scientific integrity at CVM has changed, but management is definitely more sensitive to sponsor's complaints, whether or not justified scientifically,
- I have not had any experiences that would cause me to question the integrity of FDA decisions, though I've heard others have had this experience in the past.
- The struggle for resources to conduct scientific work remains challenging. Trying to keep scientists focused on questions directly related to major FDA mandates like reviewing marketing submissions, remains a struggle.
- promote too many new managers who have no review experience and regulatory knowledge.
- I have really enjoyed my time with the FDA and everyone I've worked with has been superb in their professionalism and training.
- I don't feel that my work is influenced by pharma industry or politics. When I worked on reproductive health products, more attention was paid to my reviews and more meetings were held with upper management. I haven't felt that management was influencing my work, rather they were staying informed, they were being careful and preparing to respond to more public scrutiny than with other products. I would never say that the FDA is slow at making decisions, but I would say that they are careful and like to prepare a lot before taking a potentially controversial decision. I would also say that internal disagreements on science and public health have often resulted in slowing down decision making to the point that it could have been harmful to industry.
- I am impressed by the integrity of everyone I've met at the FDA - very honest
- I'm very impressed with the scientific integrity at FDA and I'm happy to be associated with a science oriented agency.
- Since I've been here [REDACTED] I've been very impressed by the enthusiasm and positive attitude at the Center for Tobacco Products. I don't work in management and am not privy to their machinations, but at least so far I have not encountered anything I could honestly complain about with respect to scientific freedom and integrity. I know a lot of times (let's face it, all of the time) the employees that work for Director X know what s/he thinks on a matter and they mimic her/his thoughts and beliefs on this and related matters. They don't necessarily have to be told straight out to do or say a certain thing, it just has to 'pass the smile test'. That's not the way to do good science. I hope that it doesn't prove to be the case here, but I will reserve judgment until I have more experience at FDA. Maybe because we regulate the tobacco industry, there seems little opportunity for getting too cozy with them. The relations between us and Tobacco are not friendly, unlike those of CDRH or CDER or CBER with their regulated industries. I'm told they are pretty nice to each other.
- The FDA only studies drugs and products that are profitable. There can not be scientific integrity in an authoritarian, hierarchical, compartmentalized, slave labor environment.
- I had hoped that by the 21st century, the FDA would be utilizing current software and tools, and moving toward standardization that is the benefit of utilizing automation. In some areas this movement is proceeding, in others, the arbitrary is the norm. Postmarketing pharmacovigilance is considered an art, not a science, with the stance that each case series is an individual situation that cannot follow any pattern. We have increased the use of templates and case definitions, but the science remains undefined and arbitrary without consistency. Our causality decisions are

disturbingly arbitrary to me. I would welcome an outside panel to provide regular oversight for developing policies and procedures that are consistent with science, not art.

- Businessmen often create political pressure on the FDA; consumer and public interest groups are sometimes able to create such pressure. The more political pressure that is brought to bear upon a scientific issue being handled by the FDA (or any other agency), the more likely it is that the resolution of the issue will be adversely affected.
- I was barred from attending a meeting in which I was an invited speaker because of funding even though my speech would be truly mission critical. The determination is arbitrary. There was another meeting related to my research I was denied attending with the reason that at the time Congress had not passed a budget (or final CR) and I could not attend anything unless "mission critical" [even though my research is mission critical].
- Scientific integrity in my division is high.
- Seen cases where the work of science experts are attacked by other staff with their own agendas and not necessarily that of the good of public health.
- You have a great statistics department that helps reviewers, but is under utilized by your researchers. Partly because it is not well advertised to various departments and partly because most scientist would rather try to figure out what they think is a "simple math problem" than share authorship with someone who spends 1 day analyzing data that took years of work to collect. Unfortunately many of the research scientist at the FDA do not have strong skills in statistics, and I have seen evidence of published papers where results were incorrectly interpreted. To correct the problem either a statistics course geared towards educating researchers should be created, a requirement that papers be vetted by statistician or the recognition of statisticians contribution should allow some flexibility.
- The morale of a large number of people here is very low. Low morale decreases efficiency, accuracy and productivity.
- At this point, the scientists in my organization simply regurgitate what management wants to see. The scientific process is dead, it was replaced by an agenda. Its killing Americans, that is what is so sad about it. Sorry to be so negative. Maybe it is different in other centers, but my center is an anti-industry, anti-consumer catastrophe. Management won't listen to the scientists, the industry, the public, and even Congress.
- The length of time reviewers stay at FDA.
- I do not feel it is as much an integrity issue as it is a policy issue of letting political decisions rather than science guide the path the agency follows. When I first joined the FDA in the late 80s, it was one of the most trusted agencies in the government. As political decision making (by both parties) has become more pronounced, it has led to an increased distrust of the FDA by the American public
- budget/reporting stress turns good people into bad bosses. Bad bosses just want what they want when they want it, forget process. Insufficient staff telescopes work onto those most committed, resulting in irregular performance/turnover, which contributes to less than stellar science/decisions. Arbitrary deadlines imposed by know-nothing NGO's lawsuits and media campaigns can derail planned, deliberate decision-making.

- The FDA is a great scientific organization to work. I work within CDER and have found-in general-my colleagues to be open to expressing their opinions and hearing those of their colleagues. I have never felt silenced by leadership nor felt that my scientific opinion did not matter.
- This survey has poor content validity.
- Over all, I think the scientists, technicians and administrators at FDA are honest and dedicated to their work. I have seen no instance of questionable scientific integrity since I have been here.
- As my understanding, FDA's mission is to regulate manufactural products related to the public health of human and animals. For biological products, it should follow tightly with the frontier of bioscientific direction of companies. For this purpose FDA should conduct research paralleled. So providing sufficient research funding is necessary.
- FDA employees are held to a higher level of integrity than congress and other branches of government. We are required to annually report our conflicts of interest.
- This was a terrible survey -- I don't think the authors really understand the work of FDA or the issues. Many of the question fails to recognize that much of our work is based on existing regulation and policies, which are should be given the greatest weight in our decisions. The survey seems more geared toward the <1% of scientists trying to publish research in a controversial area. The authors should be more concerned about the 99% of work done at FDA. The conflict isn't between scientists and managers that wants to hinder science in order to appease political interests, etc..., but between science and the regulations, laws, policies, etc... that govern the daily work. I'm not concerned about the 1% of controversial work, or whether a scientists can talk openly to the media without oversight. In fact, I think oversight is perfectly appropriate so that someone doesn't unduely use their affiliation to scare the public with bad science. I'm concerned about the 99% of non-controversial science that takes years and years to make its way into updated regulations, guidance documents, etc... due to the existing regulations and review processes. The survey should look more into what factors limit the use of science and what could be done to improve the use of science.
- Computers are monitored at FDA. Aggression by managers in patronage networks is very real, and I had to file a police report for something that went on for unabated for multiple years, but nobody in mgmt stood up. The miscreant(s) were found by deduction of room access (I figured out what transpired indirectly), but nobody ever said they were sorry, and no public disciplining of the offending individual was demonstrated. In other words, our transparency is a sham on the inside. Visibility of science research is highly controlled by managers and not merit. Senior Science Council is very weird. I do not think our Senior Science people really understand science. Product review is getting streamlined to accelerate the process, but the barrier of safety and review timeline is being lowered, to try to compete with the EU . Sponsors get away with not publicly disclosing research results they give FDA that are damning for their product, yet yell when their reviews are delayed. Also lowered is the documentation of how much work scientist work went into the real time review cycles. Our research hours are shortened by new work schedules and time worked on Sunday counts for nothing. We are not supposed to work past 9PM. I am sure this is not good for productivity. People focus more on when we worked and not what we achieved. Management in some centers has now become a whole division. Things are heading downhill, but FDA is still a hard money job, and people in science are desperate. It is a shame our skills are underutilized.

- I am proud to work at the FDA. I believe we do good work and believe in the work we do.
- The FDA has among the hardest working and most dedicated workforces that I have worked with. I recently came from the chemical industry to the FDA Center for Tobacco Products. This is a very hard working group.
- No. However, I have to object to the biased and leading format of the questions included in this survey. Are there problems with managers at FDA? Sure, just as there are anywhere. If you want to make things better, push for legislation/regulation that supports publication of all industry and academic clinical and preclinical research, and for more and better science education for all.
- More incentive to senior scientists in terms of upward movement on the job. There is hardly any incentive for scientists who have worked for FDA for more than twenty five years, to work harder and contribute more.
- Lawyers in the Office of Chief Counsel habitually push for the alteration of scientific documents out of a desire to strengthen our legal position to defend against possible lawsuits.
- Only to stress that work at the FDA demands integrity... singularly the most important thing, the first word that comes to my mind when I think of the FDA.
- Re question 20 "o" INDUSTRY occasionally asks us to consider questionable data... not mgt within FDA...
- Overall, I am much happier working for the government than regulated industry. I can look at myself in the mirror and know that I do make a positive difference.
- Scientific integrity at FDA exceeds that of both other environments that I have worked in: industry and academics.
- Overall I think the FDA functions with a high level of integrity.
- Expand more permanent positions for scientific research before talking about scientific integrity since only a few positions and limited research works are available at the FDA.
- This questionnaire is very negatively slanted against the FDA. I wonder whether there is a political reason for the questionnaire. The FDA has the most integrity of all the agencies with which I have worked (NIH, USUHS, FDA). As humans we all make mistakes, and the FDA might have made some in its time, but it has always tried to do its best from the standpoint of its customers and especially the standards of Science.
- In my experience, the FDA adheres to the highest standards of scientific integrity and I can't think of anything that would improve that even further.
- In my experience, the scientists are excellent at FDA. The major problem is upper management that does not support its scientific employees and makes decisions based on wrong information or gossip.
- The Agency does a very poor job with the press to represent our Agency well. Rather than emphasizing our intellectual strengths we are constantly criticized with no one defending our interests, or so it feels.
- Science integrity should be individually reviewed. The great majority of my colleagues are thoughtful and responsible.
- Give less power to management over the staff. Include the staff in making policy instead of just accepting administrative changes without debate and arbitration.

- Very MD- centric environment. If one is not an MD it is automatically considered an inferior discipline member. Each discipline likes to cluster in certain areas to avoid MD centrality in the Agency and built a strong foundation to defend. FDA would benefit to develop a good internal culture with less hierarchy, promote respect, tolerance, less ego-centric environment to work effectively and synergistically to take regulatory decisions.
- I have heard public concern that scientific work completed by FDA employees is biased and that it is not appropriate to base regulatory decisions on because of potential conflicts of interest. I'm not sure that I agree with these statements, but I do think the Agency should have a coherent response to these concerns.
- I feel every one at the FDA seem to work very hard. However, when there is problem and it needed to be resolved beyond my division level, it is very difficult to communicate with the people from other divisions. And some urgent matters keep being pushed back.
- There isn't much of integrity any way. Ours is the smallest office in the smallest center of FDA. And yet, we have SEVEN deputies; together, they earn over a million dollars per year but none of them produces anything worthwhile. When the personal integrity of upper management boils down to milking salary only, scientific integrity CANNOT survive. Every time after this kind of survey, nothing happens or at the most, a senior official resigns but the lower level managers keep on ticking, pulling the wool on the eye of the new-kid-on-the-block (no matter high his/her position is). Wash FDA with soap and bleach, remove most of the managers who are sitting on their chairs for > 3 years, and they will have no opportunity to sit on our work, or twist our language for months to keep each other happy!
- Many of the above questions cannot be answered by me based on personal experience with FDA operations. Responses primarily are based on "appearances" or the impact of the actions taken by "higher ups" in the Agency.
- Something not making any sense in FDA work. Giving the work to contractors that their basic interest is not to get the job done because when the job done they will be fired. This is taking a lot of money of the tax payers
- I'm aware of the dispute resolution process. I'm also aware that initiating that process would be career suicide. I've approached senior management regarding an inadequate review by an FDA staff member. The last time I discussed this, I was essentially told that what's done is done. I sincerely hope that this new manufacturing process is adequate and that patients don't get harmed - unfortunately, there's not much else I can do.
- I think that most of the working scientists and clinicians at the FDA are very good at what they do. Many are Gen X and millennials and enthusiastic and ambitious - until the FDA squeezes that out of them. However, except for the working folks above, from what I have seen, the integrity at the FDA, writ large - is not much better than that of industry.
- you are not likely to understand the boundaries of what you can and cannot do till you challenge them. I assume I have been lucky thus far. Our individual reviews for drugs and biologic applications are posted on-line and even though I am management I believe my staff have a right to express their views. We have a right to write an overriding memo if we disagree and it becomes pretty public if it occurs with a drug or biologic. Individual reviews for medical devices are not posted on line and

sometimes the basis for a regulatory decision is not readily available. there are advantages and disadvantages to both approaches. when i worked with devices i was willing to do more thinking outside the box on a review but since a public not scientifically trained might misunderstand the intent, i am not sure i would want such a review posted on-line. i have never had my research censored but i am careful to indicate what views are mine and what are those of the agency.

- At CTP, management has changed my scientific reviews without my knowledge. Although it is not a frequent now, it still happens and management refuses to acknowledge their breach of integrity. There have been many cases where they have added content or changed the meaning of my intention. Sometimes, the information added is scientifically incorrect. Another major issue with CTP is the lack of expertise that leads to decisions based on superficial understanding of the scientific questions. Regulations and policy decisions on scientific matters should rely on sound science, not someone in management who is seeking their opportunity to rise to a higher level.
- They manipulate their "numbers"--or at least try to--at the expense of sound scientific reviews. They will downgrade applications to get a lesser time-frame review to increase their number of reviews per year. What the application needed was a sound review at a higher level. They are notorious for doing this!
- There is a gap between formal policy and informal practices or "policy as understood." For example, FDA employees have (as far as I know) the right to publish scientific papers in peer-reviewed journals without interference, provided no non-public information is disclosed. But it doesn't feel that way to working scientists at FDA, since each Center has its own, usually onerous, clearance process for publications. These clearance processes serve both to delay all publications and to have a chilling effect on controversial publication, and are often used to stymie publication.
- I do not understand why Dr. [REDACTED] with [REDACTED] arrest record, has managed to maintain [REDACTED] position at [REDACTED]. Anyone else would have been fired. The rules of conduct and integrity don't seem to apply equally to all of us.
- The scientists and engineers I work with are absolutely committed to scientific integrity and to our mission of protecting, preserving and promoting public health. Our scientific managers are also absolutely committed to scientific integrity and completely support the staff.
- There is such a huge pool of highly talented scientists at the FDA. When they are not motivated to engage in the best research work they could and want to do, the scientific integrity of the FDA research community would be impacted.
- Management is the biggest hurdle. The FDA is a brutal organization, this is the culture in all centers.
- For the most part, I continue to be heartened by the quality and depth of the science that is conducted throughout the Agency. Typically, Agency scientists are incredibly enthusiastic public servants.
- **Large section of content redacted to maintain confidentiality** Very Long Timeframe from ANPRM to Proposed to Final Rule. When I was at [REDACTED], the timeframe for this exercise was 2 years. On the web, one can Google and discover that DOD's timeframe is 2 years. [REDACTED] tells me our timeframe can be as long as 10 years. Because of this and because rulemaking [REDACTED] says is [REDACTED] [REDACTED] nonbinding guidance is created, instead. But others tell me that guidance takes many, many years as well. Guidance versus rulemaking. For OFAS regulated products, we have major

companies violating, not just the “fly-by-nights.” These major players know the regulations, but due to lack of enforcement of the regulations are openly violating (i.e., spinach extract, Jagua blue, gardenia blue, gardenia yellow). If regulators within a regulatory agency notes this, then usually, a regulatory agency will interpret that the regulations need to be tightened, and that we need to begin enforcing, rather than put more nonbinding guidance in place. Large manufacturers within the food industry already know FDA’s position, they have been in the agency attending meetings with us, testing the regulatory waters. Putting more guidance in place will not help. They are violating because they can make profits with autonomy. Informal Opinions. Apparently, OFAS has many, many emails to industry serving as informal opinions about our current regulations. Rather than the regulations being expanded legitimately via rulemaking, informal opinion emails are being used to interpretively expand the regulations for industry inquirers. This approach leads to violations and a “live and let live” anything goes attitude by industry (doing whatever they think they can get away with to make a profit). Others are pointing this problem out in our internal meetings besides just me, and I have also pointed out that we could [REDACTED]. [REDACTED]. For example, tri-sodium phosphate is used in the marketplace more than mono- or di-, but our regulations only mention mono-and di-. If one goes back through the historical records, our reviews, and into the petition, one will see that we didn’t craft tri- into the regulation because it was the most expensive, and our colleagues of yesteryear couldn’t envision (or industry couldn’t envision) its use because it was the more expensive. But today, Trisodium phosphate is used by preference rather than mono- or di-. Let’s form a workgroup of senior toxicologists and chemists, perform a safety assessment, create safety and exposure memos, write the regulations, and publish rulemaking so that those in the marketplace using TSP won’t be in violation, if TSP has no safety concerns. In ways that the regulations should be expanded, resulting in no harm to the public, then let’s do so, such that our regulations will work and we don’t have informal opinion letters, which have no force of law, that are completely nonbinding substituting for regulation, and which may be even inconsistent with other informal opinion letters, let’s work to make these letters obsolete. Another example would be calcium silicate, where our current regulations only permit sodium silicate. The calcium ion would be safer, and would even reduce sodium’s use in the marketplace, this is an example of where we could legitimately expand the regulations, eliminating an informal opinion that is occurring in email, and clean up our regulations. Notification program for Food Additives. My sentiments are that over the course of the last 30 years the regulations have been loosened so much that substances are being directly and indirectly added to food that cause chronic adverse human health effects. Industry, for the most part, has learned that acutely toxic substances sold in the marketplace will have direly negative consequences that can be traced. Where our regulatory system has broken down, however, is in the area of chronic adverse effects. These are more subtle effects that occur over time. We are not protecting the public in this area. Our regulatory system is biased, pro industry at the expense of the public’s health and safety. We are eroding the petition process where we used to demand a battery of toxicity studies to truly evaluate the safety of a substance. So often, public literature is substituted for well-designed studies, even in the current petition process. But the public literature is biased, representing the body of knowledge on overt, negative health effects, which are typically acute health effects. Having a notification program for industry only hastens this process of allowing more and more substances

into the marketplace that have not been adequately tested for safety. Does the notice and notification programs for GRAS and food contact substances, respectively, benefit the public, or only the regulated public, such that public health and safety is compromised? Our mission is public health and safety, one must really ask, are we off-course? Are we aligned with societal values?

- The Commissioner's Office has greatly expanded in the past 5 years, but those working in the Commissioner's Office rarely descend from the clouds to participate or even observe the storms going on below. We don't need more layers of bureaucracy, we need better qualified managers in the lower levels !
- Now research fundings for regulatory science appear significant shortage. Please 1) increase fundings for regulatory science; 2) rebalance an equal-weighted effectiveness and safety efforts; 3) make internal post-market information sharing with user friendly manner; 4) create a system that is able to hear voices from bottom throughout the top of decision maker(s).
- Too many decisions are being made by layers under "policy" rather than utilizing scientists and their expertise to make these decision.
- No...unfortunately I often find myself asking the question "where do I work?" so I may walk away later this year.
- The FDA has MANY educated scientists with expertise. However, even though their voices may somewhat be heard, they are often felt to be over looked.
- I don't know for sure if business, political, personal etc. interests have ever swayed a decision one way or another over science. I think it could be a possibility in some cases and it certainly seems like it, but of course I don't have the information needed to back that up. I do know that for the most part, that FDA employees are keeping the best interests of consumers, patients, medical professionals, etc.as their first priority when making decisions, at least from what I observe on my level as a regular reviewer
- I think the VAST majority of FDA scientists and their managers represent the highest levels of scientific integrity and dedication...the outliers are, thankfully, exceptions. My sense over almost 20 years here is that such exceptions have very much decreased and that scientists feel more empowered to challenge management decisions. One comment about this survey: Q20 results may be difficult to interpret because it is unclear whether the responder had to have personally experienced the event or experienced it happening to a colleague. For example, look at the wording of Q20 n. 'Situations in which scientists have actively objected to, resigned from or removed themselves from a project because of pressure to change scientific findings'. I suggest a cautionary caveat about any conclusions reached based on Q20.
- Research is key to understanding problems, the freedom to conduct research and investigate issues leads to advancements that will greatly benefit the American public and private sectors.
- The notion of scientific integrity at FDA is a farce.
- FDA reviewers and management do their best to maintain scientific integrity at FDA. However, safeguards that should be in place via data inspections and manufacturer self-oversight are not adequate.

- In my third year of working with the FDA, it's my pleasure to affirm that I've never worked with a more committed and competent community of scientists, nor with scientists who have better exemplified integrity towards the public interest.
- Generally, the integrity and moral direction of researchers at the FDA is much higher than at other institutions.
- No. I just wanted to mention that question 5 was unclear to me. I didn't know what kind of contractors you meant. Contract mechanisms are used to hire postdoctoral fellow (ORISE) and to carry out certain research procedures at other facilities. These functions are important to our scientific programs and nothing confidential is involved. However, I would be strongly opposed to contracting out regulatory review of INDs and license applications or regulatory policy development to people not subject to the same conflict of interest screening as FDA staff.
- I was asked to use a comparison group that made me uncomfortable. In my draft communication for that project, I stated that our results are biased in favor of the manufacturer. I sent it up the chain and never saw the final version. The good news is that anybody who knows anything about this product will immediately see the flaw and hopefully dismiss our findings. 2) Most employees that I've met are here for the right reasons (e.g., they want to serve their country and to protect and promote public health and consumers). They are passionate, dedicated, genuine people and I love working with them.
- If regulated industry challenges FDA decisions, there is no guarantee that after a lengthy and expensive fight the courts will side with FDA.
- It's very weak because scientific integrity is considered separate and external to the premarket regulatory review process of products. Clinical reviewers are prohibited access to intramural funding as PIs. It isolates us.
- Too many lawyers working at FDA-particularly in management positions. Create an atmosphere of include me in every communication but I won't respond to any issues you bring up to me. Do your job (what we tell you) and don't ask questions. It is difficult for employees from different groups to work together. FDA needs to work more collaboratively with other agencies.
- In my opinion FDA higher authorities or the decision makers should revisit some of the issues, e.g., in many of the offices/divisions/labs people coming to FDA from various part of the world having J1 VISA and after a while being converted to H1 VISA, who are not-permanent US resident or not-US citizen. They are being provided with highly classified regulatory works and getting high quality regulatory trainings. Unfortunately many of the US permanent residents and US citizens are not allowed to do any regulatory works as well as not allowed to sit for any of the regulatory training sessions. I'm a US citizen. I joined [REDACTED] as an ORISE fellow (while I was a permanent resident of USA, waiting to be a US citizen). I was not allowed to do any regulatory work nor to sit for any regulatory training. [REDACTED] It is very disappointing and unfortunate. While joining FDA one would naturally think/expect to have a very deep regulatory exposure, the very uniqueness only FDA has on the earth. I suggest/request the policy makers to revisit this regulation and give priority to the US Permanent residents/US Citizens rather than the temporary foreign workers.
- Yes. I could write several pages on it if it would help.

- I think there needs to be a transparent, plain speech discussion about the use of PDUFA, BSUFA and GDUFA funds for research within and sponsored by FDA, Millions of dollars of user fees intended to expedite the drug approval process are being used for meaningful research that advances and protect the Public Health. The overlap of these mission elements is unclear and managed unevenly. The mission as a whole would be advanced by clarifying and specifying the role of extra-congressional budgetary funds in research activities. There needs to be an open honest discussion about the funding programs that incent the purchase of equipment to populate understaffed labs but disincent or disallows the hiring of staff to use the equipment to generate and analyse data. The recent decision (now reversed) that prohibited the hiring of qualified US citizens as Research Staff Fellows within FDA while permitting the hiring of non-citizen Research Staff Fellows at FDA is another example where the staffing and funding of research is more a function of administrative expediency than effective use of resources to provide a world class research capability.
- Recent changes to internal scientific review has made publications more difficult to clear. Primarily, incompetent scientists (ones without expertise) cause enormous delays to publication of scientific findings. Their ignorance makes it difficult to clear manuscripts. Certain managers seem to not understand their role in review.
- Integrity is very good in my opinion. The biggest change in the past 5 years is the use of flexiplace; many people work at home 2-3 days every week, so on most days only 50-60% of the staff are in their office at White Oak- this is a huge change in the working environment and staff interactions from 5-10 years ago.
- The FDA is approving a drug from Vertex that failed its clinical trial. I think that says it all in terms of industry pressure, and the direct influence of upper management who have had no role in reviewing the data.
- As a research scientist, I'm mighty proud to contribute to protecting and promoting public health, and to be part of this great agency, the Food and Drug Administration! Thank you!
- The agency claims decisions are science-based but that is true only when the science agrees with the decisions that have already been made. Our work is heavily influenced by White House preferences. If they want it, it's going to happen. Science and testing is often an afterthought.
- I have found that the greatest threat to science within the agency is agency scientists waging political battles against other FDA scientists to quiet other voices in the room. In my experience, this is done to make their careers stronger. If you study this problem and eliminate it, I think a lot of the FDA's scientific problems will improve. Some ideas - Limited resources lead to internal fighting. Solution: increase resources. Limited resources to attend meetings leads to limited contact with the scientific community by diverse FDA scientists. Solution: increases resources to attend meetings and other training.
- Assign newly hired scientists to research projects that make use of the education and experience in research that they personally bring to the job.
- FDA reviewers should hear more about their right for equal voice practice and be more exposed to the agency's program they can be protected when they pursue scientific integrity.
- Much has been done recently to improve conditions but we still have a long way to go. Senior leadership is doing and saying all the right things; new people coming in who think independently

are creating change as well. There is a large middle of "government good, industry bad" type people who insist on maintaining a retrograde mindset, and they are able to indoctrinate some of the new people as well. People need to read the actual laws and regs for themselves and let go of some positions with are "oral tradition".

- The culture throughout all levels of management is designed to serve industry first, second, and third.
- I think the problem is not so much lack of integrity per se as an over-identification with the companies CDER regulates. Drug manufacturers have hundreds of meetings with CDER staff each year, consumer advocates almost none. CDER tends to think of its regulatory actions as affecting companies, not patients.
- I've only been working about [REDACTED] so I didn't feel like I could answer the questions about my experience in the past five years. Also, I think the fact that I've previously worked for a regulated industry (I worked in the deli department at a grocery store over the summer when I was eighteen) is more testament to the fact that we regulate 30% of the economy rather than inappropriate connections between industry and the agency.
- In my experience scientific integrity at FDA is extremely high. My colleagues and I believe that we attempt to "call balls and strikes" fairly and that this is supported by our management. I have seen examples of interference by Congress and sometimes senior management is influenced by political factors, but in general the majority of FDA leaders that I have experienced practice high levels of scientific integrity.
- Occasionally, recommendations by scientific staff are arbitrarily overruled by senior management without justification or transparency. This has a chilling effect on morale.
- Compared to academia, I have found that the FDA is less willing to give one credit where it is due. For instance, I had to fight with the management to get my name on the cc list even after I selected GLP studies for audit during inspections. I found that people who are not part of the management do not get the credit they deserve unless you are in management's good graces, and it is often questionable when a task you perform is part of your duty and when it is considered above and beyond when it should be rewarded.
- I believe that scientists should be qualified in the field in which they work. Persons should not be appointed supervisors in a field in which they are not academically qualified. They very rarely have the knowledge to effectively give advice and try to keep the department at the level at which they can understand. . Persons with BS degrees should not be appointed as supervisors in a field in which PhDs are common. A person with a BS, especially if this was done long ago and where they have not taken refresher courses do not really know what they do not know. Many industry representatives in scientific arease have PhDs and operate at that level. Additionally, inaccurate knowledge becomes the norm
- The pressure from pharmaceutical companies regarding the product label contents is sometimes too aggressive and interferes with our review completion in an unproductive way.
- Senior managers need to be held accountable for their actions. Managers need to be professional and uphold scientific integrity. When I have excelled or received external awards, one of my

previous managers responded by denigrating me and limiting distribution of my work. Such pettiness should not have any place in a federal regulatory agency.

- This is the only place to make this comment: This is a very badly written survey. Most people at FDA are scientific reviewers who evaluate protocols and data submitted by Sponsors, depending on their discipline (chemistry, clinical pharmacology (pharmacokinetics), pharmacology/toxicology, medical officer (clinical data) and statistics). Thus, most of the way your questions are phrased, and the content itself, is not really applicable to the majority of FDA employees. You also seem to conflate doing science (working in a lab) with using scientific training in the service of FDA's regulatory mission. You don't even have the right categories for our job description or our training! I laud that you are doing this survey, but you really need to pass it by folks who work at FDA first next time so that you can make the questions reflective of our work experience.
- Research is steered into safe topics so controversy never even appears!
- I want to share this: I have not experienced any single instance where I had reasons to doubt the integrity of any of my colleagues or supervisors. I do not blame those who question FDA scientists' integrity, since I was one of them. But in order to really change something, if we really want our children will live in a decently acceptable world, we need as many well informed people as possible. And I believe surveys like this can help.
- Generally high, less of a concern in food safety
- Having worked in a variety of centers within FDA. Scientific integrity varies based upon the leadership of that center.
- The integrity of all organizations I have been associated with in FDA is outstanding.
- There are inconsistencies between reviewers from the same group. Favoritism is often seen when the decision makers decide whether an application should be on clinical hold. There are plenty of loop holes in the regulations allowing poor scientific data slip by.
- Fear of retaliation is very high in CDRH-especially. That is like living in [REDACTED]. I do not feel I live in a democracy and express my opinion without any fear or retaliation. I see only the people who are 'nice ' to the authorities get promoted-not who are capable and brilliant. Meriocre people get promoted in the federal agency! That is Sad The only reason I am able to say this -I hope this survey is anonymous and am leaving the agency as soon as get another job
- Senior management and an increasing number of people recruited and hired from industry are undermining FDA's ability to do its work to generally accepted scientific standards. The focus in the last several years has strongly shifted to focus what 's good for business, Congress' political agenda, and some highly vocal advocacy groups who threaten and intimidate FDA staff on a continuous basis. People are quitting in large numbers. They are afraid and aren't being supported to do good medical and scientific work.
- Thank you for doing this survey. It is so important!
- In general, I think scientific integrity at the FDA is very high
- FDA has a lot of respectable scientists who take great pride in making a difference in public health protection. There are a lot of valuable people that are driven by the nobility of their mission. Scientific debate is never discouraged - at least in my experience. There is a good mix of "conservative" views and more "open-minded" views. It is healthy to have these scientists argue

their points so the resulting agency stance is as close to as what is best for the public given the available information. In my experience, senior managers want their decisions to be science-based, so science has a strong voice in the agency.

- I'm probably the only [REDACTED] who has published papers in all the [REDACTED] branches of [REDACTED]: [REDACTED]. My supervisor who has [REDACTED] years in "pushing papers" and the [REDACTED] who is pushing papers for atleast [REDACTED] years; they have "lost " their technical expertise in [REDACTED] and was even unwilling to come and take a look at the instrument settings. Objected and warned me that I should not use the test to ascertain the capability of the instrument, for such a test "[REDACTED] [REDACTED] I'm referring to a test that monitors the level of [REDACTED] in the [REDACTED] [REDACTED]. The [REDACTED] shuts down automatically when the [REDACTED] becomes [REDACTED]: they admonished me that such test "[REDACTED] How dumb their logic is; they are living in the relm of 2 or 3 generation [REDACTED]. The current instrumets have the capabality to sense the level of the [REDACTED] and shuts the [REDACTED] automatically, when the sensors in the instument, detects the [REDACTED] has become [REDACTED]! This just one of many examples! When I submitted my manuscript: "[REDACTED] [REDACTED] " for a [REDACTED] publication(Laboratory Information Bulletin), He did not understand a thing about it as he has no experience in [REDACTED] [REDACTED]. and wrote me an e-mail quoting that " This work should not be published in any fourm or form" and I got tired of the runaround, and even after explaining the work step by step, the [REDACTED] declined to submit it for [REDACTED] publication. He did not have any good explantion except that he copied a couple of lines verbatim, from Laboratory Procedure Manuel." Even those two lines do not make sense, because you do not change matrix in the middle of a [REDACTED] !! It should be corrected in [REDACTED]. I did not like their evaluation and on my own, submitted it to [REDACTED] [REDACTED] ([REDACTED]) it was well received and was published !! For publishing it the [REDACTED] gave me Repramand! would you believe that this kind of stupidity exists? I hope you do some thing about this kind of attitude, otherwise this survey would be meaningless!!
- There is a burden of approval for travel and the reduction in non regulatory travel funds that is handicapping FDA scientists from participating in conferences with their peers in their respective fields. Researchers and decision makers need to be networked and informed just like industries that they regulate or make policy for.
- THE PUBLIC SHOULD BE CONCERNED ABOUT THE QUALITY AND SAFETY OF THE DRUG PRODUCTS HITTING THE MARKET IN MASS QUANITIES RIGHT NOW...where is the Congressional oversight that the agency needs right now? How was the FDA expected to implement these regulations and is Congress even aware of the agency's failure to hire the needed work force per the [REDACTED] regulations? WHERE ARE THE DEDICATED drug investigators that were supposed to be hired under the GDUFA/PDUFA regulations????? When and if shit hits the fan at least I can say I took my time and I did the best inspection and provided the highest quality work product... [REDACTED] [REDACTED] At least no one died and no drugs were recalled that I recommeded for approval, but who cares, right? Those aren't the kind of work accomplishments the governement cares about and those aren't what earn merit promotions...I hope someone can find the problem, address it publicly so that I can sleep at night, and then apologize and let me keep my GS-[REDACTED] which took me [REDACTED] years to earn. I graudated with honors in three years and took this shitty job for \$ [REDACTED]

a year. I have worked so hard to get where I am today and if something doesnt change for the better SOON I am going to quit and I am never turning in those reports. They can go back and use the money from ██████████ to do the inspection themselves. I dont want to jeopordize public health,I took a sworn oath to uphold and to protect and promote public health and I am so proud that I carry a Federal Agent's badge...I don't want to have to give this up. I love what I do and I have purpose in my life but there are systemic issues that need to be resolved QUICKLY. THANK YOU!!!!!!!!!!!!!!!!!!!! PLEASE MAKE SOMETHINH OF THIS SURVEY!!!!!!!!!!!!!!!!!!!!

- I believe FDA operates with high scientific integrity and I would like to see that continue and even increase.
- Too much political infighting for jobs/decisions
- The general public depends on FDA to put their safety first no matter what. I believe in FDA and its mission. Balance science with common sense and fight for what is right and reject what is wrong. We are public servants and not the strong arm of the law. I hope my comments will give whomever reads them a chance to pause and reflect.
- I think the scientist working for the agency are doing a good job. Congress and the WH and consumer groups push their agendas on the agency. Just becasue people are upset by something doesn't make it scientifically wrong. Politicians need to remember this.
- supervisor/director should not an author just because they are a supervisor of the author
- The scientific integrity is high. The scientific data get muddled when public policy gets involved.
- Overall, my short experience has shown that almost everyone working in our group has a high regard for public health and safety. Decisions are never made that jeopordize the health or well being of the public.
- Research when completed should be centrally housed in a database. That databace needs to be redilly accessable.
- More research
- Not that I can think of. I really do think that this is an excellent agency, but like everything there are a few things that could be done to improve it.
- Approval process is cumbersome and time consuming
- I know this can be a big issue..... I have heard the news reports Bush Admin Suppressed or pressured scientists on the issue of global warming On my level and the level of people I work with..... If the food is bad...we call it bad We call it like we see it and nobody bothers us about it..... Our big bosses believe in us, and seem to support us as far as I can see
- The FDA is 10 years behind the industries it regulates.
- It would not be possible for those individuals, such as myself, to not be influenced by all past experiences in the private sector. We all are the culmination of our experiences, which actually may benefit the processes necessary to assure we represent the sciences we in which we work and regulate outcomes in our efforts in protecting the public health.
- I'll give you an example, the assignment to collect produce. My understanding of the assignment was to collect produce and have it analyzed for certain pathogens so that FDA could compile baseline data on the subject. It should not matter if the produce was in interstate commerce or not. This was a data collection assignment. We collected samples that came back CRO for listeria. We did

not have interstate commerce and were told to focus more on produce for which interstate could be documented so we could get enforcement actions. If you are trying to collect statistically valid samples in order to develop a hypothesis of how and where pathogens are entering into the food stream, collecting only samples for which interstate commerce can be documented seems very counterproductive. Cleaning up the instructions on assignments may help to alleviate this matter. Does FDA want administrative actions or does it want usable data upon which to base compliance programs and assignments?

- clean the house of management at SRL
- One need look no further than the Coke brothers to know that money makes policies in Washington, DC. If it would be possible to generate funding via some means other than direct funding from Congress or fees from Industry, that would likely help ensure FDA's freedom to ensure scientific integrity.
- I think the scientific integrity at FDA is much better than in other departments/agencies (e.g., USDA), but that overall, Congress and the Administration have become too attentive to the wants and needs of industry - perhaps as a result of too much money in re-elections and lobbying?
- I don't care for the tone of this questionnaire. Many of the questions are designed to steer the results toward what must be some political end.
- I have had [REDACTED] new method publications in [REDACTED]. [REDACTED] of the [REDACTED] publications have also been published in [REDACTED]. I was told that I can not use publications to promote from [REDACTED] (my current position) to [REDACTED]. In my institute, some analysts were hired as [REDACTED] when they started to work with FDA. They are the operators of expensive instruments only, with no new method publication over the past years. One of them have [REDACTED] of [REDACTED] publications, but many people criticized that his (or her) publication was a plagiarism. When I was hired as a [REDACTED] in FDA [REDACTED] ears ago, I was told by an old Lab Director that an FDA specialist should have new method publication(s). But the new lab director told me that I can not use publications to promote from [REDACTED] [REDACTED] to [REDACTED]. Why?
- I dont see any issues regarding the scientific integrity at the the FDA. Issues have to do more with Management not being consistant all the time with certain desicions
- When I started this postion as a CSO, I envisioned it as scientific based. My experience has been more observation as far as foods and not so much scientific. My interest in BIMO and medical devices will happen after my first year which should be more scientific based with the proper training.
- Have strong emphasis on peer review process.
- Front-line scientist are not respected for their knowledge, experience, & opinion; especially those outside of DC.
- Congress has imposed too many requirements to "reduce burdens" on industry, that increase burdens on the agency and its employees who are only trying to write regs and guidance that will be fair and implement the laws that Congress passed. I think FDA tries its best, but we are sometimes stymied by having to do "economic analyses" or "reduce burdens" on industry. Whatever happened to protecting the consumer? Business ought to understand that if they want to sell food, drugs, devices, etc., it is FDA's first job to protect the public--not to help them make money. The sequester,

the constant freezes, the negative comments about Federal "bureaucrats" are incredibly demoralizing. We are not sitting in our offices trying to think up ways to cause trouble for the American people. We are trying to faithfully carry out what we have been asked to do. We have lost employees and cannot replace them, but the additional duties keep coming. There is a point where we cannot "do more with less." Congress should be ashamed of itself for the badmouthing of the Federal civil servants.

- I am sure scientific integrity is an ideal of the senior management. However, at the mid and lower management levels the ideals are replaced by self service and self preservation. The goal of optimizing the program to address the health concerns of the American public deteriorate till the goal becomes simply to optimize the program for the benefit to the management and their purview. I have seen it get worse over the years. The current efforts of "Program Optimization" do not address the agency mission to promote and protect the American consumer.
- No matter how high tech and infrastructure in the agency, as long there is no control of the origin of products it is irrelevant lab results. In the import Field.
- The management at the local level is not scientifically based.
- We don't do enough to keep talented scientists w/FDA. Peer Review is valuable but not the panacea.
- I believe the FDA strives to keep scientific integrity.
- Many questions in your survey were asked about some sort of training. For the vast majority of times, when training is involved, the extent of this training given to employees is: "Read this" or "Go to this website" etc. Pretty worthless. And as far as knowing my rights, sure. But that does not prevent the agency from violating those. And when they do, the recourse is non-existent. A classic "Do-as-I say" and "Not-as-I-do".
- During audits, our managers still instruct us to hide, through silence, any problems. All managers and labs I worked for have always done this game, even in private industry. However the FDA is the premier regulatory body entrusted with ensuring public health on a national level. We should be held to higher standards. We should be encouraged to point out existing problems during the audit. Why should the FDA not make a better example?
- Hire management with relevant scientific knowledge and experience.
- Try to get politicians out of the FDA decisions.
- FDA needs to look at what other countries do allow as far as tolerances in all human and animal food products. The US allowable thresholds for some pathogens/micro-organisms foods are out of touch with the rest of the world and have created a population of non-tolerant bodies.
- Severe impact on training and engagement with outside stakeholders through travel restrictions.
- There is scientific integrity for research that is permitted. Having to have topics approved seems like it would skew this.
- Scientific integrity appears to be on an unfortunately downward spiral. The integrity is being comprised by people's personal interests and poor work ethics.
- The opinion of the field is routinely discarded out of hand with no consideration of their hands on experience and proximity to the issues.
- Allow the Consumer Safety Officers to attend trainings and conferences.

- In some cases more rigor is needed for guidance provided to industry. . The FDA lacks diversity in thought, most of the workforce has been in place too long. There are very few experienced professionals and people from industry.
- I think for all the new unknown technology that is starting to develop, FDA has done a good job trying to be consistent with its policy and develop guidance for industry. It will soon to be seen if FDA will be considering cost-benefits in its review practices with the increasing healthcare costs. That will bring in a lot of ethical questions to be discussed.

NOAA

- I believe NOAA should get high marks for scientific integrity. The issue is more capacity, our ability to meet our responsibility to the public is degrading year-by-year. Lack of support by congress is killing us.
- NOAA leadership generally relies strongly on science to determine policy or meets its regulatory obligations (notably fisheries management, protected resources), but has run away from the National Ocean Policy and supporting science. This is due to adverse comments from a small number of Congressional members and ocean industries.
- Scientific integrity is not the issue. Reducing bureaucracy and giving more resources to scientists is essential to being a science-based agency.
- I am unqualified to comment. However, with regard to documentation. Almost NONE of the scientific papers I have processed for scanning and filing have had author's name, date, and paper title somewhere (better if it were all in the footer or header) making it almost impossible to obtain information on the validity, time period, sources, and locating source copies later (2 years or more) into the future.
- Accelerate the review process of manuscripts. Center approval of the lead author on a manuscript should be all that is required when multiple Centers are on the authorship list. In addition, the quagmire that manuscripts need to go through within a given Center is far too laborious for those that are known to be good writers. Additional considerations should be provided to those that have prevent themselves and a more streamlined process needs to be in place for good writers.
- In future surveys I'd suggest adding the option of answering n/a to more of the questions because there were some that were not applicable to me but I couldn't indicate that. For example, the question about peer reviewed journal articles. I don't write those.
- Let the nation know what a huge undertaking this is!
- It is generally quite high in my opinion.
- I've been impressed with the level of scientific integrity of my supervisor and our group, in general.
- a good working relationship amongst workers
- In my opinion, NOAA is probably as good as it gets.
- I am an IT Engineer and contractor. I am filling out this survey because some of my work involves managing scientific data that comes into our office. Our scientific staff has a mixed level of education with regard to computer/network usage. I am called in on scientific research when there is need for more expertise in using databases or storing high volumes of data. I like working at NOAA. The scientists are good, caring people who are under too much oversight and great pressure

to achieve with no funding. That sucks. The people that oversee our office are longtime, lifer's whose only goal appears to be not making waves and not screwing up. From where I sit, the contractors do a great deal of work while some of the FTEs are dead weight.

- I have been here for about 15 years (more if you consider occasional fieldwork), and I can say that the scientific integrity of EVERY SINGLE SCIENTIST I have encountered has been of the absolute highest calibre. Without exception. The problem is that every year the burdens placed on us (decreasing funds, ridiculous increases in administrative demands, difficulty in hiring personnel) has made it extremely difficult for us to do our basic job. This dramatically affects moral, and we are starting to lose extremely dedicated, hard-working people for these unfortunate reasons.
- Some information distributed by other NOAA offices to do not met either the Information Quality Act or NOAA's Scientific Integrity requirements.
- I'm a S/C Operations engineer. Not sure I was the intended audience for this. This seemed to be more of a survey for scientists.
- Within my workplace, hiring and management of contractors by federal employees is not appropriate nor legal, and management of the federal employees is not adequate.
- NOAA projects/ divisions that provide the basis for the informed management of industries, public resources, and the environment should be the priority for funding when resources are tight. NOAA leadership should re-focus on these essential core functions and be less concerned about 'shiny objects' that make the news in any given week.
- The scientists who work at NOAA are committed and intelligent, and act in the best interest of the species and use sound science. However, things can get lost when issues move up the chain.
- Fortunately there are still real scientists who are employed at the lower-level positions at NOAA, so there is still hope there.
- More NOAA folks can do more work. Not replacing retired employees is a long term issue.
- Using a system that is punitive (i.e. pay banding) for paying non-management employees (scientists) is a shady area that might encourage loosening of scientific integrity. For example, individuals who are supervised or managed by individuals that wield unrestrained favoritism, or who are not forthright in their intentions regarding the structure or management of a division, could succumb to a perceived pressure that the outcome of a study is not "correct". Pay banding has the potential to encourage a culture of poor scientific integrity.
- Biggest hurdles for me in Section 7 analysis and writing biological opinions has to do with inadequate resources for training and honing expertise. Also, apparent conflicts of interest between political agenda and resource management issues avails itself on large-scale projects with more serious cumulative impacts from time to time.
- NOAA is a great agency and I feel privileged to work here.
- The survey did address allocation of scarce funds to different mandates. The Magnuson Act (fisheries) gets more and more consistent science funds because industry insists on assessments because without them, the industry suffers economic consequences. Protected species (marine mammals, turtles, ESA listed species) have no such advocates. With level funding, the fish research takes priority and the protected species research disappears. Also, the public has no 'window' to

view the relative costs of science versus administration. Because funding trickles down from DC to Regions and finally to Science Centers, the proportion going to research has continually declined.

- At my office, I have always believed that the scientific integrity was the top priority, and that the facts speak for themselves. I have never witnessed at any level attempts to change or suppress findings, even if they are controversial. My direct supervisor and management team have always supported the decisions of the scientists, regardless of the fall-out.
- The NWS is a solid organization.
- People at leading positions have the potential to affect individual publication or performance and I would like the agency to not only provide training to the individuals about rights but specifically requiring the leaders - directors, chiefs, project leaders, etc - to attend an agency-sponsored "integrity training" session.
- This survey is flawed. There is little wrong with the scientific integrity at NOAA. I have never been directed to change results or not work on an issue due to undue influence -- except of course Congress can tell us not to use terms like global warming, but we work on climate change. The problems with NOAA are primarily budgetary and high-level management control.
- I feel it is most limited by our financial restraints.
- Not sure this survey was designed well. There were multiple questions where "N/A" would be the most appropriate response give my job duties but I did not have that option so ended up responding "undecided" in the middle of the scale but that really doesn't accurately reflect my response.
- I can't speak to senior leadership outside of my region with whom I am not involved, but I have only complete and profound respect for all my colleagues with whom I interact on a day to day basis and know.
- We influence scientific integrity by improving all forms of integrity. Financial sustainability should come first though.
- The Deepwater Horizon Spill has had a significant negative impact on my organization within NOAA
- I think scientific integrity is high within the organization.
- Repeatedly, I have been denied adequate training to be a competent and effective scientist at NOAA.
- NOAA is charged with managing and assessing the status of living marine resources primarily those that are endangered or exploited. How can effective management be accomplished without having control or reference sites to measure against? Consequently, NOAA should establish and enforce a policy that requires that unexploited control or reference areas are incorporated into the sampling design for assessing the status of exploited species
- I think that when there have been deviations from basic standards of integrity and ethics it has been caused by outside pressure to change unpopular scientific results. Bush having NOAA scientists water down their findings on global warming comes to mind immediately, but there have been other incidents like that.
- It is very clear that in recent years , political agendas and funding dominate research across many government agencies.
- I wish there was more science coming out of the agency. Seriously. How many people work for NOAA? And how many papers are published per office and/or agency?

- There are great scientific staff at NOAA. However, consider that prior to publication there are at least two internal reviews done- by peer scientists and usually a manager. Policy decisions are never reviewed. It has been my experience that if a scientist sticks to the facts, they keep their integrity, and they are subsequently invited to participate in fewer and fewer conversations with managers and policy makers.
- NOAA conducts cutting edge science. The integrity of the science is not the problem. The problem is a lack of public (see congress) recognition and appreciation for the quality of the work being done. However, NOAA seems at times to be almost embarrassed to take on the role as a world-class, research body and the timidity undermines its position.
- Within my program, some project protocols are not clearly defined and analyses are often post-hoc and are not hypothesis driven. When data are collected there are no clear questions being answered and no hypotheses being tested. The importance, questions and/or hypotheses are not communicated or shared with team members. Much of what I see looks good on paper, however in reality either these "goals" are not actually being accomplished, or are not completed to high quality standards. Much of the data management within this program is messy and inefficient as the same data are often entered into multiple files which are full of errors. When I asked if we can streamline data management I only received push back since this is "just the way it is." When asked to review a draft of a manuscript by a prominent program lead (he was 1st author), I found direct evidence of plagiarism as entire paragraph was almost word-for-word, without quotations, lifted from the abstract of the publication it referenced, which by academic standards is a clear form of plagiarism (at least this manuscript was for a small, not well known publication). I included this finding in my review of that manuscript, gave my comments back to the program lead and have heard nothing since. To be clear, although I am a contractor I have 12 years of combined research experience as an assistant, student, and Co-PI. During this time I have worked at multiple prominent institutions and with long term projects. I have been well trained in scientific methods, research, and ethics. It is with my combined experience that I can honestly say, this is one of the most mismanaged projects I have ever worked for. In my time here I have also learned that this mismanagement is well known within the division, facility and nationally, although the extent of which others are aware varies since everything seems to look good on paper and "don't ask don't tell" seems to be the policy. If someone actually reads this, I hope you will hear my comments and take them seriously. Thank you for this opportunity to share my honest, professional opinions and finding here.
- I believe many employees of NOAA enjoy their jobs and give their best efforts to follow the mission and believe in the mission. However, we are forced to cut corners more each year in the time allocation we give to insuring that our science is adequately presented and shared with colleagues.
- Terminate agenda driven scientist and managers.
- The science would be better if scientists did not have to spend so much time on the bureaucracy and needless (and useless) training and meetings. Let scientists be scientists.
- To my knowledge, no scientifically sound information or data has been withheld, confiscated or erased from the Line Office I have worked with in past 10 years. The issues I observed are bureaucratic burden but not corruption. I hope you maintain confidentiality of my opinions or the work I do for underserved communities and my prosperity will be impaired.

- I have worked for NOAA Fisheries for 14 years, and the only issue of pressuring scientists I have seen is pressure to use the phrase "climate change" instead of "global warming". The science is fine. Decision and policy-making by NOAA employees and other bodies does not always rely strictly on the science, but that is appropriate. I have never seen actual findings changed or suppressed.
- Bureaucracy is strangling science at NOAA.
- I believe its generally good, using sound science without too much manipulation, but we are asked to make arguments "iron clad" with very limited resources, and outside groups can bring greater resources to bear.
- From my perspective, I appreciate that the management side of NOAA Fisheries and the Science Center have separate chains of command. While we coordinate (what information do we need to make management decisions and how can we get it?) often, this ensure that scientists are not unduly influenced by management/policy concerns.
- In my time with NOAA, I've generally seen scientific integrity upheld.
- In my position, I am not privy to the type of information you were surveying about (whether Members of Congress etc. have influenced withdrawal or significant modification of policy or science communication). The White House/OMB influence is mostly in terms of proposals in their budget to combine science communication/education programs in non-productive ways and eliminate many programs - much time is spent in justifying the existence of such programs, time that could have been used in actually communicating science. Non-govt organizations often take the govt to court to say that the govt has not done an adequate job of assessing if particular species should be listed under the Endangered Species Act - this is an example of a significant modification of policy but I was not sure if this is what you were aiming for.
- Management should not make unreasonable requests for scientific outcomes, papers, opinions and findings. This just puts stress on the authors. Science takes many years to identify patterns, conclude results, and test hypotheses.
- Management is generally risk averse and very conservative. Staff tends to be more creative in their approach to work. Willingness to take risks is one the hallmark of successful employees, whereas aversion to risk tends to be the hallmark of successful management. Age old problem. Its the Dilbert factor.
- It would be nice to have an avenue to publish our work on environmental management. I have three manuscripts prepared, but I do not have funding to pay the publication fees.
- NESDIS needs support for more than just ensuring the satellites launch. They also house our data repositories, which in my opinion should hold just as much value to the Congress and the Public. It is the means to ensure that data is available for all to utilize!
- The NWS is again talking about reducing the numbers of Information Technology Officers (ITO, currently one per field office) and centralizing the ones that are left. As our forecasts become more dependent upon technology it is imperative that these positions remain at the local level. Each County Warning Area has its unique challenges where a local expertise is needed. If this reduction in positions takes place, expect at least some degradation in service.
- I have consistently observed a high degree of commitment to scientific integrity across the agency.
- For the most part it appears to me that everything is pretty much on the level in terms of integrity.

- Support environmental studies over resource surveys.
- I worked at the USFWS before NOAA. I have never experienced any sort of censorship or ethically sketchy treatment at NOAA. This is quite a contrast to the environment at the USFWS. I believe that the science coming from our NOAA center is top notch and not tainted by politics or business. Again, a big contrast with USFWS.
- Most NOAA scientists I've encountered conduct their work with a high level of scientific integrity. I've become disillusioned by higher level managers and attorneys willing to modify scientific results due to political pressure.
- The huge increase in bureaucratic tasks being foisted upon scientific staff, for example in procurements, is reducing staff efficiency and effectiveness thereby reducing both the timeliness and quality of scientific advice and products. NOAA's hindrances to its scientists go beyond those of its parent agency (DOC).
- The days of federal researchers working on personal research goals is done. The money has dried up. Research is now strictly targeted towards the mission of NOAA to protect and manage our nation's resources. This is a good thing.
- In general, integrity is good due to the commitment of employees to the responsibility of a natural resource agency to the American people.
- Management should be aware of requirements of scientific integrity and form policy and enforce those policies.
- I resent having to clear all of my media interactions with NOAA Communications.
- I am not personally aware of scientific integrity issues at NOAA but I work on the science side, providing information to decision-makers rather than making policy.
- NOAA scientists are extremely dedicated, have a positive work ethic, and strive to conduct high quality research.
- Certain line offices (NCCOS) seem to be moving away from doing science at all and are, instead, following a business model- which DOES NOT WORK for science based research.
- As a rule, I believe that NOAA's integrity in its work for weather, climate, and fisheries is generally of high quality (albeit some mistakes have been made at times). I believe that NOAA's integrity with respect to Protected Resources is less so in part because it does not receive the same level of scrutiny with respect to all species. I feel that those actions that command the least public attention also receive the least scrutiny, and NOAA integrity is more likely to be lower than it should be.
- Sometimes integrity is not addressed in order to avoid conflict with individuals/ work groups. Whether this be a fear of conflict or a matter of favoritism is unclear, but it has an affect on data collection/reporting.
- I have answered the questions based on how my agency operates.
- NOAA has a fine record of productivity and integrity. We should do all that is necessary within legal and scientific means to continue this record.
- Remove the conflict of interest that exists within the National Marine Fisheries Service where the same decision maker (both at the regions and HQ) about Fishery Management Issues is also the decision maker about Protected Resources and Habitat Conservation Issues. In the Southeast Region Scientists and Resource Managers within the Protected Resources and Habitat Conservation

Divisions are often forced to alter their findings if it would shine a negative light on the Sustainable Fisheries Division or on the Fishery Management Councils. I am aware of numerous cases where the Regional Administrator overruled findings by the staff in the other offices because it would have forced changes to Fishery Policy. The regional administrators have significant conflict of interests in that they manage programs that are supposed to be the watch dog of each other.

- Current situation is untenable with respect to Council interference in nmfs ESA mandates. Infiltration of Council priorities and agendas goes very deep within the regional and science management, down to the level of bench scientists. No possibility for scientists to produce a report for management that is unaffected at very early stages by Council/business interests.
- In my opinion, the scientists at NOAA work very hard and do a good job, given the context wherein they do their work.
- While I have some complaints, I will say that NOAA Fisheries does strive to encourage scientific integrity and application in a more affirmative way than other agencies I have worked for or with.
- General attitude of Local administration towards scientists and scientific work is often dismissive and viewed as more of a hindrance to their particular agenda than it is to our mission statement. We receive little to negative support in carrying out the scientific mission and feel the overwhelming amount of paperwork and regulation has stifled the scientific process.
- I do not know if this is true for all of NOAA; but the general feel of many of co-workers at the ground level of the line office where I work, is that this line office is quickly heading away from rigorous baseline research and down a road toward scientific syntheses; where researchers sit at their desks and rely on the data and research of others [colleges and universities, state and other federal agencies, private industries and consulting firms, and international colleagues] as their source of information to analyze and synthesis to address and meet the goals and mission of NOAA. If this happens, the integrity of NOAA as a scientific agency WILL BE LOST!
- Management measures are often taken with little or no consultation of how it would be best integrated to provide data as to whether it was an effective activity.
- I feel NOAA, at least in my personal experience of the last 12 years, sold its scientific integrity for the price of regular extramural funding from other agencies. NOAA needs to make an important strategic decision at the TOP levels as to whether or not NOAA is an independent agency that is driving and prioritizing its scientific research internally, and funding that activity independently of other agencies or institutions, and collecting its own new scientific data. If so, then there needs to a good strategic plan in place as we undergo budget or staff reductions.
- In nearly 30 years working for NOAA and learning about experiences from colleagues in Department of Interior, State agencies, and other government bodies, I have been grateful that NOAA strongly supports sound science and the vast majority of decision-makers are genuinely interested in letting the science inform policy in an honest and direct way. Integrity is generally very high, although there are always exceptions where specific circumstances make the science/policy interface challenging.
- NOAA does the best they can, but I have seen many changes to slant toward political means/funding. NOAA should steer clear from this, but very difficult to do so as a government agency.

- NOAA is sliding down a very slippery slope where good scientists are unable to function due to bureaucratic burden and lack of support and poor scientist are never reprimanded or taken to task. There is no incentive to maintain scientific integrity or competitive research in the agency.
- The three most significant issues for scientists in my agency are: 1) a tight travel budget that restricts opportunities for attending scientific meetings and a group travel policy that delays decisions about attendance at major scientific meetings until one month or less before the meeting; 2) a lack of sufficient personnel who can share the responsibilities for scientific development as well as a lack of programmers who have both scientific programming skills and skills for setting up end-to-end operational processing systems for data; and 3) the imposition of not well-defined configuration management requirements that seem to be either excessive or not well-tailored to the situations for which they are required, taking away scientists' time from scientific development, analysis, and publication.
- The last five years are VASTLY improved compared to the years under the Bush administration. My answers during that administration would have been entirely different.
- Focus on analysis with the intent to identify pollutants to lead the world to a cleaner existence.
- More 1 on 1 training and interaction between folks in the office.
- I enjoy position as biological science tech because of disability workplace provided new technology access communication.
- I like the optimism of the phrase 'best science available'.
- Integrity is very high.
- As a non-scientist, but a manager and someone who interfaces with the public, I am always proud to note the integrity of NOAA Science and how it benefits the public at large. It is interesting to note the science related to weather modeling is usually never in question, but the modeling for fisheries generally is. I'm sure it breaks down into safety vs. livelihood issues, but it is a greater challenge to get people to trust data that ends up limiting what they do or how they do it.
- I am concerned with budgetary issues at the NWFS center. It often appears a certain group will be sent a certain amount of money from headquarters, and then it will be redistributed to other groups at the center that are not well funded. While, I feel for these non-mandated science groups, I think they should find funding else where. Our center could even provide other outputs for revenue for them. In addition, I am concerned with the lack of transparency our center leadership has. Often leadership will be discussing plans to change specific significant items in a team without even discussing it with supervisors of that group. Our center leadership appears to make many choices based on politics solely. It is unfortunate that they feel they have to stay on the good side of politicians in D.C. in order to maintain funding of our center. I don't think science should be funded this way.
- Other than weather science, I think the agency has given up on the idea and support of science.
- There is a lot of "quick and dirty" decision making done which leads to requests to hurry up the science. Those requests to compromise the science need to end.
- I think it is less a problem of integrity than it is of expertise and experience.
- There's a great article on integrity by Admiral Arleigh Burke that outlines the importance of the virtue.

- Whistle blowing or reporting scientific misconduct still seems to be a career harming or ending decision in NOAA Fisheries. Please provide summary statistics on the fate of scientists who have invoked these measures.
- When I joined NOAA in 1979 it was an agency that I was proud to be a part of. Now it seems this agency is being directed by budget considerations, economists and management specialists. Where is the science? By assuming responsibility for some of the satellite activities the budget has become lopsided such that the remote sensing areas are eating the lunch of the research groups. Both are needed. Who develops the field data to calibrate the sensors?
- Science in general has suffered terribly from the political-eNGO establishment. Major decisions that impact communities have been made due to political-eNGO establishment pressure and lobbying, irregardless of the science. Objectivity in science has been diluted, especially amongst the younger generation of scientists.
- I think the scientific integrity at NOAA is fine. However, please understand that I'm coming from a contracting staff point of view who doesn't do science anymore - I work in a regional office doing management. I use science to inform decisions.
- last five years I have had many cases where my results have been questioned, demeaned and discarded even though they stood the test of time and scientific review. Because a number of these issues were highly contentious and carried high public profile, I was "strongly" encouraged to drop the research. Whistle blowing simply won't work when little is on paper and the situation boils down to "he says she says". Been there done that. Talk of integrity is plenty, actually following these precepts - not so much.
- It is and always has been very high.
- I believe the integrity of scientific integrity is there. Most scientist I work with are ethical and work systematic and are open minded to look at new data and apply it when opportunity arises. Kudo's to our scientist.
- I wish they would allow contractors to receive health benefits through their paychecks.
- The integrity of the science at NMFS does not need to be questioned. The problem is that the resources needed to conduct good science are not available and the managers often wish to move forward with insufficient information to make informed decisions.
- The group that I have the most experience with - the Protected Species Branch at NEFSC has extremely high scientific integrity and works hard to do excellent work
- The final science is only as good as the data collected. No effort is made to vet the integrity of the data or those who collect it in the National Weather Service.
- Managers need to have more respect for goals of senior management but that won't happen until senior management maintains a consistent target through time and provides support for the mission.
- Croneyism is rampant in the NOAA Fisheries PIFSC.
- There needs to be more rigorous vetting of administrators' independence from influence by business stakeholders. The influence of NGO industry advocates and business organizations (e.g. charter boat operators' associations) appear to unduly influence management options away from best scientific advice. These interests have learned to exploit the fishery service's mandate to use

the "best available science" by delaying or blocking formal review of available science, hence it cannot be used until deemed "best available".

- Science is only as good as the data collected which needs the best technicians yet a tech is a four letter word in NOAA. Techs should be sought out and paid as well as bios and made as equals to biologists. For a few decades now we have demeaned techs and elevated bios which I think is the main reason why science is falling apart from the ground up.
- NOAA has top notch scientists but will have an increasingly hard time retaining them under the current financial and management conditions.
- My work and general experiences are very limited in context to the larger NOAA mission. Most of my opinions are from external experiences in observing the incompetent and unscientific influence of politics in general on decisions, or more accurately, indecisions for the general welfare of the population. Very limited actions have ever impacted NOAA at my level in the program.
- Because I work in a sensitive area [REDACTED] and [REDACTED] in the [REDACTED] I feel that at times I must tread lightly so as not to anger stakeholders. I have not yet published, but I do have concerns at how certain groups will respond when I do, and what kind of support I will get from my advisor.
- There are a lot of talented scientists in the various science centers but there is a culture of firewalling staff from science centers and scientists. More integration of the science centers and regulatory staff is needed.
- I have always been impressed by the integrity and work ethic of my colleagues at NOAA. The staff is passionate about the work we do and dedicated to the goals of the agency.
- I have a huge respect for the research in the natural sciences conducted at NOAA; as a social scientist, I would love to be able to be part of a similarly impressive community of colleagues who can support and guide - and understand - each other. However, this kind of productive research environment is not possible when there are so few of us.
- Integrity is very good ... only problem is that we cannot do all we need to because of budget issues and unfilled federal worker positions.
- I am an engineer, doing habitat restoration for fisheries. My experience is that our scientists are well supported in their work, and that I am enabled to do my best to take that science into account in my work.
- My experience in Alaska working for NOAA has been excellent.
- Not really. It does seem that freedom of expression of scientific ideas has improved in the past decade, but controversial topics can be difficult to disseminate at the local level.
- As far as I can tell, my department is integral. But as a contractor in my second year (and a volunteer for a year before that), I have almost no information at all about what goes on in the management and acquisitions levels. I receive information through the grapevine about the general funding environment. And from what I understand right now, it has never been so bad. According to long-time employees here, morale is at an all time low.
- Please have this site [REDACTED] [REDACTED] in the name of marine science
- Too many unnecessary (in my opinion) restrictions in IT policies and work-hour related policies prevent or make significantly difficult to pursue scientific projects.

- I have an issue with this question: 5. The use of government contractors for scientific work is harming the effectiveness of NOAA. The only reason why contractors are harming the effectiveness of NOAA is because it is increasingly difficult to keep contracts on, often highly needed personnel. Contractors are the first to be written out of budgets.
- On numerous occasions over the past 10 years I have noticed instances where NOAA scientists have - made false or incorrect statements in scientific publications or presentations; and - used incorrect statistical methods that influenced findings in scientific publications or presentations. In my view this does not, in fact, constitute "best available science", and I have expressed my concerns to our lab's Science Director & Dep Director, but I have seen or heard little in the way of action on their behalf other than that "they would look into it."
- Generally I think the scientists and managers work extremely hard to produce accurate and credible information to stakeholders. Nonetheless, there is political pressure, both from within NOAA and from outside agencies, to heed the wishes of selected interests in Congress, in the Senate and in the White House to showcase science in such a way so as to obtain the research dollars that are so desperately needed for NOAA to function. It is important to note that this is not unique to any one administration, rather it is an undercurrent through all administrations in an organization that is generally underfunded and understaffed.
- Procurement of computer hardware for use by research scientists is very difficult- even with Project funding in hand!
- Despite any complaint, working for NOAA is great.
- Power corrupts and absolute....well you know the rest
- I've had the privilege of working with many talented scientists here at NOAA.
- Let information that has been vetted and accepted and found to be true and accurate drive decision making.
- The data in databases are "updated," sometimes several years after the data have been reported.
- For the most part, scientific integrity is intact at NOAA. Research scientists are dedicated and want to do good work.
- I think we're in a good place in my area of work. Our scientific work is pretty solid, at least as solid as it gets in the area of variable natural ecosystems.
- I know we need funding from Congress to thrive as an agency, but I don't think sensationalizing climate data is the right way to get this funding.
- The internal review process is onerous and used to delay and filter publications. We should be able to publish externally w/o internal reviews and approvals. Even our oral presentations, web pages, and posters have to be reviewed and approved. It is absolutely ridiculous.
- A lot of your questions are NOAA based and I can only answer from my knowledge at NWS. NWS does not have the regulatory issues that other NOAA agencies deal with. We do have climate outreach and talk publicly about the impacts of climate change. NOAA provides resource material for this, but we have never felt restricted in our ability to scientifically convey the information and data on the topic.
- Question the integrity of the automated weather equipment data used to promote climate change. In many cases like in snowfall/measurement a human observer is much more accurate. ASOS

(Automated Surface Observation Systems) often times wipe out the liquid equivalent moisture in snow because of the heating process involved.

- NOAA scientists are increasingly called on to grant funding to finance their work and that means they are less available to support management and policy needs, and are being put into positions that make their objectivity, or the appearance of their objectivity, questionable.
- I worked as a "bench" scientist for 23 years before becoming a Division Director and never experienced any of the negative events regarding representation of scientific results that you asked about. I have always found the persons managing our science to leave the technical details and interpretation to us. I have received only positive encouragement to accomplish our best science.
- I believe there is a great desire to continually improve our scientific accuracy and integrity. However, different programs/divisions are starting in different places and have more/less work to do to attain this.
- All the research scientists I work with have high integrity and would not publish anything they did not believe.
- Politically influenced hiring decisions between 2000 and 2008 continue to affect day to day operations.
- There is far too much emphasis on security in the field. We understand security needs, but the bureaucracy of security has seemingly become more important than our actual mission.
- In working at NOAA for over 12 years, I have never seen any questionable science produced by NOAA researchers. Since the end of the Bush Administration, I have not seen any skewing of the science.
- The integrity, skills, and dedication of the NOAA scientists I work with is superlative.
- Over the past five years, my personal opinion is that local and regional management has deteriorated to such a level that the workplace and thus the science that is being conducted has become a 'free for all'. Scientific work is not being driven by NOAA's mission. Rather, it is being driven by egotistical maniacs and bullies. These people, who are actually in the minority, run rampant while managers sit by with their hands at their sides and quip that there is nothing they can do. Over my past 13 years with NOAA, I have never seen morale so low as it is currently. Honest, hardworking scientists have become the punching bags and work horses for those who have figured out the system and more importantly, are favored by an outside funding agency. In my opinion, this favor is typically due to the ineffectual nature of the work performed by said researchers. In other words, it does not 'pay' to come up with the 'wrong' answer. On another note, it is virtually impossible to execute a field study in a timely manner given the rate that funding is delivered to the line offices and processed through the system. In my particular situation, I am being asked to include salary for myself as well as my colleagues (all federal employees) in budget proposals. This puts my proposal at a competitive disadvantage even before the scientific merit is considered. Furthermore, internal funding decisions are often made at the local and regional levels based on someone's personal agenda or relationships rather than on competition and scientific merit. Unfortunately, I believe NOAA is still operating on some level as a 'good old boys' network. Gender discrimination in particular is certainly alive and well. My experience working for NOAA has deteriorated significantly in the past five years. I believe this is due in large part to a fairly recent crew of very poor

managers/leaders and their inability to react to the recent decline in funding we've experienced as an agency. I can honestly say that I have never experienced such a lack of communication, guidance, vision, and general leadership. I hope my experiences from the trenches so to speak are unique to the local and regional level. I am extremely proud to work for NOAA Fisheries. I am simply frustrated with the current state of leadership/science. Thanks for the opportunity to express my concerns.

- For the most part, I do not get the sense that managers within NOAA are willfully attempting to undermine scientific integrity at NOAA. However, the business-mentality emphasis on churning out products that are "useful" to natural resource managers undermines the ability to focus on longer-term, thorough research that is ultimately more useful.
- Industry and Political priorities usually trump scientific based priorities.
- There is little scientific integrity when it comes to NESDIS standing up to political decisions that are not in the best interest of NESDIS. Many technical reports and research has been discarded in the interest of furthering some individual's personal likes and dislikes.
- I believe this topic is generally well addressed by my work unit, because we all agree on necessity to rely on best available science in our respective work products. Nevertheless, staff and managers in my work unit have divergent views of what that means, so several long-standing policy issues remain unresolved over several years.
- Please don't associate my name with my responses and comments. I am not convinced that I am well protected with regard to whistleblower laws.
- Contractors are not bound by integrity policies and are often driven by business interests. Contract staffing organizations lobby and have an enormous, wasteful overhead cost.
- NOAA's scientific integrity is strong
- The new era of "doing more with less," initiated by difficult budget situations over previous years, has become the status quo. A lack of prioritization of activities by leadership means that agency scientists are continually spread very thin and asked to do more than what is reasonable. I worry that if this trend continues, it will lead not only to further declines in morale, but could eventually impact the quality of the science NOAA is responsible for producing.
- This science is currently being compromised by lack of strong and visionary leadership and extremely poor budget management.
- Expedite the processing of Interagency Agreements, MOUs, MOAs so that scientists can work more efficiently.
- I do great science of very high integrity. I believe the same is true of my colleagues' science here at NOAA.
- Overall, I do think NOAA scientists practice outstanding personal and professional integrity. They are predominantly a group that exhibits traits of high character. They are truly passionate about the mission. NOAA lacks the publishing standards that exist within the USGS.
- I can only speak for my office in NOAA, but science here is inhibited in three ways. First, the number of actual scientists here is vastly overstated. Most managers are titled "Supervisory Physical Scientist", giving the impression that they are scientists, when in fact they perform no science, and many do not have advanced degrees in any discipline. Second, many scientists (myself included), have our performance plans filled with non-scientific duties, while the "science" that is done here at

this office is either performed by contract scientists through a cooperative institute, or by other employees who do not have expertise in the science work they are performing. Case in point, I have a Ph.D. in climatology, yet I am not permitted to contribute to the climate reports or assessments produced by my office, while the majority of contributors to these reports from my office possess neither advanced degrees nor experience in climate science. Instead, my duties are largely relegated to writing computer code to reformat data. Lastly, my office prevents its scientists from disseminating the results of their research by withholding approval to participate in scientific conferences, even when we have the money to do so provided out of grants in which we participate. Citing NOAA group/conference travel policy and agency imposed travel caps, the few spots our office is allocated for science conferences such as the AMS or AGU are given to managers so they can control and spin the scientific messages and to be seen as part of the scientific community. This can also be seen in the lack of recognition for performing science, as evidenced in the proportion of managers receiving agency awards for "scientific" activities, relative to the number of scientists receiving such recognition. In a recent department gold medal award for a scientific activity, three quarters of the group were managers who had little to no role in the actual work. In my opinion, the claim of NOAA as a science agency is a well crafted illusion. We do not advance scientific knowledge, nor do we operate on the basis of sound scientific information. NOAA is a political organization whose upper management are solely concerned about the advancement of their own careers, not the mission of the agency. The agency cherry picks science when it supports their agenda and makes them look good. When our science conflicts with the party line, it is conveniently overlooked. We still are prohibited from using the term global warming or even "hot" (we must use the word "warm").

- NOAA leadership allows scientific integrity as long as there are no controversial or political issues at stake. If controversial or political issues arise, NOAA leadership easily dismisses scientific integrity.
- Scientific software is inherently complex and it is mostly written by scientists and not software engineers. For scientific software that is beyond the research domain and into the operations domain, the application of software engineering best practices, such as those codified in the CMMI, will go a long way to ensure that NOAA remains the authoritative source of environmental scientific information.
- There are scientific integrity issues that management does not want to address- it's clear that there is concern for the image of subgroups within NOAA over concerns about scientific integrity.
- Science at NOAA is strong. The mandate for more parts of NOAA to do and lead science needs to be met with resources to implement those mandates.
- some of the tools used for analysis are OUTDATED or provided by incompetent contractors (lowest bid). This in itself wastes many valuable hours and tax payer money. The contracts are not adequately reviewed/overviewed by a fed manager.
- As unrealistic as I know it is, listen to the science and forget about political agendas.
- test
- Funding for our science centers is sometimes derived from the regulated industry and the results are used to delay action if more funding is available to study further in a feedback loop that can prevent conservation actions.

- Balance the functions of each units in turns, not partial to certain topics that attract more public attentions. Like tsunami hazard, it is not happening in the U.S. generally, but we spend too much on it. Similarly, the hurricane storm study has been for years, the conclusion is still to evacuation training, very little funds were spent improving new science which can provide better accurate information. In past four years, NOAA has been focused on fishery and maritime operation but overlooks other coastal zone issues in charged by NOAA.
- This seemed like a very paranoid survey
- Most scientists i know have high integrity. We are highly insulted by attacks on the scientific method, especially by pseudo-science appointees and media outlets. Science agencies should be sheltered from political intervention, especially religiously motivated malicious budget cuts.
- Everyone is trying very hard to do good science here, but they feel beset at every turn by lack of resources and (at the lab level) a lack of drive to better the situation.
- The voice from scientist is weak. Everything is decided by the supervisor or director.
- I find it pretty honest and professional. It is certainly on the level with academia.
- I believe NOAA scientists are doing their best to preserve scientific integrity in spite of a number of obstacles that make it very challenging to do so. Creating a political and economic environment favorable to conducting sound science would go a long way.
- It has been good for all of the 22 years I've worked in NOAA Fisheries, and excellent for the past 5-10 years. There were a few minor exceptions before the current scientific integrity policies were put in place, but I have had no issues regarding integrity recently.
- From my experience in the trenches for the last [REDACTED] years as a [REDACTED] biologist at NOAA, I think the scientific integrity has been and continues to be excellent at the agency. I can't speak to what goes on in DC, but from my view in the field, my superiors use the best available science to make their decisions. I have never once felt like I was being censored, even in fairly controversial topics (protected resources).
- The biggest problem at my Center is that there is little transparency of decisions affecting budgetary decisions for the Center, and there is not a straightforward process for communicating with the leaders. Given reduced capacity to do science, these issues create a very difficult environment to get funding for priority research.
- I am truly proud to work for this organization. I have worked for other government agencies as a biologist and had to quit because I disagreed with their questionable practices. But the people who work here, and the work we do, I can stand behind it a really trust that science is the platform for our decisions.
- I work in a research environment where science is valued and supported, independent of the results. If results are controversial, we are encouraged to work with communication and policy staff on how to discuss those results. There is also a general feeling among staff that integrity of the data and results of of greatest importance. I love my job - and the majority of my staff and colleagues feel the same. We work with fabulous people who are committed to protecting natural resources and providing relevant science for policy and management. And several other comments as answers to some of these survey questions could be interpreted in a number of ways: I hesitated to answer questions 21 and 22 since these can be easily taken out of context. I have not experienced the list of

issues in that series of questions, with the exception of increased administrative burden which has been significant and extreme over the past several years. With tightening budgets and gross errors made in other gov't branches, we all have experienced increased scrutiny and monitoring of absolutely everything. And a note on contractors - the question in this survey seems like a loaded question. Contractors are ESSENTIAL to our work, largely because we are limited in our ability to hire employees as full time or term employees under the federal government. Our workforce management group is beyond dysfunctional and although senior managers are aware of this problem and working hard to improve it, the reality is that we still are unable to hire federal staff. Even if workforce management was fixed, restrictions on hiring FTEs is still in place so the hope of hiring young, motivated, exceptional staff is limited. So, without contractors we would not be able to do the research we need to do to meet goals, mandates (ESA, Magnuson-Stevens), etc. And last, at our center, we are asked to get in touch with communication staff prior to interacting with the media, when possible. It's not a restrictive policy, but one designed to support staff in their communications with media and simultaneously to give a heads up to communications team that we will be/have been in contact with the press. From the question, it might seem that this is controlling staff communications, but my experience has been that there is no intent to restrict communication (but instead ensure effective communication while eliminating surprises up the chain).

- Our area (nautical charting) is fairly non-controversial. Our products and decisions are often driven by the needs and requests of the industry we serve (primarily commercial shipping), but I do not see this as problematic.
- Generally, the agency does a good job of protecting scientific standards for fisheries management. The 2006 revisions to the Magnuson Act have significantly raised the protections for stocks, especially the requirement for the SSCs to set catch level recommendations.
- Just remember 10% of employees do work above and beyond. 40% do their jobs vary well. 30% do what's asked of them and 20% are not worth a @\$%.
- I feel the agency has a very high level of scientific integrity.
- I think your survey is biased to reflect negatively and not a objective survey to investigate scientific integrity at NOAA
- Work harder, Gretchen.
- You need to quit letting NOAA investigate complaints against NOAA
- NOAA means well but can't see past the "Beltway mindset."
- I want to know why contracting is such a high priority. Replacing federal employees with embedded contractors is detrimental to morale and effectiveness of both federal employees and contract employees. I do not understand the reason for doing this—certainly not cost effective.
- I recently was told by a someone at the [REDACTED] that I could not publish a paper using [REDACTED] [REDACTED] Project funding. That person tried to control what was published, tried to invite themselves as a co-author, and threatened retaliation when the paper was put through the review process. I knew this was wrong, but because I have to fund others with [REDACTED] funding at the university I'm collocated with, I never filed a grievance. The [REDACTED] person in question, was in control of [REDACTED] funding via is advisory role in the program and the program manager was ill-qualified to make most

decisions without advise from others (a shortcoming). I also find it troubling that most in my field fear funding denial as a potential retaliation mechanism. So there are several ways a nail that sticks out can be hammered down. I don't think the NOAA policy would protect those people that are impacted by my decisions as a noaa employee.

- Overall, I think the agency does a good job of trying to protect the integrity of its scientific research.
- NOAA does great scientific work with very little money. Members of other agencies such as DOD, NGA, and the Department of the Interior who perform similar tasks are paid significantly higher. Additionally, these agencies have a larger operating budget than NOAA. The most positive aspect of doing more with less is that the agency has produced a wide variety of individuals capable of performing tasks outside their realm of expertise. The downside of this, is that these people are overwhelmed and tend not to stay within the agency long-term. In the end, this higher than average turnover is not providing the government with the best return on its investment.
- There are many great scientists, but we are less and less able to do science and more constrained to do what is politically lucrative or thought to be attractive to leadership at the time. doing government science on a project by project basis does not allow scientists to develop professional expertise. When leadership is trying to play according to the rules that will get them the most money from Congress, science becomes just another political tool....climate change is a prime example..... Good scientists need to feel free to express their expertise without fear of being fired or not having their contract renewed next year. Inter-line office and inter-branch rivalry for funding is killing any chance we have at a spirit of cooperation. We are fighting for fiscal scraps and that is no grounds for real collegiality.
- With adequate funding, scientific integrity will improve.
- Listening to operators and users of the science is critical to know if the science is flawed. Yet, on numerous cases... the expertise of the front line analyst is ignored by lower and middle management (not even provided to highest managers). Though we have experience and active knowledge of science and its application there appears to be an overwhelming attitude of intellectual superiority by middle level management toward the lowest level staff. More frequently, the burden of proof of science or policy is not presented for "buy-in" for those on the front line applying the science or policy, more of forcing the situation with a connotation of reprisal for not unilaterally "buying in". Additionally, on occasion (becoming more frequent) we have been explicitly told to not discuss any matter regarding "sensitive topics" to tours (including media and high ranking governmental staff, ie Senators)
- Many of the scientists that I know at know NOAA are quite unbiased and appear open minded to issues that are not always accepted by the majority. For the most part, political positions, thoughts, and ideals (and other individual preferences) do not interfere with collaboration among colleagues. To me this is quite important in the scientific process and needed to best determine the appropriate science needed to understand natural phenomena.
- I think the staff could use additional training in terms of maintaining social media channels and communicating information. The National Weather Service is still trying to familiarize itself with social media sites, particularly Facebook and Twitter. From the perspective of a National Weather Service field office, it is challenging trying to keep the public interested in what we are doing as an

office and agency as a whole, especially during periods when mainly benign weather is occurring. So we sometimes end up putting more emphasis on entertaining our users rather than providing them meaningful scientific information. On social media, there seems to be little interest in our various safety awareness campaigns (for example, Winter Weather Awareness Week), especially when there is little or no active weather occurring for long periods.

- The government has the biggest resources to provide the most accurate information to the public. As such, its scientific work should be free of influence of budgeting. The only pressure to the government research activities should be the following: scientist guarantee to use the most updated technology to provide the most accurate and systematic information to the general public.
- NOAA is just a bureaucratic organization. No one cares about science. It's just an inconvenience. Red tape and forms and general bureaucratic formalities are all that matters. Publishing is so difficult that it's generally not worth it, its easier to do nothing. I haven't been to a science conference in 5+ years!
- I am very impressed with the scientific integrity at NOAA.
- I think NOAA does an excellent job in general and regarding scientific integrity.
- Claims from NOAA about the supposed threat of climate change are harming the integrity and reputation of the organization.
- The administration's support and respect for science is much better now than it was under the previous administration.
- NOAA/NWS seems to have a bi-polar in its use of policies. Policies that support the current political agenda are followed, and those that don't are ignored. As an example, at the NWS management touts certain event specific forecasts for high profile events as "successes", but then tells field forecasters that they cannot perform similar forecasts for similar events that lack the media profile on DC. We have been told we give forecasts specific for large scale public events held by non-profits in our area (the NWS says we are competing with the "weather industry"), yet we are then tasked to perform weekly or bi-weekly teleconferences and forecast analysis with Shell Oil, an obvious for profit with its own forecasters. Another example is that NWS is planning to reduce several offices from 24 hr to 16 hr. When employees objected that these are the only offices located in the rapidly changing arctic, that automated instruments do not accurately reflect precipitation and snowfall, and that the years of climate record associated with these very sparse stations makes them very important for climate change, we are told it is not an issue. The rest of the US is increasing its presence in the Arctic such as through the Coast Guard, Navy, and various research groups, yet the NWS is decreasing its presence. Employees have long argued that ground truth is needed and that forecasts and research can't all be done from long distance lacking the ground truth. We have argued that having people located in local arctic communities increases the communication with them that is not as present as when someone pops in from afar for a 1 day meeting, but NWS management does not hear us. In the past few years High level managers have told employees they are easily replaceable, and treat them that way. That is the real issue. If you object to something, even if is managers not following a an agency policy or procedure, you are branded a trouble maker and made to feel as if you should leave. Many good employees are abused until they retire or leave.

- At the local lab level I am confident in the integrity of scientific endeavor within NOAA. I do not know how this plays out at higher levels. In the 25 years I have worked at NOAA, I have never had reason to doubt the integrity of our NOAA lab/division directors. They have had to constantly battle against poor funding and find ways to keep us employed.
- I would like us to look at science, as science. Policy is important, but policy should not dictate the science. Let's have sound debates about what the science is showing before political discussions take the forefront. If good science shows certain results, then let's discuss them.
- My experience has been restricted to a narrow range of NOAA activities.
- I would like to see MUCH better communications from Upper level management and the Weather Service Office. We have had no work on vacancies, travel money, etc. .
- NOAA policy prohibiting employees to attend conferences if they are willing to fund a portion of the conference fees with their own money (it's either fully funded or no-go) is extremely detrimental to science-sharing and morale. This should be addressed and corrected; official time should be provided regardless if the entire conference fees are funded by the parent agency or not.
- The politicization of global climate discussions is an embarrassment to the entire atmospheric science profession. The best way I can describe it is with a Mark Twain reference to a supposed Benjamin Disraeli quote: "There are three kinds of lies: lies, damned lies, and statistics." All of climatology is statistics, and everyone is cherry-picking them to serve their own viewpoints. There is a difference between Correlation and Cause and Effect, yet these are delivered as synonymous in most anthropogenic climate change arguments. Our varying weather and climate results from the superimposition of numerous environmental cycles, each of varying duration and amplitude. Many of these cycles are known, but many remain unknown. To say that we can forecast decades into the future with any accuracy based solely on our understanding of known atmospheric cycles and interactions while disregarding the unknown ones is a gross exaggeration of our physical and technological abilities to measure and forecast relevant parameters on our planet. Computer models have helped improve the accuracy of weather forecasts tremendously over the past three decades. However, the accuracy of their output diminishes as one moves farther away from their initialization time for a variety of reasons, including the "unknown" cycles/parameters mentioned above. Multi-decadal output from global computer models suffers from this same "spaghetti chart" problem, which should be acknowledged in any discussion on long-term forecasts. Unfortunately, the dumbing-down of the issue to accommodate the reading level and attention span of the average person (and politician) completely disregards this critical issue, and feeds the passions that turn scientific dialogue into the vitriolic attacks that have become common place in environmental discussions. It is obvious and undisputed that mankind does affect the earth's environment on at least the microscale, if not the mesoscale, One need only view the overnight minimum temperatures from urban to nearby rural areas on a cold winter night to see this. However, the certainty with which some scientists attribute humanity's role in recent global temperature trends - and the simplistic belief that the current trends will continue unabated on they same path unless we somehow reverse them - is not only arrogant, but foolish. To use a crude analogy, we are parasites on planet earth. Like parasites, we can affect our host, but we cannot control it. Should we cause enough damage to the host that it becomes advantageous for it to rid itself of the the parasites,

then it will. Our goal as scientists should not be to convince the public that humanity can control nature, but that we can and should respect it and work within its limitations for us. In other words, we need to adapt to it, not the other way around. Overall the scientific integrity is excellent. However the critical communications methods used by my agency need revamping and improving, but the process is very slow, cumbersome, poorly organized and inefficient. The result has been little or no change.

- NOAA scientists are being forced to work with other agencies such as NASA, DOD, DOI or DOE to participate in research and conduct basic climate monitoring. NOAA didn't even bother to request funding from ARRA while all other science agencies requested and received enough funds to expand their programs and push the science forward. OAR leadership is severely lacking in representing the science, seeking out and acquiring funds to maintain the science at a basic level.
- The future of our reputation requires strict scientific integrity.
- More driven by funding than good science.
- Remove the Office of Marine and Aviation Operations (OMAO) NOAA Corps Officers from shipboard management and operations. They lack the professional qualifications and experience to take charge of a navigational watch nor manage a ship in any capacity.
- There is sometimes a sense that, although management knows that they can't/shouldn't tell us not to talk to the media, they will still informally put pressure on you not to do so if they think what you are going to say will reflect badly.
- The drive to obtain research funds from US Congress, and the NSF is driving research to show a condition exists that actually does not. Tests are done to verify a situation, not to accurately determine deviations from some given norm. The Office of Atmospheric Research (OAR) is the biggest offender.
- The working level scientists I've encountered show high scientific integrity, and, inside NOAA, are supported fairly well at carrying out their research and publication in professional literature. NOAA management fails to support/permit scientists leaving the ivory tower to speak to media, thence more of the public. Rather few scientists are inclined to do so in the first place. So it takes little to shut it down pretty thoroughly.
- I believe upper management at NOAA is under a lot of pressure from congress, but have no direct knowledge this is so other than what I see/read in the public domain. What I do have some direct knowledge of is that work at NOAA appears to be very "product" oriented. It's like everyone is on a "short leash". There is some management level aversion to "high risk" research -- not good for breakthrough developments -- but again, the budget is very tight so this latitude is ill afforded. Ultimate bottom line though : NOAA will not achieve true world class models w/o some "high risk" work...
- From my tiny little space in NOAA, I believe it has integrity.
- NOAA needs to depart from political doctrine and stick to factual research.
- We can only achieve our highest scientific integrity when adequately staffed, which due to sequestration and then ineffective work from NOAA's Work Force Management Office has crippled this office by sustained under-staffing lasting approximately 2 years at this point, if we don't have enough people to do the job, the science will be one of the first things to suffer.

- One way to further scientific integrity as an organization is to resist the temptation to become increasingly involved in popular / politically-charged areas (e.g., climate change) that distract from more pressing / immediate issues facing mankind.
- Listening to scientist instead of controlling them. Too much influence by propaganda.
- My major is ██████████ science, and I have worked on data assimilation on both ██████████ and NOAA ██████████. I like to work at ██████████ mainly because the management and working environment make me feel respected and encouraged. And enrich my knowledge. I heard and observed the unique role of the former ██████████, Dr. ██████████ who made great effort to make ██████████ a successful scientific enterprise. Dr. ██████████ also knows how to make ██████████ a multi-culture coexisting work place. If you compare the publications from ██████████ with non-English author names with the similar ██████████ scientific institute, say, ██████████ in ██████████, you see significant publication from ██████████. Dr. ██████████ is a white American, but you feel he does not have bias towards any other non-white people. From my ██████████ fellow and my experience, we were happy to work for ██████████ when Dr. ██████████ was the director. In the atmospheric science field, the top scientific institute is the ██████████, in ██████████ back to the time when Dr. ██████████ was the lead, he had the reputation of leading ██████████ to catch up the ██████████. I think a few most important measurements about the scientific integrity at ██████████ should include: it emphasizes values the scientists' roles; having the ability to organize and arrange the team work and individual work. Dr. ██████████ perhaps is the best one I have worked with.
- Sorry, UCS, but some of my research directly contradicts results that are strongly featured in your report on ██████████. The UCS report cites some of ██████████ earlier work, along with other sources, which I was actually in the process of more carefully evaluating at the time that UCS published. My paper refuting the very large drops in ██████████ and specifically the method used to arrive at those numbers, is one of the most scientifically airtight examples you will find of debunking a long- and widely used methodology. I was allowed to publish it, but not without some distinct nervousness on the part of my Director. Some of the authors of the UCS report were also top author/editors of the ██████████, released last year. They are heavily invested in the old methodology that overestimates the change in ██████████, under climate change, from the land that drains into the ██████████ and despite consultation with me, gave my results only very weak acknowledgment in the ██████████. I am working on further demonstration of this principle. Summing up: Regarding NOAA, there was some nervousness (apparently based on political pressure) about publishing this result showing that the large drops in ██████████ levels predicted multiple times were based on a faulty method, but it was allowed. Regarding ██████████, my feeling is more strong that my work was squelched based on political factors and the investment that the editors had made into a newly-discredited methodology.
- My main concern with scientific integrity at NOAA is that every individual in the upper echelons of management in NOAA has been hired specifically to promote AGW and the climate change agenda. The meteorologists and climatologists I work with do NOT support the NOAA or IPCC position and should not be put in a position where they must defend a scientific position with which they disagree. Despite the ad nauseam claims to the contrary, there is NOT consensus within the meteorological and climatological community regarding the certainty of AGW!

- When I was young...I conducted a study on the degradation of climate records by the installation of Automated Surface Observing System equipment (ASOS). When I put forth my results and my intention of documenting them in a paper...higher level [REDACTED] personnel told me to cease and desist my study. They basically intimidated me and I felt in fear for my job if I continued to pursue it. I believe this was done because my findings were in conflict with the wants of the [REDACTED] and NOAA. This has resulted in me being very skeptical of an open science policy within the [REDACTED].
- if possible, extend the range of accessible published journals.
- Overall, I don't think there is much of an issue with scientific integrity across NOAA. Even during the Bush years, when Climate Change research was a dirty word, we were never forced to toe the administration line. In fact, in response to press reports that science communication in NOAA was being restricted, then NOAA Administrator (ADM Lautenbacher) addressed NOAA's Senior Executives and clearly told them that there were no restrictions, but employees should make it clear that their opinions do not necessarily represented the view of the agency. I am not aware of any changes in that policy.
- Senator Inhofe (rep, OK) uses political power to smear credible science, and has spent millions of taxpayers dollars to further his business interests. It's ironic that federal scientists are under such scrutiny about their "scientific integrity" and yet Senator Inhofe, who is NOT a scientist accuses scientists of being political. I wish that NOAA would directly address his accusations like his dismissal of the IPCC report: ""The idea that our advanced industrialized economy would ever have zero carbon emissions is beyond extreme and further proof that the IPCC is nothing more than a front for the environmental left. It comes as no surprise that the IPCC is again advocating for the implementation of extreme climate change regulations that will cripple the global economy and send energy prices skyrocketing. The United States is in the midst of an energy renaissance that has the potential to bring about American energy independence, which would strengthen our national security and energy reliability for generations into the future. At a time of economic instability and increased threats to American interests, the IPCC's report is little more than high hopes from the environmental left." <http://www.inhofe.senate.gov/newsroom/press-releases/inhofe-statement-on-ipcc-synthesis-report> I am appalled at NOAA's silence, and was offended that I had to respond Senator Inhofe's accusation in 2011 that NOAA's climate reference network and cooperative observing programs were flawed; that climate change was fabricated by our agency. His accusations were completely unfounded and even the GAO investigators were embarrassed that they had to verify the integrity of NOAA data. The most ignorant assertion made by the senator was that sensors on rooftops or on parking lots were the reason that we have witnessed warming; he completely ignored (maybe purposely to sway his constituents and pander to big oil) the fact that the sensors had been in the same place for 30+ years! So even if the sensors were measuring "high" the change over 30+ years (ie, HIGHER Temps) is what matters. Politicians are "allowed" to make completely inaccurate statements; but NOAA is not allowed to refute them.
- It is interesting how NOAA's stance on climate change varies significantly depending on which party has control of the White House. Under the George W. Bush Administration, NOAA scientists were more or less instructed to keep quiet on the causes of climate change, with some pressure to deny

its existence at all. This was in direct conflict with the findings of the International Panel on Climate Change (IPCC), even at that time. Under the Obama Administration, this policy changed, and we are now encouraged to follow the guidance of the IPCC. It would be nice if science, not politics, guided our positions on these types of issues.

- Decisions regarding internal and external funding are not made very transparently, or efficiently, or fairly. By external funding, I mean funding provided by NOAA to other entities, and also from other agencies to NOAA.
- Job candidate selection should be more objective and less subjective, in other words, less of "its not what you know; its who you know." Leaders within NOAA need to practice more of what is preached in leadership training provided by NOAA.
- From my experience, NOAA's science is alive and well despite budgetary problems and any outside pressures. This is because the scientists that work for NOAA are dedicated professionals.
- I don't really observe things that concern me about scientific integrity. Most people in the David Skaggs facility are primarily driven by the science. The upper administrative layers that deal more directly with the "Staff Offices" naturally have to pay more attention to Political interests; but, for the most part, in this facility, they do a fairly good job of keeping the Political layers at bay so the scientific personnel can do the job and produce the best Science available. Best Science in this case meaning minimally biased fact finding and empirical verification of theories and questions. Note: Computational modeling efforts are not really considered in this. Computational modeling efforts are relatively new, less than three generations of scientists in age. For simple systems; Nuclear weapons, Supersonic Fluid Dynamics, Molecular, etc. the modeling codes are well understood and demonstrably accurate. Techniques for dealing with computational intractable systems are what is being done now. This is what makes Computational Science approaches rather iffy, which category does the effort belong to.
- If this agency is to be a servant of the public with integrity, ALL sides of an argument must be transparently considered, explored, resolved, and communicated. Science should not be political, it should be results oriented based on all scientific arguments. For a long time, transparency of research and data integrity have been going downward and has really accelerated since about 2010. For example, we have a number of co-operative observing stations that have been around here for a long time (like 80 years). These sites are out in the country and have not been moved. Yet, when I compare the recorded data that the observer sent in to NCDC and the "quality controlled data" that I get from the NCDC, they have been altered to show a cooler dust bowl era into the 50s, and a warmer current era at EVERY SINGLE STATION even though not one thing has changed over these years at these observing sites. How can an agency that is to investigate climate change do that to a dataset and have any credibility left? And I am gag-ordered about saying anything contrary to IPCC to the public as a NOAA representative? That's not transparency, that deception.
- Scientific integrity in my division appears to be a high priority.
- Avoid catch phrases like "global warming" and "polar vortex" and "snowicane" and "snowageddon" It's all absurd phraseology where image and pre-conceived notions trump truth and reality.
- Not perfect, but much, much, much better than during the period 2001-2006

- Leaders need to come into the field more often when big changes/decisions need to be made and get the real concerns and problems (and not just at one office or location either). If so they would be frequently surprised about their first solution findings.
- Additional training will always improve the quality of publications and the integrity of scientists.
- Employees need more training/review of the physical principles on which models are based, to aid in recognizing misleading model output and enhance awareness of model strengths and weaknesses, rather than mindlessly following guidance based solely on verification statistics.
- NOAA scientists may at times be hampered by limited budgets or even (during CRs) "disappearing budgets", but I have found their scientific integrity to be high, and at any rate comparable with that found in academia in my field. And to be clear, my prior work for a "regulated industry" was during a prior career, before I became a scientist. And that work was for a financial services firm - i.e., no relationship whatever to NOAA's mission.
- Within NOAA OAR, we have excellent scientists who are committed to high-quality science.
- Operational arms of NOAA are too disconnected from research laboratories.
- My and my colleagues scientific work has not, to my knowledge been impeded by political considerations.
- The director of the National Weather Service told me with his nose to my nose to no longer share my views on Climate Change because they disagreed with the politically accepted version even after I presented irrefutable evidence supporting my position. So we now live in a sophist society where opinion matters more than facts or the truth.
- Walk the walk, don't just talk the talk.
- Stop bending to political pressure and stop saying such things as "the debate is over". We should have more loyalty to science than to politicians.
- Politics is playing much too large a role in everything related to climate studies - way too many NOAA eggs in that basket, especially on the modeling side. NOAA needs to maintain distance from trendy "science", be more of an honest broker rather than leading the pack at the behest of politicians and science fanatics. And by the way, I am hardly alone in NOAA with those feelings - those of us who question certain directions can read the political tea leaves and keep a mostly low profile, hoping a more balanced and scientifically defensible policy will prevail over time.
- Fairly good in my experience
- Scientific integrity has been, in my experience, sacrificed in numerous instances in preference to promoting the career of certain individuals of higher ranking or position of power within NOAA. During the months that lead up to the ██████████ in ██████████, I worked with my immediate supervisor and a group chief from another division to interpret ██████████ measurements made by NOAA and other entities (i.e., ██████████) and to estimate global ██████████ emissions to the atmosphere. This information was relevant to pending decisions regarding the fate of certain projects within the ██████████ of the ██████████ a fact that had been brought to our attention by a colleague of the group chief that held a position within ██████████, a company that produces ██████████ as a by-product of ██████████ production. At my supervisor's request, I obtained permission from my ██████████ colleagues to share their data with my supervisor and the other group chief. As the ██████████ discrete atmospheric observations were of very high temporal resolution, its

interpretation was straightforward and the conclusion that emissions were decreasing because of the [REDACTED] projects was robust. In contrast, the NOAA data consisted only of [REDACTED]-air samples, the interpretation of which is convoluted and depends more strongly on model assumptions, and resulted in conclusions of much greater uncertainty (and an inability to detect the emission decrease). Once my supervisor and the other group chief became aware of the differences in interpretation of the two datasets, I was told to abstain from communication with my [REDACTED] colleagues regarding [REDACTED]. I was implicitly threatened with accusation of disloyalty when the [REDACTED] [REDACTED] asked me "You are NOAA now, right? You have drank the Kool-Aid." Nonetheless, I made it clear that the [REDACTED] data interpretation provided a more accurate assessment of the [REDACTED] impact on [REDACTED] emissions, and that I felt obligated to publish this interpretation. I was then told by the other group chief that I must wait until my supervisor had submitted publication of his interpretation of the NOAA data (which took another 5 months, causing me to miss the opportunity to share my findings with the [REDACTED] audience). In the end, I paid \$1,600 out of my own pocket for publication the [REDACTED] interpretation. More recently, when I attempted to submit an abstract to present an updated [REDACTED] [REDACTED] data interpretation to an upcoming conference ([REDACTED]), I was explicitly told by my supervisor that if I "continue with this research, then our group chief may decide not to fund my salary." I felt forced to withdraw my abstract submission. I was also told explicitly by my supervisor, during the recent periods of Federal Government shutdown, that my contractor position put me "on thin ice" regarding job security, whereas my supervisor made it clear that as a federal employee himself, it would "take an act of Congress to have him removed from office."

- The scientific integrity at NOAA has been there....and that's all....JUST THERE. Only problem is it's not really moving around as it's being held down by stupid fucking politics, with all due respect.
- Things move too slowly within the agency. For example, when I started with NWS over 10 years ago, some of our products such as zone based forecast were outdated and it was said they would soon disappear. Other things, such as the lack of scientific integrity in the parts of the NDFD, were questioned by scientists 10 years ago, and yet these things persist. I get the impression there is an impediment to change when there is good agreement among the scientists and field users that it should change.
- I think at the heart, NOAA has good integrity. The issue is that NOAA is being handcuffed in many instances mainly through funding cuts and tight money to suppress work that has proven benefit or may offend higher political interests. NOAA has had to make some tough choices in spending its funds, it is actually short-changing internal good gov scientists in order to perpetuation science through universities. In the end however, you can push the blob of dough in any shape or configuration, but you only have the same blob of dough, and it can only do so much. Over time that blob continues to shrink. Government actions in science are under appreciated. Gov needs better PR. Americans are clueless as to what they really are getting for their tax dollars and if they did know better, it would help matters. Most Americans I talk to don't know that NWS is gov funded and think all the weather work is done by the Weather Channel.
- NOAA's integrity as an organization and its production is diminished by its lack of adherence to the tenets of Diversity. There has been a tremendous improvement in the mentorship and promotion of

white women throughout the organization during the last 30 years. However, talented scientists from non-white groups have not fared as well in this organization. Across NOAA, the representation of African- American professionals, in particular, has steadily decreased from the already low numbers of the 1990s. The work of these same professionals does not appear to receive the same level of promotion, in my opinion.

- There appears to be a segment of NOAA that thinks that data is less important than looking good. (One example was its decision to eliminate the information technology officers in its National Weather Service. And, although mandated by congress more than a year ago, some offices have not yet had their vacancies fulfilled.) NOAA tasks its employees with a mission without providing sufficient support to accomplish its goals, resulting in considerable frustration and resistance to its programs, especially decision support and information dissemination. Also NOAA appears to want to usurp the role of the media in disseminating its information by supplying services that should more be considered "information for entertainment", rather than its primary mission of saving lives and property and contributing to the economic well-being of the country. NOAA's mission is also compromised by its poor enforcement of contractual obligations and memorandums of understanding. In one instance the contractors appointed to supply communications to observation platforms in the Caribbean have still not repaired a fault, after more than 6 months, causing automated products to fail or require human intervention. Sometimes the science is compromised by the lack of funding. And while one could say this is not NOAA's fault, the words of a former director that additional funding was not needed still limits the potential of our agency.
- I think the scientific integrity within NOAA is strong. However, the administrative burden placed on NOAA scientists combined with the lack of adequate resources is detrimental. This is made even worse by ineffective leadership at the director level that will not argue poor decisions being made and passed down by headquarters.
- I think NOAA does a great job with all of the constraints we work under.
- Most of the issues i have had are related to decreased funding. Training has always been an issue. also mgmt are increasing the hoops you have to jump through to get science accomplished.
- More research, and less assumptions.
- I do not believe scientific integrity is a real issue here. As a NOAA employee, I am completely free to publish a piece of work as an individual, whether it agrees or disagrees with NOAA finding or conclusions. It is when I release information as a NOAA employee that I must watch my step. Even then, it is not the disagreement between findings that would create controversy. Controversy would only result if I, in some way shape or form, made derogatory, false statements toward the agency. Otherwise, I feel completely free of my own will to provide factual information or express my findings. That has never been a concern for me.
- NOAA should be more organized about outreach. There should be informal peer review of material appearing on web sites. Web sites should be supported instead of having scientists prepare them, and outreach professionals should help make sure that content is accessible to the public.
- There is too much political pressure from the White House and upper NOAA management to conform to their ideology of human influence on the climate. I do not feel comfortable in speaking out about my doubts about this subject and know of other scientists who have been subject to

ridicule and pressure for publicly airing their doubts. I provided input on the recent National Climate Assessment that was all but ignored and the final document was very biased and full of errors and scientific misrepresentations. It was apparent from the White House's involvement in the roll-out of the Assessment that NOAA had 'trimmed its sails' to comply with Administrations wishes in slanting the work. And NOAA reaped the rewards in the budget process. This stinks for science but is great for funding.

- NOAA needs to establish a Scientific Integrity Office and SI training for its scientists and program managers. Mentoring between older and younger scientists on this would also be helpful in establishing a culture of SI in the agency. Information on SI should be accessible on a website with FAQs and other information. NOAA could work with other agencies that have well-established SIOs to do this - HHS/NIH, etc.
- Generally, we have the highest level of scientific integrity in Government, and I'd like to see that continued. Adequate resources are an absolute necessity to maintaining that level.
- I have concerns that NOAA's internal review policy for peer-reviewed manuscripts will impede (slow down) publication rates by NOAA authors/coauthors, and opens up the opportunity for abuse/censorship by leadership.
- NOAA is an outstanding organization to work for and does strive for scientific integrity.
- A lot of what NOAA does is puffery or self-aggrandizement rather than science. Much of that P&A is masked as education and outreach. NOAA is too driven by hot button feel-good issues e.g., coral reefs and turtles and dawdles on hazardous weather support. It is too DC centric. Also the enforcement side of NOAA should be removed from the science side. In many cases, fishing regulations are not supported by the science but by the academics and Luddites. It is clear you have an agenda the way the questions were worded. Much of what NOAA does could be privatized and be more effective.
- While this is just an opinion, it seems that the farther "up the ladder" you go into agency management, the less concerned they are about scientific integrity. I presently can't think of an example where scientific integrity was a key motive in policy from agency level executives.
- This survey appears to have an agenda...that I don't really think exists within NOAA
- Ignorance of using TEMPERATURE (only kinetic energy) in issue climate change. Energy is the proper metric which is HEAT. If interested in role feedback w/r/t greenhouse gases, THETA-E is a bit closer because includes most potential energy (water) of the climate system. Beer's Law is also ignored. Experimentation proven countless times over a century is rejected. Why? All key political and government decision makers simply unable or unwilling to understand. The Climate Change issue is not being addressed by anyone through ignorance and abandonment of the scientific method. Truth (science) has no side, we (society) are all losing. Public trust in our institutions will continue to suffer.
- An overwhelming mindset by management on internal consistency in weather forecasts. This is an unrealistic goal at the present time and the quality of the weather forecasts produced clearly suffers because of it. Management is often referred to as the Pretty Picture Police.
- Not really. More awards in the field would be appreciated.
- See above. Models that are less credible than their predecessors.

- The scientists working at NOAA have high scientific integrity, and work earnestly to save the lives and property of American citizens, while also improving the scientific community's general understanding and knowledge of Earth's weather, climate and oceans.
- NOAA suffers from a lack of clear-headedness when it comes to the technology of data manipulation. Often, new techniques are attempted or even implemented simply because the analysis methods are available to us. However, the hard work of determining whether those new techniques are valid is not done before the techniques are put into play. Simply put, NOAA often forgets that just because you can do something, that doesn't mean you should. NOAA needs to do a better job of vetting techniques before they are implemented.
- The commitment to seek and disseminate to the public true/factual information when it is in disagreement or conflicts with NOAA policy and political motivations.
- No is a scientific organization that is at the top of the group and applies science appropriately to operational requirements and timelines.
- More media exposure. Our scientists should be showing up on cable news networks.
- Too much time and money spent on "climate change" and not enough on weather forecasting that helps people every day.
- Unnecessarily tight security requirements, especially regarding foreign nationals, has hampered research, despite that we do no classified or sensitive research at most of my line office's facilities. Decisions regarding computer resources have also been made at a level of upper NOAA management without regard to the needs of scientists. Often it is not clear what NOAA administration provides to help the progress of research at our line office.