United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
Denver Federal Center, Building 53
Post Office Box 25207
Denver, Colorado 80225-0007

ER21/0484 February 07, 2021

Lars Christensen
355 North Vernal Ave
Vernal, UT 84078

Subject: Comments on Draft Environmental Impact Statement for the Ashley National Forest Plan Revision, UT

Dear Mr. Christensen,

The U.S. Department of the Interior (Department), including the Bureau Reclamation's (Reclamation) Provo Area Office and the U.S. Fish and Wildlife Service (USFWS) Utah Ecological Services Field Office, has reviewed the U.S. Forest Service's (USFS) Draft Environmental Impact Statement (EIS) for Ashley National Forest (Forest) Plan Revision, located within Utah. We understand that USFS' proposed action is to create one unified forest plan for the Ashley National Forest. The revised forest plan will describe the strategic intent of managing the Ashley National Forest for the next 10 to 15 years and will address the identified need to change the existing forest plan. We offer the following comments in response to the Draft EIS from the Reclamation and USFWS.

Reclamation Comments

Reclamation has concerns in regard to withdrawn lands for the Central Utah Project- Bonneville Unit. The Central Utah Project Completion Act Office, and the Central Utah Water Conservancy District are currently coordinating directly with USFS staff to ensure Bonneville Unit interests are being considered. We appreciate this coordination and hope that it will continue so that these interests remain taken into consideration.

USFWS Comments

Migratory Birds

The Migratory Bird Treaty Act (MBTA) prohibits the taking, killing, possession, and transport (among other actions) of migratory birds, their eggs, parts, and nests, except when specifically permitted by regulation. The list of migratory birds protected under the MBTA includes more than 1,000 species (50

CFR 10.13; April 5, 1985). On October 4, 2021, the USFWS published a final rule (86 FR 54642) revoking the January 7, 2021, regulation (86 FR 1134) that limited the scope of the MBTA regulations. As of December 3, 2021, the USFWS returned to implementing the MBTA as prohibiting incidental take and applying enforcement discretion, consistent with judicial precedent and long-standing agency practice prior to 2017.

Additionally, the USFWS released a Director's order (No. 225, October 4, 2021; USFWS 2021a) clarifying that enforcement efforts will be focused on specific types of activities that both foreseeably cause incidental take and where the proponent fails to implement known beneficial practices (best management practices, conservation measures, best practices, mitigation measures, etc.) to avoid or minimize incidental take. Furthermore, the Director's order clarifies that Federal agencies conducting activities in accordance with a signed memorandum of understanding (MOU) with the USFWS developed under Executive Order 13186 for the conservation of migratory birds will not be priorities for law enforcement. The USFWS will continue to provide technical assistance in developing beneficial practices to minimize effects to migratory birds, consistent with our signed 2008 MOU with USFS relating to EO 13186 (FS Agreement # 08-MU-1113-2400-264). We attached project recommendations for migratory bird conservation (USFWS 2020) for your consideration when implementing actions that may adversely affect migratory birds.

The Conservation of Migratory Birds, Bald and Golden Eagle Protection Act (BGEPA) affords eagles additional protections beyond those provided by the MBTA by making it unlawful to "molest or disturb" eagles or destroy their nests. The take of eagles may be permitted when the taking is: 1) associated with, but not the purpose of the activity, and cannot practicably be avoided, and 2) where the take is compatible with the preservation of eagle populations, which means it must be consistent with the goal of stable or increasing breeding populations.

For raptors, we recommend use of the *Utah Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances* (Guidelines; Romin and Muck 2002) to provide consistent application of raptor protection measures statewide and provide compliance with environmental laws regarding raptor protection. Raptor survey and conservation measures are provided in the Guidelines to ensure that proposed projects under the Plan avoid adverse effects to raptors, including bald and golden eagles. Locations of existing raptor nests and eagle roosting areas should be identified prior to the initiation of project activities. Appropriate spatial buffer zones of inactivity should be established during breeding, nesting, and roosting periods. Arrival at nesting sites can occur as early as December for certain raptor species and can continue through August.

The Birds of Conservation Concern 2021 List (BCC 2021; USFWS 2021b) identifies the migratory and non-migratory bird species (beyond those already designated as federally threatened or endangered) that represent our highest conservation priorities. The list is based on an assessment of several factors, including population abundance and trends, threats on breeding and nonbreeding grounds and size of breeding and nonbreeding ranges. We recommend the Forest evaluate and minimize effects to migratory bird habitat, focusing on species listed in BCC 2021. For example, the pinyon jay (*Gymnorhinus*

cyanocephalus) is an obligate bird of piñon-juniper and other pine-juniper woodlands that has experienced significant population declines and is of increasing conservation concern and is found on this list. Pinyon jay population declined 83.5% from 1967-2017 (Pardieck et al. 2018), and half of the remaining population is predicted to be lost within 19 years (Rosenberg et al. 2016). Pinyon jay is significantly declining in all states where the bird occurs (range -3.1 to - 4.5% per year) (Pardieck et al. 2018). We recommend the Forest evaluate and minimize effects to pinyon jay by implementing management recommendation found in Chapter Six of the *Conservation Strategy for the Pinyon Jay* (Somershoe et al. 2020).

Endangered Species

The Plan area contains occupied and potential habitat for several species listed under the Endangered Species Act (ESA). As such, we recommend the Plan fully evaluate all consequences of the proposed action and identify appropriate conservation measures to avoid, minimize, or mitigate effects to listed species for projects and actions identified under the Plan. We encourage the Forest to work with our office to identify reasonable, appropriate, and meaningful measures that will not only mitigate the effects of the Plan but will also assist in the conservation of the species, per direction to Federal agencies under section 7(a)(1) of the ESA. In addition, we encourage the Forest to work with our office to properly identify effects determinations for ESA-listed species affected by actions under the Plan.

Formal consultation under the ESA (50 CFR 402.14) is required if the Federal agency determines that an action is likely to adversely affect a listed species or critical habitat (50 CFR 402.02). Federal agencies should also confer with the USFWS on any action that is likely to jeopardize the continued existence of any proposed species or result in the destruction or adverse modification of proposed critical habitat (50 CFR 402.10). A written request for formal consultation or conference should be submitted to the USFWS with a completed biological assessment and any other relevant information (50 CFR 402.12).

Oftentimes, ESA section 7(a)(2) consultations for large management plans such as the Plan are complex because aspects of the land management plan may be implemented over extended periods of time, with some actions that occur immediately after the NEPA Records of Decisions and other potential long-term actions that are not immediately identified under land zone prescriptions. The challenge with ESA section 7(a)(2) consultation on land management plans are fulfilling the FWS's responsibility for making a 7(a)(2) opinion while recognizing that not all future actions and their probable effects are known at this time. To address this challenge, the FWS and National Marine Fisheries Service promulgated an addition to the regulations on Interagency Cooperation (50 C.F.R. § 402) in 2015 that was designed to deal with conflicting court cases regarding incidental take in consultations (80 FR 26832). The concepts discussed in the preamble to the regulations and the regulatory definitions promulgated into the Code of Federal Regulations can inform the consultation process for the Plan.

Several definitions were added to the regulation for purposes of conducting formal ESA section 7(a)(2) consultation and issuing an incidental take statement for large scale management plans. The two definitions most relevant to the Plan are the definitions for a "Framework Programmatic Action" and a

"Mixed Programmatic Action." A "Framework Programmatic Action" means, for purposes of an incidental take statement, a Federal action that approves a framework for the development of future action(s) that are authorized, funded, or carried out at a later time, and any take of a listed species would not occur unless and until those future action(s) are authorized, funded, or carried out and subject to further section 7 consultation.

The regulations describe a "Mixed Programmatic Action" as "… a Federal action that approves action(s) that will not be subject to further section 7 consultation, and also approves a framework for the development of future action(s) that are authorized, funded, or carried out at a later time, and any take of a listed species would not occur unless and until those future action(s) are authorized, funded, or carried out and subject to further ESA section 7 consultation." The Plan could fit the description of either a framework programmatic action or mixed programmatic action depending on whether the management prescriptions identified in the includes both planning-level actions (actions that set agency direction, but do not authorize implementation of those actions on the ground) and implementation-level actions (actions that can immediately be implemented upon approval). Please note the USFS's implementation of planning-level actions will be subject to future ESA section 7 consultation, if necessary.

If the USFS's proposed action for the Forest Plan including both planning-level and implementation level actions, our regulations support consulting on the USFS's action as a "mixed programmatic action." This distinction allows the FWS to issue an incidental take statement for those parts of the action that are specific enough that we can meet the regulatory burden of reasonable certainty to issue an incidental take statement. Where that degree of certainty is not met, the FWS can still judge the action against the 7(a)(2) jeopardy/ adverse modification standard, make a conclusion, but not have to exempt take (since we can't meet the reasonable certainty burden). The planning-level decisions and actions where we cannot reasonably determine incidental take at this time would still be subject to ESA section 7(a)(2) compliance during implementation of those decisions and actions.

Mexican Spotted Owl

We listed Mexican spotted owl (*Strix occidentalis lucida*) as a federally threatened species in 1993 (58 FR 14248; March 16,1993). The Recovery Plan was completed in 1995, revised in 2012 (USFWS 2012), and we designated critical habitat in 2004 (69 FR 53182: August 31, 2004). The primary threats to the species at the time of listing were commercial-based timber harvest and stand-replacing wildland fire (USFWS2012).

We believe Mexican spotted owl warrants further consideration in the DEIS. Within the Forest, models indicate several areas meeting the description of rocky-canyon habitat suitable for Mexican spotted owl nesting, roosting, foraging, wintering, or dispersal (Willey 1997; Lewis 2014). We recommend addressing the presence of suitable habitat more comprehensively throughout the DEIS, as areas of suitable habitat within the Forest that are assumed unoccupied but have not been recently surveyed may have become occupied at a later date. Additionally, we recommend reconsideration of your use of the 2x2 rule (as referenced in Appendix C) as the primary criteria for identifying Mexican spotted owl habitat

within the Forest. Our interpretation of the 2x2 rule is to be inclusive of canyons 2 km wide and at least 2 km long as potential habitat and is not meant to exclude canyons identified through modeling efforts that do not meet those size requirements (USFWS 2002). We recommend the Forest identify and provide information on locations in the Forest where Mexican spotted owl suitable habitat is present by conducting a desktop habitat suitability assessment using either the Willey 1997 or Lewis 2014 habitat models in conjunction with field reviews (Se 2002) and consider effects to the species within these areas in the Forest Plan.

We also recommend that you incorporate the following general conservation measures established in the 2012 Recovery Plan into the Forest Plan:

- Survey any area that could be occupied by nesting spotted owls using the established survey protocol (USFWS 2012, Appendix D) before implementing any management action that will alter habitat structure or influence owl behavior;
- Maintain and enhance existing nesting/roosting habitat for Mexican spotted owl through the establishment and conservation of PACs at all identified Mexican spotted owl sites. See Box C.1. in the 2012 Recovery Plan for our criteria for an owl site; and
- Avoid conducting activities that may disturb owl sites or PACs during the breeding season (01 March to 31 August) unless protocol surveys allow inference of non-nesting.

In addition, we recommend that you include threat-specific conservation measures into the Forest Plan for potential management actions as identified in Appendix C of the 2012 Recovery Plan. Threats and stressors that may be present in the Forest include timber harvesting, wildfire, livestock grazing, energy development, land development, recreation disturbance, noise, and climate change.

Western yellow-billed cuckoo

We listed the western Distinct Population Segment (DPS) of Yellow-billed cuckoo (*Coccyzus americanus*) as a federally threatened species in 2014 (79 FR 59992; November 3, 2014). The primary threats to the species are riparian habitat loss and degradation (USFWS 2014).

We agree with your determination that there is unlikely to be suitable riparian habitat that meets the patch size requirements for the species within the Forest; however, we recommend adjusting your habitat assessment criteria to reflect the smaller patch sizes (greater than 12 acres) found in Utah (see our attached *Guidelines for the identification and evaluation of suitable habitat for western yellow-billed cuckoo in Utah*). If additional suitable habitat is identified using this updated criterion, we recommend effects to Western yellow-billed cuckoo be thoroughly discussed in the DEIS and that you include threat-specific conservation measures into the Forest Plan specific to the species. Threats and stressors that may be present in the Forest include energy development, land development, recreation disturbance, noise, and climate change.

Ute ladies'-tresses

Ute ladies'-tresses is listed as a threatened species under the Endangered Species Act (Act) (57 FR 2048; January 17, 1992). There is identified potential habitat and occupied habitat for the species within the Plan area.

Currently Ute ladies'-tresses and at-risk plants are only mentioned generally in Chapter 3, subheading "Environmental Consequences for Wildlife". We recommend addressing the presence of occupied and suitable habitat for Ute ladies'-tresses more comprehensively throughout the DEIS. Additionally, we recommend that the effects to Ute ladies'-tresses and at-risk plant species be thoroughly discussed in a section specific to vegetation rather than wildlife. We also recommend that you include threat-specific conservation measures into the Forest Plan specific to the species. Threats and stressors that may be present in the Forest Plan proposed actions include effects from vegetation and fuels management, livestock grazing and management, recreation, and designated areas.

Canada lynx

We listed the contiguous United States Distinct Population Segment (DPS) of Canada lynx (*Lynx canadensis*) as threatened in 2000 because of the inadequacy, at that time, of regulatory mechanisms on some Federal lands to provide for the conservation of lynx habitats and populations. The Forest currently contains unoccupied lynx habitat that is considered peripheral. Due to the classification of this habitat, there is a greater degree of flexibility for management activities on the Forest. That said, we recommend incorporating conservation measures into the DEIS to continue supporting this secondary habitat.

Per the Lynx Conservation Assessment and Strategy (Interagency Lynx Biology Team 2013), the focus of management in peripheral habitat is to provide a mosaic of forest structure to support snowshoe hare prey resources for individual lynx that infrequently may move through or reside temporarily in the area. Vegetation management can support snowshoe hares and lynx with the creation of dense early-successional forest conditions as well as mature multi-story conifer stands (USFWS 2017). We also recommend designing timber harvest, planting, and thinning to include some representation of young dense regenerating stands in the mosaic for snowshoe hare production areas. Landscape connectivity should also be maintained to allow for any lynx movement and dispersal. Although the Forest does not contain core habitat for the species, we recommend including measures in the DEIS to avoid diminishing lynx and hare habitats with forest management practices that may alter natural disturbance patterns and regimes, create unnaturally large or continuous openings, fragment habitat, or eliminate connectivity/dispersal habitats.

Monarch butterfly

Monarch butterfly is a candidate species for listing under the ESA and may occur throughout the Plan area. We recommend addressing the potential for breeding and migrating monarch butterflies in the DEIS and integrating voluntary conservation measures for western monarch butterfly for all breeding and migratory habitat in the Plan area, whenever feasible and appropriate. Voluntary conservation actions for

monarch butterfly include conducting management actions that may affect butterflies outside of the estimated timeframe for monarch presence; protecting monarchs, their habitats, and other pollinators from pesticides; avoid planting tropical milkweed and replace existing tropical milkweed with native milkweed; reporting monarch and milkweed occurrences in the Plan area; and encourage the growth of diverse native, nectar plants with bloom times across the monarch breeding and migratory season (USFWS 2021c). Please see our attached *Western Monarch Butterfly Conservation Recommendations* for more details on these conservation actions.

Other Listed Species

Other federally listed species may occur in the Plan area based on the identification of potential habitat. To expedite information sharing, we created an Information, Planning, and Conservation System (IPaC) that is available online at http://ecos.fws.gov/ipac/. IPaC can be used to identify any potential federally threatened or endangered species in your Project area by using the "Get Started" button. We recommend that you use IPaC to inform the species list, habitat suitability evaluations, and surveys that may be needed for this Plan and other planning and management activities. Site-specific projects designed under the Forest Plan would be subject to consultation requirements under section 7 of the ESA where they may affect federally listed species.

Greater Sage-grouse and Sagebrush Ecosystems

Greater sage-grouse (*Centrocercus urophasianus*) is a species of conservation concern in Utah. In 2015, we determined that the greater sage-grouse was not warranted for protection under the ESA. Our decision followed an unprecedented conservation partnership across the western United States that has significantly reduced threats to the greater sage-grouse across 90 percent of the species' breeding habitat. Our decision relied on effective implementation of Federal land-use plans, including increased efforts to control invasive species and wildfire in sagebrush ecosystems. Success in restoring the health of the sagebrush ecosystem also requires the continued commitment of Federal agencies, private landowners, industry, and conservation organizations to avoid and minimize effects to greater sage-grouse and their sagebrush habitat.

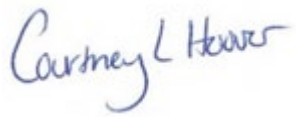
The Plan area overlaps the greater sage-grouse Wyoming Basin and Strawberry Priority Areas for Conservation (PAC), important areas for greater sage-grouse, as identified in the Conservation Objectives Team final report (USFWS 2013). The Wyoming Basin and Strawberry PACs and other PACs comprise those areas necessary for maintaining greater sage-grouse representation, redundancy, and resilience across the landscape. Preserving the integrity of all identified PACs is an essential foundation for greater sage-grouse conservation.

We recognize that greater sage-grouse management in the Forest will be directed by the September 2015 Sage Grouse Management Plan Record of Decision, or the most recent interagency greater sage-grouse management plan. Because management of the sagebrush biome may be most effective with a move

toward maintenance of ecosystem resilience and resistance and conservation of the entire suite of sagebrush-dependent and -associated species, we recommend the Forest implement conservation measures in important sagebrush habitats in addition to PACs for greater sage-grouse (Remmington 2021). Threats to the sagebrush biome include altered fire regimes, invasive plant species, conifer expansion, overabundant free-roaming equids (wild horses [*Equus caballus*] and burros [*Equus asinus*]), energy development, cropland conversion, infrastructure, improper livestock grazing, and climate change (Remmington 2021).

We thank you for the opportunity to comment on the DEIS. If you have any questions regarding this memo for Reclamation, please contact Theresa Taylor at ttaylor@usbr.gov or (303) 445-2806. For questions related to USFWS's comments, please contact Joe Moore, Biologist, at (385) 285-7921, or email joseph_moore@fws.gov. If you have any questions for the Department, please contact me at (303) 478-3373, or courtney_hoover@ios.doi.gov.

Sincerely,



Courtney Hoover, Regional Environmental Officer
Office of Environmental Policy and Compliance

Project Recommendations for Migratory Bird Conservation
U.S. Fish and Wildlife Service, Utah Field Office (May 2020)

The Migratory Bird Treaty Act (MBTA) is the cornerstone of migratory bird conservation and protection in the United States. The MBTA implements four treaties that provide for international protection of migratory birds. The USFWS maintains a list of all species protected by the MBTA at 50 C.F.R. § 10.13. This list includes over one thousand species of migratory birds, including eagles and other raptors, waterfowl, shorebirds, seabirds, wading birds, and songbirds. The MBTA does not protect introduced species such as the house (English) sparrow, European starling, rock dove (pigeon), Eurasian collared-dove, and non-migratory upland game birds.

The U.S. Fish and Wildlife Service (USFWS) recommends that the following migratory bird conservation measures be implemented as you complete your project:

a. Wherever possible we recommend that projects be completed outside the migratory bird nesting season to avoid and minimize impacts to migratory birds.

b. If the project includes the loss or degradation of migratory bird habitat then complete all portions of the project that could impact migratory birds outside the maximum migratory bird nesting season. This includes ground-disturbing activities, habitat removal, clearing or cutting of vegetation, grubbing, burning, etc. If that is not feasible, we recommend that you complete the project outside the minimum migratory bird nesting season.

    The time period associated with the maximum migratory bird nesting season is approximately December to August. The time period associated with the minimum migratory bird nesting season is April 1 to July 15 (time-frame when the majority of annual bird nesting occurs).

c. If the project needs to occur during the migratory bird nesting season, impacts to birds can be avoided or minimized by completing vegetation treatments and vegetation clearing and removal actions during the fall and winter (outside the migratory bird nesting season per above) prior to the nesting season when the project will begin.

d. If a project may impact migratory birds and/or cause the loss or degradation of migratory bird habitat, and such work cannot occur outside the migratory bird nesting season, we recommend surveying impacted portions of the project area to determine if migratory birds are present and nesting. Surveys should emphasize detecting presence of USFWS Birds of Conservation Concern, take place during the nesting season the year before the nesting season in which project is scheduled to occur, and should document presence of migratory birds at least throughout the entire minimum migratory bird nesting season (April 1 to July 15). Nest surveys should be conducted by qualified biologists using accepted survey protocols.

e. If your project must occur during the maximum migratory bird nesting season, implement measures to prevent migratory birds from establishing nests in the potential impact

area. These steps could include covering equipment and structures and hazing birds away from the project footprint. Migratory birds can be hazed to prevent them from nesting until egg(s) are present in the nest. However, we acknowledge that hazing migratory birds away from a project site is likely only practical for projects with a relatively small footprint (i.e. projects about 5 to 10 acres in size or smaller). Do not haze or exclude access to nests for bald or golden eagles or any migratory bird species federally listed under the Endangered Species Act (ESA), as these actions are prohibited without a permit for these species.

f. If your project must be scheduled during the maximum migratory bird nest season, and vegetation clearing and removal work cannot be completed prior to the nesting season, then we recommend performing a site-specific survey for nesting birds no more than 7 days prior to all ground-disturbing activities or vegetation treatments.

    If you document active migratory bird nests during project nest surveys, we recommend that a spatial buffer be applied to these nests for the remainder of the nesting season. Vegetation treatments or ground-disturbing activities within the buffer areas should be postponed until after the birds have fledged from the nest. A qualified biologist should confirm that all young have fledged.

We recommend the use of the *Utah Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances* (Romin and Muck 2002) to provide consistent application of raptor conservation measures to your project or action in Utah. We provide recommendations for raptor surveys and conservation measures in the Guidelines to ensure that proposed projects will avoid adverse impacts to raptors. Locations of existing raptor nests should be identified prior to the initiation of project activities. We recommend that appropriate spatial buffers and timing limits be applied to your project for raptors during crucial breeding and nesting periods relative to raptor nest sites or territories per our Guidelines. Raptors may initiate nesting as early as December for certain species. Nesting and fledging can continue through August and for some species the young may not fledge from nests until September.

ATTACHMENT 1

Guidelines for the identification and evaluation of suitable habitat for western yellow-billed cuckoo in Utah

The purpose of this guidance is to assist federal agencies and project proponents in identifying areas that provide suitable, occupied habitats for western yellow-billed cuckoos (cuckoo) in Utah, and should be further evaluated for potential effects from proposed project activities.

Step 1: Identify and delineate all riparian habitats within 0.5 mile[1] of the proposed action, below the elevation of 8,500 feet.

Step 2: Identify suitable cuckoo breeding, nesting habitat, including associated foraging areas.

Riparian habitat patches used by breeding and nesting cuckoos vary in size and shape, ranging from a relatively contiguous stand of mixed native/exotic vegetation to an irregularly shaped mosaic of dense vegetation with open areas. The following parameters characterize suitable breeding and nesting cuckoo habitat:

- Vegetation that is predominantly multi-layered, with riparian canopy trees and at least one layer of understory shrubby vegetation;
    - Riparian overstory and understory vegetation that supports suitable cuckoo habitat may include: cottonwood (*Populus spp*), willow (*Salix* spp), alder (*Alnus spp*), walnut (*Juglans spp*), boxelder (*Acer spp*), sycamore (*Plantanus spp*), ash (*Fraxinus spp*), mesquite (*Prosopis spp*), tamarisk (*Tamarix spp*), and Russian olive (*Elaeagnus angustifolia*). Suitable understory vegetation does not include grasses or forbs although herbaceous vegetation is often present alongside shrubby understory.
    - Western yellow-billed cuckoo nest in tamarisk, consequently, the presence of tamarisk should not eliminate a vegetation patch from a suitability determination. However the potential for cuckoo occurrence decreases rapidly as the amount of tamarisk cover increases.
- Patches of multi-layered vegetation (as described above) that are at least 12 acres (5 ha) or greater in extent and separated from other patches of suitable habitat by at least 300 meters;
- Somewhere within a patch, the multi-layered riparian vegetation (as described above) should be at least 100 meters wide by 100 meters long. This is to avoid patches that may be long enough to meet the minimum area (12 acres) but are so narrow that they are unsuitable-- 750 m x 75 m (length x width) for example; and,
- Open areas, or gaps of multi-layered vegetation within a patch are less than 300 meters.

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1 A 0.5 mile distance is the area in which impacts to cuckoos may occur from project-associated noise, light, and human disturbance. Actual effects may vary depending on the type of activity and noise levels. For example, drilling rig operations may create more noise and human disturbance than infrequent traffic associated with monitoring well sites.

Breeding and nesting cuckoos will forage in riparian patches that have a single layer overstory canopy and are within 300 meters (m) of the edge of suitable breeding and nesting habitat.

STEP 3: Suitable cuckoo breeding, nesting, and foraging habitats within 0.5 mile of project activities should be surveyed to determine if a habitat patch contains cuckoos.

STEP 4: Habitats determined to be occupied by cuckoos should be evaluated for potential effects from project activities. If adverse effects to cuckoos are anticipated, federal agencies should initiate section 7 consultation with the U.S. Fish and Wildlife Service under the Endangered Species Act.

References

Halterman, M., M.J. Johnson, J.A. Holmes and S.A. Laymon. 2016. A Natural History Summary and Survey Protocol for the Western Distinct Population Segment of the Yellow-billed Cuckoo. Draft May 2016: U.S. Fish and Wildlife Techniques and Methods, 45 p.

Laymon, S. 2015. Personal Communication. Senior Wildlife Biologist, Sacramento Fish & Wildlife Service Office.

U.S. Fish and Wildlife Service. 2014. Final rule determining threatened status for the western yellow-billed cuckoo. Federal Register 79: 59992-60038.

U.S. FISH AND WILDLIFE SERVICE

April 29, 2021

Western Monarch Butterfly Conservation Recommendations:

Purpose: Section 7(a)(1) of the Endangered Species Act of 1973 (ESA), directs federal agencies to use their authorities to further the purpose of the ESA, by conducting conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary activities that an action agency may undertake to avoid and minimize the adverse effects of a proposed action, implement recovery plans, or to develop information that is useful for the conservation of listed species. The purpose of the following conservation recommendations is to encourage federal agencies to incorporate monarch butterflies into their Environmental Assessments and Biological Assessments associated with Section 7 Biological Opinions (BO), when in consultation with the U.S. Fish & Wildlife Service. These recommendations are organized by habitat zone, so that they may be cut/paste, as applicable and contingent upon project location. There is potential utility for these recommendations beyond Section 7, and they are intended to promote benefits for other pollinators as well.

Background: The western monarch butterfly population has declined by more than 99 percent since the 1980s. An estimated 4.5 million monarchs overwintered on the California coast in the 1980s, whereas in 2020, the population estimate for migratory overwintering monarchs was less than 2,000 butterflies. This extreme population decline is due to multiple stressors across the monarch's range, including the loss and degradation of overwintering groves; pesticide use, particularly insecticides; loss of breeding and migratory habitat; climate change; parasites and disease. Historically, the majority of western monarchs spent the winter in forested groves near the coast from Mendocino County, California, south into northern Baja California, Mexico. In recent years, monarchs have not clustered in the southern-most part of their overwintering range, and they are likely year-round residents in some areas of the coast. This resident phenomenon is plausibly due to a combination of climate change, and an abundance of residential-planted non-native, evergreen tropical milkweed that is available for monarchs year-round. Migratory western monarchs leave the overwintering groves in mid-winter to early-spring. Throughout the spring and summer, monarchs breed, lay their eggs on milkweed, and migrate across multiple generations within California and other states west of the Rocky Mountains. In an attempt to reverse the severe population decline of western monarch butterflies, and to protect other pollinators as well, we encourage implementation of the conservation recommendations listed below. Please also see the "Priority Restoration Zones in California for Recovering Western Monarchs" map (Figure 1) for suggested areas to focus conservation actions. Western monarch habitat outside of California is considered Priority level 3, where conservation actions are still important, especially for the larger pollinator community.

Please contact Samantha Marcum (samantha_marcum@fws.gov) or Cat Darst (cat_darst@fws.gov) with questions or suggestions on these recommendations.

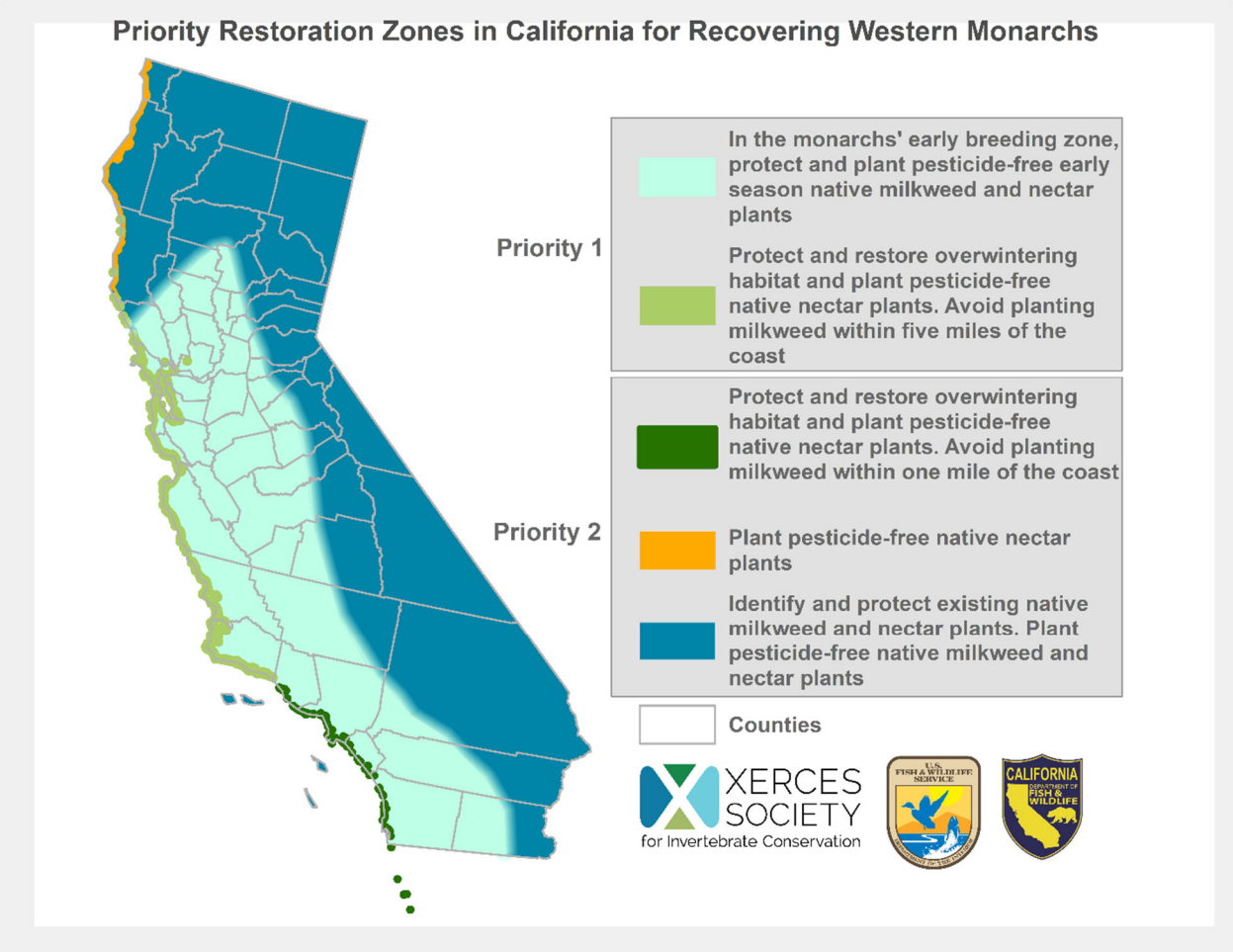

Figure 1. Priority Monarch Habitat Restoration Areas in California.

<u>Coastal California Overwintering Habitat</u>: Western monarchs migrate to the California coast, and cluster in a specific set of forested tree groves during the fall and winter each year. The overwintering groves provide protection from inclement weather, and possess suitable vegetation and microclimate conditions for monarchs (e.g., roosting trees, wind protection, dappled sunlight, nectar sources, water and/or dew for hydration, high humidity, and an absence of freezing temperatures). In the overwintering zone of the coast (i.e., within five miles of the coast from Mendocino County south through Santa Barbara County, and within one mile of the coast from Ventura County south through San Diego County), we recommend the following:

1. Protect, manage, enhance and restore monarch butterfly overwintering groves (Find An Overwintering Site).

2. Conduct overwintering grove habitat assessment(s), and develop and implement long-term grove management plans, as applicable. Management plan actions for groves may include, but are not limited to:

    a. Enhance roosting trees within overwintering groves and within 1/2 mile of groves by planting native insecticide-free trees (e.g., Monterey pine *(Pinus radiata)*, Monterey cypress *(Cupressus macrocarpa)*, Coast redwood *(Sequoia sempervirens)*, coast live oak *(Quercus agrifolia),* Douglas fir *(Pseudotsuga menzesii),* Torrey pine (*Pinus torreyana*), western sycamore *(Platanus racemosa),* bishop pine *(Pinus radiata)* and others, as appropriate for location).

    b. Avoid the removal of trees or shrubs within 1/2 mile of overwintering groves, except for specific grove management purposes, and/or for human health and safety concerns. The maintenance of trees and shrubs within a 1/2 mile of these sites provides a buffer to preserve the microclimate conditions of the winter habitat.

    c. Conduct management activities in groves from March 16-September 14, in coordination with a monarch biologist, such as tree trimming, mowing, burning and grazing in monarch overwintering habitat outside of the estimated timeframe when monarchs are likely present.

    d. Enhance native, insecticide-free nectar sources by planting fall/winter blooming forbs or shrubs within overwintering groves and within one mile of the groves (Nectar Planting Lists).

3. Protect monarchs, other pollinators, and their habitats from pesticides (i.e., insecticides and herbicides).

    a. Avoid the use pesticides within one mile of overwintering groves, particularly when monarchs may be present. If pesticides are used, then conduct applications from March 16-September 14, when possible.

    b. Screen all classes of pesticides for pollinator risk to avoid harmful applications, including biological pesticides such as *Bacillus thuringiensis* (UC Integrated Pest Management).

    c. Avoid the use of neonicotinoids or other systemic insecticides, including coated seeds, any time of the year in monarch habitat due to their ecosystem persistence, systemic nature, and toxicity.

    d. Avoid the use of soil fumigants.

    e. Consider non-chemical weed control techniques, when possible (Cal-IPC Non-chemical BMPs).

Please contact Samantha Marcum (samantha_marcum@fws.gov) or Cat Darst (cat_darst@fws.gov) with questions or suggestions on these recommendations.

f. Avoid herbicide application on blooming flowers. Apply herbicides during young plant phases, when plants are more responsive to treatment, and when monarchs and other pollinators are less likely to be nectaring on the plants.

g. Whenever possible, use targeted application herbicide methods, avoid large-scale broadcast applications, and take precautions to limit off-site movement of herbicides (e.g., drift from wind and discharge from surface water flows).

h. Separate habitat areas from areas receiving chemical treatments with a pesticide-free spatial buffer and/or evergreen vegetative buffer of coniferous, non-flowering trees to capture chemical drift. The appropriate monarch and pollinator habitat spatial buffer size is contingent upon several factors, including weather and wind conditions, but at a minimum, the habitat should be at least 40 feet from ground-based pesticide applications, 60 feet from air-blast sprayers, and 125 feet from any systemic insecticide applications or seed-treated plants.

4. To minimize the spread of the pathogen *Ophryocystis elektroscirrha* (OE), and to encourage natural monarch migration, do not plant non-native tropical milkweed (*Asclepias curassavica*). OE is able to build up on tropical milkweed, because these plants are evergreen, and they do not die back in the winter. OE can be debilitating and/or lethal to monarchs.

5. Remove tropical milkweed that is detected, and replace it with native, insecticide-free nectar plants suitable for the location (Nectar Planting Lists).

6. To assist in maintaining normal migration behavior, do not plant any type of milkweed within five miles of the coast from Mendocino County south through Santa Barbara County, and within one mile of the coast south of Santa Barbara County.

7. After appropriate training, conduct grove monitoring for butterflies during the Western Monarch Counts each fall and winter. When possible, report when monarchs arrive and depart the groves each year (Western Monarch Count).

8. To provide benefits for monarchs and other pollinators anywhere on the landscape within the overwintering zone, install native, insecticide-free nectar plants that bloom throughout the year, as is feasible, for the location (Nectar Planting Lists).

Breeding and Migratory Habitat: Monarch butterflies breed and migrate across multiple generations each year throughout the western U.S. The early breeding zone is an estimated area in California where monarchs are likely to breed and/or lay their eggs on milkweed after departing the overwintering groves in mid-winter to early spring each year (See Figure 1, Priority Restoration Zones in California map, above). Early emerging milkweed species are likely a limiting factor on the landscape in the early breeding zone and may be associated with the severe population decline of western monarchs, and these plants are essential to successfully create the next generation of migratory butterflies. For monarch breeding and migratory habitat, we recommend the following:

Priority 1 Zone:

1. Enhance and maintain habitat in the Priority 1 early breeding zone of California, (Figure 1, above), by identifying and protecting existing habitat, and planting native, insecticide-free early-emerging milkweed species (e.g., *Asclepias vestita, A. californica, A. eriocarpa, A. cordifolia, A. erosa*), and native, insecticide-free flowering plants that are available to monarchs from January-April, as appropriate for the project location (Nectar Planting Lists; Milkweed Seed Finder).

Priority 2 Zone:

2. Enhance and maintain habitat in the Priority 2 breeding/migratory habitat zone of California (Figure 1, above) and in other western States, by identifying and protecting existing habitat, and planting native, insecticide-free milkweed species and flowering plants that are appropriate for the location (Nectar Planting Lists).

For All Breeding and Migratory Zones:

3. Conduct management activities such as mowing, burning and grazing in monarch breeding and migratory habitat outside of the estimated timeframe when monarchs are likely present (Figure 2, Recommended Management Timing Map, below).

4. Protect monarchs, other pollinators, and their habitats from pesticides (i.e., insecticides and herbicides).

    a. Avoid the use of pesticides when monarchs may be present, when feasible (Figure 2, Recommended Management Timing Map, below).

    b. Screen all classes of pesticides for pollinator risk to avoid harmful applications, including biological pesticides such as *Bacillus thuringiensis* (UC Integrated Pest Management).

    c. Avoid the use of neonicotinoids or other systemic insecticides, including coated seeds, any time of the year in monarch habitat due to their ecosystem persistence, systemic nature, and toxicity.

    d. Avoid the use of soil fumigants.

    e. Consider non-chemical weed control techniques, when feasible (Cal-IPC Non-chemical BMPs).

    f. Avoid herbicide application on blooming flowers. Apply herbicides during young plant phases, when plants are more responsive to treatment, and when monarchs and other pollinators are less likely to be nectaring on the plants.

g. Whenever possible, use targeted application herbicide methods, avoid large-scale broadcast applications, and take precautions to limit off-site movement of herbicides (e.g., drift from wind and discharge from surface water flows).

h. Separate habitat areas from areas receiving treatment with a pesticide-free spatial buffer and/or evergreen vegetative buffer of coniferous, non-flowering trees to capture chemical drift. The appropriate monarch and pollinator habitat spatial buffer size is contingent upon several factors, including weather and wind conditions, but at a minimum, the habitat should be at least 40 feet from ground-based pesticide applications, 60 feet from air-blast sprayers, and 125 feet from any systemic insecticide applications or seed-treated plants.

5. To minimize the spread of the pathogen *Ophryocystis elektroscirrha* (OE), do not plant non-native tropical milkweed (*Asclepias curassavica*). OE can build up on tropical milkweed and infect monarchs, because these plants are evergreen and do not die back in the winter. OE can be lethal to monarchs.

6. Remove tropical milkweed that is detected, and replace it with native, insecticide-free milkweed and native, insecticide-free nectar plants appropriate for the location.

7. Report milkweed and monarch observations from all life stages, including breeding butterflies, to the Monarch Milkweed Mapper or via the project portal in the iNaturalist smartphone app.

8. To provide benefits for monarchs and other pollinators anywhere on the landscape within the breeding/migratory zone, install native, insecticide-free milkweed and native, insecticide-free nectar plants that bloom throughout the year, as is feasible for the location (Nectar Planting Lists; Milkweed Seed Finder).

Please contact Samantha Marcum (samantha_marcum@fws.gov) or Cat Darst (cat_darst@fws.gov) with questions or suggestions on these recommendations.

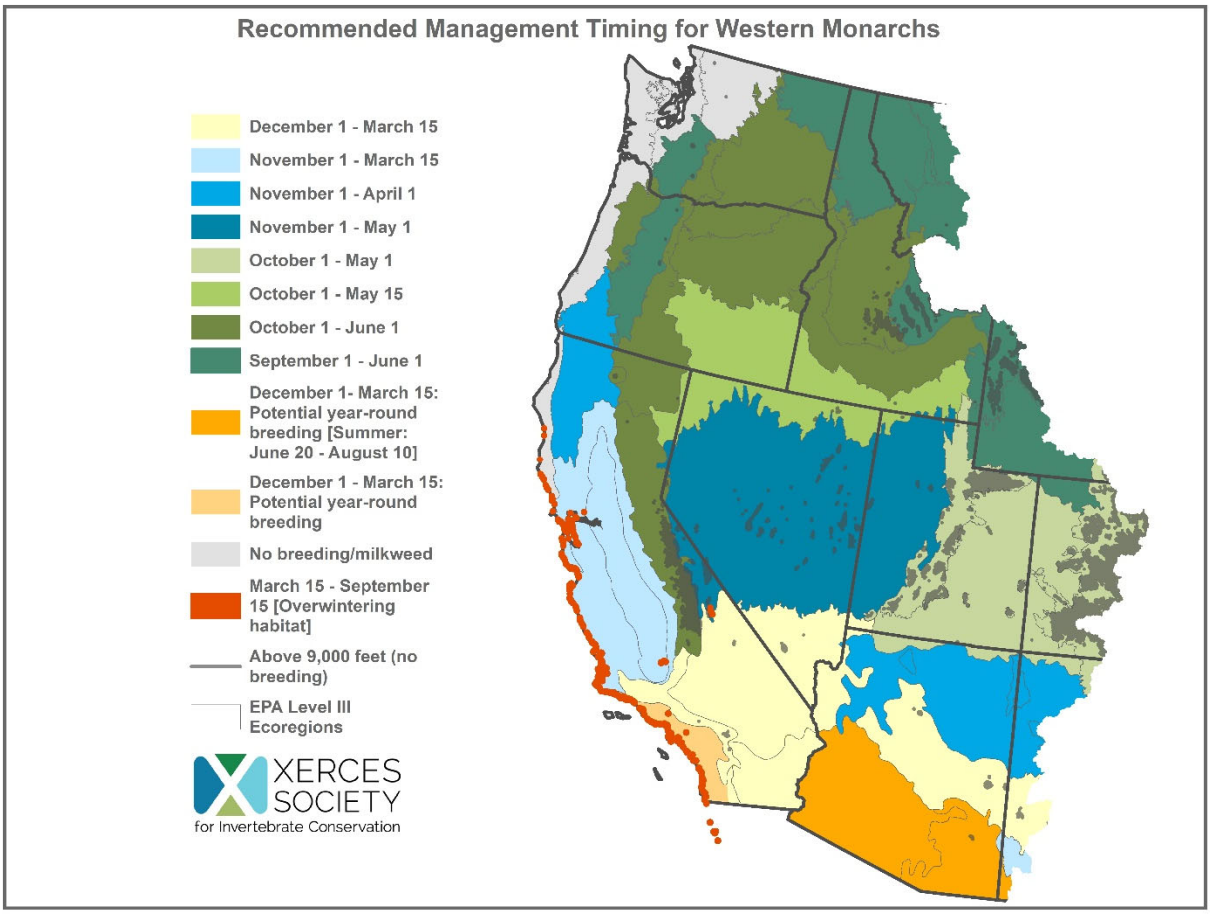

Figure 2. Recommended Management (i.e., mowing, burning, grazing, pesticide applications) Timing Windows in the western U.S. by Zone.

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