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IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA
OAKLAND DIVISION

STATE OF CALIFORNIA et al.;

Plaintiffs,

v.

**DONALD J. TRUMP, in his official
capacity as President of the United States of
America et al.;**

Defendants.

Case No. 4:19-cv-00872-HSG

**APPENDIX OF DECLARATIONS
REGARDING ENVIRONMENTAL
HARMS IN SUPPORT OF PLAINTIFFS'
MOTION FOR PARTIAL SUMMARY
JUDGMENT REGARDING SECTION
2808 AND NEPA**

Date: November 20, 2019
Time: 10:00 am
Judge: Honorable Haywood S. Gilliam,
Jr.
Trial Date: None Set
Action Filed: February 18, 2019

DECLARATIONS CONCERNING ENVIRONMENTAL HARMS

Exhibit Number	Declarant
1	Kevin B. Clark (San Diego Natural History Museum)
2	Dr. Kai Dunn (California Regional Water Quality Control Board, Colorado River Basin Region)
3	David Gibson (California Regional Water Quality Control Board, San Diego Region)
4	Christopher D. Nagano (Center for Biological Diversity)
5	Myles B. Traphagen (Wildlands Network)
6	Sula Elizabeth Vanderplank (San Diego Zoo Global)

EXHIBIT 1

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IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA
OAKLAND DIVISION

**STATE OF CALIFORNIA; STATE OF
COLORADO; STATE OF
CONNECTICUT; STATE OF
DELAWARE; STATE OF HAWAII;
STATE OF ILLINOIS; STATE OF
MAINE; STATE OF MARYLAND;
COMMONWEALTH OF
MASSACHUSETTS; ATTORNEY
GENERAL DANA NESSEL ON BEHALF
OF THE PEOPLE OF MICHIGAN;
STATE OF MINNESOTA; STATE OF
NEVADA; STATE OF NEW JERSEY;
STATE OF NEW MEXICO; STATE OF
NEW YORK; STATE OF OREGON;
STATE OF RHODE ISLAND; STATE OF
VERMONT; COMMONWEALTH OF
VIRGINIA; and STATE OF WISCONSIN;**

Plaintiffs,

4:19-cv-00872-HSG

**DECLARATION OF KEVIN B. CLARK
IN SUPPORT OF PARTIAL MOTION
FOR SUMMARY JUDGMENT
REGARDING SECTION 2808
PROJECTS AND NEPA**

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v.

DONALD J. TRUMP, in his official capacity as President of the United States of America; **UNITED STATES OF AMERICA; U.S. DEPARTMENT OF DEFENSE; PATRICK M. SHANAHAN**, in his official capacity as Acting Secretary of Defense; **MARK T. ESPER**, in his official capacity as Secretary of the Army; **RICHARD V. SPENCER**, in his official capacity as Secretary of the Navy; **HEATHER WILSON**, in her official capacity as Secretary of the Air Force; **U.S. DEPARTMENT OF THE TREASURY; STEVEN T. MNUCHIN**, in his official capacity as Secretary of the Treasury; **U.S. DEPARTMENT OF THE INTERIOR; DAVID BERNHARDT**, in his official capacity as Acting Secretary of the Interior; **U.S. DEPARTMENT OF HOMELAND SECURITY; KIRSTJEN M. NIELSEN**, in her official capacity as Secretary of Homeland Security;

Defendants.

1 I, Kevin B. Clark, declare as follows:

2 1. I have personal knowledge of the facts set forth in this declaration. If called as a
3 witness, I could and would testify competently to the matters set forth below.

4 2. I am the Director of BioServices for the San Diego Natural History Museum, a
5 position I have held since 2014.

6 3. I have over twenty-five years of biological experience, including conducting surveys
7 for a wide range of endangered species. I hold permits with the state and federal governments to
8 nest search, monitor, and band rare and endangered passerines, shorebirds, and seabirds. I hold
9 federal and state permits to survey and nest monitor endangered species such as the Southwestern
10 Willow Flycatcher, Least Bell's Vireo, Western Yellow-billed Cuckoo, and California
11 Gnatcatcher. I am also permitted to mist-net, handle, and band migratory birds.

12 4. I have conducted biological surveys throughout the U.S., Mexico, and Costa Rica,
13 from bird banding in bottomland hardwood forests of Louisiana to mammal, bird, and reptile
14 studies in the Sierra Nevada of California. I co-authored a book on the extinction of the Imperial
15 Woodpecker that took me throughout tropical and montane habitats of northwestern Mexico. I
16 have a Bachelor of Science degree from the University of California, Berkeley, and a Master of
17 Science Degree in Ecology from Arizona State University. My thesis research involved the
18 effects of habitat fragmentation on birds, mammals, and reptiles. My research analyzed
19 landscape influences on biological communities and trophic level relationships of extirpated and
20 persisting species. This research found that smaller habitat fragments supported fewer species of
21 animals, and even common species in pre-fragmented landscapes could be extirpated once
22 fragmentation occurred. In 2011, this research was published in the Journal of the Arizona-
23 Nevada Academy of Sciences.

24 5. From 2000-2006, I was a Fish and Wildlife Biologist with the U.S. Fish and
25 Wildlife Service (USFWS), based in Carlsbad, California. In this capacity, I worked on the
26 recovery of endangered species, including the California Gnatcatcher and California Least Tern,
27 and was the regional recovery coordinator for the threatened Western Snowy Plover. I was the
28 primary author of the 2003 designation of critical habitat for the California Gnatcatcher, which

1 included a proposed rulemaking reclassifying the species as a Distinct Population Segment under
 2 the Endangered Species Act (68 Fed. Reg. 20228). As part of this analysis, I thoroughly
 3 reviewed all the pertinent literature and survey information for the species, conducted field
 4 surveys for the bird and its habitat requirements, and analyzed and finalized maps describing the
 5 range of the species and its essential habitat locations. In my capacity as a Fish and Wildlife
 6 Biologist I also participated in consultations required under Section 7 of the Endangered Species
 7 Act, which are required whenever a federal project may impact threatened or endangered species.

8 6. Subsequent to my employment at the U.S. FWS, I founded my own company,
 9 Clark Biological Services, to conduct focused surveys and conservation-based research on
 10 endangered species in Southern California. I possess authorized take permits from both federal
 11 and state wildlife agencies to conduct surveys and monitoring of the California Gnatcatcher. I
 12 authored numerous reports on the results of California Gnatcatcher surveys and monitoring,
 13 generally for large landowners in southern California such as the Department of Defense. After I
 14 founded my own conservation firm, I joined the San Diego Natural History Museum as the
 15 Director of BioServices, and in this capacity I coordinate the contracting within the science
 16 departments with various clients requiring applied ecological research, typically for large
 17 agencies and institutions. I also currently serve on the recovery teams of the endangered Masked
 18 Bobwhite Quail (*Colinus virginianus ridgwayi*) and the Sonoran pronghorn (*Antilocapra*
 19 *americana sonoriensis*), both convened by the U.S. FWS.

20 7. I have analyzed the proposed border-infrastructure projects including San Diego
 21 Project 4, Yuma Project 6, and San Diego Project 11, as outlined in the table attached as Exhibit 1
 22 to the Declaration of Heather Leslie (“2808 Project Table”), and as described in the “List of
 23 Military Construction Projects” that Defendants filed in this matter on September 3, 2019, [ECF
 24 Doc. No. 206-2] (“2808 Project List”). These projects involve the construction of primary and
 25 secondary pedestrian fencing that will be 18 to 30 feet tall, based on the bollard-style pedestrian
 26 fencing used for other recent border-barrier projects that Defendants have undertaken. San Diego
 27 Project 4, Yuma Project 6, and San Diego Project 11 would also include the construction of roads
 28 and installation of lighting.

1 8. The Department of Homeland Security (“DHS”) has not provided detailed
2 information regarding these projects. It is presumed that the projects will be similar to recently
3 completed border wall projects in other portions of the California border, and will include a new
4 bollard wall from 18 to 30 feet high, construction of a 20-foot wide all-weather road, and assorted
5 temporary roads for access to the work sites. As with any construction project of this scale, it is
6 assumed that extensive areas for equipment staging and materials storage will also be required in
7 the vicinity of the project area at the border.

8 9. I have considerable experience in evaluating the impacts caused by similar border
9 infrastructure projects. From 2011-2012, my company was hired to perform biological
10 monitoring of the construction along the primary and secondary border fences from Bunker Hill
11 (about a mile east of the Pacific Ocean) to the coast. My observations of the amount of area
12 needed for staging equipment and materials, constructing roads for access to construction areas,
13 and cut and fill activities during construction are directly relevant to the current proposal.

14 10. In this declaration, I provide several examples specific to the San Diego 4, San
15 Diego 11, and Yuma project sites, and to the border region more generally, to illustrate how these
16 projects will cause irreparable harm to wildlife.

17 11. Multiple peer-reviewed scientific studies have found that a variety of wildlife,
18 ranging from mountain lions (*Puma concolor*) to bighorn sheep (*Ovis canadensis*) as well as
19 ground dwelling non-migratory birds, are negatively affected by border fences disrupting their
20 movement patterns. In disrupting movement, these barriers can reduce or restrict events such as
21 juvenile and adult dispersal, as well as genetic interchange between populations.

22 12. The American Society of Mammalogists, a professional, scientific, and
23 educational society consisting of nearly 3,000 members, passed a resolution in June 2017
24 opposing the construction of border infrastructure due to its well-documented negative effects on
25 a variety of mammal species, many of them declining or endangered. The resolution calls upon
26 the Federal Government to ensure that all boundary infrastructure, both existing and proposed,
27 include features and modifications to maintain landscape permeability for mammalian
28 populations to permit demographic and genetic exchange necessary for well-distributed, viable

populations and the long-term persistence of species and mammalian community structure. According to the resolution, the actions of DHS on the US-Mexico border must receive regular environmental review to identify, monitor, and mitigate significant threats to the persistence of mammalian populations under the National Environmental Policy Act (“NEPA”) and the U.S. Endangered Species Act. In addition, the Southwestern Association of Naturalists (“SWAN”) passed a similar resolution in July 2017 opposing the construction of a border wall. SWAN is an international association of scientists, educators, and students founded in 1953 to promote the field study of plants and animals in the southwestern United States, Mexico, and Central America. Their resolution states, “. . . wall construction will irreparably harm many species and some of the Southwest’s most significant lands . . . THEREFORE BE IT RESOLVED that the Southwestern Association of Naturalists (SWAN) calls upon the Governors of all the border states (those of the U.S. and of Mexico), the U.S. Secretary of the Interior, the Secretaria de Medio Ambiente y Recursos Naturales (SEMARNAT) of Mexico, the Director of the U.S. Fish and Wildlife Service, and the Secretary for Homeland Security to immediately stop all plans for construction of the proposed border wall based on the potential negative impacts of the wall to native plants and wildlife and to mitigate the current negative impacts of the existing fence.”

Effects of the Proposed San Diego Project 4

13. San Diego Project 4 proposes the construction of 1.5 miles of new primary pedestrian fencing and 2 miles of new secondary fencing starting 3.6 miles east of the Otay Mesa Port of Entry and extending to the east. Extensive trenching, construction of roads, and staging of materials would also presumably be necessary to construct the proposed border fence in this location. The proposed construction area would cut through designated critical habitat for the endangered Quino Checkerspot Butterfly, as well as the federally designated Otay Mountain Wilderness Area.

14. I conducted a site visit to the proposed construction area on October 2, 2019. During this visit I evaluated the habitat conditions of the work area, and observed access roads and staging areas.

15. The endangered Quino Checkerspot Butterfly (*Euphydryas editha quino*) has been

1 documented to occur within the project area. This butterfly is restricted to a few locations in
2 Riverside and San Diego Counties and is found in open scrub and grassland areas that support its
3 primary host plant, dwarf plantain (*Plantago erecta*). Dwarf plantain is a small annual herb found
4 in open patches of bare ground. Adult Quino Checkerspot Butterflies seek out patches of dwarf
5 plantain to lay their eggs, as the caterpillars are restricted to feeding on this host plant. After
6 hatching, the caterpillars grow rapidly while feeding in patches of plantain, but if dry conditions
7 occur, these caterpillars have the ability to “diapause” or enter biological stasis, where they bury
8 themselves in the leaf litter, sometimes for years, until suitable conditions arrive again. The
9 Quino Checkerspot Butterfly uses this strategy to persist in habitats that are prone to extended
10 droughts. Quino can therefore persist in some areas where it has not been seen in years, but when
11 suitable rains arrive and the dwarf plantain is in abundance, caterpillars in large numbers can
12 emerge in short periods of time to take advantage of the conditions, resulting in brief population
13 spikes. This is important because a lack of sightings in any given year does not necessarily mean
14 that the species is not present.

15 16. According to the California Natural Diversity Database, Quino Checkerspot
16 Butterflies have been documented immediately adjacent to the border fence and on the
17 surrounding slopes to the north, well within the proposed project area.

18 17. The western third of the project area cuts through Quino Checkerspot Butterfly
19 designated critical habitat. The presence of critical habitat and past occurrences of the species in
20 the area indicates that the species is present, and the proposed work, including resurfacing of the
21 roadways where the butterfly and its host plant have been found, will crush and bury diapausing
22 larvae and host plant seed bank in the area. These activities will cause irreparable harm to the
23 Quino Checkerspot Butterfly population and its critical habitat on Otay Mesa.

24 18. The Coastal California Gnatcatcher (*Poliophtila californica californica*; California
25 Gnatcatcher) is a federally threatened species restricted to coastal southern California in areas of
26 open coastal sage scrub vegetation. California gnatcatchers are obligate insectivores (meaning
27 that they can only eat insects) that forage by “foliage gleaning”, a method of visually finding
28 insects while actively searching through vegetation. These birds utilize shrub species found

1 within coastal sage scrub vegetation for foraging. One prominent species utilized by the
2 California gnatcatcher for foraging is coastal sagebrush (*Artemisia californica*) which commonly
3 occurs in coastal sage scrub adjacent to the proposed border wall. This shrub is considered a
4 primary constituent element within California gnatcatcher critical habitat. California Gnatcatcher
5 territories average approximately 9 acres, and expand in the winter to take in a larger foraging
6 area, often by as much as 80%.

7 19. The California Natural Diversity Database documents California Gnatcatchers as
8 occurring within the project area. During a site visit October 2, 2019, I detected a California
9 Gnatcatcher approximately two miles northwest of the project, but numerous pairs have been
10 detected much closer. Habitat on the slopes adjacent to the proposed work and staging areas is
11 suitable for this species, consisting of coastal sage scrub dominated by shrubs such as California
12 sagebrush, and it is expected that this species is currently found in the work area.

13 20. The construction of a border wall fence and related road network will destroy
14 essential habitat for numerous gnatcatcher pairs due to vegetation clearance activities that will be
15 required to construct both the primary and secondary fences. Additionally, the steep topography
16 of this area will require new road networks for access to the work areas, and significant cut and
17 fill operations will be undertaken, as was needed in previous border fence construction projects in
18 and around Otay Mountain. These destructive construction activities will result in significant
19 displacement of California gnatcatchers into already diminished and limited habitat areas. As
20 these habitats are already occupied by adjacent pairs, the affected gnatcatchers will either be
21 required to move or challenge adjacent pairs for their occupied territories. The result will be a
22 substantial reduction of the population in the area, and irreparable harm to the species and its
23 habitat.

24 21. The Western Burrowing Owl (*Athene cunicularia hypugaea*, Burrowing Owl) is a
25 burrow-inhabiting small owl restricted to the western U.S. and northern Mexico, where it occurs
26 in declining numbers in open grasslands and agricultural areas. Diurnal (daytime) activities of
27 owls are often restricted to within 250 meters of the nest burrow. However, nocturnal foraging
28 activities extend out much farther and average home range sizes are determined by the extent and

1 quality of foraging habitat. A study in San Diego County found that burrowing owl home ranges
 2 averaged 20 acres. A study of two urban sites in northern California determined that home ranges
 3 averaged 22 acres.

4 22. The Burrowing Owl is considered a Bird of Conservation Concern by the U.S.
 5 Fish and Wildlife Service, as well as a Species of Special Concern by the California Department
 6 of Fish and Wildlife. The 1988 amendment to the Fish and Wildlife Conservation Act mandates
 7 the USFWS to “identify species, subspecies, and populations of all migratory nongame birds that,
 8 without additional conservation actions, are likely to become candidates for listing under the
 9 Endangered Species Act (ESA) of 1973.” Birds identified as such are deemed priorities for
 10 conservation actions, and the lists are consulted for actions taken on Federal lands in accordance
 11 with Executive Order 13186, “Responsibilities of Federal agencies to protect migratory birds”.
 12 BCC species also receive priority attention in the USFWS when allocating research, monitoring,
 13 and management funding. California Species of Special Concern are defined as species or
 14 subspecies that are experiencing population declines or range retractions that, if continued, could
 15 qualify them for state threatened or endangered status. According to a California Department of
 16 Fish and Wildlife Report, in California, threat factors affecting Burrowing Owl populations
 17 include “habitat loss, degradation and modification, and eradication of ground squirrels resulting
 18 in a loss of suitable burrows required by burrowing owls for nesting, protection from predators,
 19 and shelter.”

20 23. As stated in the draft Burrowing Owl Conservation and Management Plan for San
 21 Diego County:

22
 23 In southern California, the western burrowing owl . . . has experienced declining
 24 populations for decades. This species was once widespread and abundant in San Diego
 25 County during the breeding season. The San Diego Bird Atlas provides a detailed account
 26 of declines in the County population since the 1920s, when the owl was common along an
 27 elevational gradient extending from coast to foothills. The number of occupied sites had
 28 declined by the 1970s, although breeding owls could still be found in coastal locations . . .
 as well as several inland sites that are no longer occupied by BUOW [Burrowing Owls].
 Nearly all coastal populations were extirpated [meaning a local population extinction] by
 1997 due to intensive urban development and habitat fragmentation. Extensive field
 surveys conducted in the years 1997-2002 for the San Diego Bird Atlas documented five
 locations of breeding pairs. In the 15 years since those surveys, the number of breeding
 pairs has dropped to the point that breeding pairs are now only detected in scattered sites

1 on Otay Mesa.

2 24. A Memorandum dated September 25, 2017, that I have reviewed and was written
3 by U.S. Customs and Border Protection staff, states that during a one-day survey in August 2017,
4 immediately west of the proposed construction area, contract biologists found 37 active
5 Burrowing Owl burrows and 19 individual owls. *See* Memorandum by Border Patrol staff, dated
6 Sept. 25, 2017, and attached as Exhibit A to this declaration. On another property further to the
7 west of this project, also along the border fence, nine Burrowing Owl pairs utilizing 165 acres of
8 habitat were found. This area of eastern Otay Mesa is the last stronghold for the species in the
9 County, and further loss of both occupied burrows and foraging habitat will only hasten its
10 decline.

11 25. The proposed construction activities, while still undefined and poorly documented,
12 include disturbance to foraging habitat and occupied burrows through the extensive road work,
13 and vegetation clearing and trenching along the primary and secondary border fences. Burrowing
14 Owls are especially sensitive to construction disturbance due to their unique behavior. During
15 daylight hours, they stand guard over their burrow, which may include eggs and young, and are
16 easily flushed by adjacent human disturbance or activities. Repeated flushing during periods of
17 incubation or while feeding chicks has extremely negative effects, including cooling of eggs,
18 reduced feeding of chicks, or increased exposure to predators, reducing the percentage of chicks
19 surviving to adulthood.

20 26. Besides direct flushing, the extensive clearing of vegetation, as would be necessary
21 for the construction of staging areas for materials and road access to the site, would remove
22 foraging habitat from this owl population. Due to the high density of owls in such a relatively
23 restricted area, with nineteen individual owls observed during a one-day survey, loss of foraging
24 habitat would necessarily cause additional competition for resources among the owls, leading to
25 the displacement of some younger or less aggressive birds. Displaced birds are subject to
26 increased mortality rates as they search the area for suitable unoccupied habitat. These activities
27 would therefore hasten the decline of this last breeding population in coastal southern California.
28

1 27. In southern California, vernal pools are shallow depressions overlying
2 impermeable substrates, typically clay hardpans, which fill with winter rainfall and retain ponded
3 water through the spring. These unique seasonal wetlands are too short-lived to harbor fish, and
4 therefore support specialized species that cannot survive fish predation, but can reproduce quickly
5 in the rapidly drying pools. Species such as fairy shrimp, spadefoot toads, and specialized plants
6 with both aquatic and terrestrial components of their life cycle can only be found in vernal pools.
7 In Southern California, due to the massive destruction of vernal pools on flat coastal mesas
8 (upwards of 90% have been destroyed), several of these species have now been protected as
9 Endangered Species under the Federal Endangered Species Act.

10 28. Fairy shrimp reproduce by means of hardened “cysts”, analogous to hard-shelled
11 plant seeds, which are released by the female after mating. These cysts remain in the soil for
12 extended periods, potentially years, until the right combination of soil moisture and temperature
13 returns to stimulate hatching. Only a percentage of cysts hatch during any particular period with
14 suitable conditions, therefore, “cyst banks” analogous to seed banks, develop in the soil
15 consisting of viable but unhatched cysts from numerous previous generations in a state of
16 diapause, or biological stasis, awaiting future suitable hatching conditions.

17 29. Two federally endangered species of fairy shrimp inhabit the border zone in Otay
18 Mesa. The San Diego Fairy Shrimp (*Branchinecta sandiegonensis*) is restricted to vernal pools
19 and other temporary aquatic environments in San Diego, Orange, and Riverside Counties. It can
20 survive in shallow, short-lived pools that fill for only a few weeks. Its short life cycle allows it to
21 persist in pools that have been damaged or disturbed, and in some cases it can survive in pools on,
22 or adjacent to, dirt roads bisecting vernal pool landscapes. Despite this tolerance for some
23 disturbance, the majority of vernal pools in southern California that would have supported this
24 species have now been irreparably lost, and it only survives in scattered parks and preserves that
25 are managed for vernal pool species.

26 30. The second endangered fairy shrimp inhabiting the border zone in Otay Mesa is
27 the Riverside Fairy Shrimp (*Streptocephalus woottoni*). In contrast to the wider variety and
28 distribution of pools inhabited by the San Diego Fairy Shrimp, the Riverside Fairy Shrimp can

1 only occur in deeper pools holding water for extended periods of time. Upon listing as an
2 endangered species in 1993, Riverside fairy shrimp were known to inhabit 9 vernal pool
3 complexes within Riverside, Orange, and San Diego counties, and Baja California, Mexico.
4 Extensive survey work since its listing as an Endangered Species have now documented 45
5 known occupied vernal pool complexes, but it is still restricted to the same geographic
6 distribution in southern California.

7 31. Past border-barrier construction activities to the west of where San Diego Project 4
8 is being constructed included improvements to access roads to facilitate project construction. For
9 example, in order to construct the wall prototypes access roads were repaired and improved to
10 support the movement of heavy trucks and equipment to the prototype construction area from the
11 nearest paved roads to the west. That road work consisted of clearing vegetation, filling potholes,
12 leveling and grading, and stabilizing the road with aggregate or other stabilized road surface
13 course. *See* Memorandum by Border Patrol staff, dated Sept. 25, 2017, and attached as Exhibit A
14 to this declaration. It is clear from the site visit conducted on October 2, 2019, as well as analysis
15 of aerial imagery, that the only feasible access to the western portion of the San Diego Project 4
16 construction area is on unimproved dirt roads that lead from the prototype area to the west. It is
17 expected that the current proposal for San Diego Project 4 would conduct similar road grading
18 activities through this area as it is the primary means of accessing the construction zone. The
19 landscape in the immediate vicinity of the prototype area and along the dirt roads to the east and
20 north, leading to San Diego 4, supports numerous vernal pools. Several of these pools occur
21 within and adjacent to dirt roads that will be utilized by heavy equipment, and where additional
22 grading, vegetation clearing and filling may occur. This roadwork would damage vernal pools
23 and cause irreparable harm to the fairy shrimp and other vernal pool species.

24 32. Adjacent to the border wall zone on Otay Mesa, several recent biological surveys
25 on private properties have found that the entire road network within, and adjacent to, the work
26 area contains vernal pools and numerous rare and endangered species associated with them. For
27 example, the access roads to the west of the project area, which are the main conduits for the
28 heavy equipment and materials being brought onto the site, support rare and endangered species

such as Riverside Fairy Shrimp, San Diego fairy Shrimp, Quino Checkerspot Butterfly, Western Spadefoot Toad, and San Diego Button Celery. Surveys on private parcels to the immediate north and west of the construction area depict numerous vernal pools occupied by both fairy shrimp species. Surveys for the Otay Business Park development, immediately north of the border fence, found San Diego Fairy Shrimp at ten sites, including nine pools along the road network immediately north of the secondary fence, to the west of the construction area. This area is also designated as critical habitat for the species. Riverside Fairy shrimp were also found in three pools, all of which occur along the main east-west dirt road that would be used for access to the construction area. Also found within these same pools are other federally endangered species, such as San Diego Button Celery (*Eryngium aristulatum* var. *parishii*) and Spreading Navarretia (*Navarretia fossalis*).

33. These species are persisting in and adjacent to the disturbed dirt roadways due to their brief reproduction period when the pools are full, and when vehicles avoid these pools in order to avoid getting stuck in the deep-clay mud. However, once road modifications of grading, “pothole filling”, and repaving with aggregate occur, these pools will cease to refill with water, and the cysts and seeds embedded in the soil will be crushed and buried, preventing their hatching in future rain events. These actions will cause irreparable harm to these vernal pool species, and reduce the potential for recovery of the species, as mandated under the Federal Endangered Species Act.

Effects of the Proposed San Diego Project 11

34. San Diego Project 11 proposes the construction of three miles of new secondary pedestrian fencing starting two miles west of the Tecate Port Of Entry and extending 1.5 miles east of the port. The project footprint here is characterized by natural habitats with minimal disturbance, and the proposed fencing here will harm multiple species of lizards, birds and mammals. The Quino Checkerspot Butterfly, discussed above, has been reported from this area. In addition to the to the butterfly, numerous rare species occur in the project area and would be harmed or killed by the extensive trenching, construction of roads, and staging of materials necessary to construct the proposed border fence. These include:

1 Baja California coachwhip (CA State Species of Special Concern)

2 Coast patch-nosed snake (CA State Species of Special Concern)

3 Red-diamond rattlesnake (CA State Species of Special Concern)

4 Cope's leopard lizard (CA State Species of Special Concern)

5 Coast horned lizard (CA State Species of Special Concern)

6 San Diego banded gecko (CA State Species of Special Concern)

7 Coastal whiptail (CA State Species of Special Concern)

8 Gray Vireo (CA State Species of Special Concern)

9 Townsend's big-eared bat (CA State Species of Special Concern)

10 Pallid bat (CA State Species of Special Concern)

11 California Leaf-nosed bat (CA State Species of Special Concern)

12 Western Yellow bat (CA State Species of Special Concern)

13 Western mastiff bat (CA State Species of Special Concern)

14 Pocketed free-tailed bat (CA State Species of Special Concern)

15 Big free-tailed bat (CA State Species of Special Concern)

16 San Diego black-tailed jackrabbit (CA State Species of Special Concern)

17 Dulzura pocket mouse (CA State Species of Special Concern)

18 Northwestern San Diego pocket mouse (CA State Species of Special Concern)

19 Jacumba pocket mouse (CA State Species of Special Concern)

20 San Diego desert woodrat (CA State Species of Special Concern)

21 Southern grasshopper mouse (CA State Species of Special Concern)

22 American badger (CA State Species of Special Concern)

23
24 In my experience, if Defendants had conducted environmental review under NEPA for San
25 Diego Project 11, the USFWS would have considered and addressed potential impacts to these
26 listed species as part of its review of the project during the NEPA process.
27
28

Effects of proposed Yuma Project 6

35. Yuma Project 6 proposes the construction of approximately 1.5 miles of a new primary and secondary pedestrian fence system starting at Andrade Port Of Entry and extending to the west into the Algodones sand dunes. Additional proposed fencing would also occur east of the Colorado River and continue south for approximately one mile.

36. The proposed primary and secondary fence in the Yuma area would affect numerous rare and endangered species along the Colorado River and adjacent desert uplands that would be harmed or killed by the extensive trenching, construction of roads, and staging of materials necessary to construct the proposed border fence. These include:

- Flat-tailed Horned Lizard (CA State Species of Special Concern)
- Colorado Desert Fringe-toed Lizard (CA State Species of Special Concern)
- Sonoran mud turtle (CA State Species of Special Concern)
- Loggerhead shrike (CA State Species of Special Concern)
- LeConte's Thrasher (CA State Species of Special Concern)
- Yuma Ridgway's Rail (Federally endangered)
- Arizona Bell's Vireo (CA State Species of Special Concern)
- Gila Woodpecker (CA State Species of Special Concern)
- Southwestern Willow Flycatcher (Federally endangered)
- Western Yellow-billed Cuckoo (Federally endangered)
- Townsend's big-eared bat (CA State Species of Special Concern)
- Pallid bat (CA State Species of Special Concern)
- California Leaf-nosed bat (CA State Species of Special Concern)
- Western Yellow bat (CA State Species of Special Concern)
- Western mastiff bat (CA State Species of Special Concern)
- Pocketed free-tailed bat (CA State Species of Special Concern)
- Big free-tailed bat (CA State Species of Special Concern)

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2 In my experience, if Defendants had conducted environmental review under NEPA for
3 Yuma Project 6, the USFWS would have considered and addressed potential impacts to these
4 listed species as part of its review of the project during the NEPA process.

5 37. The flat-tailed horned lizard (*Phrynosoma mcallii*) is found in a restricted area of
6 low desert habitat in southeastern California, southwestern Arizona, and adjacent Mexico. This
7 lizard was proposed by the U.S. Fish and Wildlife Service for listing as a threatened species under
8 the Endangered Species Act. On March 15, 2011, this proposal was withdrawn by the Service,
9 which determined that the species did not need the protection of the Act, in part due to ongoing
10 conservation efforts such as the establishment of a Rangewide Management Strategy, an excerpt
11 of which is attached as Exhibit 6 to Plaintiffs' Request for Judicial Notice, that was filed on June
12 12, 2019 [ECF Doc. No. 176-3]. The lizard is currently considered a California Species of
13 Special Concern. It is typically found in sandy flats and dunes that often support sparse desert
14 vegetation. Though this species is typically found in areas of fine windblown sand, it occasionally
15 is found in badlands, saltbush flats, and gravelly soils. This lizard is a specialized predator of
16 ants, and has declined throughout its range due to habitat fragmentation and degradation from
17 agricultural development, urbanization, and off-road vehicle use. For much of the year it stays
18 concealed in underground burrows, emerging during warmer months to forage for prey.

19 38. The flat-tailed horned lizard is currently known to occur along the border zone
20 within the proposed construction area. The extensive trenching, construction of roads, and
21 staging of materials proposed in this area would harm or kill lizards that were either active or in
22 underground burrows in the area.

23 39. The Yuma Ridgway's Rail (*Rallus obsoletus yumanensis*) is a federally
24 endangered bird restricted to marsh and riparian habitats within the watershed of the lower
25 Colorado River and adjacent desert marshes. This secretive species stays well hidden in dense
26 vegetation located in shallow water. The Yuma Ridgway's Rail is known to occur along the
27 Colorado River in the vicinity of the border. As this rail is secretive and easily disturbed by
28 human activities, the proposed one mile of construction activity immediately in and adjacent to

1 the river will destroy nesting habitat and disturb nesting rails along a significant stretch of the
2 river.

3 I declare under penalty of perjury under the laws of the United States that the foregoing is
4 true and correct.

5 Executed on October 8, 2019, at San Diego, California.

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Kevin B. Clark

EXHIBIT A

MEMORANDUM FOR: Loren Flossman
Director
Border Patrol and Air and Marine
Program Management Office

FROM: Paul Enriquez
Real Estate and Environmental Branch Chief
Real Estate, Environmental, and Leasing Division
Border Patrol and Air and Marine
Program Management Office

SUBJECT: Construction and Evaluation of Border Wall Prototypes, U.S.
Border Patrol, San Diego Sector, California

Purpose:

On August 2, 2017 the Secretary of the Department of Homeland Security (DHS) issued a waiver pursuant to Section 102(c) of the Illegal Immigration Reform and Immigrant Responsibility Act (IIRIRA) (the Waiver). Among the projects covered by the Waiver is the construction and evaluation of border wall prototypes (Project) in San Diego County, California. This memorandum provides a description of Project activities, summarizes the results of recent natural and cultural resource surveys performed within areas to be affected by the Project, and analyzes the potential effects of the Project on the resources present within the Project Area (hereinafter defined). Furthermore, the memorandum provides best management practices (BMPs) to be implemented during the Project to minimize or avoid potential Project impacts.

Background and History:

The United States Border Patrol (USBP) San Diego Sector (SDC) in southern California is one of the busiest USBP sectors in the Nation. Although the construction of border infrastructure and other operational improvements over the last two decades has improved border security in the sector, SDC remains an area of high illegal entry.

On August 2, 2017, the Secretary of DHS, pursuant to his authority under Section 102(c) of IIRIRA of 1996, issued the Waiver, which sets aside certain laws, regulations, and other legal requirements in order to ensure the expeditious construction of barriers and roads in the vicinity of the international land border of the United States in SDC, including the Project. Although the Secretary's waiver means that U.S. Customs and Border Protection (CBP) no longer has any specific legal obligations under the laws that are included in the waiver, CBP remains committed

Construction of SDC Border Wall Prototype

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to the protection of valuable natural and cultural resources through responsible environmental stewardship.

Project Description:

CBP will construct and evaluate border wall prototypes in an approximately 120' by 1,000' corridor on the U.S./Mexico border in the alignment of the secondary border fence between the Otay Mesa Land Port of Entry (LPOE) and the western base of Otay Mountain in San Diego County, California (the Construction Corridor). The Construction Corridor is situated within an area that currently serves as a border enforcement zone with primary and secondary border fences, border roads, border lighting, and surveillance technology. CBP will build eight different border wall prototypes side by side in the Construction Corridor. The construction design, materials, methods, and equipment will vary by prototype. In general, construction activities will consist of excavating for the prototype foundations, forming concrete, and assembling and installing the 30' by 30' prototypes. A mockup of each prototype will be further evaluated at the USBP SDC Support Facility on Pogo Row.

Access to the prototype construction area will be along the secondary border road from the west and via two north-south roads near the LPOE; these access roads will be repaired or improved to support the movement of heavy trucks and equipment to the prototype construction area. Access road repair and improvement will consist of clearing vegetation, filling potholes, leveling and grading, and stabilizing the road with aggregate or other stabilized road surface course. A gate will be installed on the existing secondary fence to allow the movement of construction traffic from the entrance road through the fence and onto the border road. Construction laydown and staging will be done immediately south of the prototype construction area. The laydown and staging area will include concrete washout stations, sanitary stations, and equipment refueling stations. A remote video surveillance system (RVSS) will also be installed in the laydown and staging area.

The Construction Corridor, access roads, laydown and staging areas and RVSS placement area is referred to collectively as the Project Area. The total Project Area is estimated at approximately 52 acres, of which approximately 8 acres will be temporary disturbance and approximately 2 acres will be new permanent disturbance.

Existing Environment:

The Project Area is located in San Diego County, California. It is situated along the U.S./Mexico border between the western base of Otay Mountain and the Otay Mesa Land Port of Entry (LPOE) within Section 36 of Township 18 South, Range 1 West, and Sections 31 and 32, Township 18 South, Range 1 East (map reference: Otay Mesa, California, USGS 7.5' topographic quadrangles). Additional evaluation of prototype mockups will occur at the USBP SDC Support Facility on Pogo Row. See Figure 1 for a Project location map.

The Project Area, including the Construction Corridor, is located on Federal government property. The Construction Corridor, laydown and staging areas, and RVSS placement area are managed by CBP for purposes of border security. The access road to be used as an entrance to the Construction Corridor is a two track road located on Federal government property managed

Construction of SDC Border Wall Prototype

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by the General Services Administration (GSA). The access road to be used as an exit from the prototype construction area is a graded dirt road located on an easement held by CBP. The laydown, staging, and RVSS placement area is heavily disturbed and currently serves as a border enforcement zone with primary and secondary border fences, all-weather road, and border lighting and surveillance technology. The USBP SDC Support Facility is a fully developed facility located on Federal government property managed by CBP.

Field surveys for natural and cultural resources were conducted on August 23, 2017 by Gulf South Research Corporation (GSRC) on behalf of CBP. The surveys covered the entire Project Area but not the mockup evaluation location, which is completely paved and devoid of vegetation. The survey area included the prototype construction area, all potential access roads, and the laydown, staging, and RVSS placement area. See Figure 2 for a Project Area overview map.

The Construction Corridor is heavily disturbed and bound by disturbed nonnative grassland to the north and the U.S./Mexico Border to the south. A majority of this portion of the Project Area is devoid of vegetation. A small strip of heavily disturbed and frequently mowed non-native forb grassland runs along the southern edge of the Project Area adjacent to the border. The entrance road is bound by industrial buildings to the north and east, and by heavy-truck transport infrastructure to the west and south. This area shows evidence of heavy prior disturbances in the form of grading and frequent mowing. The vegetation community is non-native grassland with mixed forbs dominated by brome grass (*Bromus* spp.), Russian thistle (*Salsola* sp.), prickly lettuce (*Lactuca serriola*), and Australian saltbush (*Atriplex semibaccata*). The exit road is an unpaved heavily disturbed area running south of Via de La Amistad to the secondary border fence. This area is bound by industrial buildings to the west, disturbed non-native grassland to the east, and the border enforcement zone to the south. The vegetation community in the immediate vicinity can best be described as non-native grassland with mixed forbs and shrubs. This portion of the Project Area is completely disturbed and is nearly devoid of vegetation. The laydown, staging, and RVSS placement area is heavily disturbed from frequent mowing of vegetation and vehicular traffic. The vegetation community in the immediate vicinity can best be described as non-native grassland with mixed non-native forbs dominated by brome grass, Russian thistle, prickly lettuce, and Australian saltbush.

The burrowing owl (*Athene cunicularia*; [BUOW]) is a small owl distributed throughout western North America that has been designated as a Species of Special Concern in the State of California and is protected under the Migratory Bird Treaty Act. Common habitat includes open areas containing mammal burrows within sparsely vegetated arid and semi-arid environments. BUOWs require small mammal burrows for rearing and fledging young and for refuge. BUOWs generally stay close to their burrows during the day and forage further from the nest or refuge burrow between dusk and dawn. The current breeding range of BUOW includes much of the state of California, including most of San Diego County along the border with Mexico.

During the survey, multiple BUOWs and 37 active BUOW burrows were observed in the laydown, staging, and RVSS placement area. GSRC biologists reported 19 BUOWs, 12 of which were observed at burrow sites. Additionally, several small mammal burrows were observed within the entrance road portion of the Project Area, primarily along the western edge of the GSA managed property. However, there was no evidence of occupation or use of these

Construction of SDC Border Wall Prototype

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burrows by BUOW and no BUOWs were observed in this portion of the survey area. There was no evidence of any active bird breeding or nesting behaviors observed in the Construction Corridor or the exit road portions of the Project Area.

The Project Area is located within one mile of designated Critical Habitat for the coastal California gnatcatcher (*Poliophtila californica*; [CAGN]). The CAGN is Federally listed as threatened. The CAGN is the northernmost species of California gnatcatcher. It is a small, non-migratory songbird occurring along the Pacific coasts of southern California and northern Baja California, Mexico. The CAGN is associated with coastal scrub plant communities, including coastal sage scrub and coastal succulent scrub. There was no evidence of suitable habitat or occupation of the Project Area by CAGN.

The eastern portion of the Project Area extends into designated Critical Habitat for the Quino checkerspot butterfly (*Euphydryas editha quino*; [QCB]). The QCB is Federally listed as endangered. The QCB is found in several plant communities, from scrub on coastal bluffs, coastal sage, chaparral, and oak woodlands to desert pinyon-juniper woodlands. However, it is only found in openings within these plant communities having a sufficient cover of larval food plants and annual forbs that provide nectar for adults. There was no evidence of suitable habitat or occupation of the Project Area by QCB.

The Project Area extends into designated Critical Habitat for San Diego Fairy Shrimp (*Branchinecta sandiegonensis*; [SDFS]). The SDFS is a small aquatic crustacean that is generally restricted to vernal pools in southern California and northwestern Baja California. The SDFS is Federally listed as endangered. There was no evidence of suitable habitat or occupation of the Project Area by SDFS.

Critical habitat for Riverside Fairy Shrimp (*Streptocephalus woottoni*; [RSFS]) occurs within 1.0 mile of the Project Area. The RSFS is a small aquatic crustacean that is generally restricted to vernal pools greater than 12 inches in depth in Riverside, Orange, and San Diego Counties in California. The RSFS is Federally listed as endangered. There was no evidence of suitable habitat or occupation of the Project Area by RSFS.

Vernal pools are a type of temporary wetland that consist of depressions in areas where a hard underground layer prevents rainwater from draining downward into the subsoils. Rainwater typically fills the pools in winter and spring and gradually evaporates from late spring to summer. Vernal pools are some of the most ecologically important and distinct habitats in California, supporting a diversity of flora and fauna, including species found only in these habitats such as SDFS and RFS. As wetlands, vernal pools are protected by state and Federal laws. Vernal pools are known to occur north of the Project Area. However, no vernal pools, wetlands, or other surface waters were observed within the Project Area. A shallow ditch within the border enforcement zone to the east of the entrance road and outside of the Project Area was observed to display vegetation and hydrology consistent with wetlands and is a potential wetland habitat.

No other rare, threatened, or endangered species were observed within the survey area and other than the BUOWs, no other nesting or breeding bird behavior was observed.

Construction of SDC Border Wall Prototype

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No archaeological sites or historic properties were identified during the pedestrian archaeological survey. Several manmade features were observed within the Project Area, such as a drainage channel and storm drain. The drainage channel is believed to be modern in nature and origin (i.e., within the last 10 to 20 years). A fragment of a ceramic roof tile was also noted within the GSA-managed property near the entrance road, but appears to be displaced, along with refuse, and is likely modern. In addition, two possible pieces of lithic debitage were also noted within the laydown, staging, and RVSS placement area. However, both items are located between the primary fence and the all-weather road to the north, and within an area that has been subject to significant earth-moving activities (e.g., blading, grading, leveling). It is likely that the items were created through pressure of heavy equipment (e.g., bulldozer or grader) traveling over the ground surface.

The Project Area is located within San Diego County, California within the San Diego Air Pollution Control District. San Diego County is a Federal and State nonattainment area for 8-hour ozone and a State nonattainment area for 1-hour ozone and particulate matter (PM₁₀ and PM_{2.5}). San Diego County is in attainment or unclassified status for all other criteria air pollutants.

Environmental Analysis:

Based on the results of the field surveys and knowledge of the Project Area, CBP identified sensitive species, surface water, cultural and historical resources, and air quality as the environmental resource categories with the greatest potential to be impacted by the Project. A review was conducted to ensure that the impacts from the Project will not adversely affect these resources. Other environmental impacts are not expected to result from the Project.

(a) Sensitive Species

In August 2017, biologists conducted a pedestrian survey of the Project Area to identify sensitive species, candidate species, and/or critical habitat present; consider project revisions to avoid or minimize effects; and provide options for reasonable mitigation of unavoidable effects.

During the survey, multiple BUOWs and 37 active BUOW burrows were observed in the laydown, staging, and RVSS placement area. GSRC biologists reported 19 BUOWs, 12 of which were observed at burrow sites. The California Department of Fish and Wildlife recommends a 50-meter buffer around active BUOW burrows during the non-breeding season (September 1 through January 31). A 50-meter buffer around all but the two easternmost observed burrows will be enforced by CBP for Project activities. The two easternmost observed burrows will be directly affected by site grading and are within 50 meters of the area to be affected by the RVSS placement. CBP will install one-way exclusionary doors on these two easternmost BUOW burrows to be affected as the result of RVSS placement and wait until the burrows are vacated before collapsing them to ensure no direct mortality to BUOW individuals occurs. Because BUOW burrows and suitable habitat are relatively common throughout San Diego County along the border with Mexico, overall impacts to BUOW from a loss of two burrows are considered minor.

Construction of SDC Border Wall Prototype

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The Project Area is located within designated Critical Habitat for QCB and SDFS and in the vicinity of designated Critical Habitat for CAGN and RSFS. However, no evidence of suitable habitat or occupation of the Project Area was observed. Due to the absence of suitable habitat for these species within the Project Area, the Project will have no impact on CAGN, QCB, SDFS, or RSFS or their designated Critical Habitat. Furthermore, the Project will have no impact on any other state or Federal sensitive or protected species.

(b) Cultural and Historical Resources

In August 2017, an archaeologist conducted a pedestrian survey of the Project Area to identify cultural and historical resources; consider project revisions to avoid or minimize effects; and provide options for reasonable mitigation of unavoidable effects. No archaeological sites or historic properties were identified during the pedestrian archaeological survey. Due to the absence of cultural resources sites in the Project Area, the Project is not likely to have any impact on cultural and historical resources.

(c) Air Quality

San Diego County is within a Federal and State nonattainment area for 8-hour ozone and a State nonattainment area for 1-hour ozone, PM₁₀, and PM_{2.5}. A conformity determination would be required for each pollutant where the total of direct and indirect emissions in a non-attainment or maintenance area caused by the Federal action will equal or exceed specified emissions rates.

Temporary and minor increases in air pollution will occur from the use of construction equipment (combustion emissions) and the disturbance of soils (fugitive dust) during construction. Several sources of air pollutants will contribute to the overall air impacts of the Project, including: combustion engines of construction equipment; construction workers commuting to and from work; supply trucks delivering materials to the construction site; and fugitive dust from job-site ground disturbances. Fugitive dust emissions for the Project were calculated based on assumptions about equipment to be used, size of the Project Area, and construction duration. The total air quality emissions from the construction activities were estimated and compared to the de minimis thresholds of the General Conformity Rule.

Total Air Emissions (tons/year) from the Project versus the de minimis Threshold Levels for San Diego County

<i>Pollutant</i>	<i>Total (tons/year)</i>	<i>de minimis Thresholds (tons/year)</i>
CO	<3	100
Volatile Organic Compounds (VOC)	<1	50
Nitrous Oxides (NO _x)	<2	100
PM-10	<2	100
PM-2.5	<2	100
SO ₂	<1	100
CO ₂ and CO ₂ equivalents	<1,200	27,557

The construction and evaluation activities associated with the Project do not exceed Federal de minimis thresholds for air pollution emissions. As there are no violations of air quality standards

Construction of SDC Border Wall Prototype

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and no conflicts with the state implementation plans, the Project will not have a major impact on air quality.

(d) Surface Water

The Project will not result in impacts on any vernal pools, wetlands, or other surface waters, as no vernal pools, wetlands, or other surface waters are located within the Project Area. A shallow ditch within the border enforcement zone to the east of the entrance road and outside of the Project Area displayed vegetation and hydrology consistent with wetlands and is a potential wetland. However, all impacts from the Project will be contained within the Project Area through the implementation of a Storm Water Pollution Prevention Plan (SWPPP), and no impacts to the potential wetland will occur. The SWPPP measures will be monitored during construction. The Project will not have a major impact on surface water quality.

Best Management Practices:

GENERAL

CBP will clearly demarcate project construction area perimeters. No disturbance outside that perimeter will be authorized without prior coordination and approval.

Within the designated disturbance area, CBP will minimize the area to be disturbed by limiting deliveries of materials and equipment to only those needed for effective project implementation.

CBP will provide an environmental briefing to all construction crew members working on the Project, informing them of sensitive resources present within the Project Area and BMPs to be implemented.

VEGETATION

CBP will minimize habitat disturbance by restricting vegetation removal to the smallest possible project footprint. Native seeds or plants, which are compatible with the enhancement of habitat for sensitive species, will be used to the greatest extent practicable, to rehabilitate staging areas and other temporarily disturbed areas.

Construction equipment will be cleaned at temporary staging areas, in accordance with BMPs, prior to entering and departing the Project Area to minimize the spread and establishment of non-native invasive plant species.

WILDLIFE RESOURCES

If construction activities are scheduled during nesting season (February 15 through September 1), monitors will perform surveys in advance of construction activity to identify active nests. If the monitor observes a nest with eggs or chicks, he will work with the construction crew to do one of the following: 1) avoid the nest, so long as it does not impact the scope of work for road improvement activities; 2) if appropriate, take it to a rehabilitation center; or 3) if neither 1 nor 2 is practicable, document the loss and include that information in the monitoring report.

Construction of SDC Border Wall Prototype

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CBP will not, for any length of time, permit any pets inside the Project Area or adjacent native habitats. This BMP does not pertain to law enforcement animals.

PROTECTED SPECIES

A 50-meter buffer around observed BUOW burrows will be enforced by CBP for Project activities. Where observing a 50-meter buffer is not compatible with Project needs, CBP will install one-way exclusionary doors on BUOW burrows and wait until the burrows are vacated before collapsing them to ensure no direct mortality to BUOW individuals occurs.

WATER RESOURCES

Standard construction procedures will be implemented to minimize the potential for erosion and sedimentation during construction. All work will cease during heavy rains and will not resume until conditions are suitable for the movement of equipment and material. No refueling or storage will take place within 100 feet of drainages. CBP will avoid contaminating natural aquatic systems with runoff by limiting all equipment maintenance, staging, laydown, and dispensing of fuel, oil, etc., to designated upland areas.

CBP will avoid contamination of ground and surface waters by storing any water that has been contaminated with construction materials, oils, equipment residue, etc., in closed containers on site until removed for disposal. Storage tanks must have proper air space (to avoid rainfall-induced overtopping), be on-ground containers, and be located in upland areas instead of washes.

In the event that CBP contaminates soil or water resources as a result of the Project, the contaminated soil or water will be remediated.

A SWPPP will be prepared, implemented, and monitored.

CULTURAL RESOURCES

If any archaeological artifacts are found during Project activities, all project activity in the immediate area will immediately cease until an evaluation of the discovery is made to determine appropriate actions to prevent the loss of significant cultural or scientific value.

In the event that human remains or indications that human remains may be present, such as headstones, are observed or encountered, all project activity in the immediate area will immediately cease and the site will be secured. Securing the site requires that the discovery not be disturbed and that others are prevented from disturbing it. The CBP project manager will be immediately notified of the observations or discoveries. A map showing the location will be provided if possible. No photographs of human remains will be taken.

AIR QUALITY

In order to minimize the amount of project-related dust emissions, construction crews will implement the following practices: minimizing land disturbance; ensuring saturation of exposed

Construction of SDC Border Wall Prototype

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areas; and controlling fugitive dust caused by hauling activities and vehicular travel on unpaved road surfaces.

All construction equipment shall be maintained and operated in a manner that produces the least amount of emissions. All construction equipment and vehicles must be maintained in good operating condition, free from leaks.

NOISE

All applicable Occupational Safety and Health Administration regulations and requirements will be followed.

On-site activities will be restricted to daylight hours, to the greatest extent practicable.

All equipment will possess properly working mufflers and will be kept properly tuned to reduce backfires.

HAZARDOUS MATERIALS

To minimize potential impacts from hazardous and regulated materials, all fuels, waste oils, and solvents will be collected and stored in tanks or drums within a secondary containment system that consists of an impervious floor and bermed sidewalls capable of containing the volume of the largest container stored therein. The refueling of machinery will be completed in accordance with accepted industry and regulatory guidelines, and all vehicles will have drip pans during storage to contain minor spills and drips. Although it is unlikely that a major spill will occur, any spill of reportable quantities will be contained immediately within an earthen dike, and the application of an absorbent (e.g., granular, pillow, sock) will be used to absorb and contain the spill.

CBP will contain non-hazardous waste materials and other discarded materials, such as construction waste, until removed from the construction and maintenance sites. This will assist in keeping the Project Area and surroundings free of litter and reduce the amount of disturbed area needed for waste storage.

CBP will minimize site disturbance and avoid attracting predators by promptly removing waste materials, wrappers, and debris from the site. Any waste that must remain more than 12 hours should be properly stored until disposal.

All waste oil and solvents will be recycled. All non-recyclable hazardous and regulated wastes will be collected, characterized, labeled, stored, transported, and disposed of in accordance with all applicable Federal, state, and local regulations, including proper waste manifesting procedures.


Solid waste receptacles will be maintained at the construction staging area. Non-hazardous solid waste (trash and waste construction materials) will be collected and deposited in on-site receptacles. Solid waste will be collected and disposed of by a local waste disposal contractor.

Construction of SDC Border Wall Prototype
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Conclusion:

Based on a review of the information provided for the Project, the results of natural and cultural resources surveys, and an analysis of potential effects from the Project, no major impacts to the environment are likely to result from the Project. Therefore, no further environmental investigation or analysis, such as preparing an Environmental Stewardship Plan, is required.

Date: 25 Sep 17

Approve: 

Disapprove: _____

Modify: _____

Needs More Discussion: _____

EXHIBIT 2

XAVIER BECERRA
Attorney General of California
ROBERT W. BYRNE
SALLY MAGNANI
MICHAEL L. NEWMAN
Senior Assistant Attorneys General
MICHAEL P. CAYABAN
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Attorneys for Plaintiff State of California

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA
OAKLAND DIVISION

**STATE OF CALIFORNIA; STATE OF
COLORADO; STATE OF
CONNECTICUT; STATE OF
DELAWARE; STATE OF HAWAII;
STATE OF ILLINOIS; STATE OF
MAINE; STATE OF MARYLAND;
COMMONWEALTH OF
MASSACHUSETTS; ATTORNEY
GENERAL DANA NESSEL ON BEHALF
OF THE PEOPLE OF MICHIGAN;
STATE OF MINNESOTA; STATE OF
NEVADA; STATE OF NEW JERSEY;
STATE OF NEW MEXICO; STATE OF
NEW YORK; STATE OF OREGON;
STATE OF RHODE ISLAND; STATE OF
VERMONT; COMMONWEALTH OF
VIRGINIA; and STATE OF WISCONSIN;**

Plaintiffs,

4:19-cv-00872-HSG

**DECLARATION OF DR. KAI DUNN IN
SUPPORT OF MOTION FOR PARTIAL
SUMMARY JUDGMENT REGARDING
SECTION 2808 PROJECTS AND NEPA**

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v.

DONALD J. TRUMP, in his official capacity as President of the United States of America; **UNITED STATES OF AMERICA; U.S. DEPARTMENT OF DEFENSE; PATRICK M. SHANAHAN**, in his official capacity as Acting Secretary of Defense; **MARK T. ESPER**, in his official capacity as Secretary of the Army; **RICHARD V. SPENCER**, in his official capacity as Secretary of the Navy; **HEATHER WILSON**, in her official capacity as Secretary of the Air Force; **U.S. DEPARTMENT OF THE TREASURY; STEVEN T. MNUCHIN**, in his official capacity as Secretary of the Treasury; **U.S. DEPARTMENT OF THE INTERIOR; DAVID BERNHARDT**, in his official capacity as Acting Secretary of the Interior; **U.S. DEPARTMENT OF HOMELAND SECURITY; KIRSTJEN M. NIELSEN**, in her official capacity as Secretary of Homeland Security;

Defendants.

1 I, Dr. Kai Dunn, declare as follows:

2 1. I have personal knowledge of each fact stated in this declaration, and if called as
3 witness could competently testify thereto.

4 2. I am a Senior Water Resources Control Engineer and Chief of the “NPDES /
5 Stormwater / 401 Water Quality Certification Unit” for the California Regional Water Quality
6 Control Board, Colorado River Basin Region (Colorado River Basin Water Board). I have served
7 as the Chief of this unit since 2014 and been employed by the Colorado River Basin Water Board
8 as a senior engineer since 2007.

9 3. As the Chief of the NPDES / Stormwater / 401 Water Quality Certification Unit, I am
10 responsible for drafting National Pollutant Discharge Elimination System (NPDES) permits for
11 wastewater and storm water discharges to surface waters within the Colorado River Basin Region
12 that are issued by the Colorado River Basin Water Board, as well as water quality certifications
13 under Section 401 of the Clean Water Act. I am a California registered civil engineer and hold a
14 doctorate degree in environmental engineering from the University of Southern California.

15 4. The Federal Water Pollution Control Act (33 U.S.C. § 1251 et seq.) (commonly
16 referred to as the “Clean Water Act”) and the California Porter-Cologne Water Quality Control
17 Act (Cal. Wat. Code § 13000 et seq.) authorize the California State Water Resources Control
18 Board (State Water Board) and the nine California Regional Water Quality Control Boards
19 (Regional Water Boards) (collectively, Water Boards) to regulate and protect water quality in
20 California. The Water Boards’ mission is to preserve, enhance, and restore the quality of
21 California’s water resources and drinking water for the protection of the environment, public
22 health, and all beneficial uses for the benefit of present and future generations.

23 5. Each Regional Water Board—including the Colorado River Basin Water Board—is
24 required to prepare a water quality control plan (also referred to as a “basin plan”) setting forth
25 the water quality standards for all surface waters and groundwaters within the region, as well as
26 programs of implementation. *See* Cal. Water Code §§ 13050(j), 13240-13248. Water quality
27 standards consist of the beneficial uses of a water body and the water quality objectives (or
28 “criteria” under Clean Water Act terminology) designated to protect those beneficial uses. 40

1 C.F.R. §§ 131.2, 131.10-131.15; Cal. Wat. Code §§ 13050(f), (h), 13241. “Beneficial uses” of
 2 water refers to the resources, services, and qualities they support or could support, e.g., drinking,
 3 recreation, critical habitat, etc. Cal. Wat. Code § 13050(f); 40 C.F.R. § 131.10. “Water quality
 4 objectives” are limits on levels of pollutants in a water body designed to ensure that the water
 5 quality is adequate to support the designated beneficial uses for that water body. Cal. Wat. Code
 6 §§ 13050(h), 13241; 40 C.F.R. § 131.11.

7 6. The Water Quality Control Plan for the Colorado River Basin Region (Basin Plan),
 8 adopted by the Colorado River Basin Water Board, contains water quality standards and
 9 programs of implementation and serves as the legal, technical, and programmatic basis of water
 10 quality regulation in the Board’s region. Cal. Wat. Code § 13240; 33 U.S.C. § 1313; 40 C.F.R. §
 11 131.4. The Basin Plan is designed to preserve and enhance water quality in the region and to
 12 protect the beneficial uses of all regional waters. A copy of the current Basin Plan is available on
 13 the Colorado River Basin Water Board’s website at
 14 https://www.waterboards.ca.gov/coloradoriver/water_issues/programs/basin_planning/. The
 15 Basin Plan has been approved by the State Water Board and has the full force and effect of
 16 regulation. Cal. Code Regs., tit. 23, § 3960 et seq; Cal. Gov Code § 11353.

17 7. The Colorado River Basin Water Board protects the water quality of water bodies
 18 within the Colorado River Basin Region, including the Salton Sea, Colorado River, New River,
 19 Alamo River, All-American Canal, Alamo Canal, Imperial Valley agricultural drains, and washes
 20 and ephemeral streams that drain into and serve as to tributaries to these water bodies, all of
 21 which are located near California’s border with Mexico. These surface waters generally
 22 constitute jurisdictional waters of the United States under the Clean Water Act and are also waters
 23 of the state under the California Porter-Cologne Water Quality Control Act. 33 U.S.C. § 1362;
 24 Cal. Wat. Code § 13050(e).

25 8. The Colorado River Basin Water Board implements the water quality objectives
 26 contained in the Basin Plan through the issuance of several different types of permits and other
 27 orders and certifications to protect water quality. *See, e.g.*, Cal. Wat. Code § 13263 (waste
 28 discharge requirements “shall implement any relevant water quality control plans that have been

1 adopted, shall take into consideration the beneficial uses to be protected, the water quality
2 objectives reasonably required for that purpose...”; 33 U.S.C. § 1342 (federal Clean Water Act
3 permits must conform to state water quality standards). In addition to the traditional NPDES
4 permits for domestic, municipal, and industrial wastewater discharges to surface waters (under
5 Clean Water Act Section 402), the Water Boards issue NPDES permits to address storm water
6 runoff from construction activities that may result in discharges into the jurisdictional waters of
7 the United States. Pursuant to section 313 of the Clean Water Act (33 U.S.C. § 1323), federal
8 agencies and departments are required to comply with the requirements of California’s NPDES
9 permitting program.

10 9. The Colorado River Basin Water Board also issues water quality certifications under
11 Section 401 of the Clean Water Act for projects that involve the discharge of dredged or fill
12 material into waters of the United States, including rivers and streams and wetlands. Under
13 Section 401, every applicant for a federal permit or license for any activity that may result in a
14 discharge to jurisdictional waters must obtain a water quality certification from the appropriate
15 Water Board demonstrating that the proposed activity will comply with state water quality
16 standards and with any other appropriate requirements of state law. The federal permit, such as a
17 permit issued by the United States Army Corps of Engineers under Clean Water Act Section 404,
18 allowing a party to dredge and fill within or near a water body, cannot be issued unless the state
19 grants or waives certification. 33 U.S.C. §§ 1341, 1344; Cal. Wat. Code §§ 13260, 13376.

20 10. A Section 401 water quality certification ensures that the project complies with water
21 quality objectives for waters impacted by the project, and that the project will not harm or impair
22 the waters’ beneficial uses designated in the Colorado River Basin Water Board’s Basin Plan.
23 Water quality certifications typically include requirements for implementing best management
24 practices (BMPs) that the project proponent must follow in order to minimize the project’s
25 impacts on water quality. BMPs are scheduling of activities, prohibitions of practices,
26 maintenance procedures, and other management practices to prevent or reduce the discharge of
27 pollutants to waters of the United States. BMPs also include treatment requirements, operating
28 procedures, and practices to control site runoff, spillage or leaks, sludge or waste disposal, or

1 drainage from raw material storage. Water quality certifications can also require compensatory
2 mitigation to offset loss of aquatic resource functions from unavoidable project impacts to waters
3 of the United States. *See* Cal. Wat. Code § 13263; 40 C.F.R. § 230.93.

4 11. The Colorado River Basin Water Board's NPDES / Stormwater / Section 401 Water
5 Quality Certification Unit has reviewed and processed several applications for Section 401 water
6 quality certifications submitted to the Board by federal agencies for projects within the Colorado
7 River Basin Region. These have included applications submitted by the United States Bureau of
8 Reclamation, the United States Army Corps of Engineers, and United States Customs and Border
9 Protection.

10 12. Exhibit 3 to Plaintiffs' Request for Judicial Notice, filed on June 12, 2019, [ECF Doc
11 No. 176-3], is a Water Quality Certification Order issued in response to United States Customs
12 and Border Protection's (CBP) 2013 application for a Section 401 water quality certification. I
13 have reviewed the Water Quality Certification Order and CBP's application for certification.
14 CBP sought to construct a 1.6 mile road, known as the West Desert All-Weather Road project,
15 along the United States-Mexico border in an area west of the Calexico Port of Entry. The order
16 reflects that CBP needed a Section 401 water quality certification and federal permits from the
17 Army Corps of Engineers because the project would involve dredge and fill activities within or
18 next to the Pinto Wash, an ephemeral stream that drains into the New River. (RJN Ex. 3, p. 7.)

19 13. The Colorado River Basin Water Board's Section 401 Water Quality Certification
20 Order, which granted CBP certification subject to specified conditions, also noted that the West
21 Desert All-Weather Road project would traverse six ephemeral washes that are waters of the
22 United States through use of concrete low-water crossings, reinforce concrete pipes, or box
23 culverts. (*See* RJN Ex. 3, page 7.) In documents attached to CBP's application for certification,
24 CBP acknowledged that the six unnamed ephemeral washes constitute waters of the United
25 States. The order also specified the exact location of the West Desert All-Weather Road project
26 using GPS coordinates. (*See* RJN Ex. 3, page 7.)

27 14. I have reviewed a list of additional border-barrier projects that the federal
28 government plans to construct in Imperial County, California, as outlined in the table attached as

1 Exhibit 1 to the Declaration of Heather Leslie. (2808 Project Table). I received the 2808 Project
2 Table from counsel of record for the State of California. I also reviewed the projects described in
3 the “List of Military Construction Projects” that Defendants filed in this matter on September 3,
4 2019, [ECF Doc. No. 206-2] (2808 Project List). The 2808 Project Table and 2808 Project List
5 include three border-barrier projects to be constructed, at least in part, in areas under the
6 jurisdiction of the Colorado River Basin Water Board. The three projects include El Centro
7 Projects 5 and 9, and Yuma Project 6.

8 15. The 2808 Project List states that El Centro Project 5 includes one mile of new
9 secondary pedestrian fencing near the Calexico Point of Entry, and that El Centro Project 9
10 involves construction of approximately twelve miles of a new secondary fence system, starting
11 1.5 miles west of monument marker 223 and ending at monument marker 221, and resuming one
12 mile east of the Calexico West Port of Entry and extending east for three miles. The California
13 portion of Yuma Project 6 includes construction of approximately one mile of new primary
14 pedestrian fencing starting at the Andrade Port of Entry and going east towards the Colorado
15 River, and also construction of around 1.6 miles of new secondary pedestrian fencing in
16 California, starting a half mile east of monument marker 208 and extending east towards the
17 Colorado River. (ECF Doc. No. 206-2). I also used Google Earth to plot the coordinates provided
18 for the projects in the 2808 Project Table to confirm the locations of El Centro Projects 5 and 9,
19 and Yuma Project 6.

20 16. I am generally familiar with the steel bollard style fencing that has been constructed
21 by CBP over the past year near the Calexico Port of Entry and understand that the construction of
22 similar fencing is proposed for El Centro Projects 5 and 9 and Yuma 6. The construction of these
23 types of barriers necessarily involves the use of heavy equipment, excavation and digging.
24 Similarly, the construction of roadways near the border barriers necessarily require grading and
25 significant soil disturbances.

26 17. El Centro Project 5 is being constructed near the New River, which CBP has
27 previously recognized is a jurisdictional water of the United States under the Clean Water Act.
28 (RJN Ex. 3, p. 7). Possible impacts to the New River from this project include sediment being

1 discharged into the River, and also potential harm to riparian areas including a 14-foot-wide
2 riparian zone on the west bank of the New River, and a 9-foot riparian zone on its east bank.
3 Riparian areas act as a buffer to protect and enhance aquatic resource functions from adjacent
4 land uses. Compensatory mitigation could be required for loss of riparian areas due to El Centro
5 5, in order to sustain aquatic resource functions within the watershed. The protection and
6 maintenance of terrestrial resources, such as riparian areas and uplands, is required when they
7 contribute to or improve the overall ecological functioning of aquatic resources in the watershed.
8 El Centro Project 5 could normally not proceed without a Section 404 dredge and fill permit
9 issued by the United States Army Corps of Engineers, which would in turn compel a Section 401
10 water quality certification for the project by the unit that I manage.

11 18. The same is true for El Centro Project 9. That project will also impact jurisdictional
12 waters including the All-American Canal by discharging sediment, which is a physical pollutant
13 that increases turbidity, and also further impairs water quality by transporting other pollutants
14 such as nutrients, metals, pesticides, and oils and grease into the water body. El Centro Project 9
15 could normally not proceed without a Section 404 dredge and fill permit issued by the United
16 States Army Corps of Engineers, which would in turn compel a Section 401 water quality
17 certification by the unit that I manage.

18 19. Yuma Project 6 will also likely result in water-quality impacts to jurisdictional waters
19 including the All-American Canal, the Alamo Canal and the Colorado River. This project will
20 result in sediment impacts to these waters, and also potentially harm a 30-foot-wide riparian zone
21 on the west bank of the Alamo Canal. Compensatory mitigation might be required depending on
22 the extent of impacts to the riparian area. This project also could normally not proceed without a
23 Section 404 dredge and fill permit issued by the United States Army Corps of Engineers, which
24 would in turn compel a Section 401 water quality certification by the unit that I manage.

25 20. Due to their nature and location of construction, El Centro Projects 5 and 9, and Yuma
26 Project 6 normally would also require enrollment in the State Water Board's statewide NPDES
27
28

1 Construction General Permit,¹ which is enforced by the Colorado River Basin Water Board in the
2 region. The proposed construction for all three projects poses a high risk for storm water run-off
3 impacting water quality during the construction phase and post-construction maintenance. The
4 Construction General Permit requires the preparation and implementation of a Storm Water
5 Pollution Prevention Plan (SWPPP) to ensure construction and post-construction activities do not
6 adversely impact water quality. The permit requires a risk assessment of pollutants being
7 discharged to surface waters, and that the SWPPP include a description of: (a) the specific project
8 activities that threaten water quality (i.e., characterization of potential sources of storm water
9 pollution and their pollutants); and (b) specific best management practices and other measures
10 that will be implemented by the project proponent for project-specific activities during
11 construction to prevent and minimize adverse water quality impacts.

12 21. The authority of the State and Regional Water Boards under the NPDES permitting
13 program and the Section 401 water quality certification program are necessary to ensure that
14 projects within the Colorado River Basin Region are constructed in a way that is consistent with
15 the state's water quality objectives and in a way that protects the beneficial uses for affected
16 water bodies. Without such permitting authority, the Colorado River Basin Water Board and
17 other Water Boards lose critical tools for implementing applicable water quality objectives and
18 enforcing California water quality laws.

19 I declare under penalty of perjury that the foregoing is true and correct and that this
20 declaration was executed on October 4, 2019, in Palm Desert, California.

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27 ¹ *National Pollutant Discharge Elimination System (NPDES) General Permit for Storm*
28 *Water Discharges Associated with Construction and Land Disturbance Activities*, State Water
Board Order No. 2009-0009-DWQ, NPDES No. CAS000002 (as amended).

EXHIBIT 3

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IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA
OAKLAND DIVISION

**STATE OF CALIFORNIA; STATE OF
COLORADO; STATE OF
CONNECTICUT; STATE OF
DELAWARE; STATE OF HAWAII;
STATE OF ILLINOIS; STATE OF
MAINE; STATE OF MARYLAND;
COMMONWEALTH OF
MASSACHUSETTS; ATTORNEY
GENERAL DANA NESSEL ON BEHALF
OF THE PEOPLE OF MICHIGAN;
STATE OF MINNESOTA; STATE OF
NEVADA; STATE OF NEW JERSEY;
STATE OF NEW MEXICO; STATE OF
NEW YORK; STATE OF OREGON;
STATE OF RHODE ISLAND; STATE OF
VERMONT; COMMONWEALTH OF
VIRGINIA; and STATE OF WISCONSIN;**

Plaintiffs,

4:19-cv-00872-HSG

**DECLARATION OF DAVID GIBSON IN
SUPPORT OF MOTION FOR PARTIAL
SUMMARY JUDGMENT REGARDING
SECTION 2808 PROJECTS AND NEPA**

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v.

DONALD J. TRUMP, in his official capacity as President of the United States of America; **UNITED STATES OF AMERICA; U.S. DEPARTMENT OF DEFENSE; PATRICK M. SHANAHAN**, in his official capacity as Acting Secretary of Defense; **MARK T. ESPER**, in his official capacity as Secretary of the Army; **RICHARD V. SPENCER**, in his official capacity as Secretary of the Navy; **HEATHER WILSON**, in her official capacity as Secretary of the Air Force; **U.S. DEPARTMENT OF THE TREASURY; STEVEN T. MNUCHIN**, in his official capacity as Secretary of the Treasury; **U.S. DEPARTMENT OF THE INTERIOR; DAVID BERNHARDT**, in his official capacity as Acting Secretary of the Interior; **U.S. DEPARTMENT OF HOMELAND SECURITY; KIRSTJEN M. NIELSEN**, in her official capacity as Secretary of Homeland Security;

Defendants.

1 I, David Gibson, declare as follows:

2 1. Except as to statements made on information and belief, I have personal knowledge
3 of each fact stated in this declaration, and if called as witness, I would and could testify
4 competently to those facts. As relevant to statements made on information and belief, I am
5 informed and believe that those statements are true.

6 2. I am employed by the California Regional Water Quality Control Board, San Diego
7 Region (San Diego Water Board) as its Executive Officer and have served in that capacity since
8 November 18, 2009. Before that, I was an environmental scientist in the Watershed Protection,
9 Storm Water, Clean Water Act section 401 Water Quality Certifications, Grants and Loans, and
10 Total Maximum Daily Loads programs. Prior to my employment with the San Diego Water
11 Board, I was employed by the City of San Diego Water Department where I worked on vector
12 control, watershed, and reservoir monitoring programs. I hold a Bachelor of Science Degree in
13 Biology from San Diego State University (1989).

14 3. I have been trained in wetlands delineation and have worked extensively preparing
15 proposals for dredging and fill activities in wetlands and preparing Federal Clean Water Act
16 (CWA) section 401 Water Quality Certifications (401 Certifications). In my staff work at the
17 City of San Diego and the San Diego Water Board, I have acquired extensive knowledge of the
18 Tijuana River Watershed and its several transboundary drainages. As Executive Officer, I have
19 led the Tijuana River Valley Recovery Team and worked with over 30 agencies and organizations
20 on projects related to the transboundary flows of wastes, and on the impacts of those flows on
21 receiving waters, habitats, and communities in the lower Tijuana River Valley. Those efforts
22 have included extensive engagement with agents, staff, and contractors of the Department of
23 Homeland Security and U.S. Customs and Border Protection (CBP). I am also familiar with
24 CBP's efforts to develop or expand border fence and ancillary infrastructure in the San Diego
25 Region.

26 4. As Executive Officer, I am responsible for reviewing staff work on National Pollutant
27 Discharge Elimination System (NPDES) permits for wastewater and storm water discharges to
28 surface waters within the San Diego Region that are issued by the San Diego Water Board, as

1 well as water quality certifications under Section 401 of the Clean Water Act. I have reviewed
2 and acted upon staff recommendations to approve or deny 401 Water Quality Certifications for
3 projects in the Tijuana River and Otay River watersheds.

4 5. The Federal Water Pollution Control Act (33 U.S.C. § 1251 et seq.) (commonly
5 referred to as the “Clean Water Act”) and the California Porter-Cologne Water Quality Control
6 Act (Cal. Wat. Code § 13000 et seq.) authorize the California State Water Resources Control
7 Board (State Water Board) and the nine California Regional Water Quality Control Boards
8 (Regional Water Boards) (collectively, Water Boards) to regulate and protect water quality in
9 California. The Water Boards’ mission is to preserve, enhance, and restore the quality of
10 California’s water resources and drinking water for the protection of the environment, public
11 health, and all beneficial uses for the benefit of present and future generations.

12 6. Each Regional Water Board—including the San Diego Water Board—is required to
13 prepare a water quality control plan (also referred to as a “basin plan”) setting forth the water
14 quality standards for all surface waters and groundwaters within the region, as well as programs
15 of implementation. *See* Cal. Water Code §§ 13050(j), 13240-13248. Water quality standards
16 consist of the beneficial uses of a water body and the water quality objectives (or “criteria” under
17 Clean Water Act terminology) designated to protect those beneficial uses. 40 C.F.R. §§ 131.2,
18 131.10-131.15; Cal. Wat. Code §§ 13050(f), (h), 13241. “Beneficial uses” of water refers to the
19 resources, services, and qualities they support or could support, e.g., drinking, recreation, critical
20 habitat, etc. Cal. Wat. Code § 13050(f); 40 C.F.R. § 131.10. “Water quality objectives” are
21 limits on levels of pollutants in a water body designed to ensure that the water quality is adequate
22 to support the designated beneficial uses for that water body. Cal. Wat. Code §§ 13050(h),
23 13241; 40 C.F.R. § 131.11.

24 7. The Water Quality Control Plan for the San Diego Region (Basin Plan), adopted by
25 the San Diego Water Board, contains water quality standards and programs of implementation
26 and serves as the legal, technical, and programmatic basis of water quality regulation in the
27 Board’s region. Cal. Wat. Code § 13240; 33 U.S.C. § 1313; 40 C.F.R. § 131.4. The Basin Plan
28 is designed to preserve and enhance water quality in the region and to protect the beneficial uses

1 of all regional waters. A copy of the current Basin Plan is available on the San Diego Water
2 Board's website at https://www.waterboards.ca.gov/sandiego/water_issues/programs/basin_plan/

3 The Basin Plan has been approved by the State Water Board and has the full force and
4 effect of regulation. Cal. Code Regs., tit. 23, § 3960 et seq; Cal. Gov Code § 11353.

5 8. The San Diego Water Board protects the water quality of water bodies within the San
6 Diego Region, including Tijuana River and Otay River, and washes and ephemeral streams that
7 drain into and serve as to tributaries to these water bodies, all of which are located near
8 California's border with Mexico. These surface waters generally constitute jurisdictional waters
9 of the United States under the Clean Water Act and are also waters of the state under the
10 California Porter-Cologne Water Quality Control Act. 33 U.S.C. § 1362; Cal. Wat. Code §
11 13050(e).

12 9. The San Diego Water Board implements the water quality objectives contained in the
13 Basin Plan through the issuance of several different types of permits and other orders and
14 certifications to protect water quality. *See, e.g.*, Cal. Wat. Code § 13263 (waste discharge
15 requirements "shall implement any relevant water quality control plans that have been adopted,
16 shall take into consideration the beneficial uses to be protected, the water quality objectives
17 reasonably required for that purpose..."); 33 U.S.C. § 1342 (federal Clean Water Act permits
18 must conform to state water quality standards). In addition to the traditional NPDES permits for
19 domestic, municipal, and industrial wastewater discharges to surface waters (under Clean Water
20 Act Section 402), the Water Boards issue NPDES permits to address storm water runoff from
21 construction activities that may result in discharges into the jurisdictional waters of the United
22 States. Pursuant to section 313 of the Clean Water Act (33 U.S.C. § 1323), federal agencies and
23 departments are required to comply with the requirements of California's NPDES permitting
24 program.

25 10. The San Diego Water Board also issues water quality certifications under Section 401
26 of the Clean Water Act for projects that involve the discharge of dredged or fill material into
27 waters of the United States, including rivers and streams and wetlands. Under Section 401, every
28 applicant for a federal permit or license for any activity that may result in a discharge to

1 jurisdictional waters must obtain a water quality certification from the appropriate Water Board
2 demonstrating that the proposed activity will comply with state water quality standards and with
3 any other appropriate requirements of state law. The federal permit, such as a permit issued by
4 the United States Army Corps of Engineers under Clean Water Act Section 404, allowing a party
5 to dredge and fill within or near a water body, cannot be issued unless the state grants or waives
6 certification. 33 U.S.C. §§ 1341, 1344; Cal. Wat. Code §§ 13260, 13376.

7 11. A Section 401 water quality certification ensures that the project complies with water
8 quality objectives for waters impacted by the project, and that the project will not harm or impair
9 the waters' beneficial uses designated in the San Diego Water Board's Basin Plan. Water quality
10 certifications typically include requirements for implementing best management practices (BMPs)
11 that the project proponent must follow in order to minimize the project's impacts on water
12 quality. BMPs are scheduling of activities, prohibitions of practices, maintenance procedures,
13 and other management practices to prevent or reduce the discharge of pollutants to waters of the
14 United States. BMPs also include treatment requirements, operating procedures, and practices to
15 control site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material
16 storage. Water quality certifications can also require compensatory mitigation to offset loss of
17 aquatic resource functions from unavoidable project impacts to waters of the United States. *See*
18 Cal. Wat. Code § 13263; 40 C.F.R. § 230.93.

19 12. The San Diego Water Board has reviewed and processed several applications for
20 Section 401 water quality certifications submitted to the Board by federal agencies for projects
21 within the San Diego Region. These have included applications submitted by the United States
22 Army Corps of Engineers, and I am aware of a pending application by CBP.

23 13. I have reviewed a list of additional border-barrier projects that the federal
24 government plans to construct in San Diego County, California, as outlined in the table attached
25 as Exhibit 1 to the Declaration of Heather Leslie. (2808 Project Table). I received the 2808
26 Project Table from counsel of record for the State of California. I also reviewed the projects
27 described in the "List of Military Construction Projects" that Defendants filed on September 3,
28 2019, [ECF Doc. No. 206-2] (2808 Project List). The 2808 Project Table and 2808 Project List

1 include two border-barrier projects, San Diego 4 and San Diego 11, that will be constructed in
2 areas under the jurisdiction of the San Diego Water Board.

3 14. The 2808 Project List states that San Diego 4 includes construction of 1.5 miles of
4 new primary pedestrian fencing starting 3.6 miles east of the Otay Mesa Port of Entry and
5 extending east, and also construction of 2 miles of new secondary pedestrian fencing for this
6 same stretch of the border. San Diego 11 involves construction of approximately 3 miles of new
7 secondary pedestrian fencing starting 2 miles west of the Tecate Port of Entry and extending to
8 1.5 miles east of the Tecate Port of Entry. I also reviewed the coordinates in the 2808 Project
9 Table to confirm the locations of San Diego Project 4 and San Diego Project 11.

10 15. I am generally familiar with the steel bollard style pedestrian fencing that has been
11 constructed by CBP over the past year in California, and understand that the construction of
12 similar fencing is proposed for San Diego Projects 4 and 11. The construction of these types of
13 barriers necessarily involves the use of heavy equipment, excavation and digging. Similarly, the
14 construction of roadways near the border barriers necessarily requires grading and significant soil
15 disturbances.

16 16. San Diego Project 4 is being constructed near the Tijuana River, and within and near
17 washes and ephemeral streams that drain into the Tijuana River. Possible impacts to the Tijuana
18 River from this project include sediment being discharged into the River, along with other
19 pollutants like metals and pesticides that are contained in the sediment. Vernal pools near the
20 project site may also be impacted during project construction, as the roads providing site access
21 go through vernal pool areas. Transporting heavy construction equipment on these roads, and any
22 road improvements needed for project construction, could damage vernal pools. In Southern
23 California, vernal pools are shallow depressions overlying impermeable substrates, typically clay
24 hardpans, which fill with winter rainfall and retain ponded water through the spring. These
25 seasonal wetlands are habitat for numerous protected species such as the San Diego Fairy Shrimp
26 and the Riverside Fairy Shrimp, both of which are endangered under the federal Endangered
27 Species Act. Because much of the vernal pool habitat in Southern California has been destroyed,
28 preserving the remaining vernal pool habitat is critical for these species' recovery. San Diego

1 Project 4 could normally not proceed without a Section 404 dredge and fill permit issued by the
2 United States Army Corps of Engineers, which would in turn compel a Section 401 water quality
3 certification for the project issued by the San Diego Water Board.

4 17. The same is true for San Diego Project 11. That project will also impact
5 jurisdictional waters including the Tijuana River, and washes and ephemeral streams that drain
6 into the Tijuana River, by discharging sediment which is a physical pollutant that increases
7 turbidity, and also further impairs water quality by transporting other pollutants such as nutrients,
8 metals, pesticides, and oils and grease into the water body. San Diego Project 11 could normally
9 not proceed without a Section 404 dredge and fill permit issued by the United States Army Corps
10 of Engineers, which would in turn compel a Section 401 water quality certification issued by the
11 San Diego Water Board.

12 18. Due to their nature and location of construction, San Diego Projects 4 and 11 normally
13 would also require enrollment in the State Water Board's statewide NPDES Construction General
14 Permit,¹ which is enforced by the San Diego Water Board in the region. The proposed
15 construction for these two projects poses a high risk for storm water run-off impacting water
16 quality during the construction phase and post-construction maintenance. The Construction
17 General Permit requires the preparation and implementation of a Storm Water Pollution
18 Prevention Plan (SWPPP) to ensure construction and post-construction activities do not adversely
19 impact water quality. The permit requires a risk assessment of pollutants being discharged to
20 surface waters, and that the SWPPP include a description of: (a) the specific project activities that
21 threaten water quality (i.e., characterization of potential sources of storm water pollution and their
22 pollutants); and (b) specific best management practices and other measures that will be
23 implemented by the project proponent for project-specific activities during construction to
24 prevent and minimize adverse water quality impacts.

25 19. The authority of the State and Regional Water Boards under the NPDES permitting
26 program and the Section 401 water quality certification program are necessary to ensure that

27 ¹ *National Pollutant Discharge Elimination System (NPDES) General Permit for Storm*
28 *Water Discharges Associated with Construction and Land Disturbance Activities*, State Water
Board Order No. 2009-0009-DWQ, NPDES No. CAS000002 (as amended).

1 projects within the San Diego Region are constructed in a way that is consistent with the state's
2 water quality objectives and in a way that protects the beneficial uses for affected water bodies.
3 Without such permitting authority, the San Diego Water Board and other Water Boards lose
4 critical tools for implementing applicable water quality objectives and enforcing California water
5 quality laws.

6 I declare under penalty of perjury that the foregoing is true and correct and that this
7 declaration was executed on October 9 2019, in San Diego, California.

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EXHIBIT 4

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IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA
OAKLAND DIVISION

**STATE OF CALIFORNIA; STATE OF
COLORADO; STATE OF
CONNECTICUT; STATE OF
DELAWARE; STATE OF HAWAII;
STATE OF ILLINOIS; STATE OF
MAINE; STATE OF MARYLAND;
COMMONWEALTH OF
MASSACHUSETTS; ATTORNEY
GENERAL DANA NESSEL ON BEHALF
OF THE PEOPLE OF MICHIGAN;
STATE OF MINNESOTA; STATE OF
NEVADA; STATE OF NEW JERSEY;
STATE OF NEW MEXICO; STATE OF
NEW YORK; STATE OF OREGON;
STATE OF RHODE ISLAND; STATE OF
VERMONT; COMMONWEALTH OF
VIRGINIA; and STATE OF WISCONSIN;**

4:19-cv-00872-HSG

**DECLARATION OF CHRISTOPHER D.
NAGANO IN SUPPORT OF MOTION
FOR PARTIAL SUMMARY JUDGMENT
REGARDING SECTION 2808
PROJECTS AND NEPA**

Plaintiffs,

v.

DONALD J. TRUMP, in his official capacity as President of the United States of America; **UNITED STATES OF AMERICA; U.S. DEPARTMENT OF DEFENSE; PATRICK M. SHANAHAN**, in his official capacity as Acting Secretary of Defense; **MARK T. ESPER**, in his official capacity as Secretary of the Army; **RICHARD V. SPENCER**, in his official capacity as Secretary of the Navy; **HEATHER WILSON**, in her official capacity as Secretary of the Air Force; **U.S. DEPARTMENT OF THE TREASURY; STEVEN T. MNUCHIN**, in his official capacity as Secretary of the Treasury; **U.S. DEPARTMENT OF THE INTERIOR; DAVID BERNHARDT**, in his official capacity as Acting Secretary of the Interior; **U.S. DEPARTMENT OF HOMELAND SECURITY; KIRSTJEN M. NIELSEN**, in her official capacity as Secretary of Homeland Security;

Defendants.

1 I, Christopher D. Nagano, declare as follows:

2 1. I have personal knowledge of the facts set forth in this declaration. If called as a
3 witness, I could and would testify competently to the matters set forth below. As to those matters
4 which reflect an opinion, they reflect my personal opinion and judgment on the matter.

5 2. I reside in Washougal, Washington.

6 3. I am a staff member of the Center for Biological Diversity, where I have served as
7 a senior scientist in the Center's Endangered Species Program since 2017. At the Center, I work
8 to protect imperiled species, particularly reptiles and invertebrates such as butterflies, lady
9 beetles, and tiger beetles. I work in conjunction with campaigners, lawyers, policy experts and
10 other scientists to achieve this goal.

11 4. Prior to coming to the Center, I worked for 27 years, from 1989 to 2016, as an
12 endangered species entomologist/ecologist, endangered species biologist, Endangered Species
13 Division Chief, and Deputy Assistant Field Supervisor with the U.S. Fish and Wildlife Service
14 ("FWS" or "Service") based in Carlsbad and Sacramento, California, and Albuquerque, New
15 Mexico. At the FWS, I worked on nearly all aspects of the Endangered Species Act, including
16 section 7, habitat conservation plans, listing, recovery, and law enforcement.

17 5. I was the Chief of the Endangered Species Division at the New Mexico Ecological
18 Services Office for 1 ½ years. I was responsible for the protection, conservation, and recovery of
19 listed species throughout the Land of Enchantment, including at the US/Mexico border area. I
20 also completed endangered species-related details in five other states.

21 6. Prior to going to the Service, I worked for several years in the mid-late 1980s as a
22 research associate in the Entomology Section at the Natural History Museum of Los Angeles
23 County. While at the Natural History Museum, I worked on "soft money" funded projects
24 investigating the western migration of the Monarch butterfly, and comprehensive surveys of the
25 terrestrial invertebrate fauna of two coastal southern California wetlands.

26 7. I have a Master of Environmental Studies degree from the Yale School of Forestry
27 and Environmental Studies; for my graduate work I investigated the international trade in
28 butterflies. During this period, I was an intern working on endangered species issues at the

1 Environmental Defense Fund in Washington, D.C. for Michael J. Bean, now retired Deputy
2 Assistant Secretary for Fish, Wildlife and Parks at the Department of Interior. In sum, I have
3 dedicated my career to the scientific research and protection of endangered and threatened
4 species.

5 8. As a scientist at the Center focused on the conservation and eventual recovery of
6 imperiled animals, especially reptiles and invertebrates, I have a profound professional interest in
7 researching and finding whether certain animal species warrant new or continued federal
8 protection under the Endangered Species Act (“ESA” or “Act”) and ensuring that the Act’s
9 procedural and substantive protections are enforced. As a veteran of the FWS, I understand the
10 critical role that non-governmental organizations, like the Center, play in ensuring that these
11 procedural and substantive protections are adhered to and carried out, particularly the requirement
12 for interagency consultation pursuant to section 7 of the ESA. I am committed to playing this
13 outside monitoring role to ensure that the government is carrying out its statutory duties toward a
14 listed species’ continued survival and ultimate recovery in the wild.

15 9. I have an extensive working knowledge of section 7 of the ESA. During my 27-
16 year career with the FWS, I conducted literally hundreds of informal consultations and many
17 dozens of formal consultations with many Federal agencies ranging from the Bureau of
18 Reclamation to the National Park Service. This involved providing guidance to Federal agencies
19 in the process of complying with the section 7 process, including instruction and assistance in
20 making their effects determinations as to whether their projects were “no effect,” “may affect, not
21 likely to adversely affect,” or “may affect, likely to adversely affect” listed species and critical
22 habitat. I also reviewed their projects to ascertain if their project description was accurate, and
23 whether the FWS concurred with their effects determination; and if the action was likely to
24 adversely affect the survival and recovery in the wild of listed species, as well as whether the
25 action was likely to adversely modify or destroy designated critical habitat. If the project was not
26 likely to jeopardize a listed species and/or adversely modify or destroy critical habitat, I made the
27 recommendation for or authorized the anticipated amount of incidental take, and the appropriate
28 reasonable and prudent measures for the project. I am familiar with the new regulations for

1 section 7 of the ESA that were issued by the Trump Administration on August 27, 2019 (Federal
2 Register 84(166): 44976-45018) and the changes from the previous section 7 regulations.

3 10. During my career with the FWS, I routinely reviewed projects proposed by
4 federal, state and local agencies, and non-governmental parties for their potential effects on non-
5 listed wildlife, plants, and their habitats pursuant to the National Environmental Policy Act
6 (“NEPA”). I also reviewed projects to ensure compliance with the Fish and Wildlife
7 Coordination Act, Migratory Bird Treaty Act, and the FWS Mitigation Policy of 1956. My
8 efforts involved assessments of project impacts on non-listed wildlife and plants, and their
9 habitats, as well as review of the proposed mitigations and development of additional measures, if
10 appropriate.

11 11. While at the U.S. Fish and Wildlife Service, one of the issues that I focused on,
12 analyzed, and encouraged other agencies and non-governmental parties to first avoid, and if not
13 possible, to mitigate, was the effect of barriers, such as highways and roadways, on the long-term
14 movement of listed animals and wildlife. The ability of many animals to move to new areas or
15 between portions of their home range is critical for ensuring they do not become extinct or
16 extirpated.

17 12. Another issue that I focused on at the FWS was the indirect adverse effects of a
18 project, or as they are now called in the new section 7 regulations, consequences, on listed
19 animals and wildlife. 50 CFR § 402.02 defines “effects of the action” as “... all consequences to
20 listed species or critical habitat that are caused by the proposed action, including the
21 consequences of other actions that are caused by the proposed action. A consequence is caused
22 by the proposed action if it would not occur but for the proposed action and it is reasonably
23 certain to occur. Effects of the action may occur later in time and may include consequences
24 occurring outside the immediate area involved in the action.” Some consequences, formerly
25 known more accurately as indirect effects, can have adverse impacts on listed species that are
26 greater and much longer lasting than the direct effects (also now considered to be consequences)
27 of a project. An example of such a consequence (indirect effect) is silt from the construction of a
28

1 road washing into a pond inhabited by the tadpoles of a listed frog after project construction has
2 been completed, and results in the animals dying because their gills become coated with dirt.

3 13. I am gravely concerned by the failure of the Department of Defense (“DOD”),
4 Department of Homeland Security (“DHS”) and Customs Border Patrol (“CBP”) to comply with
5 the ESA for segments El Paso 2 and El Paso 8 of their proposed border wall in New Mexico. As
6 they are required, these agencies failed to consult with FWS on the effects of the proposed border
7 wall on the endangered jaguar (*Panthera onca*) and its designated critical habitat, threatened
8 Chiricahua leopard frog (*Rana chiricahuensis*), and endangered and Experimental Nonessential
9 Populations of the Mexican wolf (*Canis lupus baileyi*) and the Aplomado falcon (*Falco femoralis*
10 *septrionalis*).

11 14. Based on my background in the ecology and biology of the jaguar and its critical
12 habitat, and the Chiricahua leopard frog, Mexican wolf, and Aplomado falcon, and my experience
13 with them while I was stationed at the FWS New Mexico Ecological Services Office, as well as
14 my professional experience and knowledge dealing with the effects (=consequences) of human
15 and natural effects on threatened and endangered plants and animals, I recognize and understand
16 the credible threat that the border wall construction poses to these four listed animals and critical
17 habitat for the jaguar.

18 15. El Paso 2 and El Paso 8 are located in the “Bootheel” of New Mexico, a region of
19 the United States and northern Mexico where six distinct biological provinces overlap with a
20 concomitant extremely high diversity of plant and animal species (World Wildlife Fund and Sky
21 Island Alliance.2003. Natural heritage of the Peloncillo Mountain region. Tucson, Arizona).
22 Much of the Bootheel is uninhabited by humans, and still has extensive amounts of natural
23 habitats. These factors make the area among the most diverse biological regions in North
24 America. There are at least 879 species of plants, 89 species of reptiles and amphibians (72% of
25 the 123 species recorded in New Mexico), 91 mammal species (more than all of the mammal
26 species in the entire State of Pennsylvania), and 318 species of birds including 23 species listed as
27 threatened or endangered by the State of New Mexico.
28

1 16. In May 2019, I visited the Animas Valley of the “bootheel” region of Hidalgo
2 County, New Mexico, to specifically observe the habitats of the jaguar and its critical habitat, the
3 Chiricahua leopard frog, Mexican wolf, Gila monster and other wildlife, and current land uses in
4 the area.

5 17. The endangered jaguar was historically found throughout the southwestern United
6 States with occurrences recorded from Arizona, New Mexico, California, Texas, and perhaps
7 Oklahoma and Colorado (M.J. Robinson *et al.* undated. Suitable habitat for jaguars in New
8 Mexico. Center for Biological Diversity, Tucson, Arizona). Today, only a few individuals
9 remain in the United States as a result of hunting, trapping, poisoning, and habitat loss. El Paso 2
10 is located within 50 miles of recently documented jaguar occurrences, and the project areas for
11 both El Paso 2 and El Paso 8 contain suitable habitat that is essential for the recovery for this
12 endangered animal (*ibid*). There are many springs, seeps, stock tanks, and seasonal and
13 permanent springs in this area that provide sources of drinking water for the big cats; and there is
14 an abundance of Coues deer, javelina, rodents, skunks, jackrabbits, and other prey species. Based
15 on the project coordinates that Defendants have provided, El Paso 8 is located adjacent to this
16 designated critical habitat for the jaguar.

17 18. Only very minimal information has been made available by DOD, DHS, and CBP
18 on El Paso 2 and El Paso 8 –construction methods and equipment, timing of construction, number
19 of construction personnel, night lighting, operation and maintenance, and other basic information
20 which federal agencies routinely supply, even for projects of an emergency nature have
21 apparently not been publically disclosed. The DOD has provided the approximate geographical
22 coordinates (=latitude and longitude) of El Paseo 2 and El Paso 8, but based on my 27 years
23 reviewing projects for their effects on federally listed species, this information is not sufficient for
24 allowing a full assessment of the projects’ impacts on wildlife. However, even with the lack of
25 any specificity or meaningful information, it is clear the proposed project will result in harm and
26 harassment to the jaguar. The big cat will avoid using or abandon the area while construction is
27 underway, and when finished, the border wall will result in the significant reduction in its ability
28 to move between the United States and Mexico.

1
2 19. Even if El Paso 2 and El Paso 8 are not located within jaguar critical habitat, the
3 area in the Bootheel where these two Border Wall segments are proposed contains one or more
4 habitat components which would be considered primary constituent elements essential to the
5 conservation of the jaguar if they were located within designated critical habitat for this
6 endangered cat. These primary constituent elements include: (a) expansive open spaces in the
7 southwestern United States which are at least 32 to 38.6² miles in size; (b) provide connectivity to
8 Mexico; (c) contain adequate levels of native prey species including deer and javelina, as well as
9 medium-sized prey such as coatis, skunks, raccoons, or jackrabbits; (d) include surface water
10 sources within 12.4 miles of each other; (e) contain greater than 1 to 50 percent canopy cover
11 within Madrean evergreen woodland, generally recognized by a mixture oaks, juniper, and pine
12 trees on the landscape, or semidesert grassland vegetation communities usually characterized by
13 tobosa grass or black gamma grass along with other grass species; (f) are characterized by
14 intermediately, moderately, or highly rugged terrain; (g) are below 6,562 feet in elevation; and (h)
15 are characterized by minimal to no human population density, no major roads, and no stable
16 nighttime lighting over any 0.4 mile² area.

17 20. Based on my 27 years administering the Endangered Species Act, including the
18 review and oversight of hundreds of section 7 consultations for federal projects, and my
19 knowledge of the jaguar and other listed species which are highly imperiled, it is my professional
20 opinion that segments El Paso 2 and El Paso 8 along with their associated consequences
21 (=adverse effects) in what is the most important area for this large cat to cross between the United
22 States and Mexico, almost certainly will significantly contribute to the elimination of this
23 imperiled animal in the United States. If the pedestrian wall can keep humans out, it will keep
24 jaguars out. Fewer jaguars entering the United States will result a smaller resident population and
25 fewer individuals available to mate with each other causing a decline and eventual loss of this
26 legendary large cat in this Country.

27 21. The threatened Chiricahua leopard frog inhabits cienegas, livestock tanks, ponds,
28 reservoirs, streams and rivers in northern Sonora, Chihuahua, and Durango in Mexico, central and

1 southeastern Arizona, and west central and southwestern New Mexico. Its range includes the
2 area where El Paso 2 and El Paso 8 are proposed in the Bootheel. According to the FWS, the
3 animal has continued to decline in New Mexico since it was listed in 2002 (FWS. 2011.
4 Chiricahua leopard frog (*Lithobates [=Rana] chiricahuaensis*) 5-year review: summary and
5 evaluation. Arizona Field Office, Phoenix, Arizona). The threats to the Chiricahua leopard frog
6 in this area of range include predation by non-native fishes, disease (chrtidomycosis fungus),
7 wildfire, drought, and habitat destruction. El Paso 2 and El Paso 8 will act cumulatively with
8 these factors to reduce the chances of its recovery, including by damaging or destroying the frog's
9 habitat and its ability for foraging, resting, breeding, and movement.

10 22. Based on my 27 years administering the Endangered Species Act, including the
11 review and oversight of hundreds of section 7 consultations for federal projects including many
12 dozens of informal and formal consultations for the threatened California red-legged frog (*Rana*
13 *draytonii*), a listed amphibian species with a similar ecology and biology to the Chiricahua
14 leopard frog, it is my professional opinion the construction and operation of El Paso 2 and El
15 Paso 8 will have consequences (=adverse effects) on the threatened *Rana chiricahuaensis*.
16 Construction may result in animals being injured, killed, or harassed by equipment, workers, and
17 vehicles, falling into trenches or pits and dying from exposure or suffocating after being covered
18 with dirt and other debris, poisoned by oil, fuel leaks and other chemical contaminants from
19 vehicles and mechanical equipment, eaten by coatis and other omnivorous animals attracted to the
20 work sites by discarded human food and trash; and once the pedestrian wall is in place, loss of the
21 ability to move between breeding ponds and upland areas, loss of aestivation and wintering sites,
22 and being run over by CBP vehicles.

23 23. The Center for Biological Diversity is aware of reports from reliable observers
24 who have seen Mexican wolves in the Bootheel region of New Mexico in recent times. The
25 entire region currently contains suitable habitat for this animal to move through the area and find
26 food and shelter, and also includes other biological and physical features that are essential for the
27 Wolf's successful survival.
28

1 24. The unimpeded movement of Mexican wolves between the United States and
2 Mexico is critical for increasing and maintaining their genetic diversity in both countries, and
3 especially to ensure their survival and recovery in Mexico.

4 25. The pedestrian wall will adversely affect, and likely restrict or eliminate the ability
5 of Mexican wolves to move on their own volition between Mexico and the United States. Since
6 the pedestrian walls will be effective in prohibiting the entry of humans, they also will restrict or
7 prevent the movement of Mexican wolves between the two nations, including animals from the
8 United States into Mexico. The Mexican wolves inhabiting Mexico could also be harassed by
9 construction of the border wall. These impacts—particularly the restrictions on the wolf's
10 movement—undermine the wolf's ability in both the United States and Mexico to survive and
11 recover.

12 26. The FWS has designated the Mexican wolf on the northern side of the
13 U.S./Mexico border as an Experimental Nonessential Population under section 10(j) of the ESA.
14 It is unclear if the authorized take of the Mexican wolf described in the final rule for the
15 Experimental Nonessential Population was intended to include massive habitat destroying,
16 movement blocking projects, such as the proposed border wall. The Experimental Nonessential
17 Population designation did not include endangered Mexican wolves that inhabit the Republic of
18 Mexico. Therefore, the section 9 prohibitions of the ESA against harm of a listed animal apply to
19 the endangered Mexican wolves in Mexico who could be harmed through the El Paso 2 and El
20 Paso 8 by eliminating the ability of individuals from the US dispersing into Mexico, where they
21 will prevent genetic problems such as inbreeding by providing much needed genetic diversity. In
22 turn, wolves from Mexico will be prevented from entering the US and providing genetic diversity
23 in to the experimental non-essential population. Therefore, any Mexican wolf residing in Mexico
24 is currently listed as endangered under the ESA, and is not part of the Experimental Nonessential
25 Population designated for this species, and the effects of the proposed border wall on them must
26 be analyzed by DOD, DHS and CBP pursuant to section 7 of the ESA. Failure to consult by
27 DOD, DHS and CBP not only could violate section 7(a)(2) of the ESA, but the border wall could
28 eliminate the possibility of the survival and recovery of the endangered Mexican wolf in the

1 Republic of Mexico, and thus all of these federal agencies, as well as the FWS by remaining
2 silent, would violate section 7(a)(1) of the ESA.

3 27. The construction of El Paso 2 and El Paso 8 will likely also harm the federally –
4 protected Aplomado falcon. This raptor is present in the bootheel of New Mexico and habitat
5 exists in the project area and adjacent areas in Mexico (R.A. Meyer and S.O. Williams. 2005.
6 Recent nesting and current status of Aplomado falcon (*Falco femoralis*) in New Mexico. North
7 American Birds 59(2): 352-356; FWS. 2014. Northern Aplomado falcon (*Falco femoralis*
8 *septrionalis*). 5-year review summary and evaluation. New Mexico Field Office,
9 Albuquerque, New Mexico). The dispersal of falcons from the US into the Republic of Mexico
10 may be preventing long-term problems such as the inbreeding of closely related individuals by
11 providing genetic diversity. Again, the FWS has designated this imperiled raptor on the northern
12 side of the U.S./Mexico border as an Experimental Nonessential Population pursuant to section
13 10(j) of the ESA. Again, the Experimental Nonessential Population designation does not include
14 the endangered Aplomado falcons on the Mexican side of the U.S./Mexico border. Therefore, the
15 section 9 prohibitions of the ESA protecting listed animals apply to the birds from Mexico which
16 could be harmed or harassed by construction activities of the proposed border wall for El Paso 2
17 and El Paso 8. In 2005, agricultural development resulted in the extensive conversion of portions
18 of occupied habitat in the State of Chihuahua, Mexico. The Sonoran Joint Venture, a partnership
19 of organizations and individuals in the southwestern United States and northwestern Mexico,
20 including the FWS, expressed concern that the extirpation of the Aplomado falcon in Chihuahua
21 in the coming decades is imminent (<https://sonoranjv.org/aplomado-falcons-chihuahua>. Accessed
22 on September 18, 2019). And just as in the case of the Mexican wolf, any individual of the
23 Aplomado falcon found within Mexico is not part of the Experimental Nonessential Population,
24 so the effects of the proposed border wall to the population in Mexico must be analyzed by DOD,
25 DHS and CBP. Failure to consult by DOD, DHS and CBP, and the continued silence of the
26 FWS, would violate the requirements of section 7(a)(2) of the ESA.

27 28. It is critical that DOD, DHS and CBP comply with section 7(a)(2) of the ESA
28 because it mandates that federal agencies must ensure they do not jeopardize listed species or

1 adversely modify or destroy designated critical habitat. Neither DOD, CBP nor DHS have
2 completed, let alone initiated the section 7 process for the jaguar and its critical habitat, the
3 Chiricahua leopard frog, the endangered and Experimental Nonessential Populations of the
4 Mexican wolf and the Aplomado falcon, nor on members of the wolf and falcon which are listed
5 as endangered species. It is the section 7 process which should reveal effects to these four
6 animals, including whether the proposed action will jeopardize them, whether the proposed action
7 will result in adverse modification or destruction of critical habitat, and the appropriate
8 conservation measures for the project. Without this fundamental adherence to the law, DOD,
9 CBP and DHS will not be fulfilling their statutory responsibilities under section 7(a)(2) of the
10 ESA for the endangered jaguar and its designated critical habitat, threatened Chiricahua leopard
11 frog, endangered Mexican wolf and endangered Aplomado falcon. In addition, these three
12 federal agencies and the silent FWS apparently will not be carrying out any recovery actions
13 pursuant to section 7(a)(1) of the ESA, thereby exacerbating the negative effects of the border
14 wall. There will be irreparable harm to these four listed species and critical habitat without the
15 completion of section 7 consultation by these three federal agencies, and the currently silent
16 FWS.

17 29. In addition to the ESA, I am very disturbed by DOD, DHS and CBP's failure to
18 comply with NEPA. Given the lack of an adequate assessment of the project on the environment,
19 the potential effects of the proposed project on sensitive habitats, as well as non-listed, but
20 imperiled species, remains unknown. The border wall construction and associated activities
21 including vehicle traffic, road building, horseback and quad patrols, night lighting, and other
22 associated human and law enforcement activities could permanently alter the geography, impact
23 native vegetation and plant communities, especially by improving habitat conditions for invasive
24 weeds, and adversely impact the existing natural ecosystems.

25 30. The earth moving and associated disturbance caused by border wall construction
26 will create habitat for invasive exotic plants and weeds which outcompete and replace native
27 plants. These exotic species initiate a downward spiral of increasingly destructive effects to
28 native plants, and native animals that are dependent on the native vegetation for food, as well as

1 the predators that feed on them. The seeds of exotic weeds from other areas are easily transported
2 within dried mud or dirt on construction equipment, or unintentionally by CBP cars, trucks, horse
3 trailers, quads, and the hooves and fur of their patrol horses. Listed species, wildlife, and plants
4 across the surface of the Earth are imperiled by invasive exotic plants. In the 1990s, then
5 Secretary of Interior Bruce Babbitt warned that invasive species are one of the biggest threats to
6 listed species.

7 31. The Gila monster (*Heloderma suspectum*), is an iconic large orange and black
8 colored venomous lizard that inhabits both sides of the international border from west of El Paso,
9 Texas into Arizona. This legendary reptile is listed as endangered by the State of New Mexico.
10 Its 2017 recovery plan issued by the New Mexico Department of Game and Fish (Gila Monster
11 (*Heloderma suspectum*) Recovery Plan by John Bulger dated April 5, 2017) and other
12 publications (W.G. Degenhardt *et al.* 1996. Amphibians and reptiles of New Mexico. University
13 of New Mexico Press, Albuquerque, New Mexico; C.H. and E.M. Ernest. 2011. Venomous
14 reptiles of the United States, Canada, and northern Mexico Volume I *Heloderma*, *Micruroides*,
15 *Micurus*, *Pelamis*, *Agkistrodon*, *Sistrurus*. John Hopkins University Press, Baltimore, Maryland;
16 D.D. Beck. 2005. Biology of Gila monsters and beaded lizards. University of California Press,
17 Berkeley, California), document the animal has been collected or observed in at least one location
18 in the bootheel of New Mexico, and is found throughout this region of the State.

19 32. Gila monsters in New Mexico are typically found in Chihuahuan desert scrub, and
20 grassland habitat most commonly associated with rocky areas of mountain foothills and canyons.
21 Dominant vegetation in occupied and suitable sites includes creosote bush, catclaw, snakeweed,
22 ocotillo, mesquite, juniper, cacti, sotol, and numerous grasses. Small trees, shrubs, and
23 herbaceous vegetation provide important cover and food for the Gila monster's prey. The
24 recovery plan and the other publications reported that Gila monsters in New Mexico prefer
25 relatively coarse gravelly conglomerate soils and areas of loam and sand. Of paramount
26 importance is availability of suitable refuge shelters, which occur in rock cavities and crevices,
27 pack rat mounds, and burrows created by other reptiles or mammals.

1 33. The recovery plan noted Gila monster home range sizes are highly variable,
2 ranging from <2.5 acres to 259 acres. Typically, Gila monsters center their activities and home
3 ranges on their refuge shelters. Individuals have tremendous fidelity to their home ranges, e.g.
4 they stay within their “home” area, according to one herpetologist (D.D. Beck. 2005. Biology of
5 Gila monsters and beaded lizards. University of California Press, Berkeley, California).

6 34. The threats from the proposed border wall to the Gila monster come in the form of
7 direct effects of wall construction such as their death or injury from construction operations,
8 falling into trenches or other holes and then dying of exposure or being buried alive; getting run
9 over by vehicles associated with the project; collected by construction personnel; and indirect
10 effects in the form of the border wall blocking their movement patterns or reducing the size of
11 individual animal’s home ranges and eliminating the available food or shelter resources.

12 35. The border wall will prevent a number of native wildlife species from moving in
13 this region of Mexico and the United States, resulting in their inability to successfully find food,
14 water, mates, and shelter. These animals include Gould’s wild turkey, mountain lions, javelinas,
15 badgers, gray foxes, and Coues deer.

16 36. Currently, we are seeing a dramatic global collapse of species that were
17 widespread and once common or even abundant. A recent scientific paper documented the loss
18 of 3 billion native birds in North America since 1970 or 29% of the abundance over the last 48
19 years, and the scientists who conducted the study expressed concern about avifaunal collapse with
20 concomitant loss of ecosystem integrity, function, and service. (K.V. Rosenberg *et al.* 2019.
21 Decline of the North American avifauna. *Science* 365(6459): 1228-1229)). The very real
22 possibility exists that another familiar and once abundant inhabitant of much of North America,
23 the monarch butterfly, will disappear from throughout large regions of the continent within the
24 span of a few decades, if not sooner. The failure by DOD, DHS and CBP to adequately analyze
25 the effects of the construction and operation on wildlife, let alone acknowledge the need to assess
26 the impacts on the environment, will result in the unnecessary loss of native plants and animals,
27 the blocking of key movement corridors for listed animals and wildlife across the US/Mexico
28

1 border, and “nickle and dime” even some common and abundant species to the point where they
2 will become imperiled and require the protection of the ESA to prevent their extinction.

3 37. These injuries to listed species, wildlife, and the environment would be redressed
4 if DOD, DHS and CBP immediately and without delay complete consultation pursuant to section
5 7 of the ESA with the FWS, and complete the environmental review process as required under
6 NEPA. The Bootheel contains one of the most biologically diverse and ecologically important
7 areas in the United States and northern Mexico, and El Paso 2 and El Paso 8 almost certainly will
8 spell doom or extreme danger to many of the plants and animals who call this region home.
9 Unfortunately, the DOD, DHS and CBP, with the apparent acquiescence of the FWS, continue to
10 maintain the shroud of darkness over the border wall which they brazenly and shamelessly
11 dropped over the project at its initiation which conceals the deleterious effects of their plan on
12 listed species, and wildlife. I am hopeful that NEPA and ESA analyses, if done properly and in
13 good faith by DOD, DHS and CBP, will ensure the survival and recovery in the wild of the
14 endangered jaguar, threatened Chiricahua leopard frog, endangered Mexican wolf and
15 endangered Aplomado falcon, and the New Mexico State-listed Gila monster, and avoid adverse
16 modification or destruction of the jaguar’s critical habitat, in addition to maintaining the health of
17 the greater ecosystem in the New Mexico borderlands region. Requiring DOD, DHS and CBP to
18 complete the NEPA process and ESA consultation will surely redress the irreparable harms to
19 listed species, wildlife, and the environment.

20
21 I declare under penalty of perjury under the laws of the United States that the foregoing is true
22 and correct.

23
24 Executed on October 8, 2019, at Portland, Oregon.


25
26
27 
28 CHRISTOPHER D. NAGANO

EXHIBIT 5

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IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA
OAKLAND DIVISION

**STATE OF CALIFORNIA; STATE OF
COLORADO; STATE OF
CONNECTICUT; STATE OF
DELAWARE; STATE OF HAWAII;
STATE OF ILLINOIS; STATE OF
MAINE; STATE OF MARYLAND;
COMMONWEALTH OF
MASSACHUSETTS; ATTORNEY
GENERAL DANA NESSEL ON BEHALF
OF THE PEOPLE OF MICHIGAN;
STATE OF MINNESOTA; STATE OF
NEVADA; STATE OF NEW JERSEY;
STATE OF NEW MEXICO; STATE OF
NEW YORK; STATE OF OREGON;
STATE OF RHODE ISLAND; STATE OF
VERMONT; COMMONWEALTH OF
VIRGINIA; and STATE OF WISCONSIN;**

Plaintiffs,

4:19-cv-00872-HSG

**DECLARATION OF MYLES
TRAPHAGEN IN SUPPORT OF
MOTION FOR PARTIAL SUMMARY
JUDGMENT REGARDING SECTION
2808 PROJECTS AND NEPA**

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v.

DONALD J. TRUMP, in his official capacity as President of the United States of America; **UNITED STATES OF AMERICA; U.S. DEPARTMENT OF DEFENSE; PATRICK M. SHANAHAN**, in his official capacity as Acting Secretary of Defense; **MARK T. ESPER**, in his official capacity as Secretary of the Army; **RICHARD V. SPENCER**, in his official capacity as Secretary of the Navy; **HEATHER WILSON**, in her official capacity as Secretary of the Air Force; **U.S. DEPARTMENT OF THE TREASURY; STEVEN T. MNUCHIN**, in his official capacity as Secretary of the Treasury; **U.S. DEPARTMENT OF THE INTERIOR; DAVID BERNHARDT**, in his official capacity as Acting Secretary of the Interior; **U.S. DEPARTMENT OF HOMELAND SECURITY; KIRSTJEN M. NIELSEN**, in her official capacity as Secretary of Homeland Security;

Defendants.

1 I, Myles Traphagen, declare as follows:

2 1. I have personal knowledge of each fact stated in this declaration, and if called as
3 witness could competently testify thereto.

4 2. I am providing this declaration in response to the 10 U.S.C. section 2808 transfer of
5 Department of Defense funds to build primary and secondary steel bollard fencing in Hidalgo
6 County, in southwestern New Mexico, an area referred to commonly as the “Bootheel.” This
7 declaration specifically pertains to El Paso Project 2 and El Paso Project 8. I have worked on
8 both sides of the United States-Mexico border in this region for 22 years as a biologist.

9 **Background and Qualifications**

10 3. I hold a Master of Science Degree in Geography from the University of Arizona, and
11 a Bachelor of Arts Degree from the University of California Santa Cruz in Environmental
12 Studies. I conducted research in the Bootheel for my Master’s Degree resulting in my thesis,
13 “Habitat connectivity for the white-sided jackrabbit (*Lepus callotis*) between the United States
14 and Mexico: The border divides a species.” The white-sided jackrabbit is a New Mexico state-
15 listed threatened species, and its only population occurs exclusively in the same valleys where El
16 Paso Project 2 and El Paso Project 8 are being constructed.

17 4. Since 1996 I have conducted field surveys, inventories and research along the US and
18 Mexico border region and in Mexico. From 1996 to 1998, I worked for the US Fish and Wildlife
19 Service at San Bernardino National Wildlife Refuge in southeast Arizona conducting bird
20 surveys, native fish surveys and recovery of Rio Yaqui fishes.

21 5. From 1998 to 2008, I conducted research as a consultant for the US Forest Service
22 Rocky Mountain Research Station and Malpai Borderlands Group on the effects of fire, grazing
23 and climate in the borderlands of southwest New Mexico and southeast Arizona. During this time
24 period I also began researching the white-sided jackrabbit.

25 6. From 2000 to 2008, I worked for both Turner Enterprises and the Turner Endangered
26 Species Fund in New Mexico inventorying vegetation, monitoring bison and prairie dog
27 reintroduction, and rewilding the Bolson tortoise from Durango, Mexico. I have held permits
28 from the New Mexico Department of Game and Fish to survey wildlife in the state.

1 7. From 2007 to 2014, I was a Bureau of Land Management Authorized Biologist and
2 worked as a consultant on numerous renewable energy projects in California and Nevada,
3 surveying and translocating desert tortoise and inventorying rare plants and wildlife.

4 8. In 2010 and 2011, I conducted research for the New Mexico Department of Game
5 and Fish to assess the population status of the white-sided jackrabbit in New Mexico, specifically
6 in the El Paso Project 2 and 8 project areas. The results of this survey suggested that roadkill by
7 the U.S. Border Patrol was a significant factor leading to a threefold population decline in less
8 than decade.

9 9. My current employment as Borderlands Program Coordinator with Wildlands
10 Network involves researching and advocating for wildlife corridors and connectivity. This entails
11 a significant amount of work in Mexico on projects such as trail camera trapping, mapping, and
12 designing projects for mitigating road and highway impacts and enhancing habitat connectivity.

13 10. I am also the Science Coordinator the Malpai Borderlands Group. In that role I
14 implement research and monitoring projects such as wildlife, vegetation, climate and weather
15 monitoring, fire and grazing research and review, and coordinate a large array of projects that
16 relate directly to conservation projects in the borderlands of Arizona and New Mexico. This work
17 occurs in the El Paso Projects 2 and 8 project areas in New Mexico, and the Tucson Project 5 area
18 in Arizona.

19 11. In this declaration, I provide several examples specific to the El Paso 2 and El Paso 8
20 project sites, and to the border region more generally, to illustrate how these projects will cause
21 irreparable harm to wildlife.

22 **The Floral and Faunal Diversity of the El Paso 2 and 8 Project Areas: What's at Risk**

23 12. I have analyzed the proposed border-infrastructure projects including El Paso Projects
24 2 and 8, as outlined in the table attached as Exhibit 1 to the Declaration of Heather Leslie ("2808
25 Project Table"), and as described in the "List of Military Construction Projects" that Defendants
26 filed in this matter on September 3, 2019, [ECF Doc. No. 206-2] ("2808 Project List"). These
27 projects involve the construction of primary and secondary pedestrian fencing that will be 18 to
28 30 feet tall, based on the bollard-style pedestrian fencing used for other recent border-barrier

1 projects that Defendants have undertaken. El Paso 2 and 8 also include the construction of roads
2 and installation of lighting.

3 13. The Bootheel region, where El Paso Projects 2 and 8 are being constructed, is
4 extremely high in both plant and wildlife diversity and is the pinch point for ecological diversity
5 and species migration and dispersal in the western North American continent. The Bootheel
6 includes the Peloncillo and Sierra San Luis Mountains where 879 plant species are known to
7 occur. 25 percent of all the plant species in New Mexico occur in this region, which occupies only
8 about 2 percent of the state's area. The area harbors numerous biotic communities which include
9 riparian corridors, Chihuahuan desert scrub, desert grassland, oak woodland, pine-oak forest and
10 spruce-fir at higher elevations. The Peloncillo Mountains are the only mountain range that
11 directly connects the Sierra Madre of Mexico to the Rocky Mountains in the United States. The
12 exchange of plant and animal diversity between the northern and southern parts of the North
13 America Continent reaches its apex here.

14 14. The great diversity of plants and habitat in the Peloncillo region supports an equally
15 rich fauna where many species of invertebrates, reptiles, birds, and mammals flourish, including
16 an impressive number of endemic species. For example, 89 species of reptiles and amphibians
17 live in the Peloncillo Mountains, more than any other mountain range in New Mexico. Just one
18 small area of two square miles, Antelope Pass, harbors the highest lizard diversity of any
19 comparably sized area in the United States, and there are 14 native amphibian species despite the
20 xeric nature of the area. Mammal diversity is equally high as Hidalgo County has 91 recorded
21 species, and 75 mammal species have been recorded in the El Paso 2 and 8 project areas, a higher
22 number than Yellowstone National Park. Many birds are resident year-round, while others find
23 the region suitable habitat for summer nesting or wintering.

24 15. One crucial ecological feature of Greater Peloncillo Ecosystem is the number of intact
25 native plant and animal species existing with little competition from exotic, introduced or
26 invasive species. The building of border walls will bring a high likelihood of introducing exotic,
27 non-native plant species that could drastically alter the ecological integrity and balance of the
28 system. Following the construction of the vehicle border barrier in 2008 in the Animas Valley in

1 the same location that is now the proposed El Paso 2 Project (5.1 miles east of the Arizona/New
2 Mexico state line), non-native South African lovegrasses were introduced. The entire 60-foot
3 wide Roosevelt Easement was bulldozed to bare earth, and then heavy equipment ran across the
4 site for 6 months. The Animas Valley had been free of these exotic grasses, and the only vector
5 for spreading these seeds would have been the tires of the heavy equipment and vehicles that had
6 access to gates that are normally locked to outside traffic (Animas Foundation vegetation
7 monitoring data 2008 to 2018). Lehman lovegrass (*Eragrostis lehmanniana*) is the chief culprit.
8 During the 2010 surveys for the white-sided jackrabbit (*Lepus callotis*), no hares were observed
9 in the grasslands where the exotic Lehman lovegrass had taken over the previous two years.

10 **The White-Sided Jackrabbit- El Paso 2 and 8 Jeopardize the Continued Existence of this**
11 **New Mexico Threatened Species:**

12 16. Currently, the only area that the white-sided jackrabbit (*Lepus callotis gaillardi*)
13 inhabits in the United States is in the Animas and Playas Valleys, where the proposed El Paso 2
14 and 8 Projects are being constructed. This New-Mexico threatened species is already in distress
15 and its numbers are falling due to habitat loss and roadkill incidents from U.S. Border Patrol
16 vehicles which increased dramatically after Customs and Border Protection completed road
17 improvements in 2008. The current jackrabbit population is estimated to be 61 hares (Range
18 between 18 and 103 (CI= 42, SD .326)). This represents a 65% reduction in the population since
19 the last reliable estimates were made in 1977 and 2004.

20 17. The jackrabbit's habitat extends from the Animas and Playas Valleys into Mexico, as
21 shown on the maps attached as Exhibits A and B to this declaration. I created these maps using
22 data that I obtained when I researched the white-sided jackrabbit and its habitat and distribution
23 for my Master's thesis, and also when I worked for the New Mexico Department of Game and
24 Fish to assess the hares' population status in New Mexico.

25 18. On the U.S. side the hares chiefly live in the Animas Valley, as shown in detail on the
26 map attached as Exhibit B. These jackrabbits access their habitat in Mexico by going east and
27 crossing through a gap in the San Luis Mountains into the Playas Valley, and then into Mexico.
28 Hares in Mexico cross into the U.S. using this same route. The hares cross back and forth to avoid

1 predators, and to access food, water and mates. This habitat corridor (shown in blue on the maps
2 and labeled “Best Fit Corridor”) is the sole route the hares can utilize to access habitat on both
3 sides of the border because they cannot navigate the mountainous terrain that surrounds the
4 Animas and Playas Valleys. El Paso Project 8 completely blocks this habitat corridor, and the
5 primary and secondary pedestrian fence constructed there *would cut off the last remaining*
6 *population of the white-sided jackrabbit in the United States.* The eastern portion of El Paso 2
7 also blocks a habitat corridor for the hare. The outlook for the jackrabbit’s survival in New
8 Mexico and the United States is dismal if El Paso 2 and 8 are built due to a variety of factors that
9 include drought, climate change and a major increase in fire frequency since 1987. Non-native
10 plant invasion caused by construction of the 2008 vehicle barrier has also contributed to fuel
11 loading that has increased fire frequency, as noted in Exhibit C, a map I created that depicts fires
12 that occurred in the El Paso 2 and El Paso 8 project areas. The 2002-03 drought was considered
13 the worst drought in recorded history due to higher temperatures and lower humidity than past
14 droughts, such as the drought of the 1950’s. From 2000 to 2010 the mean number of white-sided
15 jackrabbits per survey (one of the standard measures used for line-distance sampling) had
16 declined by 55%. *See* Exhibit D attached to this declaration, which is a chart I prepared
17 illustrating this decline. From 1976 to 2010, suitable white-sided jackrabbit habitat was reduced
18 from 11,993 hectares to 5,838 hectares, representing a 51.3% loss of habitat in a 33-year period.
19 In a time of changing climates that are favoring hotter, drier conditions, arid lands mammals, like
20 the white-sided jackrabbit, need more options--not fewer--to ensure their survival. At the current
21 population level of 61 estimated individuals, genetic inbreeding is likely to be an issue. The
22 importance of genetic introgression from alternate populations is paramount. The US population
23 of *L. callotis* is already inherently isolated by virtue of complex geography. The introduction of a
24 double-barrier steel bollard pedestrian fencing would be the most significant event to alter the
25 evolutionary history of the white-sided jackrabbit since the close of the Ice-Age 10,800 years ago.

26 19. Based on the pedestrian fencing in other border-barrier projects that Defendants have
27 recently constructed, my understanding is that for El Paso 2 and 8 the fencing will be 18 to 30
28 feet high, and include steel concrete-filled bollards spaced four inches apart. The jackrabbits

1 cannot fit through the 4-inch gaps in this bollard-style pedestrian fencing because they are too big
2 and have a body width that exceeds 4 inches. Therefore, El Paso 2 and 8 will completely block a
3 critical habitat corridor for this already imperiled species and make its survival in the U.S.
4 unlikely.

5 **Border Wall Construction Will Negatively Impact Jaguar Recovery**

6 20. Construction of El Paso 2 and 8 will also harm the federally endangered jaguar
7 (*Panthera onca*), as both projects are immediately adjacent to the jaguar's critical habitat which
8 was designated by the US Fish and Wildlife Service. *See* Exhs. A, B and E to this declaration.
9 Unit 5 of the jaguar's critical habitat abuts the western portion of El Paso Project 2, and Unit 6 is
10 adjacent to El Paso Project 8, as shown in the map I created that is attached to this declaration as
11 Exhibit E. Though jaguars are elusive and are not radio-collared (making it difficult to definitely
12 confirm the number of jaguars present in the Bootheel), jaguars have been documented in this
13 region, including on conservation lands that directly adjoin the location of El Paso 2 Project in the
14 Animas Valley.

15 21. Habitat connectivity is critical to the jaguar's survival, and was a key factor in
16 designating its critical habitat as mandated by the U.S. Endangered Species Act. Wildlife
17 corridors (which facilitate habitat connectivity) are not just arbitrarily drawn on maps to illustrate
18 one's perceived impression of wildlife movement patterns. Rather, when identifying and
19 predicting wildlife corridors and connectivity, complex sets of covariates (factors) are
20 incorporated into quantitative models to determine which corridors the species in question
21 actually utilizes. Common covariates include: slope, ruggedness, vegetation, prey and predator
22 presence, proximity to water, roads, human settlements, and other significant factors that may
23 affect wildlife movement. Two published models using two different methods, Circuitscape,
24 which is based upon the principles behind electrical current flow and resistance, and Least Cost
25 Distance modeling, have arrived at similar spatial models regarding jaguar corridors and optimal
26 habitat. They show that El Paso 2 and 8 will impact the eastern-most corridor of the critical
27 habitat because they will bisect the intracontinental jaguar corridor by creating an impermeable
28 barrier. In corridor modeling, most variables that are incorporated, such as ruggedness and

1 vegetation, are malleable, and therefore are simply impedances and obstacles to wildlife. But a
2 steel border wall with the gaps of only 4 inches between the bollards will amount to an
3 impenetrable barrier that has never been seen in the entire evolutionary history of jaguar (and all
4 wildlife) of North America in this region.

5 22. The jaguar's survival depends on it being able to access habitat on both sides of the
6 U.S.-Mexican border to access prey, mate and suitable habitat. The El Paso Projects impede the
7 jaguar's recovery by blocking a key wildlife corridor.

8 **Harms to Other Wildlife Species**

9 23. El Paso Projects 2 and 8 will also block habitat corridors, in both Hidalgo and Luna
10 Counties, for many other wildlife species that currently cross back and forth over the border to
11 access habitat, vegetation, water and other resources. Common species in the project areas
12 include mule deer, bighorn sheep, pronghorn antelope, mountain lions and black bears, all of
13 which are covered by New Mexico's Wildlife Corridors Act which recognizes the need to create
14 and preserve habitat corridors for these and other species. Javelina and other more common
15 species also utilize habitat in the U.S. and Mexico. The El Paso 2 and 8 projects, particularly
16 when viewed cumulatively with other recent border-barrier projects such as El Paso Project 1, are
17 blocking wildlife corridors for these species and impeding their access to resources necessary for
18 their survival.

19 24. These border-barrier projects also negatively impact wildlife corridors for the
20 Mexican wolf which is endangered under both the New Mexico and U.S. endangered species acts.

21 I declare under penalty of perjury that the foregoing is true and correct and that this
22 declaration was executed on October 9, 2019 in Tucson, Arizona.

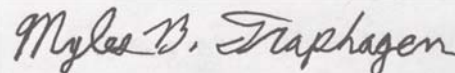
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EXHIBIT A

Overview Map of Proposed El Paso 2 and 8 (1 & 2) Project Areas

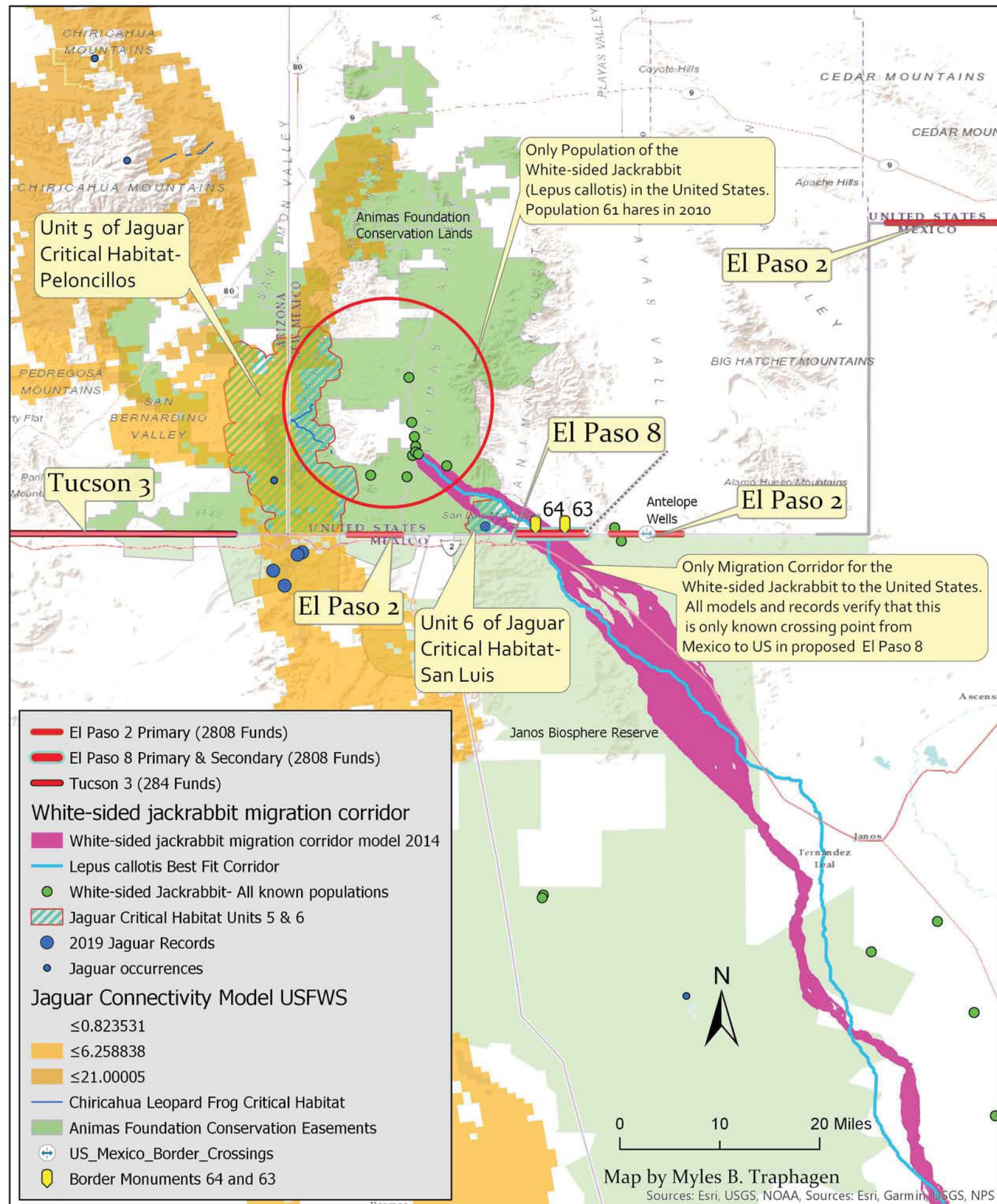


EXHIBIT B

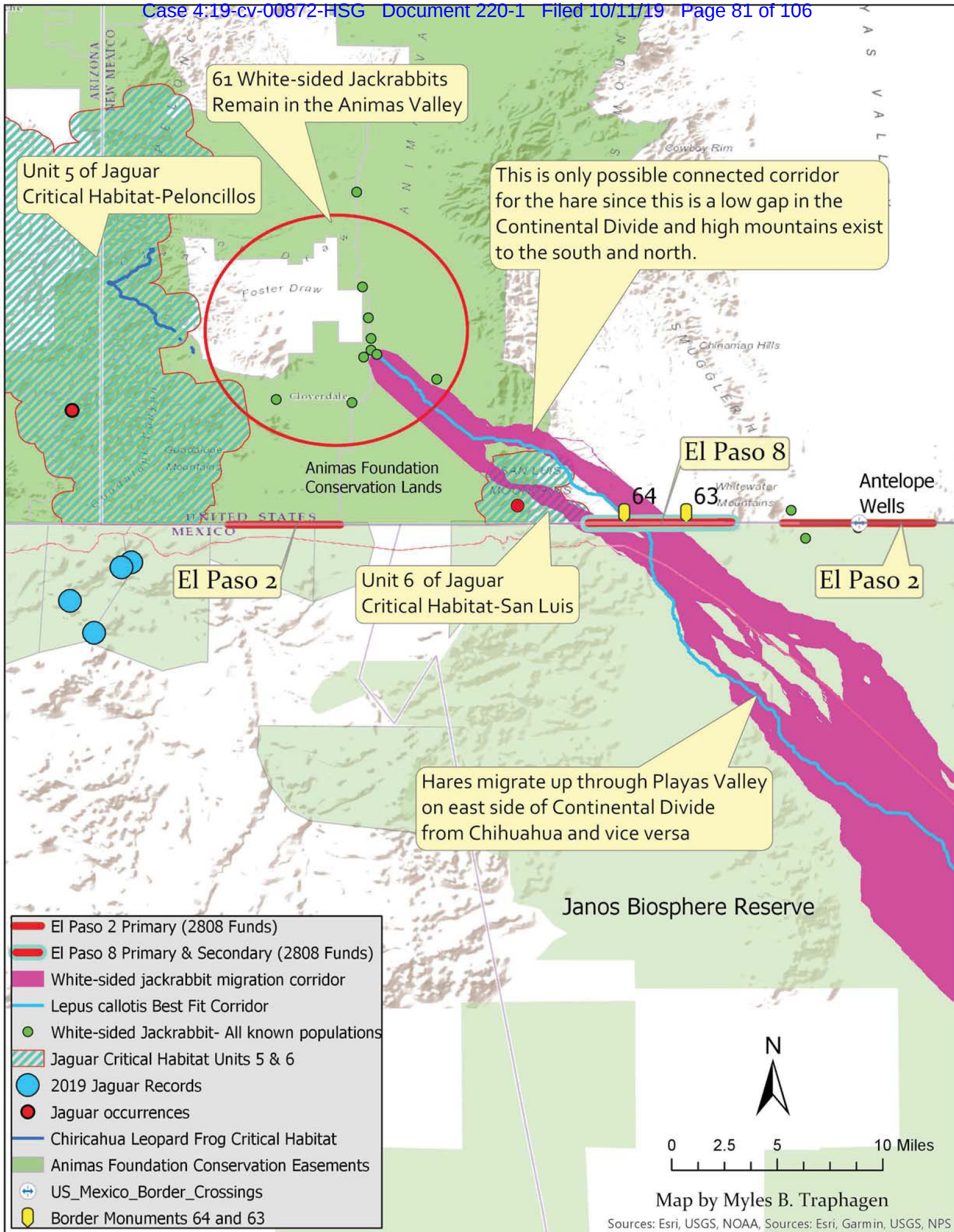


EXHIBIT C

With a significant increase in wildfire frequency since 1987, hares are forced to move more to find suitable habitat when their homelands burn. In fire years they may need to move back and forth across the border more frequently in order to find good forage and safe habitat for them and their young

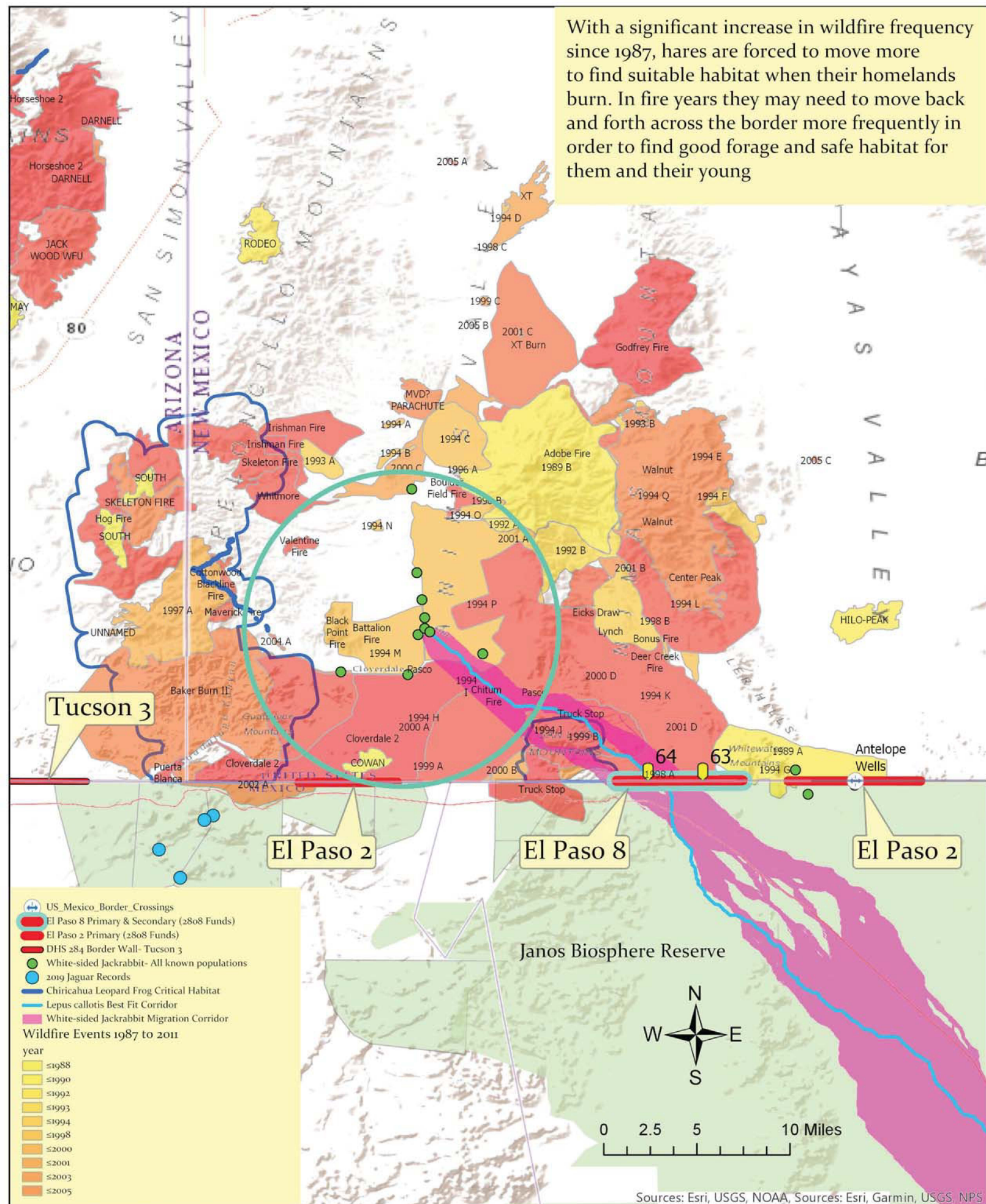


EXHIBIT D

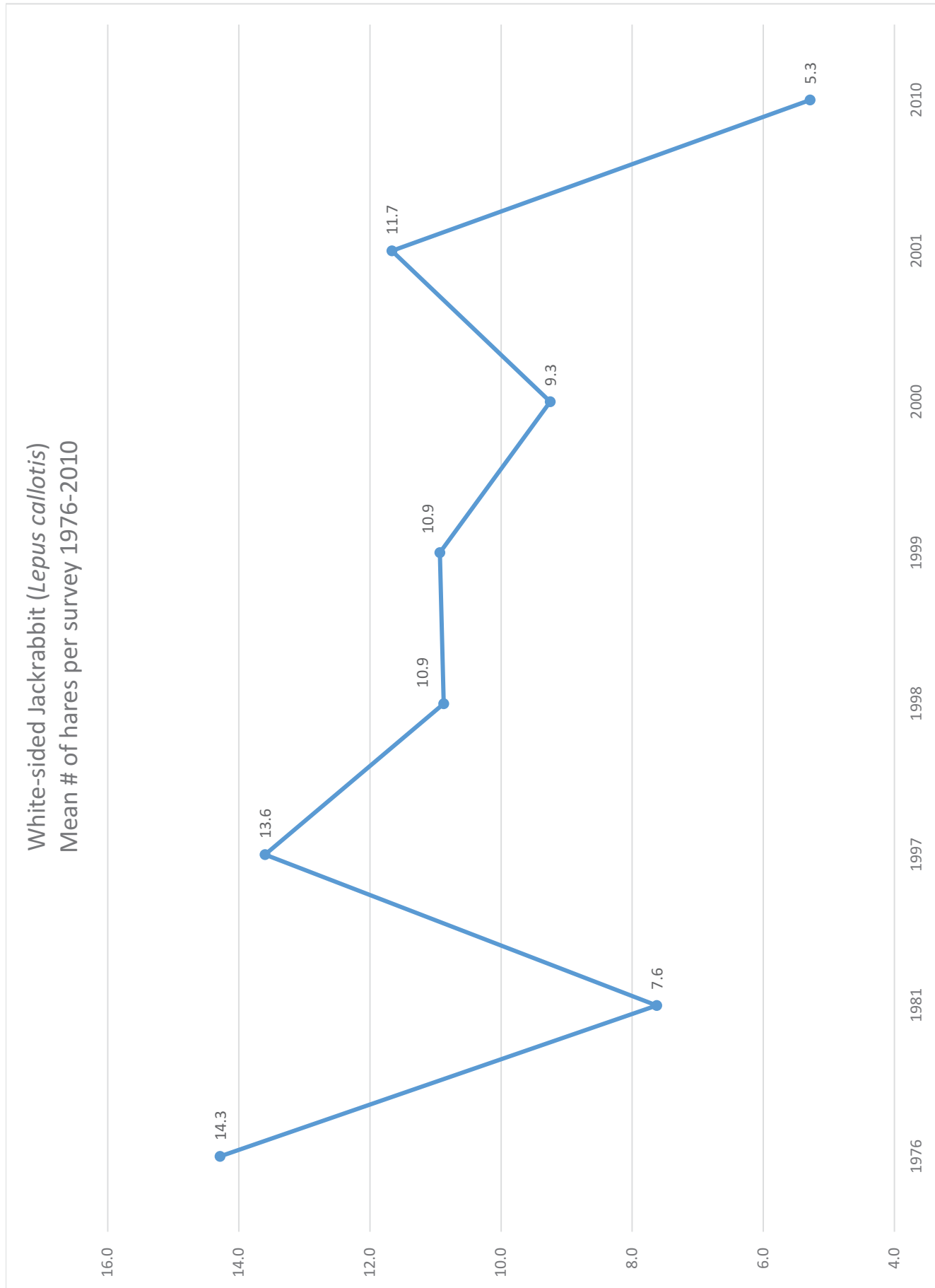


EXHIBIT E

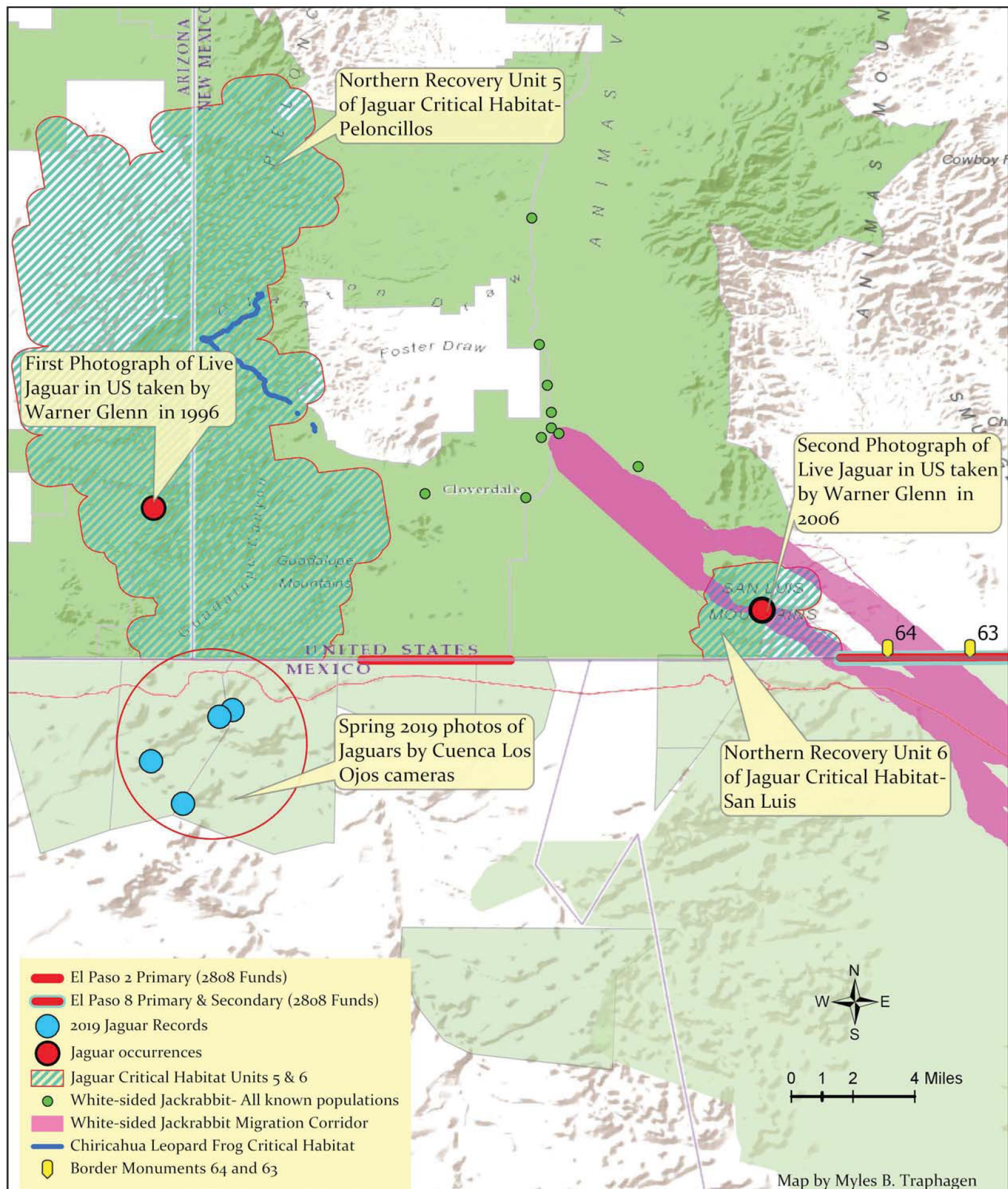


EXHIBIT 6

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IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA
OAKLAND DIVISION

**STATE OF CALIFORNIA; STATE OF
COLORADO; STATE OF
CONNECTICUT; STATE OF
DELAWARE; STATE OF HAWAII;
STATE OF ILLINOIS; STATE OF
MAINE; STATE OF MARYLAND;
COMMONWEALTH OF
MASSACHUSETTS; ATTORNEY
GENERAL DANA NESSEL ON BEHALF
OF THE PEOPLE OF MICHIGAN;
STATE OF MINNESOTA; STATE OF
NEVADA; STATE OF NEW JERSEY;
STATE OF NEW MEXICO; STATE OF
NEW YORK; STATE OF OREGON;
STATE OF RHODE ISLAND; STATE OF
VERMONT; COMMONWEALTH OF
VIRGINIA; and STATE OF WISCONSIN;**

Plaintiffs,

4:19-cv-00872-HSG

**DECLARATION OF SULA
VANDERPLANK IN SUPPORT OF
PARTIAL MOTION FOR SUMMARY
JUDGMENT REGARDING SECTION
2808 PROJECTS AND NEPA**

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v.

DONALD J. TRUMP, in his official capacity as President of the United States of America; **UNITED STATES OF AMERICA; U.S. DEPARTMENT OF DEFENSE; PATRICK M. SHANAHAN**, in his official capacity as Acting Secretary of Defense; **MARK T. ESPER**, in his official capacity as Secretary of the Army; **RICHARD V. SPENCER**, in his official capacity as Secretary of the Navy; **HEATHER WILSON**, in her official capacity as Secretary of the Air Force; **U.S. DEPARTMENT OF THE TREASURY; STEVEN T. MNUCHIN**, in his official capacity as Secretary of the Treasury; **U.S. DEPARTMENT OF THE INTERIOR; DAVID BERNHARDT**, in his official capacity as Acting Secretary of the Interior; **U.S. DEPARTMENT OF HOMELAND SECURITY; KIRSTJEN M. NIELSEN**, in her official capacity as Secretary of Homeland Security;

Defendants.

1 I, Sula Elizabeth Vanderplank, declare as follows:

2 1. I have personal knowledge of the facts set forth in this declaration. If called as a
3 witness, I could and would testify competently to the matters set forth below.

4 **Professional Background**

5 2. I am a postdoctoral fellow at the San Diego Zoo Global (SDZG) Institute for
6 Conservation Research, and a freelance conservation scientist (Director of SUVA Research). San
7 Diego Zoo Global has a focus on ending extinction worldwide. My postdoctoral position focuses
8 on conservation of cross-border rare plants. I serve as adjunct faculty in the Biology Department
9 of San Diego State University (SDSU) and at the Centro de Investigación Científica y Educación
10 Superior de Ensenada (CICESE), a graduate school in Baja California, Mexico. I specialize in
11 botany and conservation biology for the Southern California and Baja California regions,
12 including the area along California's border with Mexico, and I have published many articles on
13 the subject. The matters set forth in this declaration are based upon my personal knowledge, as
14 well as my expertise in the California-border region.

15 3. In addition to my work with SDZG and CICESE, I hold research associate positions
16 at prominent regional research centers including: San Diego Natural History Museum (SDNHM)
17 since 2012; Rancho Santa Ana Botanic Garden (RSABG) since 2011; and Cabrillo Marine
18 Aquarium (CMA) since 2015.

19 4. I am also the scientific advisor to a non-profit organization in northwest Baja
20 California called Terra Peninsular AC, and I serve on the board of the following non-profit
21 organizations: California Botanical Society, Southern California Botanists, Conservación de
22 Fauna del Noroeste AC (FAUNO), and for the research network "Next Generation of Sonoran
23 Desert Researchers." I am also a rare plant botanist for the California Native Plant Society
24 (CNPS), Baja California Chapter.

25 5. I have a Ph.D. in Plant Ecology, with minors in Conservation Biology and
26 Biogeography from the University of California, Riverside (2013), where my dissertation focused
27 on correlates of plant diversity in northwestern Baja California. My current research projects as
28 part of my postdoctoral fellowship at the SDZG focus on evaluating the conservation status of

1 rare plants in Baja California, Mexico, and in particular, on plant species that are rare on both
2 sides of the U.S./Mexico border. Specifically, we are developing conservation seed banks for
3 these plants, as well as taking samples for genetic research, and recording population data and
4 threats for each plant occurrence.

5 6. In this declaration, I provide my professional opinions regarding the biological
6 impacts of the federal government's border wall projects being constructed in California, with a
7 focus on the proposed construction near San Diego at Otay Mountain (San Diego Project 4), and
8 at the Tecate Port of Entry (San Diego Project 11) (collectively, "Projects" or "San Diego Border
9 Wall Projects"). The Project areas include near-pristine habitat that will be irreparably harmed by
10 the Projects' construction. These two Projects alone, despite including just 6.5 miles of fencing (3
11 miles for San Diego Project 11 and 3.5 miles for San Diego Project 4), will most likely cause
12 irreparable and irreversible impacts to at least 40 Plants of Conservation Concern, including 24
13 that are rare, threatened, or endangered in California (and eligible for listing). Three of the plants
14 are listed as rare, threatened or endangered at the state and federal levels. The Project areas also
15 include multiple fragile and sensitive habitats that will be irreparably harmed by the Projects'
16 construction.

17 **Assumptions on Project Activities and Expected Impacts**

18 7. In developing my opinion about the biological impacts from the San Diego Border
19 Wall Projects, I have relied on the "List of Military Construction Projects" that Defendants filed
20 in this matter on September 3, 2019 [ECF Doc. No. 206-2] ("2808 Project List"). I also reviewed
21 the table containing the 2808 Project Coordinates that is attached as Exhibit 1 to the Declaration
22 of Heather Leslie. The construction and installation of border fencing as part of these Projects
23 will cause significant environmental impacts.

24 8. At the time of writing (Oct 2019), the information available on the potential impacts
25 from the San Diego Border Wall Projects was extremely limited. No environmental impact
26 statement was prepared, and as a result there is minimal data available on anticipated impacts.
27 Exhaustive surveys have not been carried out inside the Projects' footprints and data on the
28 species that will be impacted is sparse. But previous border-barrier construction projects in

California provide some guidance on likely construction activities and impacts that will result from San Diego Projects 4 and 11. Past projects have necessitated new access roads, extensive vegetation clearing, grading and soil compaction, as well as significant landscape alteration (e.g., the past border-barrier construction in Smuggler's Gulch). Installation of San Diego Projects 4 and 11 will require similar clearance of vegetation, grading, and creation of roads, and will result in environmental impacts including soil compaction and erosion, and significant disturbance to surrounding ecosystems including by facilitating the spread of invasive species (exotic plants and seeds being transported to the Project sites by construction equipment, for example).

Environmental Context

9. San Diego Projects 4 and 11 are entirely within the California Floristic Province, one of the world's Biodiversity Hotspots (an area with a high number of restricted species and significant impacts to 80% of habitat). These hotspots are defined by extreme levels of species endemism and high levels of human impact and landscape alteration. The Project areas are no exception; they have very high levels of local endemism and have been heavily impacted.

10. The U.S./Mexico border is not a natural border, yet interestingly, it is close to a natural shift in the local plant communities in San Diego County. Our borderlands are often the northernmost outposts for many plants that are otherwise restricted to the CFP region of Baja California. These California occurrences often constitute some of the very rarest plants in the United States, occurring nowhere else in our nation. San Diego County is perhaps the most biodiverse county in the U.S. (no other county is known to have greater plant diversity). In 2014, San Diego County had 2,672 plants documented from within its boundaries.

11. San Diego County is also home to 266 rare plants that are included in the California Native Plant Society (CNPS) Rare Plant Rankings. This program develops current and accurate information on the distribution and conservation status of California's rare and endangered plants, and since 1968 has been the standard for information on the rarity and endangerment of the State's flora. The program operates under a Memorandum of Understanding (MOU) with the California Department of Fish and Wildlife (CDFW) and facilitates broad cooperation in rare plant assessment and protection. The CNPS Rare Plant Botanist is housed at the Sacramento

1 office of the CDFW's Biogeographic Data Branch, and shares all data with the [California Natural](#)
 2 [Diversity Data Base](#) (CNDDDB). See: <http://www.cnps.org/cnps/rareplants/ranking.php>.

3 12. Notably, San Diego Project 4 includes part of the Otay Mountain Federal Wilderness
 4 Area. (See Exhibit A to this declaration, which is a true and correct copy of a map of the Otay
 5 Wilderness Area from the U.S. Dept of the Interior, Bureau of Land Management). Wilderness
 6 Areas "are final holdout refuges for a long list of rare, threatened, and endangered species, forced
 7 to the edges by modern development." They are "places where law mandates above all else
 8 that *wildness* be retained for our current generation, and those who will follow." See the US
 9 Forest Service website for Managing the Land at [https://www.fs.fed.us/managing-](https://www.fs.fed.us/managing-land/wilderness)
 10 [land/wilderness](https://www.fs.fed.us/managing-land/wilderness). Federal Wilderness Areas have been protected under federal law since the
 11 Wilderness Act of 1964 was enacted "[i]n order to assure that an increasing population,
 12 accompanied by expanding settlement and growing mechanization, does not occupy and modify
 13 all areas within the United States and its possessions, leaving no lands designated for
 14 preservation and protection in their natural condition." In enacting the Wilderness Act, Congress
 15 declared its policy was "to secure for the American people of present and future generations the
 16 benefits of ***an enduring resource of wilderness.***"

17 13. The Otay Mountain Wilderness Area, near San Diego, California, was created by
 18 Congress in 1999 and encompasses some 18,500 acres. It reaches elevations of 3,500 feet, and is
 19 home to rugged mountains with gradients exceeding 40%. The 2006 Secure Fence Act stated, "If
 20 the topography of a specific area has an elevation grade that exceeds 10 percent, the Secretary
 21 may use other means to secure such area, including the use of surveillance and barrier
 22 tools." Otay Mountain "represents a unique ecosystem, home to twenty sensitive plant and
 23 animal species, including the endangered quino checkerspot butterfly, the only known stand of
 24 Tecate cypress, as well as the only known population of the Mexican flannel bush"
 25 (<https://www.blm.gov/visit/otay-mountain-wilderness>). Notably, the part of the Otay Mountain
 26 Wilderness where San Diego Project 4 is being constructed is particularly steep and rugged, as
 27 shown in a photograph I took which shows the existing fencing heading toward the steep
 28

1 unfenced area that is the project-footprint for San Diego 4. This photograph is attached as Exhibit
2 B to this declaration.

3 **Site-Specific Plant Diversity**

4 14. The San Diego Project 4 and 11 sites include extensive native-plant habitat. A
5 checklist of plants previously collected in the San Diego Project 11 area was generated using data
6 from the San Diego County Plant Atlas and includes 211 different plant species. The same query
7 for San Diego Project 4 yields 251 plant species. There are a total of 372 unique plant taxa
8 expected to be impacted if San Diego Projects 4 and 11 are constructed.

9 15. This is certainly a VERY limited dataset, far from the true total because a thorough
10 plant inventory has never been conducted in this region. These lists also do not include
11 observations or records from the California Natural Diversity Database (maintained by the
12 California Department of Fish and Wildlife). Sadly, I was not able to conduct a thorough
13 inventory due to the lack of site access, and a multi-season inventory would be necessary to
14 adequately assess diversity; a single site visit could never capture the diversity of the Project
15 areas.

16 16. During a single weekend in March 2019, citizen scientists documented 1,073 distinct
17 plant and animal taxa along the California/Mexico borderlands during the Border Bioblitz, 805 of
18 which were plants. These are certainly VERY restricted datasets, which include far less than the
19 true plant diversity of the border region, since a plant inventory has never been conducted in the
20 remote regions of the border where fencing is proposed. However, these numbers give some
21 indication of the immense biodiversity of the immediate border region. The California Natural
22 Diversity Database clearly shows the proximity of many rare plants and animals to San Diego
23 Project (*See* Exhibit B, a true and original copy of the Bureau of Land Management's Otay
24 Mountain Wilderness Boundary).

25 **Methods Used for this Assessment**

26 17. To assess the Plants of Conservation Concern that will be potentially and directly
27 impacted by San Diego Projects 4 and 11, I visited both project sites (notably access to the San
28 Diego 4 Project site was challenging, and main access roads were closed to the public). To

1 compile these data, I have also searched CNDDDB records from the CDFW. Exhibit C to this
 2 Declaration is a true and correct copy of a screenshot from the CNDDDB BIOS viewer, that I
 3 accessed on September 30, 2019, which shows the number of rare species records for the Project
 4 sites. I also searched records in the San Diego County Plant Atlas (sdplantatlas.org), and
 5 reviewed museum specimen collection data (herbarium specimens) – recent and historical as
 6 appropriate - including data from the Consortium of California Herbaria
 7 (<http://ucjeps.berkeley.edu/consortium/>). I have also referenced expert verified observations from
 8 iNaturalist, used a wealth of scientific literature, and sought expert knowledge, including
 9 consultation with Dr. Jon Rebman, a foremost expert in the region and author of the Checklist of
 10 the Vascular Plants of San Diego County 5th Edition (Rebman & Simpson 2014, 156pp), and the
 11 Annotated Checklist of the Vascular Plants of Baja California (Rebman, Gibson & Rich 2016,
 12 352 p).

13 18. In the absence of an exhaustive survey of the Project areas, the rare and endangered
 14 plants found within the impact zone at the border have been distinguished as follows:

- 15
 16 • California Rare Plant Rank **1B: Plants Rare, Threatened, or Endangered in**
 17 **California and Elsewhere:** Plants with a California Rare Plant Rank of 1B are rare
 18 throughout their range with the majority of them endemic to California. Most of the
 19 plants that are ranked 1B have declined significantly over the last century.
 20
- 21 • California Rare Plant Rank **2B: Plants Rare, Threatened, or Endangered in**
 22 **California, But More Common Elsewhere:** Except for being common beyond the
 23 boundaries of California, plants with a California Rare Plant Rank of 2B would have
 24 been ranked 1B. From the federal perspective, plants common in other states or
 25 countries are not eligible for consideration under the Federal Endangered Species
 26 Act.
 27
 28

- California Rare Plant Rank 3: Plants Where More Information is Needed: Plants with a California Rare Plant Rank of 3 are united by one common theme - we lack the necessary information to assign them to one of the other ranks or to reject them. Nearly all of the plants constituting California Rare Plant Rank 3 are taxonomically problematic.

All of the plants constituting California Rare Plant Rank 1A, 1B, 2A, 2B, and 3 are eligible for listing under the California Endangered Species Act (CESA). Impacts to these species or their habitat must be analyzed during preparation of environmental documents under the California Environmental Quality Act (CEQA), as they meet the definition of Rare or Endangered under CEQA Guidelines §15125 (c) and/or §15380.

- California Rare Plant Rank 4: Plants of Limited Distribution - A Watch List: Plants with a California Rare Plant Rank of 4 are of limited distribution or infrequent throughout a broader area in California, and their status should be monitored regularly.

Few of the plants constituting California Rare Plant Rank 4 are eligible for state listing. Nevertheless, many of them are significant locally, and it is strongly recommended that California Rare Plant Rank 4 plants be evaluated for impact significance during preparation of environmental documents relating to CEQA, based on CEQA Guidelines §15125 (c) and/or §15380. This is particularly significant for populations at the periphery of a species' range, and areas where the taxon has sustained heavy losses, which are often applicable in the U.S./Mexico border region.

19. Each rare plant also receives a threat rank, follow its listing designation:

- 0.1-Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
- 0.2-Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
- 0.3-Not very threatened in California (less than 20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

20. I also evaluated the types of impacts that are likely to result from the Projects' construction:

- **Direct impacts** are listed for those plants which have been documented within 100 meters of the fenceline and will be directly impacted during the proposed construction. (Direct Impacts under the National Environmental Policy Act (NEPA).)
- **Expected impacts** are those where plants have been documented within 500 meters of the impact zone and are expected within the Project footprint, although conclusive data are not currently available. (Direct Impacts under NEPA.)
- **Indirect impacts** are listed for sensitive plants that live adjacent to the impact area, in fragile habitats that have a high likelihood to suffer from dust, soil erosion, particulate deposition, and/or landscape hydraulic alterations which may result from the installations. They are all likely to suffer edge effects from the disturbance and an increase in invasive species competing for resources. (Indirect Impacts under NEPA.)

The Projects Will Cause Irreparable Harm to Rare and Endangered Plants

21. The Table below outlines the sensitive plants along the Projects' footprints and highlights the rare and endangered plants found within each one, including their CNPS rankings (lists and threat ranks as detailed above), and federal and state listed status (CE = California Endangered, FT = Federally Threatened and CR = California Rare). The Table also details the impacts the sensitive habitats will suffer from the San Diego 4 and 11 Projects, following the criteria listed above. All plants listed are also subject to cumulative impacts (as per NEPA) as a result of the repeat disturbances to this region. Notably, the Table includes a species new to science that is not yet formally named (pers. comm. Dr. Jon Rebman, Curator of Botany, San Diego Natural History Museum, and Dr. Michael Simpson, Professor Emeritus, San Diego State University, September 2019) in the genus *Eriodictyon*, as well as charismatic rare plants like the Tecate Cypress.

22. Of the 40 plants in the table, all are considered Species of Conservation Concern in California. One is federally-listed, two are state-listed, and 24 are considered rare, threatened or endangered in California. In total 33 Plants of Conservation Concern are expected to suffer direct impacts under NEPA, and 7 are expected to suffer indirect impacts.

Status	Family	Genus	Species	Infra Name	Common Name	State/Federal	CNPS
Expected	Asteraceae	<i>Baccharis</i>	<i>vanessae</i>		Encinitas Baccharis	CE, FT	1B.1
Direct	Asteraceae	<i>Bahiopsis</i>	<i>laciniata</i>		San Diego Sunflower	None	4.2
Direct	Asteraceae	<i>Deinandra</i>	<i>floribunda</i>		Tecate tarplant	None	1B.2
Direct	Asteraceae	<i>Isocoma</i>	<i>menziesii</i>	<i>decumbens</i>	Decumbent Goldenbush	None	1B.2
Direct	Asteraceae	<i>Iva</i>	<i>hayesiana</i>		San Diego Marsh-Elder	None	2B.2
Indirect	Asteraceae	<i>Packera</i>	<i>ganderi</i>		San Diego Butterweed	CR	1B.2
Direct	Asteraceae	<i>Xanthisma</i>	<i>junceum</i>		Rush Chaparral-Star	None	4.3
Direct	Boraginaceae	<i>Harpagonella</i>	<i>palmeri</i>		Palmer's Grappling-Hook	None	4.2
Direct	Brassicaceae	<i>Lepidium</i>	<i>virginicum</i>	<i>robinsonii</i>	Robinson's Peppergrass	None	4.3
Indirect	Brassicaceae	<i>Streptanthus</i>	<i>bernardinus</i>		Southern Jewelflower	None	1B.3
Expected	Cactaceae	<i>Ferocactus</i>	<i>viridescens</i>	<i>viridescens</i>	Coast Barrel Cactus	None	2B.1
Direct	Convolvulaceae	<i>Convolvulus</i>	<i>simulans</i>		Small-flowered Morning-glory	None	4.2
Direct	Convolvulaceae	<i>Dichondra</i>	<i>occidentalis</i>		Western Dichondra	None	4.2
Expected	Crassulaceae	<i>Dudleya</i>	<i>variegata</i>		Variegated Dudleya	None	1B.2
Direct	Cupressaceae	<i>Hesperocyparis</i>	<i>forbesii</i>		Tecate Cypress	None	1B.1
Direct	Ericaceae	<i>Arctostaphylos</i>	<i>otayensis</i>		Otay Manzanita	None	1B.2
Direct	Ericaceae	<i>Comarostaphylis</i>	<i>diversifolia</i>	<i>diversifolia</i>	Summer-Holly	None	1B.2
Direct	Fabaceae	<i>Hosackia</i>	<i>crassifolia</i>	<i>otayensis</i>	Otay Mountain Lotus	None	1B.1
Expected	Fabaceae	<i>Lathyrus</i>	<i>splendens</i>		Campo Pea	None	4.3
Direct	Fabaceae	<i>Pickeringia</i>	<i>montana</i>	<i>tomentosa</i>	Hairy Chaparral-Pea	None	4.3
Direct	Fagaceae	<i>Quercus</i>	<i>cedrosensis</i>		Cedros Island oak	None	2B.2
Indirect	Lamiaceae	<i>Lepechinia</i>	<i>ganderi</i>		Gander's pitcher sage	None	1B.3
Expected	Lamiaceae	<i>Monardella</i>	<i>hypoleuca</i>	<i>lanata</i>	Felt-Leaf Monardella	None	1B.2
Direct	Lamiaceae	<i>Monardella</i>	<i>stoneana</i>		Jennifer's monardella	None	1B.2
Direct	Lamiaceae	<i>Salvia</i>	<i>munzii</i>		Munz's Sage	None	2B.2
Direct	Liliaceae	<i>Calochortus</i>	<i>dunnii</i>		Dunn's Mariposa Lily	CR	1B.1
Expected	Namaceae	<i>Eriodictyon</i>	<i>sp. nov.</i>			None	pending
Expected	Onagraceae	<i>Clarkia</i>	<i>delicata</i>		Delicate/Campo Clarkia	None	1B.2
Indirect	Orchidaceae	<i>Piperia</i>	<i>cooperi</i>		Cooper's Rein Orchid	None	4.2
Indirect	Picrodendraceae	<i>Tetracoccus</i>	<i>dioicus</i>		Parry's Tetracoccus	None	1B.2
Direct	Poaceae	<i>Stipa</i>	<i>diegoensis</i>		San Diego Needlegrass	None	4.2
Direct	Polygonaceae	<i>Chorizanthe</i>	<i>leptotheca</i>		Ramona Spineflower	None	4.2
Direct	Pteridaceae	<i>Pentagramma</i>	<i>glanduloviscida</i>			None	Pending
Direct	Pteridaceae	<i>Pentagramma</i>	<i>rebmanii</i>		Rebman's Silverback Fern	None	Pending
Indirect	Rhamnaceae	<i>Adolphia</i>	<i>californica</i>		Spineshrub	None	2B.1
Direct	Rhamnaceae	<i>Ceanothus</i>	<i>otayensis</i>		Otay-Lilac	None	1B.2
Direct	Rosaceae	<i>Chamaebatia</i>	<i>australis</i>		Southern Mountain Misery	None	4.2

1	Direct	Selaginellaceae	<i>Selaginella</i>	<i>cinerascens</i>	Mesa Spike-Moss	None	4.1
2	Expected	Themidaceae	<i>Bloomeria</i>	<i>clevelandii</i>	San Diego Goldenstar	None	1B.1
3	Indirect	Themidaceae	<i>Brodiaea</i>	<i>orcuttii</i>	Orcutt's Brodiaea	None	1B.1

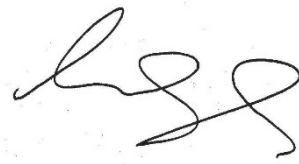
23. During a site visit I conducted on October 2, 2019, the following plants from the Table were seen to be abundant in the direct footprint for San Diego Project 4: Tecate Cypress, Otay Lilac, Otay Manzanita, Southern Mountain Misery, Summer Holly, Cedros Island Oak and the Mesa Spike-Moss.

Conclusion

24. In conclusion, the Projects' footprints include at least 40 Plants of Conservation Concern in the state of California, including at least three plants that are listed at the federal and state levels. Within these 40 Plants of Conservation Concern, there are at least 19 plants on list 1B (plants that are globally rare, threatened or endangered), and 5 plants on list 2B (plants that are rare, threatened or endangered in California), for a total of 24 plants that are eligible to be listed as rare, threatened, or endangered at the state and federal levels. In total, 33 Plants of Conservation Concern are expected to suffer direct impacts under NEPA, and 7 are expected to suffer indirect impacts under NEPA. San Diego Projects 4 and 11 will have irreparable and irreversible impacts to numerous rare plants and fragile habitats in this extremely diverse area.

I declare under penalty of perjury under the laws of the United States that the foregoing is true and correct.

Executed on October 10, 2019, at San Diego, California.



Sula Vanderplank

EXHIBIT A

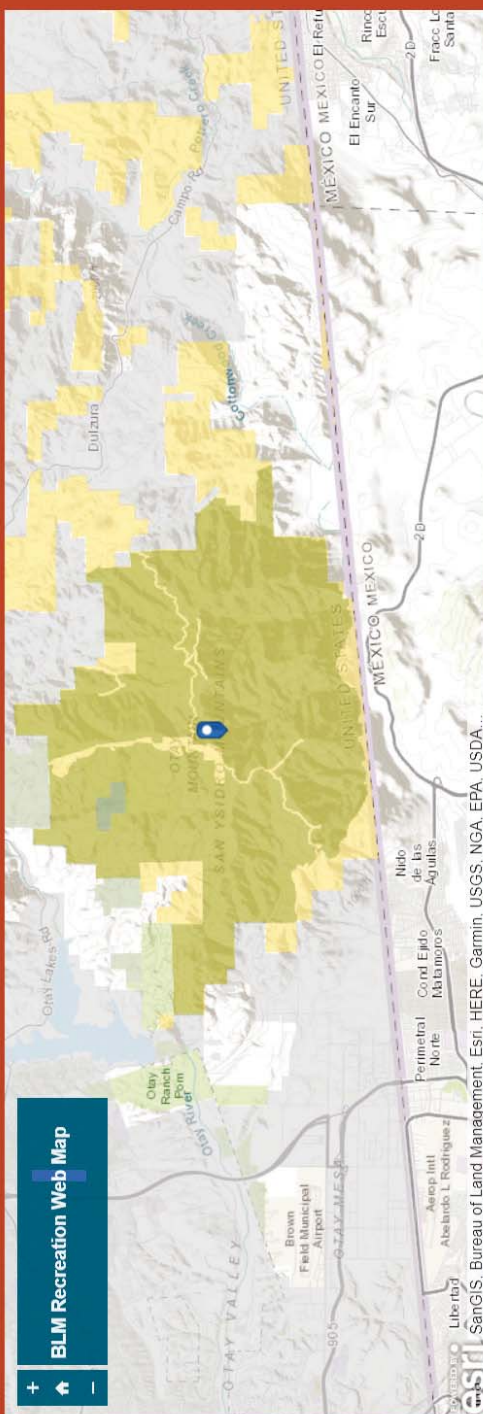


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Otay Mountain Wilderness



True and original copy of the extent of the BLM Otay Mountain Wilderness area.

EXHIBIT B

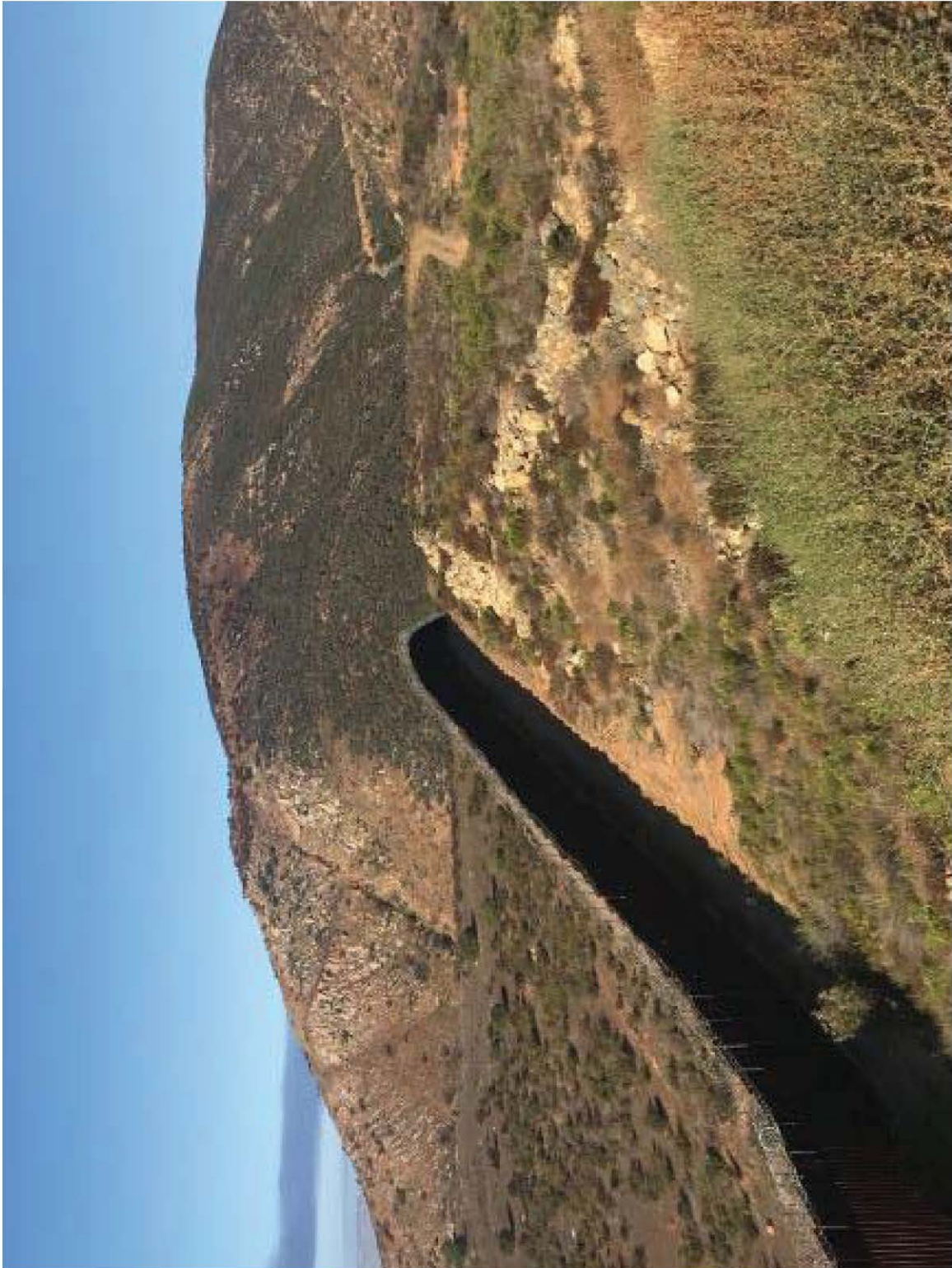


EXHIBIT C

True and original copy of CDFW data for the Otay fence replacement section. Note the high numbers of endangered species in the project area.