



United States Department of the Interior



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Memorandum

To: District Manager, Medford District Office, Bureau of Land Management
From: *Jim Thraalkill*
Field Supervisor, Roseburg Field Office, U.S. Fish and Wildlife Service
Subject: Informal consultation the Medford District Bureau of Land Management's proposed activities on Federally Listed Plant Species and Designated Critical Habitat (FWS reference # 01EOFW00-2014-I-0013)

This document transmits the Fish and Wildlife Service's (Service) Letter of Concurrence (LOC) addressing projects (proposed action or Projects) proposed by the Medford District Bureau of Land Management (District or BLM). At issues are the effects of the proposed action on the endangered Cook's desert parsley (*Lomatium cookii*) (desert parsley), the endangered Gentner's fritillary (*Fritillaria gentneri*) (fritillary) (listed plants), and critical habitat for desert parsley. The LOC was prepared pursuant to section 7 of the Endangered Species Act of 1973, as amended (Act) (16U.S.C 1531 et seq.).

The LOC is based on information provided in the District's Biological Assessment ((USDI BLM 2013; Assessment, incorporated herein by reference) dated October 23 2013 and received in our office on October 28, 2013, as well as other supporting information cited herein. The LOC reflects the Service's determination that implementation of the proposed action, as proposed by the District, is not likely to adversely affect Cook's desert parsley or Gentner's fritillary nor will the projects destroy or adversely modify critical habitat for Cook's desert parsley.

ACTION AREA

The term "action area" is defined in the implementing regulations for section 7 at 50 CFR 402.02 as "all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action." For the purposes of the project proposed herein, the action area includes all District and Cascade-Siskiyou National Monument (CSNM) lands in Jackson and Josephine counties in Oregon, and lands directly and indirectly affected by the proposed action.

PROPOSED ACTION OR PROJECTS

The proposed action includes the program of forest management activities (Table 1) which are anticipated to begin in FY 2014 and/or upon signing of associated decision documents (decision notice, memo, or record of decision). The District and Service will annually review proposed actions as described herein and the status of listed species to determine whether any changes warrant reinitiation of consultation. Please note that the LOC is valid for the term of each action as discussed in this document. Many of the management actions covered in this LOC have Project Design Criteria (PDC) that result in the project effect determinations that are insignificant, discountable or beneficial (see PDC discussion below).

Management Activities not covered under this LOC

There are several types of management activities that are too broad or variable likely resulting in adverse effects and therefore will require separate consultation. These activities include:

1. Recreational off-highway vehicle use including designating OHV areas.
2. Land exchange and other realty actions.
3. Some research projects other than the recovery actions described herein.
4. Suppression activities for large scale, high severity fires.
5. Treatments to mitigate catastrophic insect or disease outbreak (e.g. Sudden Oak Death).
6. Management activities that are prescribed following completion of a revised Medford District Resource Management Plan (anticipated completion in late 2015) that may differ substantially from those analyzed in the Assessment. When this new plan is complete, BLM and the Service will discuss the need to reinitiate consultation.

Project Design Criteria

Project design criteria (PDC), as described in the Assessment, are conservation measures that modify prescriptions or project activities with the intention of eliminating or reducing impacts so no adverse impacts occur to listed plants or their habitat. PDC may require pre-project surveys in suitable plant habitat for activities that have the potential to adversely affect listed plants. Survey results may lead to changing the timing of the action to not affect the plant species during its growing season and/or establishing no-activity buffers around plant sites. The BLM will make every effort to coordinate with its staff, contractors and the Service to reduce and minimize project impacts; additional discretionary PDC may be proposed during the interdisciplinary team project planning process (see Project Notification and Communication below). PDC may be exempted in the case of emergency situations, for example, fire suppression activities. General PDC are described below and project specific PDC are described in the Assessment.

Table 1. Project Activities that *may affect, but are not likely to adversely affect* Gentner's fritillary and Cook's desert parsley on the Medford District BLM, including the Cascade-Siskiyou National Monument, starting in FY 2014(Reference # 01EOFW00-2014-I-0013).

Project Type	Management Action
Abandoned mine land actions	Shaft or adit closures
Mining and quarry operations	Notice-level, plan-level operations, mining occupancy reclamations, new quarries, and quarry expansion
Cultural resource projects	Excavations and cultural site maintenance/restoration historic cemetery restoration
Fuels management & wildfire suppression	Mechanical fuel reduction, hand piles, prescribed burning
Range operations	Livestock grazing, fence construction and repair, forage enhancement planting, water impoundment and spring box construction and repair
Recovery actions	Manual control of woody vegetation, chemical control of woody vegetation with cut-stump, hack-and-squirt, or direct-inject methods. Prescribed burning in listed plant habitat, non-native invasive (noxious weed) (NNI) plant control with herbicides in and immediately around listed plant sites, seed or bulblet collection, planting bulbs and seedlings
Recreation/Administration	Facility construction or reconstruction; river recreation permits (private, commercial and miscellaneous); trail, campground, facility, utility site maintenance.
Research, inventory, and monitoring	Annual monitoring of desert parsley and fritillary sites.
Road maintenance and construction	Road maintenance or repair, road construction, including timber sale roads, bridge construction.
ROW permitting for roads	Construction and maintenance of communication sites; FLPMA, waterline, power line, and utility roads; O&C and event linear and non-linear impact permits.
Silvicultural treatments	Vegetation management vegetation management activities, such as stand density management, conversion, fertilization, pruning, pre-commercial thinning of managed and natural stands, Port-Orford-cedar sanitation, riparian thinning, animal damage control (gopher trapping), slash piling, and burning, pre-commercial thinning in natural stands, maintenance/protection of existing stands, fertilization, pruning, reforestation/planting; maintenance and protection of new stands
Special forest product harvesting	Collection of Christmas trees, boughs burls, edible and medicinal plants, floral greenery, mushrooms, whipstock, bolts, rails, fencing, post, poles, pulpwood, roundwood, sawtimber, fuelwood, mosses, lichens, transplants, seeds, and cones
Tree harvesting	Commercial and non-commercial regeneration, seed-tree, selective, and salvage harvest; density management thinning; restoration thinning, and individual tree removal
Watershed restoration	Meadow or floodplain restoration, stream structure placement, large fish passage, culvert replacement or repair, cross culvert replacement or repair, road closure and obliteration
Non-native invasive plant control	Biological treatments, herbicide spot spraying, manual/mechanical treatments release sites

Clearance Surveys

Large-scale projects involving ground disturbance such as timber harvests, new quarry operations, large right-of-way (ROW) permits (such as oil and gas pipelines), road construction, and fuels reduction projects will require a minimum one-year survey for both of the listed plant species. A two-year survey for the fritillary is mandatory for tree harvesting, road construction, pile burning, mechanical fuel reduction, new livestock grazing allotments, new rock quarries, and new large utility construction (USDI BLM 2013). All projects in the proposed action including smaller scale, minimum impact, and habitat restoration projects such as cultural resource projects, watershed restoration, small-scale ROW permits, silviculture projects, small-scale notice level mine operations, recreation improvement without heavy equipment, and other habitat restoration projects require a minimum one-year survey for all listed plant species in suitable habitat within their respective ranges.

PDC involving seasonal restrictions (March 15 to July 1 for fritillary and February 15 to July 1 for desert parsley) (USDI BLM 2013) will be applied to minimal impact and non-ground disturbing vegetation management projects, as necessary, to eliminate potential above-ground impacts to known listed plant species.

Marking and Buffering

Occurrences of listed plants will be marked on the ground using the District's botany flagging colors (USDI BLM 2013). Buffers using the District's flagging will be placed around these plant occurrences, which could include a single plant or group of patches within a 150-300 ft. distance or as appropriate depending on the distribution and the project type. The radius of that buffer will depend on the action involved, distance to established roads, and geography of the land. For example, a 25-foot no-entry buffer will be placed around listed plant populations near burn piles or within broadcast burns, a 100-foot buffer will be implemented near heavy equipment operations. To reduce effects of trees out shading listed plants, the PDC require no trees will be planted within 100 foot of listed plant occurrences. For the fritillary, efforts will be made to retain 40 percent combined canopy coverage of trees and shrubs within 25-foot plant site buffers.

No forest collections will be permitted within known listed plant occurrences and the BLM will direct collectors to areas that have no occurrences of listed plants. As a precautionary measure, permit holders will be provided listed plant species guides by BLM staff to assist in plant identification and report rare plant occurrences. Burl collection will not occur within 100 feet of known occurrences of fritillary. Pre-grazing allotments will be surveyed for fritillary and desert parsley and measures will be taken to protect listed plant occurrences by changing the grazing size, timing, duration, and boundaries, as required to conform to the LOC.

Invasive plant control

Non-native invasive (NNI) species will be treated by hand-pulling, applying spot spray, wicking, and direct injection of herbicide. When near or within listed plant occurrences, NNI species will be treated when plants are dormant, outside of the seasonal restriction. Roadside spray will avoid listed plants by placement of a minimum 50-foot no spray buffer around known occurrences. Precautions such as equipment washing, dry condition yarding, no new log decks, and seeding of skid trails will be required to reduce NNI seed spread and maintain habitat conditions.

Listed plant collections and recovery actions

PDC for listed plant collections and recovery actions, as mentioned below, will be coordinated with the Service.

- Allow the collection of listed plants (seeds, bulbs, and plants) on Medford District only if the collector has obtained a permit from USFWS and agrees to coordinate all actions with BLM.
- Allow collections of listed plants only for the purposes of research or recovery actions.
- Report all collection activities annually to USFWS. (USDI BLM 2013).
- BLM staff will work with Service staff to develop monitoring plans to measure effectiveness of augmentation and reintroduction activities.

Emergency Exemptions

In emergency situations, for example an outbreak of pathogenic fungi, large scale fire, etc, PDC may be waived at the discretion of the decision-maker, if necessary to protect public safety. The Service will be notified of all such occurrences and the Service and BLM will determine if emergency consultation is required. In the event that emergency consultation is initiated, the District will act prudently and efficiently to complete consultation in a timely manner, preferably within 6 months of completion of the emergency action.

Cook's desert parsley critical habitat

Projects involving heavy equipment work in desert parsley critical habitat (USFWS 2010) must be evaluated by a BLM hydrologist prior to implementation. The hydrologist will evaluate potential effects of the proposed actions on site hydrology and prescribe appropriate PDC conforming to this LOC, which may include:

- (1) seasonal entry restrictions,
- (2) limiting the extent of disturbance,
- (3) temporary engineered solutions to reduce compaction and erosion, and
- (4) restoration of vegetation and hydrologic function.

Project Notification and Communication

The following notification procedures of the general PDC include:

1. Project notification: BLM (or their contractor) Project leaders will communicate with BLM botanists of the intent to initiate a project, allowing for sufficient time to plan and complete clearance surveys.
2. BLM Project planners and line officers will ensure that procedures clearing projects for implementation include direct notification of all prescribed PDC to the Project Leader.
3. Project leaders will notify project botanists of the intent to begin the project, allowing for sufficient time to plan and implement applicable PDC under this LOC.
4. The project botanist will coordinate with the Project Leader to ensure that all parties—including contractors and agency work crews—clearly understand all prescribed PDC, including the locations of buffered plant sites and a description of how the sites are marked on the ground.
5. All parties will be notified that departures from clearance survey protocols and other PDC are not permitted and could trigger reinitiation of consultation.

EFFECTS OF THE PROPOSED ACTION ON LISTED PLANTS

Direct Effects

Direct impacts to fritillary and desert parsley by the proposed program of activities could include: physical impacts from humans during the growing season, in the course of authorized BLM activities (e.g., timber harvesting, manual fuels reduction, silvicultural practices, road construction, weed treatment, recreation, new quarry development, monitoring, research), high concentrations of recreation use near list plants, heavy grazing by cattle, and NNI plant control actions by nearby application of herbicides, causing die-offs.

The PDC (USDI BLM 2013) however, will largely negate or avoid direct impacts to listed plants by requiring one or two year surveys prior to on-the-ground work and avoidance of areas occupied by the listed plant species. The surveys will ensure no listed plants are present in the work area and/or inform the use of seasonal restrictions for work operations or no entry buffer placement around listed plants. The implementation of PDC will remove these direct effects by protection of all known listed plant occurrences within the project area. The buffers are anticipated to deter inadvertent impacts by work crews disturbing soil, driving, or trampling across plants. Plant occurrences will be identified for the work crews with appropriate notices to ensure that the workers are aware of the population areas before the activity begins. Where staff contract botanists survey locations, they will identify and document any listed plant occurrences found or if no occurrences are observed after following survey protocol (USDI BLM 2013), determine that listed plants are not present.

Thinning of the tree canopy can also improve suitable listed plant habitat by increasing the light regime, increasing available moisture to root systems, and reducing fuel loads (USFWS 2003). These activities likely mimic the role that wildfire historically played in these habitats by keeping the site more open. Tree or shrub growth in meadows and woodlands supporting fritillary and desert parsley were most likely regulated by wildfire during the species' dormant season. These activities will follow the PDC restrictions for manual fuel reduction. Road maintenance operations may benefit listed plant habitat by creating more open edge habitat and allow more light to enter plant habitat.

If discretionary impacts to listed plants are anticipated to occur during fire suppression actions, the BLM will initiate emergency consultation with the Service.

Indirect Effects

Indirect effects from habitat disturbance can have adverse, neutral, or beneficial effects to plants; depending on the type, timing, intensity, and duration of the disturbance.

Ground disturbing activities from timber sales, fuels projects, ROW permits, watershed restoration, road maintenance and construction, grazing projects, recovery actions, and other projects, can facilitate the introduction and spread of NNI such as yellow starthistle (*Centaurea solstitialis*), Scotch broom (*Cytisus scoparius*), dyer's woad (*Isatis tinctoria*), yellowtuft (*Alyssum* spp.), and Canada thistle (*Cirsium arvense*). NNI can have an indirect effect by competing with listed plants for light, space, water, and nutrients. The washing of BLM, Forest Service, and contractor equipment and vehicles can reduce the spread, but does not control noxious weeds. Noxious weeds also can be introduced into areas of high use (trailheads, developed recreation sites) and can spread to other areas and compete with listed plants.

Effects from weed treatments to listed plants will be insignificant and discountable, as described in the Assessment. The implementation of PDC for active weed treatment can have a long-term beneficial effect on both District lands and adjacent habitats by reducing competition in and adjacent to listed plant sites, while protecting occurrences from direct effects.

All recovery actions are intended to enrich plant populations by restoring habitat, increasing species density or expanding species' populations within their ranges to bolster population viability and to promote pollinator interaction. These actions are anticipated to have insignificant and discountable effects or be purely beneficial to the listed species.

EFFECTS OF THE PROPOSED ACTION ON COOK'S DESERT PARSLEY CRITICAL HABITAT

The proposed action could directly and indirectly degrade or remove some Primary Constituent Elements in desert parsley critical habitat in the Illinois Valley through physical ground disturbance.

Direct Effects

Ground disturbance includes soil compaction, soil horizon displacement, alteration of hydrologic flow, and geomorphic alteration. Controlled broadcast and burn piles can temporarily impact the native plant community and the soil horizons of critical habitat by high intensity heat. Weed control actions could directly harm or kill native plant species, which are a component of the PCE. Timber harvests, road construction, mining, cultural resource activities, or recreational development can disrupt soil horizons, hydrology, and impact local plant communities. The native plant community could be adversely impacted also by direct or nearby application of herbicide.

The PDC, as described in the Assessment, will largely reduce the loss or potential degradation of desert parsley critical habitat because they will not allow the use of heavy equipment or new road construction within critical habitat sites, regardless of season. No additional loss of undisturbed habitat from ground disturbance associated with timber harvests, road construction, mining, cultural resource activities, or recreational development will occur in critical habitat. The maintenance or decommissioning of existing roads in critical habitat is not anticipated to impact PCE.

Thinning of the conifer canopy within critical habitat will help restore vegetation communities associated with desert parsley and reduce high fuel loads. PDC would confine mining to disturbed soils. Fuel reduction, vegetation restoration, and weed control activities will likely mimic the role that wildfire historically played in these habitats by keeping the site more open and restored to a more native plant community.

Roadside maintenance operations may benefit listed plant habitat by creating more open edge habitat and allowing more light to enter plant habitat. Roadside maintenance and other activities will maintain hydrology to critical habitat by the installation and upkeep of ditches and culverts.

Area closures have an overall beneficial effect to critical habitat by helping to maintain the function of the PCE through the exclusion of OHV activity and other disturbance. Placement of permanent structures such as boulders, gates, fences and berms to deter illegal entry and

vandalism of desert parsley critical habitat does impact a very small portion of the critical habitat, but will be a negligible impact, not exceeding one percent of the total area of the critical habitat unit.

After application of herbicide spray for weed treatment in critical habitat, areas will be reseeded with native plants as appropriate to the location, if necessary. In general the application of herbicide spray would not deplete a native plant component of a critical habitat unit. The implementation of PDC for active weed treatment can have a long-term beneficial effect on both District lands and adjacent habitats by reducing invasive plant species competition within critical habitat.

All listed plant collections and recovery actions will be coordinated with the Service, per the PDC. BLM staff will work with Service staff to develop monitoring plans to measure effectiveness of augmentation and reintroduction activities. All recovery actions are intended to enrich plant populations by restoring habitat, increasing species density or expanding species' populations within their ranges to bolster population viability and to promote pollinator interaction. These actions are anticipated to be beneficial to the listed species.

BLM will ensure hydrologic restoration projects are designed to contribute to the PCE, or have no impact on the hydrologic condition of critical habitat. The PDC require that recreation permits will be reviewed by BLM botanist and hydrologist to assure habitat, hydrology, and soils will not be manipulated and assure the activity would not introduce or increase the spread of invasive weeds.

Indirect Effects

Indirect effects from habitat disturbance can have adverse, neutral, or beneficial effects to critical habitat; depending on the type, timing, intensity, and duration of the disturbance.

The indirect effect of ground disturbing activities from timber sales, fuels projects, ROW permits, watershed restoration, grazing projects etc., is the introduction and proliferation of NNI such as yellow starthistle, Scotch broom, yellowtuft, dyer's woad, and Canada thistle.

Weeds can have detrimental effects to PCE by competitively reducing light, moisture, and soil nutrients for the native plant community.

PDC are designed to reduce the spread of invasive weeds include washing of BLM, Forest Service, and contractor equipment and vehicles, careful application of herbicide, and use of weed-free gravel in road maintenance projects. Much of the federal weed treatment programs (hand-pulling and spot spray) will occur along roads.

Concurrence

The Service concurs with the effects determination made by the District that the above proposed action, as detailed in the Assessment and described in this LOC, *may affect, is not likely to adversely affect* Gentner's fritillary and Cook's desert parsley. This concurrence is based on the rationale that all projects, both individually and collectively, will incorporate the PDC as described in the Assessment that will minimize and avoid impacts to listed plants. No plants are anticipated to be harmed by following the PDC and therefore no loss of plants.

The Service reached these conclusions based on the following factors:

- Pre-project surveys for desert parsley and fritillary will be conducted prior to all large-scale ground disturbing activities within suitable habitats and includes:
 - A one-year survey protocol for desert parsley; and
 - A two-year survey protocol to avoid fritillary plants for higher impact projects such as tree harvesting and road construction activities and a one-year survey for lesser impactful projects such as watershed restoration and recreation activities, where heavy equipment is not used.
- All habitat and plants within known listed plant occurrences will be protected and avoided by ground disturbing machinery, heavy equipment, silviculture activities, special forest product harvesting, recreation construction and maintenance activities, ROW permit projects, mining and quarry operations, road maintenance projects, recreation activities, and herbicide use.
- Ground disturbing actions will not be undertaken within any known listed plant population except for small scale weed control projects and recovery activities. No entry buffers are anticipated to maintain plant population habitat integrity.
- Projects that could harm listed plant species during growing season will have a seasonal restriction to the listed plant species dormant season.
- Restoration actions as defined in the silviculture, fuels management, and weed control descriptions of the Assessment are anticipated to improve habitat for desert parsley and the fritillary by reducing shading, competing vegetation, and reducing risk of high intensity fire.
- Proposed actions such as restoration and recovery action will directly address recovery actions specified in the recovery plans for desert parsley and fritillary (USFWS 2012, USFWS 2003).

Cook's desert parsley critical habitat

The Service concurs with the effects determination made by the District that the proposed action, as detailed in the Assessment, is not likely to adversely modify Cook's desert parsley critical habitat. This concurrence is based on the fact that all projects, both individually and collectively will not remove the PCE (e.g. intact plant community, habitat, hydrology, space for soil moisture for growth, germination, reproduction, and seed dispersal) essential to the conservation of desert parsley per the critical habitat rule (USFWS 2010). We anticipate the District will incorporate the PDC as described in the Assessment and be consistent with recovery plan recommendations. The Service reached this conclusion based on the following factors:

- All desert parsley critical habitat units, will be protected by PDC for ground disturbing actions.
- The PDC require existing hydrology of all critical habitat units to be maintained.

- By adhering to PDCs, no increase in noxious weeds is anticipated to result from the proposed activities.
- Restoration actions as defined in the silviculture, fuels management, and weed control descriptions of the Assessment will improve habitat within desert parsley critical habitat units by reducing shading, competing vegetation, and reducing risk of high intensity fire.
- Recovery actions, habitat restoration, and NNI control as defined in the Assessment will directly benefit desert parsley critical habitat per recovery actions specified in the Recovery Plan for Rogue and Illinois Valley Vernal Pool and Wet Meadow Ecosystems (USFWS 2012).
- No loss of PCEs for desert parsley critical habitat is anticipated due to the program of activities and therefore the overall objectives of the critical habitat units are expected to continue serve their intended function.
- The proposed action will contribute to recovery of desert parsley by maintaining meadow and open woodland habitat within the designated critical habitat units in the action area.

Please be advised that your Assessment and therefore this LOC, does not address the effects of the proposed action on the following listed species and critical habitats that are known to occur in the action area: the threatened northern spotted owl (*Strix occidentalis caurina*); the threatened marbled murrelet (*Brachyramphus marmoratus*); the threatened vernal pool fairy shrimp (*Branchinecta lynchi*); and critical habitat for the northern spotted owl, marbled murrelet and vernal pool fairy shrimp. No impacts to *Limnanthes pumila* spp. *grandiflora* (large-flowered woolly meadowfoam) or its critical habitat are anticipated from the proposed action.

Conservation Recommendations

Sections 2 (c) and 7(a)(1) of the Act directs federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. The term "conservation recommendations" has been defined as suggestions by the Service regarding discretionary measures to minimize or avoid adverse effects of a Proposed Action on listed species or critical habitat, to help implement recovery plans, or develop information and do not necessarily represent complete fulfillment of the agency's 7(a)(1) responsibility for these species. The Service recommends that the following conservation measures be implemented:

- 1) The BLM should avoid or reduce any impacts or losses to intact plant habitat within and in buffer area around populations.
- 2) The BLM should work with the Service to establish fritillary management areas as described in the Recovery Plan for *Fritillaria gentneri* (USFWS 2003) across the District in order to address habitat improvement and population resiliency for Gentner's fritillary.

Reinitiation Notice

In accordance with the implementing regulations for section 7 at 50 CFR 402.16, re-initiation of consultation for the proposed actions is required where discretionary Federal agency involvement or control over the actions has been maintained (or is authorized by law) and if: (1) the amount or extent of exempted incidental take is exceeded; (2) new information reveals effects of the agencies' action that may affect listed species or critical habitat in a manner or to an extent not considered in the LOC; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the LOC; or (4) a new species is listed or critical habitat designated that may be affected by one or both of these actions. When consultation is reinitiated, the provisions of section 7 (d) of the ESA apply.

If you have any questions about this consultation please contact Sam Friedman at (541) 957-3478.

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LITERATURE CITED

- USDI BLM (Bureau of Land Management). 2013. Assessment of activities that may affect the federally listed plant species, Gentner's fritillary, Cook's lomatium, and large-flowered woolly meadowfoam, on Bureau of Land Management, Medford District and Cascade Siskiyou National Monument. Bureau of Land Management, Medford District, September 30, 2013. 63 pp.
- USFWS (U.S. Fish and Wildlife Service). 2003. Recovery Plan for *Fritillaria gentneri* (Gentner's fritillary) U. S. Fish and Wildlife Service. Region 1. Portland, Oregon. viii + 89 pp.
- USFWS (U.S. Fish and Wildlife Service). 2010. Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for *Limnanthes floccosa* ssp. *grandiflora* (Large flowered woolly Meadowfoam) and *Lomatium cookii* (Cook's lomatium). Federal Register 75: 42490-42569. July 21, 2010.
- USFWS (U.S. Fish and Wildlife Service). 2012. Recovery Plan for Rogue and Illinois Valley Vernal Pool and Wet Meadow Ecosystems. Region 1. Portland, Oregon. vxii + 240 pp.