

1 as President of the United States of America; UNITED STATES OF AMERICA; U.S. 2 DEPARTMENT OF DEFENSE; PATRICK M. SHANAHAN, in his official capacity as 3 Acting Secretary of Defense; MARK T. ESPER, in his official capacity as Secretary of 4 the Army; RICHARD V. SPENCER, in his 5 official capacity as Secretary of the Navy; **HEATHER WILSON**, in her official capacity 6 as Secretary of the Air Force; U.S. DEPARTMENT OF THE TREASURY; 7 STEVEN T. MNUCHIN, in his official 8 capacity as Secretary of the Treasury; U.S. DEPARTMENT OF THE INTERIOR; 9 DAVID BERNHARDT, in his official capacity as Acting Secretary of the Interior; U.S. 10 DEPARTMENT OF HOMELAND SECURITY; KIRSTJEN M. NIELSEN, in 11 her official capacity as Secretary of Homeland 12 Security: 13 Defendants. 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28

- I, Christopher D. Nagano, declare as follows:
- 1. I have personal knowledge of the facts set forth in this declaration. If called as a witness, I could and would testify competently to the matters set forth below. As to those matters that reflect an opinion, they reflect my personal opinion and judgment on the matter.
 - 2. I reside in Washougal, Washington.
- 3. I am a staff member of the Center for Biological Diversity, where I have served as a senior scientist in the Center's Endangered Species Program since 2017. At the Center, I work to protect imperiled species, particularly reptiles and invertebrates. I work in conjunction with campaigners, lawyers, policy experts and other scientists to achieve this goal.
- 4. Prior to coming to the Center, I worked for 27 years, from 1989 to 2016, as an endangered species entomologist/ecologist, endangered species biologist, Endangered Species Division Chief, and Deputy Assistant Field Supervisor with the U.S. Fish and Wildlife Service ("FWS") based at the field offices in Carlsbad and Sacramento, California, and Albuquerque, New Mexico. I also performed endangered species-related tasks and responsibilities in five other states.
- Prior to working for the FWS, I worked for several years in the mid-late 1980s as a research associate in the Entomology Section at the Natural History Museum of Los Angeles County.
- 6. I have a Master of Environmental Studies degree from the Yale School of Forestry and Environmental Studies. While pursuing this degree, I was an intern working on endangered species issues at the Environmental Defense Fund in Washington, D.C. for Michael J. Bean, now retired Deputy Assistant Secretary for Fish, Wildlife and Parks at the Department of Interior.
- 7. In sum, I have dedicated my career to the scientific research and protection of endangered and threatened species.
- 8. During my career with the FWS, I routinely reviewed projects proposed by federal, state and local agencies, and non-governmental parties for their potential effects on non-listed wildlife, plants, and their habitats pursuant to the National Environmental Policy Act ("NEPA"), and the California Environmental Quality Act ("CEQA"). My efforts involved

assessments of project impacts on non-listed wildlife and plants, and their habitats, as well as review of the proposed mitigations and development of additional measures, if appropriate.

- 9. I also have an extensive working knowledge of endangered species. During my 27-year career with the FWS, I conducted hundreds of informal consultations and many dozens of formal consultations pursuant to the Endangered Species Act with many federal agencies ranging from the Bureau of Reclamation to the National Park Service. These consultations involved providing guidance to federal agencies in determining whether and to what extent their proposed projects would have an effect on the survival and recovery in the wild of endangered species and whether and to what extent federal agencies' proposed projects would adversely modify or destroy the endangered species' critical habitat.
- 10. While at FWS, one of the issues that I focused on, analyzed, and encouraged other agencies to first avoid, and if not possible, to mitigate, was the effect of barriers, such as highways and roadways, on the long-term movement of listed animals and wildlife. The ability of many animals to move to new areas, areas containing habitat within their range, or between portions of their home range is critical for ensuring they do not become extinct or extirpated because it prevents genetic inbreeding and other biological and ecological problems.
- 11. Another issue that I focused on at the FWS was the indirect adverse effects of a project on listed animals and wildlife. Indirect effects, which are caused by the proposed project but occur later in time, are often not adequately analyzed by federal agencies, but their impact on listed species and other wildlife can be far greater and much longer lasting than the direct effects of a project.
- 12. The Department of Defense ("DOD") and the Department of Homeland Security ("DHS") have failed to consider the effects of their El Centro Project 1 proposed border wall project. (DHS, *DHS Issues Waiver to Expedite Border Wall Projects in California* (May 15, 2019) available at https://www.dhs.gov/news/2019/05/15/dhs-issues-waiver-expedite-border-wall-projects-california) Through El Centro Project 1, DOD will undertake road construction, replace approximately 15 miles of existing vehicle barrier with new pedestrian fencing, and install lighting beginning approximately 10 miles west of the Calexico Port of Entry continuing

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west 15.25 miles in Imperial County. (DHS Letter to DOD, *Request for Assistance Pursuant to 10 U.S.C. § 284* (February 25, 2019), page 3). El Centro Project 1 will have significant effects on endangered species such as the peninsular bighorn sheep (*Ovis canadensis nelsoni*) and on State of California Species of Concern such as the flat-tailed horned lizard (*Phrynosoma mcallii*) and burrowing owl (*Athene cunicularia*).

- 13. From decades of work with endangered and threatened species, as well as experience dealing with imperiled mammals, especially while I was stationed at the FWS Carlsbad and Sacramento field offices, I recognize the threat the construction, maintenance, and associated operations of the El Centro Project 1 border wall pose to the peninsular bighorn sheep. The proposed construction of the border wall and associated activities in Imperial County likely will have a number of adverse effects on this endangered species. Peninsular bighorn sheep will be directly harmed, harassed, or possibly in some circumstances, injured or killed, by the construction of the El Centro Project 1 border wall. In particular, road construction; grading and construction of equipment storage and parking areas; and off road movement of vehicle and equipment involved in construction that will alter the normal behavior of peninsular bighorn sheep. Further DOD, DHS, Customs and Border Protection ("CBP"), and construction/ maintenance vehicles may collide with peninsular bighorn sheep. However, the most significant effect on the endangered peninsular bighorn sheep will be the permanent reduction of its northsouth movement across the U.S./Mexico border. The physical barrier of the El Centro Project 1 border wall will prevent such movement and peninsular bighorn sheep will further avoid the area because of night lighting, noise, and DOD, DHS, and CBP personnel and vehicles.
- 14. The peninsular bighorn sheep has been documented to move across lowlands between desert mountain ranges, such as areas possessing similar geographic features as where the El Centro Project 1 is proposed. The FWS described how peninsular bighorn sheep utilize flat areas such as the El Centro Project 1, such as valley floors and washes, to access resources like water, forage, and lambing habitat, and these areas also are important for enabling gene flow between subpopulations (FWS. 2011. Peninsular bighorn sheep (*Ovis canadensis nelsoni*). 5-year review. Summary and Evaluation. Carlsbad Field Office, Carlsbad, California).

- 15. El Centro Project 1 will replace 15 miles of existing vehicle fencing, which animals can still cross through, with a pedestrian wall that will prohibit border crossing of species such as the peninsular bighorn sheep. The previously constructed portions of the pedestrian wall in San Diego County are a barrier that this endangered animal simply cannot pass through, under, or over. Along with the previously constructed sections of the border wall, El Centro Project 1 will continue to impair the ability of the peninsular bighorn sheep to move between the two nations.
- 16. The FWS recovery plan for the peninsular bighorn sheep stated that low survivorship of adult peninsular bighorn sheep threatens population viability. It included the recovery action that mortality should be reduced by "Prohibit fences in which bighorn sheep may become entangled or strangled, or that interrupt habitat connectivity or block movement of bighorn sheep within remaining habitat (emphasis in recovery plan)... All other fences should comply with Bureau of Land Management specifications for fences within bighorn sheep habitat (Bureau of Land Management 1989)." (Recovery Action 1.3.1.1 on Page 91 in FWS. 2000. Recovery Plan for Bighorn Sheep in the Peninsular Ranges, California. U.S. Fish and Wildlife Service, Sacramento, California.)
- 17. The unimpeded movement of the peninsular bighorn sheep between the United States and Mexico is important for increasing and maintaining their genetic diversity. As the number of animals that move between these two countries declines or ceases, the species will begin to suffer the deleterious effects of inbreeding and reduced genetic diversity including physical malformities, behavioral problems, reduced ability to successfully reproduce and produce viable offspring, greater susceptibility to disease, and reduced ability to survive adverse environmental conditions, such as drought, extremely cold winters, or hot summers. The combined direct and indirect effects of a border wall will be additional pressures on the survival and recovery in the wild of this endangered species.
- 18. There will be irreparable harm to the peninsular bighorn sheep without proper NEPA review and the completion of section 7 consultation by these federal agencies as required by the Endangered Species Act.

- 19. The proposed border wall will also harm other species that are not federally recognized as endangered or threatened but are State of California Species of Special Concern such as the flat-tailed horned lizard and the burrowing owl. Given the lack of adequate environmental review of El Centro Project 1, the full extent of irreparable harm currently is unknown. However, significant irreparable harm will likely occur. The border wall construction and associated activities such as DHS and CBP vehicle traffic, road building and maintenance, horseback and quad patrols, night lighting, and other associated law enforcement and border wall maintenance activities could permanently alter the geography, impact native vegetation and plant communities, especially by improving habitat conditions for invasive weeds, and adversely impact the existing natural ecosystems.
- 20. The earth moving and associated disturbance caused by border wall construction will create habitat for invasive exotic plants and weeds that outcompete and replace native plants. These exotic species initiate a downward spiral of increasingly destructive effects to native plants, and native animals dependent on the native vegetation for food and the predators that feed on them. The seeds of exotic weeds from other areas are easily transported within dried mud or dirt on construction equipment, or unintentionally by DHS and CBP cars, trucks, horse trailers, quads, and the hooves and fur of their patrol horses.
- 21. The flat-tailed horned lizard, which has the smallest range of all horned lizard species, inhabits both sides of the United States-Mexico border from southeastern California, extreme southwestern Arizona, in the United States, and northeastern Baja California and northwestern Sonora, Mexico. There are many documented observations of this reptile in the El Centro Project 1 area.
- 22. NatureServe, the publically accessible and highly reputable internet database of the status of animals and plants, ranks the flat-tailed horned lizard as vulnerable to extinction on a global level, and imperiled on a national and state level in Arizona and California.
- 23. The threats from the El Centro Project 1 border wall to the flat-tailed horned lizard include direct effects such as death or injury from construction operations. The flat-tailed horned lizard would fall into trenches or other holes associated construction operations and then die of

exposure or by being buried alive. The flat-tailed horned lizard also may be run over by vehicles associated with the project and collected by construction personnel. Further, the El Centro Project 1 will impair the long-term genetic viability of the flat-tailed horned lizard because the border wall will diminish their habitat, restrict their movement patterns, and prevent genetically diverse individuals from opposite sides of the international border from mating with each other. Further, the border wall will improve conditions for the flat-tailed horned lizards' predators. The border wall will provide perching sites for loggerhead shrikes and American kestrels, two of the lizard's major predators, which will make it easier for them to observe and capture the horned lizard. Finally, both on and off-road vehicles injure and kill flat-tailed horned lizards. The animal typically "freezes" in the presence of threats, including vehicles, making them particularly susceptible to getting hit by vehicles. Studies have found that even on infrequently traveled roadways, 3% and 19% of the flat-tailed horned lizards observed were dead on the road over two years of study (page 18 in California Department of Fish and Wildlife. 2014. Report to the Fish and Game Commission. Evaluation of the Petition from the Center for Biological Diversity to list the Flat-tailed Horned Lizard (*Phrynosoma mcallii*) as Endangered under the California Endangered Species Act. Sacramento, California).

- 24. The burrowing owl is a State of California Species of Special Concern. This ground nesting bird has declined throughout most of its range in California.
- 25. The threats from the proposed El Centro Project 1 border wall to the burrowing owl include death or injury from construction operations, including by being buried alive in their burrows, and from vehicular traffic with the project
- 26. The U.S. Bureau of Land Management has designated the entire area of Imperial County where the El Centro Project 1's proposed border wall will be located as the Yuha Basin Area of Critical Environmental Concern (ACEC). ACEC designations highlight areas where special management attention is needed to protect important historical, cultural, and scenic values, or fish and wildlife or other natural resources. According to the BLM, the Yuha Basin ACEC contains important habitat for the flat-tailed horned lizard and several unique vegetation communities.