United States Department of the Interior

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Information Bulletin No. 2010-

To: All CA District and Field Managers

From: Acting State Director, CA

Subject: Survey Protocols Required for NEPA and ESA Compliance for BLM Special Status Plant Species

Purpose: The purpose of this Information Bulletin (IB) is to provide guidance on the requirements for conducting special status plant species surveys/inventories for ground disturbing projects.

Background: In July 2009, IM No. CA-2009-026 was issued. This IM provided protocols for Survey Requirements for Special Status Plants with regards to NEPA and ESA compliance. In 1996 the BLM California State Director signed the Special Status Plant Management Handbook 6840-1. This Handbook details survey and inventory protocols required by BLM CA. IM CA-2009-026 and attached protocols supersede that section of the 6840-1 Handbook.

Policy: It is BLM policy to conduct surveys/inventories to determine the occurrence and status of all special status plant species on lands managed by BLM or affected by BLM actions. This includes pro-active inventories directed toward developing plans or determining the status of plant species, as well as inventories conducted to determine the impacts of BLM planned or authorized actions on any special status plants that might be within the area of a proposed project. Such surveys/inventories are to be conducted at the time of year when such plant species can be found and positively identified. Before conducting inventories, contractors for BLM or energy companies should research four valuable sources to see if BLM special status species are known from the project area: the California Natural Diversity Data Base (CNDDB), CALFLORA, Nevada Natural Heritage Program (NNHP) and the Biogeographic Information & Observation System (BIOS). However, CNDDB, NNHP and BIOS are positive occurrence databases only; the lack of data should not be used as verification that the species does not exist in a given location. Inventories must be timed so that contractors can both locate and positively identify target plant species in the field. Inventories must be scheduled so that they will detect all special status species present. A single inventory on a single date will seldom suffice. For example, when one special status plant species suspected to be in the inventory can only be found and identified in April and another species can only be located and identified in August, at least two inventories are necessary. The first inventory can facilitate the second and/or third

inventory; however, only if potential sites for the late-flowering species are flagged during the first inventory. If sufficient information is available on the habitat requirements of potentially occurring species (substrate, plant community, etc.), and the site in question is believed to be unsuitable for those species, a properly timed field visit should still be conducted to document and validate the assumptions for believing the species to be absent. In advance of the project site inventory, contractors should visit known populations of the target species in similar habitat conditions to determine current-year growth conditions and phenology. If, based on these visits to known populations, it appears likely that the project site inventory will fail to detect occurrences because of drought conditions (as may be the case for annual plant species or geophytic plants), BLM may require contractors to perform additional inventories in the following year.

For further information regarding this IB, please contact Christina Lund, State Botanist, at the California State Office (916) 978-4638.

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Survey Protocols Required for NEPA/ESA Compliance for BLM Special Status Plant Species

Policy

It is BLM policy to conduct inventories to determine the occurrence and status of all special status plant species on lands managed by BLM or affected by BLM actions. This includes pro-active inventories directed toward developing plans or determining the status of plant species, as well as inventories conducted to determine the impacts of BLM planned or authorized actions on any special status plants that might be within the area of a proposed project. Such inventories are to be conducted at the time of year when such plant species can be found and positively identified.

Definition and Purpose

Inventory is the periodic and systematic collection of data on the distribution, condition, trend, and utilization of special status plant species (BLM Manual 6600).

Inventories are conducted for many reasons; however, for the purpose of this document only one inventory "reason" is addressed:

> To ensure compliance with the National Environmental Policy Act and the Endangered Species Act by having sufficient information available to adequately assess the effects of proposed actions on special status plants. Assessments of the effects of these actions are documented in biological assessments (if the project involves Federally listed species and qualifies as a "major construction activity" as defined by the ESA).

Special status plants include plant taxa that are Federally listed as threatened and endangered, proposed for Federal listing, candidates for Federal listing, State listed as rare, threatened, or endangered, or BLM sensitive species. All plant species that are currently on List 1B of the California Native Plant Society's Inventory of Rare and Endangered Plants of California (http://cnps.web.aplus.net/cgi-bin/inv/inventory.cgi), are BLM sensitive species, along with others that have been designated by the California State Director. BLM is party to a Memorandum of Understanding with the California Department of Fish and Game to collect information for inclusion in the California Natural Diversity Data Base. Therefore, in addition to inventorying for plants formally recognized as special status species by BLM, contractors must also inventory for all plant, lichen, and fungi species recognized as "special" by the California Natural Diversity Data Base (http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/SPPlants.pdf). Although the following discussion uses the term "special status plants," it should be interpreted to mean all of the plant taxa discussed above.

The inventory requirements below apply to energy rights-of-way applications on Federal lands managed by the BLM in California and northwestern Nevada. Projects that include State or private lands or require State approval will likely also require conformance with the rare plant

survey guidelines of the California Department of Fish and Game (http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/guideplt.pdf).

Timing and Intensity of Inventory

Before conducting inventories, contractors for BLM or energy companies should research three valuable sources to see if BLM special status species are known from the project area: the California Natural Diversity Data Base (CNDDB), CALFLORA, and the Biogeographic Information & Observation System (BIOS). However, CNDDB and BIOS are positive occurrence databases only, the lack of data should not be used as verification that the species does not exist in a given location. Inventories must be timed so that contractors can both locate and positively identify target plant species in the field. Inventories must be scheduled so that they will detect all special status species present. A single inventory on a single date will seldom suffice. For example, when one special status plant species suspected to be in the inventory can only be found and identified in April and another species can only be located and identified in August, at least two inventories are necessary. The first inventory can facilitate the second and/or third inventory, however, if potential sites for the late-flowering species are flagged during the first inventory. If sufficient information is available on the habitat requirements of potentially occurring species (substrate, plant community, etc.), and the site in question is believed to be unsuitable for those species, a field visit should still be conducted to document and validate the assumptions for believing that the species to be absent. In advance of the project site inventory, contractors should visit known populations of the target species in similar habitat conditions to determine current-year growth conditions and phenology. If, based on these visits to known populations, it appears likely that the project site inventory will fail to detect occurrences because of drought conditions (as may be the case for annual plant species or geophytic plants), BLM may require contractors to perform additional inventories in the following year.

Field Survey - Methodology

Field surveys will be floristic in nature, i.e., the contractor identifies every plant taxon observed in the project area to the taxonomic level necessary to determine rarity and listing status. Surveys will be conducted so that they will ensure a high likelihood of locating all the plant taxa in the project area. Depending on the size of the project area and the heterogeneity of the habitats within the project area, surveys will involve one or a combination of the following survey methods.

Complete Survey

A complete survey is a 100 percent visual examination of the project area (Figure 1) using transects. The length of the transect and distance between transects might change as the topography changes throughout the project area. Transects should be spaced so that all of the area between transects is visible and so that the smallest rare plant expected to occur is visible. The surveyor (1) compiles a species list while traversing the project area and keeps track of the plant community or habitat type where each taxon occurs; (2) maps the locations of all rare taxa

encountered using a GPS unit, and (3) fills out a CNDDB Native Species Field Survey Form for each location of each rare taxon encountered.

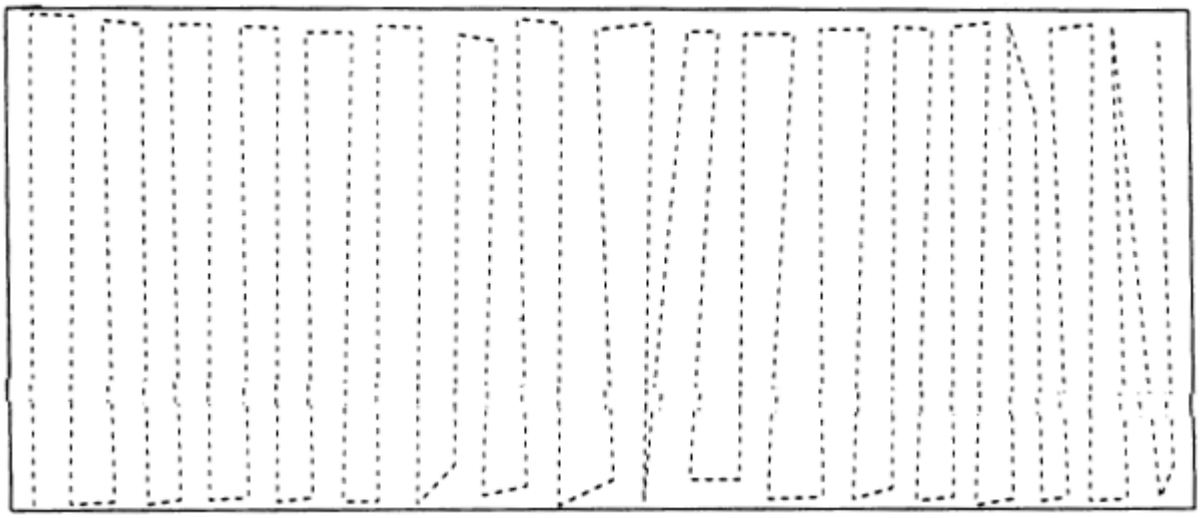

Figure 1. **Complete survey.**

Intuitive Controlled Survey

An intuitive controlled survey is a complete survey of habitats with the highest potential for supporting rare plant populations and a less intense survey of all other habitats present (Figure 2). This type of survey can only be accomplished by botanists familiar with the habitats of all the plant species that may reasonably be expected to occur in the project area. The botanist traverses through the project area enough to see a representative cross section of all the major plant habitats and topographic features. During the survey, the botanist compiles a species list of all plant taxa seen en route and keeps track of the plant community or habitat type where each taxon occurs. The surveyor maps the locations of all rare taxa encountered using a GPS unit and fills out a CNDDB Native Species Field Survey Form for each location of each rare taxon encountered. When the surveyor arrives at an area of "high potential" habitat, s/he surveys that area completely as described above and shown in Figure 1. High potential habitat areas include areas defined in a pre-field review of potential rare plants and habitat and other habitats where a rare species appears during the course of initial field work traversing the project area. Areas within the project area that are not the focus of a complete survey must be surveyed sufficiently so that is the botanist and BLM reasonably believe that few if any additional species would be added to the complete species list for the project area. The report must justify why the botanist did not consider these areas to have a high potential for supporting rare plant species and thus did not subject the area to a complete survey.

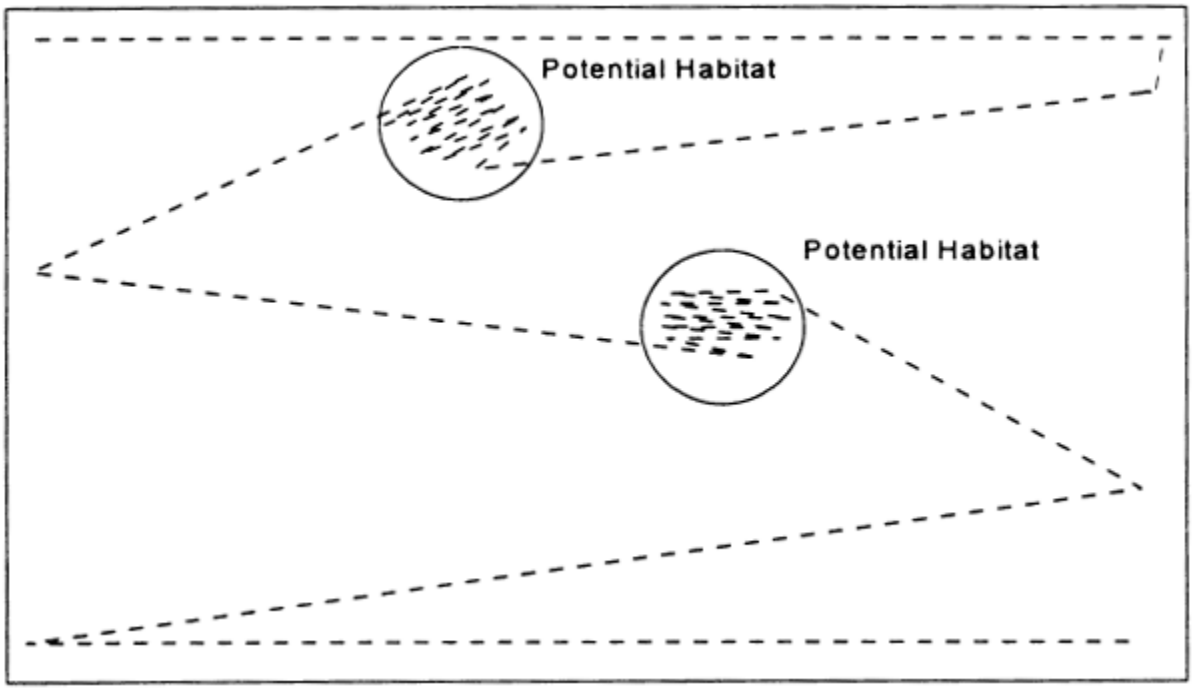

Figure 2. Intuitive Controlled Survey.

Documenting the Results of Inventory

The results of special status plant inventories should be well documented. This documentation must include as a minimum the completion and submission of Field Survey Forms and shapefiles/geodatabases of all special status plants found by BLM personnel or consultants. CNDDB defines occurrences as being separated from other plant locations by 0.25 mile. These forms are submitted to the BLM State Botanist and to the California Natural Diversity Data Base (CNDDB) at the following address:

CNDDB - Dept. of Fish and Game
1807 13th Street, Suite 202
Sacramento, CA 95811

Forms can be submitted electronically at: CNDDB@dfg.ca.gov
Copies of the Field Survey Form are available from the CNDDB at the same address. They will also provide photocopied parts of topo maps if needed.

If the inventory discovers any rare or unusual plant communities,[1] a Natural Community Field Survey Form must be completed for each such community and sent to the CNDDB at the address above.

[1] Rare or unusual plant communities includes those communities marked with asterisks in the most current list of California plant communities recognized by the California Natural Diversity Data Base, available at: http://www.dfg.ca.gov/biogeodata/vegcamp/pdfs/natcomlist.pdf, and Unusual Plant Assemblages as defined in

Most special status plant inventories of public lands conducted to assess the impacts of a project are performed by consultants hired by project proponents. These inventories must meet or exceed the intensity level required for the project by BLM. Personnel conducting the inventory must meet the qualifications outlined in this document. For BLM to adequately determine the quality of third party inventories, the following information must appear in a detailed report to BLM from the consultant or project proponent:

a. Project description, including a detailed map of the project location and study area.

b. A written description of the biological setting, including descriptions of the plant communities found in the project area and a vegetation map. Plant communities should be described and mapped to at least the alliance level using the vegetation classification system of the California Department of Fish and Game (CDFG). A list of the alliances currently recognized by CDFG can be found at: http://www.dfg.ca.gov/biogeodata/vegcamp/pdfs/NaturalCommunitiesList_Oct07.pdf. When the Manual of California Vegetation is published in 2009, the alliances recognized in that document should be used.

c. A detailed description of the inventory methodology, including techniques and intensity of the inventory and maps showing areas actually searched. This will also include areas searched but no special status plants found.

d. The results of the inventory.

e. The dates of the inventory.

f. An assessment of potential impacts and recommended mitigation measures to reduce impacts.

g. Recommended management actions to conserve any special status plants encountered should include both actions the BLM might take, as well as actions that might be taken by the FWS (listing or delisting of T/E plants, changes in candidate status, etc.).

h. A discussion of the significance of any special status plant occurrences found, with consideration for other nearby occurrences, and the distribution of the species as a whole.

i. Assessments of the health, population size, and protective status of any special status plants found.

j. A complete list of *all* plant species (not just special status species) identified within the project area, and a discussion of any range extensions discovered as a result of the inventory

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the California Desert Conservation Area Plan (http://www.blm.gov/pgdata/etc/medialib/blm/ca/pdf/cdd/cdcaplan.Par.15259.File.dat/CA_Desert_.pdf) or shown on Map 6 of the California Desert Conservation Area Plan, as amended (copies on file at the BLM California State Office, the California Desert District, and each of the field offices in the California Desert District).

k. Copies of all Field Survey Forms, for all special status plant occurrences found, or Natural Community Field Survey Forms, for any unusual communities found.

l. The name(s) and qualifications of the persons conducting the inventory.

m. A list of references cited, persons contacted and herbaria visited.

n. Additional data needs.

o. Other information as appropriate such as vegetation maps and photographs (see below).

Voucher specimens of special status plants should be collected if necessary to conclusively document the occurrence of the species and if the collection will not adversely affect the health of the population at the site. Collection of Federally listed plants on Federal lands requires a permit from the FWS. If voucher specimens are collected, they should be deposited in major recognized herbaria for future reference, preferably The University of California, Berkeley (UC), The Jepson Herbarium (JEPS), The California Academy of Sciences (CAS), or Rancho Santa Ana Botanic Garden (RSA).

Photographs should be taken of the areas inventoried, of all special status plants found, and of the habitat associated with each special status plant occurrence.

Data Collection – Data Submission

Data should be collected using a Mapping Grade GPS Receiver with an accuracy of < 3 meters Horizontal Root Mean Squared (HRMS).

All positions should be logged according to the following specifications:

- Maximum PDOP of 6
- Minimum of 5 Satellites
- Minimum elevation mask of 15 degrees
- Datum: NAD83
- Coordinate System: UTM Zone 10 or Zone 11, depending on where in California or northwestern Nevada the data is collected.
- ESRI compliant formats (Geodatabase, Coverage or Shapefile)

Metadata must be included with the data. The following must be included in the metadata:

- Project Name
- Purpose – Summary of the intentions with which the data set was developed
- Abstract Information – Brief narrative summary of the data set
- Location – What area(s) does your data cover? ie., list statewide, regions, city, county?
- Developer – Who collected the data?

Data Dictionary – A data dictionary must be used for all projects. The dictionary should include the data that is requested on the CNDDB forms. This ensures that the botanist is collecting (electronically) the same data as is requested by DFG. This also ensures that all inventories are collecting the same level/standard of data.

GIS Support Data: BLM California State Office Downloadable Data Sources

Index Page with BLM Data Naming Rules
http://www.blm.gov/ca/pa/gis/Data_Page/Data%20Page.html

Geospatial Data Downloads
http://www.blm.gov/ca/gis/index.html

All data collected in and referenced to the public land survey are required to conform to this version of PLSS published on the California BLM data download page.

In addition to the local Field Office; a copy of the Data (DVD or CDROM) must be submitted directly to:

BLM California State Office
Geographic Services, W1939
Attention: Chief Mapping Sciences
2800 Cottage Way
Sacramento, CA 95825

GIS Questions: Please Call
(916) 978-4343

Qualifications of Personnel Conducting Inventories

All personnel conducting special status plant inventories must have the following:

- strong backgrounds in plant taxonomy and plant ecology
- strong background in field sampling design and methods
- knowledge of the floras of the inventory area including the special status plant species
- familiarity with natural communities of the area

These qualifications help ensure that all special status plants in the inventory area will be located, including taxa that BLM or project proponents did not predict at the start of the inventory. All survey efforts must be coordinated with the responsible BLM Field Office botanist or biologist