EXHIBIT F

IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF NEW YORK

NATURAL RESOURCES DEFENSE COUNCIL, INC., et al., *Plaintiffs*, v. U.S. DEPARTMENT OF THE INTERIOR, et al., *Defendants*.	18-CV-4596 (VEC)
NATIONAL AUDUBON SOCIETY., et al., *Plaintiffs*, v. U.S. DEPARTMENT OF THE INTERIOR, et al., *Defendants*.	18-CV-4601 (VEC)
STATE OF NEW YORK, et al., *Plaintiffs*, v. U.S. DEPARTMENT OF THE INTERIOR, et al., *Defendants*.	18-CV-8084 (VEC)

DECLARATION OF GARY G. MOWAD

I, Gary G. Mowad, declare as follows:

1. I am a resident of Scottsdale, Arizona. I have a bachelor's degree in Wildlife Biology from Stephen F. Austin State University and a master's degree in Biology from the University of Texas at El Paso. I completed a Senior Executive Fellow program at the Kennedy School of Government, Harvard University in 2009. A copy of my curriculum vitae is attached as Exhibit A.

Work Experience at U.S. Fish and Wildlife Service

2. I started working for the U.S. Fish and Wildlife Service (USFWS) in 1988 and worked continuously for the agency until my retirement in February 2013. During my 25-year tenure with USFWS I served as a special agent, biologist, and natural resource pilot. I spent 22 years with USFWS's Office of Law Enforcement, where I served as a special agent in Alaska, Colorado, Illinois, New Mexico, and Washington DC.

3. I spent much of my time at USFWS enforcing the Migratory Bird Treaty Act (MBTA). Early in my career, when I was a special agent in Colorado in the 1990s, I became the Regional Environmental Contaminants Coordinator and specialized in migratory bird mortalities linked to things like pesticide use, mining, and oil production waste ponds and spills.

4. I also worked in several leadership and management positions in USFWS's Office of Law Enforcement. For example, I served as USFWS Assistant Special Agent in Charge of the USFWS Southwest Region in Albuquerque, NM and the Special Agent in Charge of the Mountain-Prairie Region in Denver, CO. In these

roles, I oversaw USFWS's enforcement of the MBTA and other statutes throughout several states.

5. In 2008 I became the Deputy Chief for the USFWS's Office of Law Enforcement in the USFWS Headquarters Office in Washington DC. As Deputy Chief I oversaw the entire USFWS law enforcement program in all 50 states and U.S. territories. I developed national enforcement polices, worked on regulations, set enforcement priorities, coordinated with the leaders of state and tribal wildlife programs, and gave testimony before Congress. It was my responsibility to supervise the implementation of policy and enforcement priorities for the MBTA and other statutes at both the national and regional level.

6. Following my retirement from USFWS in February of 2013, I formed an environmental consulting company specializing in compliance issues involving the MBTA and other wildlife statutes.

7. Based on my extensive background and experience, I am a national expert on the MBTA, certainly as it relates to non-hunting-related mortality. In addition to my many years of hands-on experience implementing and enforcing the MBTA, I have taught the statute and its implementing regulations to many groups throughout the country.

Incidental Take Kills Large Numbers of Migratory Birds

8. My lengthy history in MBTA enforcement and specialization in migratory bird impacts resulting from environmental contaminants—such as

pesticide use, mining, and oil and gas production—puts me in a unique position to explain the important role the MBTA has played in reducing these kinds of impacts.

9. Without question, the significant mortality caused by these industrial activities dwarfs the impacts to migratory birds from hunting or poaching. In one single environmental contaminant case I would often find more unlawfully taken birds than all that I'd seen unlawfully poached in my entire 25-year career at USFWS.

10. For example, I was a special agent in Alaska 30 years ago when the Exxon Valdez tanker went aground. I spent weeks pulling dead birds from oil spilled in Prince William Sound. Based in part on evidence I collected, USFWS estimated that Exxon was responsible for killing 300,000 birds in the spill.

11. Pesticides can also be responsible for significant bird mortality. I have witnessed instances where agricultural producers spread granular carbofuran pesticide on their fields that looked like seeds, and which killed thousands of songbirds that thought they were eating seeds but were actually ingesting a lethal pesticide. This also resulted in significant secondary take when raptors came and fed on the poisoned songbird carcasses.

12. Some of the worst agricultural incidents of bird mortality I witnessed were from the use of the pesticide furadan, which poisoned hundreds of snow geese in New Mexico and over two thousand blackbirds in Illinois. These photographs, taken by my fellow special agents, fairly and accurately show some of the birds killed in those incidents:

13. Mining activities have similarly resulted in many poisoned birds. Heap leach gold mines throughout the United States use cyanide to leach gold from ore, but the cyanide-laced water that pools on the surface of the ore piles poisons thousands of migratory birds each year.

14. Produced water impoundments associated with oil and gas production killed a particularly large number of birds. In addition to spills, like Exxon Valdez mentioned above, oil and gas production activities also often resulted in significant take of migratory birds in these produced water impoundment ponds. During extraction, producers try to separate the water and oil or gas that they pump out of the ground, and send the water out to a pond to evaporate. But the separation process is often incomplete, so the ponds end up with oil sludge on the surface.

15. This is a photograph of a produced waste water impoundments that I took in the 1990s that was entirely covered with oil sludge:

16. Oil from production fields also sometimes makes its way into nearby wetlands. This is a photograph that I took of an oil impacted wetland:

17. Avian species have trouble differentiating between oil and water. So during their migration, birds often mistake a waste pond or wetland covered with oil for a safe place to land and feed and rest. They then get coated with oil and can't fly again. They typically die either from hypothermia (by losing the insulation from their oiled feathers), or poisoning (by preening their oiled feathers and ingesting the toxin).

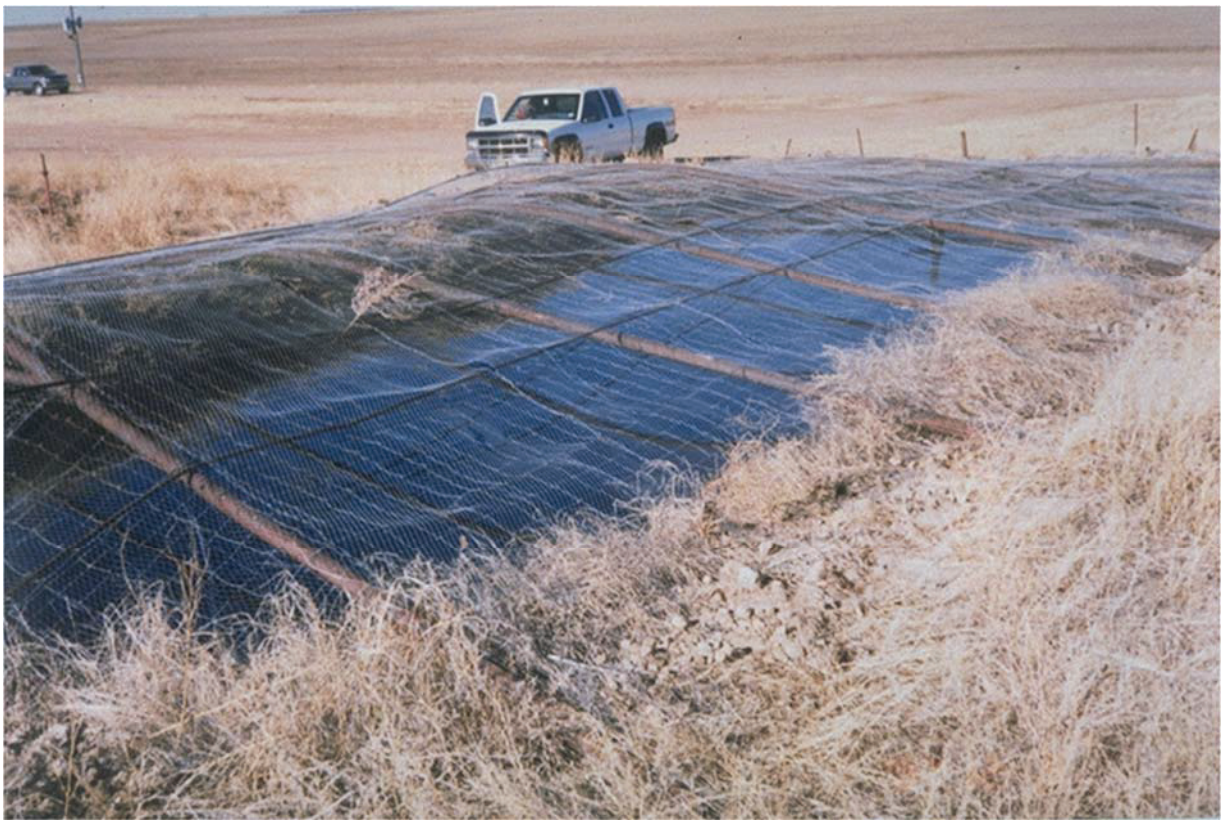
18. Sometimes we would find birds that had been stuck in a waste pond and covered in oil, and were in really bad shape, but were still alive. In those situations, we would frequently have to euthanize them, often by breaking their necks to end their suffering. It was gut wrenching.

19. These are photographs that fairly and accurately depict birds that I pulled from oil waste ponds:

20. These oil and gas waste ponds are estimated to kill hundreds of thousands, if not millions, of migratory birds per year. They kill large numbers of passerine songbirds, waterfowl, and, to a lesser degree, raptors that would fly down to scavenge but ended up getting stuck or poisoned themselves. The songbird mortality is particularly troubling, as many of those species are in substantial decline and are designated as birds of conservation concern by USFWS.

21. It is relatively easy and inexpensive for oil and gas producers to mitigate or even eliminate these risks to migratory birds by, for example, skimming the oil off their ponds or covering their waste ponds with nets that keep birds out.

22. This is a photograph I took in eastern Colorado in approximately 1995 that fairly and accurately shows a properly covered waste pond:



MBTA Liability Prompted Industry to Protect Birds

23. During my 25 years at USFWS, we used the MBTA to reduce these major industrial threats to migratory birds. For the most part, the MBTA was our only regulatory tool to prevent the rampant and avoidable mortality described above. Applying the MBTA fairly and effectively, we were successful in significantly reducing migratory bird mortality from environmental contaminants. The MBTA was crucial to our ability to do so.

24. We applied the MBTA carefully and in a reasonable and targeted manner. When we found that certain industrial activities were killing birds

predictably but unnecessarily, our standard practice was to warn the actors and give them an opportunity to change their practice before ever bringing an enforcement action. In almost every case, the actors were given a chance to change their behavior or install avian exclusionary measures without punitive repercussions. We only prosecuted in the rare cases where a bad actor refused to comply in response to our multiple requests to eliminate their bird hazards.

25. I developed an enforcement protocol in my region that embodies this approach, which was then implemented nationwide. The protocol called for working with industry to generate compliance voluntarily, and bringing enforcement actions only as a last resort.

26. Under the protocol we would, first, give industry notice that we were coming to the area. We would let industry groups know though their associations (e.g., the Wyoming or New Mexico Oil and Gas Associations) that USFWS would be coming to look for practices we knew killed migratory birds in large numbers—e.g., open oil waste ponds with visible surface sludge. Second, we would come to the area and document any such instances—e.g., by conducting flyovers of oil production fields and identifying uncovered oil waste ponds by their latitude and longitude. Third, we would then inform industry what we saw and say that we were coming back in 30 days and would then enforce the MBTA against any actors that had not cleaned up their operations. Only after we returned in 30 days and found that the threat to birds remained would we enforce the MBTA against the responsible actors.

27. The protocol was very effective. In our initial flyovers, we would often see many operations (as much as 80 percent) with active threats to migratory birds. But when we came back 30 days later, in the vast majority of cases we found that operators had skimmed the oil off their ponds or covered the ponds with nets. Based on my years of observations of bird mortality events caused by uncovered waste ponds, I conservatively estimate that these reasonable measures by industry prevented hundreds of bird deaths at each operation. Under our protocol, we only initiated enforcement proceedings against the remaining small number of recalcitrant actors (usually no more than 15 percent of operators) who refused to comply by taking the same basic measures implemented by other operators.

28. We followed the same cooperative approach with other industries whose activities incidentally but foreseeably killed large numbers of migratory birds. In the agricultural sector, for example, our practice was to first try to work with companies to implement timing restrictions that would abate the impacts to migratory birds—e.g., by changing the timing of their pesticide use to before migration season. Similarly, for the utility sector, our practice was to try to convince the owners of power lines responsible for raptor electrocution mortalities to upgrade their lines by installing avian exclusionary devices to avoid electrocuting raptors. As with other industries, the possibility of MBTA liability was critical in convincing power companies to make these upgrades. Likewise, the heap leach gold mining industry was given time to install exclusionary netting over toxic wastewater ponds.

29. I know from firsthand experience that unless USFWS has the MBTA as a regulatory tool to address take resulting from major industrial activities, these companies would lack the necessary incentive to take measures to reduce their non-purposeful killing of migratory birds. It costs money and time to implement protections, and profit-making companies are generally not going to do it if they are not legally required to do so. In my experience, only once industrial actors were informed of their potential MBTA liability did they spend resources to reduce their impacts on migratory birds.

The Jorjani Opinion Eliminates Critically Important Bird Protections

30. In December 2017, the Principal Deputy Solicitor of the Interior Daniel Jorjani issued an M-Opinion that eliminated the MBTA as a regulatory and enforcement tool to address incidental take. The Jorjani Opinion reversed the federal government's longstanding understanding of the MBTA and concluded, instead, that the Act applies only to activities that "have as their purpose" the killing of migratory birds, such as hunting or poaching.

31. I was very disappointed and deeply concerned when I learned of the Jorjani Opinion, which essentially gives industry carte blanche to kill migratory birds with impunity in the ordinary course of their operations. It means that the federal government has lost its most valuable tool to protect migratory birds—at least unless or until the Jorjani Opinion is vacated or withdrawn.

32. I know from my many years at USFWS that an M-Opinion is binding on all agencies within the Department of the Interior. So, as a direct result of the

Jorjani Opinion (and so long as it remains in effect), USFWS's Office of Law Enforcement is prevented from doing anything to reduce migratory bird deaths from industry-related incidental take.

33. In particular, USFWS will no longer conduct any flyovers of oil and gas production areas to identify potential threats to migratory birds, such as uncovered oil and waste ponds. Based on my experience as the Deputy Chief for the USFWS law enforcement program, the Jorjani Opinion also precludes USFWS agents from even going out to discuss voluntary bird protection measures with industrial actors, like oil and gas producers, because it would use agency resources and limited congressional appropriations on something that the agency purportedly lacks authority to regulate or enforce.

34. Based on my many years of experience at USFWS enforcing the MBTA, as well as my more recent work as an MBTA consultant, I am confident that—so long as the Jorjani Opinion remains in force—industry actors will lack the incentive they previously had to implement measures to reduce their incidental take of migratory birds. Consequently, the Jorjani Opinion will be devastating to efforts to protect migratory bird populations from incidental deaths and injuries that foreseeably result from major industrial activities.

35. As explained above, the MBTA's application to incidental take that was foreseeable and preventable was crucial to convincing industrial actors to eliminate bird hazards caused by their operations. In my extensive experience in enforcing the MBTA, industry actors typically only spent resources to reduce their

incidental take of migratory birds after they were informed of their potential MBTA liability.

36. Based on my many years of experience, I am confident that industrial actors will not take such steps unless they are subject to MBTA liability for incidental take. Without a deterrent, oil and gas companies are not going to clean up or cover their waste ponds. It costs money and takes effort, which explains why, in my experience, such companies often left their waste ponds uncovered, with weak peripheral controls, until we confronted them with potential MBTA liability. Eliminating that liability means that these companies will no longer take measures to clean up or cover their ponds. The same goes for smaller power utilities: if they face no liability, they will not have sufficient incentive to pay to raptor-proof their utility lines.

37. In my current position as a consultant to private industry, I have seen firsthand how the Jorjani Opinion has changed industrial actors' willingness to implement bird protection measures.

38. For example, before the Jorjani Opinion, it was the typical practice of developers of projects that required clearing migratory bird habitat to create migratory bird conservation plans that would restrict or prohibit tree clearing during the migratory bird nesting season. But after the Jorjani Opinion, USFWS lost its ability to require that clearing take place outside of the nesting season. Because there is no longer any deterrent to stop them, many project developers are now moving forward without migratory bird conservation plans or time restrictions

in their schedule. These developers are clearing migratory bird habitat during nesting season, which will result in the destruction of active nests and unnecessarily kill young birds.

39. Based on my own observations as well as recent conversations with special agents still working for USFWS, it has become clear to me that this state of affairs under the Jorjani Opinion is terrible for bird conservation. USFWS agents typically get into this line of work to protect wildlife, and yet—because of the Jorjani Opinion—they can no longer protect most species of migratory birds. These agents know how detrimental oil waste ponds, pesticides, and other industrial threats are to migratory birds. So it has been incredibly frustrating to those whose mission is to protect migratory birds that—because of the Jorjani Opinion—they can no longer do anything to reduce these threats.

The Jorjani Opinion Will Result in Many Unnecessary Bird Deaths

40. The Jorjani Opinion is causing and will continue to result in the deaths of large numbers of migratory birds that could have easily been avoided. Based on my many years of experience enforcing the MBTA, I can conservatively estimate that, as a result of the Jorjani Opinion, tens of thousands of birds will be killed annually, although my reasonable opinion is that the number will exceed one million.

41. Based on my experience, the largest number of bird deaths caused by the M-Opinion will occur in oil producing states and agricultural areas that use pesticides which result in extensive mortality—for example, parts of Wyoming, New

Mexico, and California's Central Valley (which has extensive agriculture and over 700 active oil waste ponds). I anticipate that passerine songbirds will likely take the biggest hit, followed by waterfowl.

42. In May 2018, together with a fellow former USFWS special agent, I conducted a flyover in northern Wyoming to document current threats to migratory birds that would likely be avoided if the Jorjani Opinion was vacated or withdrawn, and USFWS once again had the ability to regulate or enforce incidental take. We flew out of Billings, Montana, south to the Bighorn Basin in and around Powell, Wyoming, where there are a number of oil production fields. We saw dozens of open, uncovered waste ponds with surface oil on them. At some fields, the surrounding wetlands and streams also clearly had oil in them. We also saw some waste ponds that had avian exclusionary netting which had not been maintained, so it had been ripped from its frame (perhaps during harsh winter conditions) and not been properly reinstalled. These are exactly the kinds of conditions that would have been remedied prior to the Jorjani Opinion.

43. In August 2019, the other former agent and I conducted another flyover of the same area. Once again, we saw a large number of uncovered oil waste ponds, oil spills, and open tanks that represent an active threat to migratory birds. This time we also saw a broken flow line (which is supposed to take the oil and water mixture from the well head to tanks where it is separated out). When you have a broken flow line like that, it can spill oil into the local wetlands for quite a long time.

44. Based on my experience, the conditions I saw during my 2018 and 2019 flyovers have caused or will cause many migratory bird deaths that could easily be avoided and would have been had the Jorjani Opinion not been issued. If USFWS again had authority under the MBTA to regulate or enforce against incidental take, oil and gas producers in this area could be compelled to, or would voluntarily, take steps to clean up their operations and reduce the threats to migratory birds.

45. Similar conditions exist in southeast New Mexico, where significant oil and gas production occurs in the Permian Basin in and around the Carlsbad area. I am intimately familiar with the threats to migratory birds in New Mexico, and this part of the state in particular, because of my prior work there as a USFWS special agent. The work of USFWS in this area documented extensive migratory bird mortalities linked to contact with surface oil on production pits or waste ponds. As a result of enforcement action taken by the agency, the number of bird mortalities were reduced significantly.

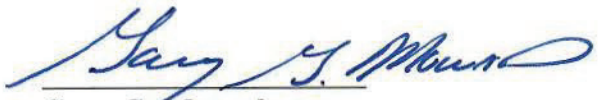
46. Oil and gas production in the area has increased significantly in recent years, increasing the threats to migratory birds from uncovered oil waste ponds. Because I live in the southwest and continue to do work there, I often fly over the Carlsbad area on commercial flights. Even from 30,000 feet I can see increased oil production and open waste ponds. Based on my extensive experience enforcing the MBTA, including in this particular region, I am confident that the lack of a

regulatory deterrent caused by the Jorjani Opinion will result in increased migratory bird mortalities in this region.

47. This needs to get fixed if we are going to avoid the unnecessary killing of millions of birds with inevitable adverse impacts on bird populations and the many people who enjoy and study them. During my twenty-five years at USFWS, we saved a lot of birds. I devoted most of my professional life to this effort, and I'm proud of the work we did applying and enforcing the MBTA against incidental take.

48. When the current administration issued the Jorjani Opinion, we lost our primarily tool that could convince industry to take reasonable measures to avoid unnecessarily killing migratory birds. We need to get that tool back.

I declare under penalty of perjury that the foregoing is true and correct. Executed on January 11, 2020, in Scottsdale, Arizona.



Gary G. Mowad

EXHBIT A

Curriculum Vitae
Gary G. Mowad

EXPERTISE:

- Retired Deputy Chief from the United States Fish and Wildlife Service (USFWS) (Retired from USFWS 2/2013)
- National USFWS expert on the Migratory Bird treaty Act, Endangered Species Act, and Eagle Protection Act
- Developed USFWS national enforcement policy on ESA Section 9 "take" cases resulting from habitat modification and/or degradation resulting in take through "harm" to the species
- Taught the Endangered Species Act to every USFWS Special Agent recruit class from 1998 to 2010
- Developed law enforcement protocols and policy regarding MBTA violations caused by pesticides and oil pits
- National USFWS expert on wildlife mortality caused by oil spills and raptor mortality caused by power line electrocution
- Criminal and civil Lacey Act cases
- Marine Mammal Protection Act
- Civil Asset Forfeiture Reform Act (CAFRA)
- Federal grand jury and federal court experience
- Federal Court Witness/Depositions

EDUCATION:
Senior Executive Fellow, Kennedy School of Government, Harvard University
Masters of Science Degree, University of Texas at El Paso, Major- Zoology
Bachelor of Science Degree, Stephen F. Austin State University, Major- Biology/Geology

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LICENSES AND CERTIFICATIONS:
Federal Senior Executive Service (SES) Certified
Instrument Rated Commercial Pilot's License, Department of Interior certified low-level mission pilot
Top Secret Security Clearance
Teaching Certificate, Composite Science, Texas Education Agency

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TRAINING EXPERIENCE
Certified Science Teacher by the Texas Education Agency
Served as an Instructor at the Federal Law Enforcement Training Center (10 years)
Served as an Instructor at the USFWS, Special Agent Basic School, (12 years)
Training Instructor for the National Park Service
Training Instructor for the United States Environmental Protection Agency (5 years)
Training Instructor for the Lusaka Agreement Task Force
Keynote Speaker and Guest Lecturer at Continuing Legal Education Conferences
Author of Two Webinars on Environmental Law Enforcement

WORK EXPERIENCE:
Gary Mowad Environmental Consulting, LLC (GMEC)
Scottsdale, Arizona
Founder and managing member of GMEC providing professional wildlife and environmental compliance services to governmental and industrial clients. Services include but are not limited to Endangered Species Act compliance reviews, Migratory Bird Treaty Act and Eagle Protection Act compliance plans, ESA Section 7 compliance and expert witness testimony.

Texas State Administrator for Ecological Services, U.S. Fish and Wildlife Service
Responsibilities of the Texas State Administrator for the USFWS Ecological Service's Division included, but were not limited to, supervision of USFWS biologists throughout Texas. Duties included supervising the listing process for species proposed for listing as endangered or threatened, the recovery of listed species, and the establishment of conservation banks.

Deputy Chief, U.S. Fish and Wildlife Service - Office of Law Enforcement, Arlington, Virginia
Responsibilities of the Deputy Chief for the USFWS law enforcement program included setting national and regional enforcement priorities, managing the program's $63 million annual budget; managing a staff of 200 Special Agents, 135 Wildlife Inspectors, and 165 administrative staff; a vehicle fleet, an aviation program, office space requirements, and training needs for the law enforcement program. Responsibilities also included supervising the operations of the

National Wildlife Forensics Laboratory, the Undercover Investigations Unit, the Evidence Repository, the National Computer Forensics Unit, and the Wildlife Inspection Program. Duties also included meeting with industry trade groups, Congressional members, foreign government representatives, and other Federal bureau heads.

Special Agent in Charge, U.S. Fish and Wildlife Service - Office of Law Enforcement, Lakewood, Colorado
Responsibilities of the Special Agent in Charge (SAC) of the USFWS Mountain-Prairie Region included managing the USFWS law enforcement program in eight western states. This included total responsibility over the investigative, administrative, and the budgetary components of the law enforcement program. It also required coordinating with other federal bureau heads in the region, meeting with Congressional members and/or their senior staff on complex and controversial issues, and coordinating with the leaders of State and Tribal wildlife law enforcement programs in the region.

While detailed as acting Deputy Regional Director, responsibilities included supervising the development and publication of the Lynx Critical Habitat Proposed Rule, the development and publication of the Gray Wolf ESA 10J Rule, and the development and publication of the Gray Wolf delisting Proposed Rule

Assistant Special Agent in Charge, U.S. Fish and Wildlife Service - Office of Law Enforcement, Albuquerque, New Mexico
Responsibilities of the Assistant Special Agent in Charge of the USFWS Southwest Region included managing the USFWS law enforcement program in four southwestern states, including total oversight over the investigative, administrative and the budgetary components of the law enforcement program.

Senior Special Agent, U.S. Fish and Wildlife Service - Office of Law Enforcement, Arlington, Virginia
While working in the USFWS Headquarters Office responsibilities included developing new wildlife law enforcement policy, writing regulations; interacting with INTERPOL and the State Department, working with foreign governments, and serving as a subject matter expert for the Endangered Species Act, the Migratory Bird Treaty Act, the Eagle Protection Act, and the Civil Asset Forfeiture Reform Act.

Special Agent/Regional Pilot, U.S. Fish and Wildlife Service - Office of Law Enforcement, Lakewood, Colorado
Responsibilities included working as a field Special Agent and Natural Resource Pilot. Areas of expertise included wildlife mortality linked to pesticides, other environmental contaminants, and oil production fields. Accomplishments included leading an interagency taskforce to address wildlife mortality; as well as, impacts to ground and surface water caused by oil and gas production.

Special Agent, U.S. Fish and Wildlife Service - Office of Law Enforcement, Golden, Colorado; Rosemont, IL; Anchorage, Alaska
Duties included all areas of investigative work performed by USFWS Special Agents, as well as Natural Resource Pilot duty. Areas of expertise included wildlife mortality linked to pesticides and other environmental contaminants, and interstate transport of unlawfully taken wildlife.

Quarantine Officer, U.S. Department of Agriculture Animal and Plant Health Inspection Service, El Paso, Texas
Responsibilities included enforcing the quarantine laws dealing with the importation and exportation of quarantined animal and plant products. The position involved working independently along the U.S. border regulating the flow of restricted and illegal agricultural and animal commodities.

AWARDS AND RECOGNTION:
Gold Medal Environmental Achievement Award, United States Environmental Protection Agency
Meritorious Service Award, Department of Interior in recognition of achievements and leadership related to the inception, development, and implementation of the very successful Rocky Mountain Region environmental contaminants program.
Recipient of 28 additional USFWS or Department of Interior performance awards

PUBLICATIONS:

Op-ed, *Regulatory Creep, When Voluntary Payments become Mandatory. The Hill, 2016*
Webinar Presentation on *MBTA prohibitions (2016)*
Webinar Presentation on *ESA compliance (2015)*
Euthanasia Related Avian Mortality, A veterinarian's guide, USFWS, 2005 (coauthor)
Investigating Pesticide Related Avian Mortality, USFWS. 2004
Protocols for Investigating Wildlife Mortality in Oil and Gas Production Fields. USFWS, 2003
USFWS Civil Asset Forfeiture Reform Act (CAFRA) enforcement policy (coauthor)
USFWS Endangered Species Act Enforcement Policy for Habitat Modification Cases 2003