



United States
Department of
Agriculture

Forest
Service

Wallowa-Whitman
National Forest

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File Code: 2770

Date: June 23, 2011

Electronically Filed

Ms. Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426

RE: **Wallowa Falls Hydroelectric Project, FERC Project No. 308-005
COMMENTS on PRE-APPLICATION DOCUMENT,
COMMENTS on SCOPING DOCUMENT No. 1, and
STUDY REQUESTS**

Dear Ms. Bose:

Enclosed for filing with the Federal Energy Regulatory Commission (Commission) are the USDA Forest Service's Comments on PacifiCorp Energy Pre-Application Document; Comments on the Commission's Scoping Document No. 1; and Study Requests for the Wallowa Falls Hydroelectric Project.

If you have any questions related to this filing, please contact Mike Gerdes, Forest Hydropower Coordinator, at (541) 447-5448.

Sincerely,

/s/ Monica J. Schwalbach
MONICA J. SCHWALBACH
Forest Supervisor

Enclosures

cc: Service List



**UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION**

IN THE MATTER OF THE)	Project No. P-308-005
PRE-APPLICATION DOCUMENT)	
SCOPING DOCUMENT)	
STUDY REQUESTS)	
WALLOWA FALLS)	
HYDROELECTRIC PROJECT)	
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DEPARTMENT OF AGRICULTURE

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that I have made service of the foregoing USDA FOREST COMMENTS TO THE PRE-APPLICATION DOCUMENT AND SCOPING DOCUMENT NO. 1, AND STUDY REQUESTS – *Wallowa Falls Hydroelectric Project - Oregon - FERC Project No. 308-005* upon the parties designated on the official service list compiled by the Secretary in this proceeding:

DATED June 23, 2011.

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**Comments on
PacifiCorp Energy
Pre-Application Document
Wallowa Falls Hydroelectric Project
FERC Project No. 308-005
Wallowa-Whitman National Forest
USDA Forest Service**

June 2011

Chapter 2.0 Project Location, Facilities and Operation

Project Area, Vicinity, and Maps: Pages 9 - 13

A discussion and table of ownership acreage within the Proposed Project Boundary is needed.

APPENDIX A, Page 2: The map shows “Spur to FS Road 1804”, correctly it should be labeled as “FS Trail 1804”.

APPENDIX A, Page 3: The map shows a doughnut hole and inclusion in the project boundary located in PacifiCorp campground. Is this accurate?

Current Operations: Page 13

Please define the term “Project Lands” as it relates to Project Area and Project Vicinity.

Daily and Seasonal Ramping Rates: Page 20

Please identify the specifics on how the forebay flushing occurs. How does the forebay flushing comply with the CWA 401 Certification requirements?

Compliance History: Page 21

Historic problems in measurement of East Fork Wallowa River bypass flows need to be rectified by installation of a staff gage immediately downstream of the diversion structure to insure accurate flow measurements. Relying on a relationship between forebay elevation and bypass flows could lead to inaccurate bypass flow measurement.

The historic penstock ruptures and associated erosion of National Forest System (NFS) lands is of concern to the Forest Service. The PAD did not discuss remediation of erosion impacts to NFS lands.

Chapter 3.0 Existing Environment and Resource Impacts

Soils: Page 25: *The erosion and slump occurring on the upper portion of the forebay access road is likely of the Anatone-Klicker-Rock Outcrop soils type and is subject to the management considerations described above.*

It is assumed that the discussion above describes the area where the access road is slumping and eroding into Royal Purple Creek. Hillslope and soil slumping into Royal Purple Creek is of concern to the Forest Service.

Shorelines and Stream Banks: Page 27

Are there any channel stability issues where the tailrace channel joins the West Fork Wallowa River?

Hydrology: Page 28

The Forest Service concurs with PacifiCorp that the USGS data does not accurately represent the bypass flow at the project diversion on the East Fork Wallowa River. Measurement of bypass flows immediately below the diversion will be necessary for the Forest Service to assess any impacts to NFS lands and resources.

Water Quality: page 31

Water temperature monitoring will be necessary for compliance with State of Oregon ORS and to meet the requirements for bull trout life history requisites.

Habitat: Page 32

The PAD not only needs to fully describe the instream and riparian habitats, and vegetative species composition of the bypass reach but also the Project Vicinity (study area) of the reach upstream of the forebay, Royal Purple Creek, and the un-named tributaries into the bypass reach.

Fish Community: Page 33

A data gap of trout species composition and abundance appears in the bypass and above the forebay reach on the East Fork Wallowa River.

Aquatic Invertebrate Community: Page 34

The Forest Service notes PacifiCorp's data gap and recommends an aquatic invertebrate assessment in the natural and bypassed portions of the East Fork Wallowa River and Royal Purple Creek.

Wildlife and Botanical Resources: Page 36

Whether in this section or under the Rare, Threatened and Endangered section, the Forest Service requests that PacifiCorp identify and address the Forest Service Regional Forester's Special Status Species (RFSSS) List for all species listed threatened, endangered and proposed for listing, and sensitive species including invertebrates, vertebrates, fungi, non-vascular plants, and vascular plants; and identify and address the Management Indicator Species (MIS) enumerated in the Wallowa-Whitman National Forest Land and Resource Management Plan (LRMP), as amended.

Regarding the identified Project vicinity for wildlife resources of a 0.25 mile radius, the Forest Service agrees that for botanical resources (noxious weed surveys, riparian and wetland delineation and mapping, sensitive plant surveys and vegetative cover type mapping) and general

wildlife observations the smaller study area is appropriate. However, the Forest Service recommends that for large home range Rare, Threatened and Endangered species the Project vicinity described in Section 2.2 (2.0 mile radius) will be employed.

The Forest Service understands that PacifiCorp uses the stated four habitat types as a generality, for the purposes of an introductory discussion, and that it does not correspond to any specific habitat typing system.

Wildlife Habitats: Page 43

Riparian Habitat: The PAD statement “*Because of the limited amount of riparian habitat, it is unlikely that species strongly associated with riparian habitats would be found within the Project vicinity*” is supposition and species associated with riparian habitats will not be determined until studies are concluded. See Forest Service comments on Recommended Studies – Section 4.2 for studies pertaining to wildlife and botanical species presence/absence and relative distribution.

Wetland Habitat: Royal Purple Creek diversion inflow also aids in the development of wetland habitat on the upstream end of the forebay.

The wetland associated with the forebay pond is described using USFWS NWI data. No mention is made of the scale that NWI is done (remote sensing), nor the significance (or lack thereof) of a wetland.

Botanical Resources and Invasive Plant Species: In the 1992 botanical survey what is the geographic extent of the Project Area? Great information but it would aid the Forest Service to have a map that delineates the survey area.

The Forest Service agrees in principal with the need to identify and control noxious weeds and other undesirable non native species and that the Project area is relatively weed free, though at risk because of the stated travel ways and recreational use of the area. Also the Forest Service notes that on other visits to the area the noxious weed, Oxeye daisy has been observed in the project vicinity. The Forest Service GIS noxious weed coverage also shows known occurrences of this species at the vicinity of the trailhead and power house. The PAD needs to address (within the Project vicinity) the existence of, or potential for introduction of noxious weeds listed on the 2011 Wallowa County Weed list (A, B, T, & watch list).

RTE Aquatic: Page 46

The Forest Service RFSSS list indicates there are documented or suspected sensitive species located on the Wallowa-Whitman National Forest. It is recommended that the discussion of Aquatic RTE species include the species identified on the RFSSS list.

RTE Terrestrial: Page 47

Table 3.5-1 should also include the Forest Service RFSSS list.

The Forest Service suggest that we revisit the ORBIC data as the Forest Service copy of their GIS coverage shows *Botrychium montanum*, *Botrychium minganense* and *Botrychium pinnatum* as being present in the project vicinity, at or near the forebay as well as further up drainage. Table 3.5-2 only lists *Botrychium montanum* as being present. The Forest Service GIS coverage

of rare plant occurrences (Region 6 Sensitive species) also shows *Botrychium minganense* as being present adjacent to the forebay. Also, the *Species Present within the ORBIC Project Vicinity* cell for *Botrychium montanum* references the 1993 botanical survey conducted for the Pacific Power forebay access road construction EA. The vascular plant list for this project is contained in Appendix B of the PAD. That list only identifies that a Botrychium species was encountered, but not what species. Thus it is unknown if they found *Botrychium montanum* or one of the other rare or common Botrychium species often found in association with each other.

PAD Appendix B also lists that *Populus tremuloides* (quaking aspen) was located within the project vicinity. Upland aspen is important wildlife habitat and an uncommon and declining species element in the Blue and Wallowa Mountains. If project operation or maintenance activities have a potential to impact aspen, then that impact will need to be described, and documentation provided as to how this impact is to be minimized, mitigated or avoided.

Bald Eagle: The Forest Service concurs with the statement that bald eagles are known within the Project area but add reference that the eagles forage on spawning kokanee during the fall and have a high likelihood of roosting in and around PacifiCorp's campground.

Recreation and Land Use: Page 64

The PAD should mention the considerable amount of winter recreation that occurs within the Project Area. This includes use of the forebay access road by backcountry skiers to facilitate access to the Aneroid Basin, both to the private inholdings and for winter camping. Snowshoers also use the Forest Service trail for day outings and occasionally return via the forebay access road because it is less steep and is shorter than using the trail. Locals will use the forebay road because avalanche danger is less severe. Actual amount of use is unknown, but anecdotal evidence suggests that there is winter use nearly every weekend day and on several week days.

The Forest Service keeps records on summer use that originates from the trailhead via mandatory, self-issuing permits. The compliance rate has been studied and is estimated at 85%. Actual summer use of the forebay trail is unknown. A popular guidebook, HIKING OREGON'S EAGLE CAP WILDERNESS by Fred Barstad (2002, Globe/Pequot) states in its description of the East Fork Aneroid trail that "this road may be used as an alternate trail" but warns that it is much steeper than using the actual trail.

Known data is listed below:

2010: Total Permits:	1701
Permit Date Range:	3/23 to 12/8
Permit Use:	4601 people
Compliance Adj (85%):	5291 people
Avg. Party Size:	2.7 people
Hikers:	1667 groups; 4492 visitors
Stock Use:	33 groups; 107 visitors
Ski:	1 group; 2 visitors
2007: Total Permits:	1730

Permit Date Range:	1/1 to 11/26
Permit Use:	4704 people
Compliance Adj (85%):	5410 people
Avg. Party Size:	2.7 people
Hikers:	1689 groups; 4595 visitors
Stock Use:	41 groups; 109 visitors
2005: Total Permits:	1765
Permit Date Range:	1/14 to 11/12
Permit Use:	4802 people
Compliance Adj (85%):	5522 people
Avg. Party Size:	2.7 people
Hikers:	1720 groups; 4693 visitors
Stock Use:	36 groups; 109 visitors

Data source: USFS wilderness permits

In addition, there is considerable stock use of the area by a local outfitter, Eagle Cap Wilderness Pack Station. Many of these are day rides of one hour or less. In 2010 they reported 177 client days in the Eagle Cap Wilderness. All of these trips began at the USFS managed trailhead adjacent to the Project area.

The PAD mentions a user created trail and two wooden benches at the project forebay. The Forest Service has no knowledge of this trail. Are the benches referred to the one homemade bench near the cabin structure? Please provide information on where these are located.

Along with the Forest Service managed West Fork and East Fork trails, the PAD should mention the Chief Joseph Trail which begins approximately a quarter mile along the West Fork trail.

The PAD does not mention the multiple user-created trails that originate from the Pacific Park campground. These climb the hillside and join into the junction of the Chief Joseph Trail and the West Fork Wallowa Trail and appear to be heavily used by visitors as a way to get back easily to the Park. Actual use of this trail “system” is unknown and it is likely that these are uncounted Forest visitors, since they do not fill out wilderness permits from that location.

The PAD states “*Recreational uses of lands within the Project area include...*” The Forest Service suggests that the discussion of these features/uses is more appropriately discussed and analyzed in the context of the 2 mile radius Project Vicinity, rather than in the Project Area as defined in Section 2.2 on page 9.

It is recommended that PAD maps include trail numbers in addition to trail names so as to correspond with other published map products. Additionally, include the Eagle Cap Wilderness boundary on all maps where that feature is in view.

Aesthetic: Page 66

The noise from the Project generator is apparent both adjacent to the facility and can be heard for at least a mile along the three trails including within the Eagle Cap Wilderness. The Forest Service disagrees that it is only a modest impact to aesthetic resources. Although most users are passing through the area en-route to a destination, the constant noise is a disruption and a reminder of the sights and sounds of humans. The visual impact of the Project is mitigated by the fact that it occurs next to other developments such as roads and a parking lot. The forebay and dam, in particular the spillway catwalk due to the materials used in construction, are a visual intrusion to trail users. When hiking the East Fork trail, the pipeline is visible in several locations and detracts from the natural quality of the area.

Cultural Resources: Page 67

The Forest Service primary interest is to ensure that PacifiCorp and the Commission follow the NHPA Section 106 cultural resource inventory and consultation procedures, involving the Oregon State Historic Preservation Office (SHPO), and the Nez Perce, Umatilla and Colville Tribal Historic Preservation Officers (THPOs).

Chapter 4.0 Preliminary Issues and Studies List

Section 4.1 Issues: Page 70

Geology and Soils:

The Forest Service agrees in concept with PacifiCorp's stated issue. However, in addition to the forebay access road, the Forest service suggest the issue be expanded to include the length of the penstock, as ruptures of the pipe have occurred historically and have the potential to affect soils and riparian habitat through erosion.

Water Resources - Hydrology:

The Forest Service agrees in concept with the stated issue. It is very important to establish and maintain a permanent gauging station below the diversion structure.

It is recommended that "*habitat conditions*" be expanded to include analysis of habitats for both aquatic and terrestrial dependent and associated sensitive plant and animal species.

The Forest Service also suggests that the stream flow regime can also be expressed in the functional wetted width of the bypass reach and as such influences habitat conditions. Therefore, it is suggested that wetted width is an issue and that a study should be conducted to examine how the wetted width changes through the bypass reach as a result of a reduction instream flow. This information will then be used to identify how the removal of water at the diversion alters those relationships and whether those changes are large enough to affect aquatic and riparian habitats.

Water Resources - Water Quality:

The Forest Service agrees with the issue as proposed.

Fish and Aquatic:

The Forest Service agrees with the issues pertaining to macroinvertebrates and redband and brook trout as proposed.

With regard to bull trout, the Forest Service agrees with the issue as proposed however the issue should be discussed under its own section - RTE.

Wildlife and Botanical:

The Forest Service agrees in concept with the stated issue. However, the statement “*Given the Project’s small size and limited geographic footprint, the Project and current operations likely have negligible impacts on wildlife and botanical resources*” is conclusory and should be removed from the issue statement.

It is recommended that the issue statement contain language to include sensitive and strategic species from the Forest Service RFSSS and MIS species from the Wallowa-Whitman National LRMP.

Rare, Threatened and Endangered:

PacifiCorp did not identify an issue for RTE species. With regard to bull trout, the Forest Service agrees with the issue as proposed above in Fish and Aquatic but the issue should be discussed here under the RTE section. It is recommended that PacifiCorp address all potential RTE species in the issue statement including the gray wolf, Canada lynx, and bull trout.

Recreation and Land Use:

The PAD should include as issues the growing winter use of the area as facilitated by the forebay access road, , and the existence of several braided and eroding social trails that are serving as a funnel for unrecorded visitors from the Pacific Park campground who access the National Forest. The adequacy of recreation opportunities is not an issue that the Forest Service considers to be an impact of this Project. The Forest Service believes that adequate recreation opportunities exist in the area as evidenced by the numerous activities offered by the trail system, the State Park system, the Wallowa Mountain Tramway and other private recreation experiences. Please refer to the Study Requests proposed by the Forest Service.

Aesthetic:

The Forest Service disagrees with the key issue identified as it seems ambiguous and vague. We suggest that the key issue is determination of soundscape and landscape impacts from the noise of the Project generator and the visual intrusion of the pipeline and forebay structures along the Forest Service trail. Is the noise bothersome to visitors? Does the presence of the pipeline and forebay structures detract from the visitor experience?

Cultural Resource:

The Forest Service agrees that a contemporary and comprehensive inventory of NRHP-eligible cultural resources in the area of potential effect is warranted.

Socio-economic:

The Forest Service agrees with the issue as proposed.

Potential Studies

In response to PacifiCorp's potential studies identified in the PAD and the Commission's SD1, the Forest Service is providing study requests that are in addition to the studies proposed by PacifiCorp.

The Forest Service supports implementation of all PacifiCorp proposed studies either agreeing with the study as described or agreeing in concept with the proposed study and recommending additions to affectively assess any potential Project effects to the NFS lands and resources. All studies proposed with the exception of bull trout monitoring have the potential to affect NFS lands and resources.

The Forest Service as administrating agency for NFS lands must analyze all potential Project affects to ensure that planning, construction, operations and modifications are consistent with Forest Service resource management direction in applicable land and resource management plans: Wallowa-Whitman National Forest Land and Resource Management Plan, as amended.

Management direction for NFS lands and resources is contained in a variety of laws, policies and management plans. **Exhibit I** contains applicable management direction for the resource studies.

Section 4.2: Page 72

Geology and Soils: The Forest Service agrees in concept with the proposed study but recommends that the study area be expanded to include hill slope and soil erosion sites for both the forebay access road and the penstock. As noted in the PAD, the Project penstock has ruptured in the past.

Hydrology: The Forest Service agrees with the proposed study as described – gaging of Project waters including the two natural inflow points above Royal Purple Creek and East Fork Wallowa River above the diversions, the East Fork Wallowa River bypass reach immediately below the diversion and at the NFS – PacifiCorp property boundary to determine the contribution of accretion flows, and in the Project tailrace.

Water Quality: The Forest Service agrees with the proposed study as described – measure numerous water quality parameters (temperature, dissolved oxygen, total dissolved gas, pH, chlorophyll, conductivity, turbidity) within the two natural inflow points above Royal Purple and East Fork Wallowa diversions, the bypass reach of the East Fork Wallowa River, the Project forebay, and the Project tailrace. A special emphasis will be placed on temperature and dissolved oxygen measurements during the May – October time-frame. Conduct a one-time assessment of selected heavy metals.

Fish and Aquatic Resources: Page 73

Aquatic and Riparian Habitat Survey: The Forest Service agrees in concept with the proposed study for Aquatic and Riparian Habitat. In addition to the proposal, the Forest Service recommends expanding the study area to include a sample reach of the East Fork Wallowa River upstream of the project to evaluate the affects of the reduced bypass flows on aquatic and

riparian habitat, and channel stability using the USDA Forest Service Region 6 Stream Inventory Handbook.

Water Flow Evaluation: The Forest Service agrees in concept with the proposed study to evaluate available instream habitat in the bypass reach of the East Fork Wallowa River. It is recommended that the study area be expanded to include a sample reach of the East Fork Wallowa River upstream of the project to compare reaches above and below the project, and to evaluate the any potential effects of the reduced bypass flows on aquatic resources (fish, macroinvertebrates, wetted width and riparian vegetative communities and habitat).

The Forest Service recommends use of the Instream Flow Incremental Methodology for this study.

Analysis of Macroinvertebrates: The Forest Service agrees in concept with the proposed study for one seasonal (spring, summer and fall) sample of stream macroinvertebrates. It is recommended that the study area be expanded to include a sample reach of the East Fork Wallowa River upstream of the project to compare the reaches above and below the project and evaluate the any potential effects of the reduced bypass flows on aquatic macroinvertebrates.

Evaluation of Fish Use in Project Waters: The Forest Service agrees in concept with the proposed study to evaluate seasonal (spring, summer, fall) presence/absence, species composition, relative abundance and spatial and temporal distribution of fish in the Project tailrace and bypassed East Fork Wallowa River. It is recommended that the study area be expanded to include a sample reach of the East Fork Wallowa River upstream of the project to evaluate the affects of the reduced bypass flows on the fisheries resource.

Bull Trout Use: The Forest Service agrees with the proposed study.

Wildlife and Botanical Resources: Page 74

The Forest Service agrees with PacifiCorp's proposal to define the study area for wildlife and botanical resources to the 0.25 mile radius around the Project works.

Vegetation Cover Type Mapping: The Forest Service agrees in concept with the proposed study. The Forest service recommends that all vegetation stand types within the defined Project Vicinity be delineated along distinct vegetation changes and or natural landscape breaks. Vegetation types should be determined to the most specific applicable stand type using the following three plant association guides:

Plant Associations of the Wallowa-Snake Province (Johnson and Simon 1987) - R6-ECOL-TP-255A-86.

Mid-Montane Wetland Plant Associations of the Malheur, Umatilla and Wallowa-Whitman National Forests (Crowe and Clausnitzer 1997) – R6-NR-ECOL-TP-22-97.

Deep Canyon and Subalpine Riparian and Wetland Plant Associations of the Malheur, Umatilla and Wallowa-Whitman National Forests (Wells 2006) – PNW-GTR-682.

Noxious Weed Surveys: The Forest Service agrees with the proposed study. However, it is recommended that noxious weed species and locations be noted when conducting other studies.

See the attached recommended list and occurrence forms. **Attachment 1** - 2011 Wallowa County Noxious Weed list and **Attachment 2** is the Wallowa Noxious Weed Occurrence documentation form.

Riparian and Wetland Delineation and Mapping: The Forest Service agrees with the proposed study. The Forest Service recommends that all wetlands delineated under the proposed study also be typed such that they too correspond with the 3 plant association guides listed above for cover type mapping and with the USFWS classification.

Sensitive Plant Surveys: The Forest Service agrees with the proposed study. The Forest Service will require that PacifiCorp use the Forest Service survey protocol and element occurrence procedures. **Attachment 3** is the Inventory Methodology recommend by the Forest Service. **Attachment 4** is the Wallowa-Whitman National Forest sensitive and strategic species list distilled from the Region 6 RFSSS list. **Attachment 5** is a pre-field review of sensitive plant species that are most likely to be found in the Project vicinity. **Attachments 6 and 7** are the TES survey protocol and field forms, and the element occurrence procedures.

Wildlife Observations: The Forest Service agrees with the proposal to conduct non-RTE wildlife observations anecdotally while implementing the botanical studies.

Recreation and Land Use: Page 74

The Forest Service agrees with the proposed studies. Attached find two additional specific studies: Pacific Park User Trail and Winter Recreation.

Aesthetics and Scenic Resources: Page 75

The Forest Service suggests that the key issue for aesthetics and scenic resources is a determination of soundscape and landscape impacts from the noise of the Project generator and the visual intrusion of the pipeline and forebay structures along the Forest Service trail. As such, it is recommended that the proposed study be modified to address these key issues.

Cultural Resources: Page 75

The Forest Service agrees with the proposed studies as described for Inventory of Historic Buildings and Structures, Pedestrian Survey of Archaeological Sites:, and Traditional Properties. All cultural resources recorded during this undertaking and those already known to exist within the area of potential effects are to be evaluated according to NHPA guidelines for national register potential, and in consensus with SHPO whether determined eligible or not eligible for listing on the National Register of Historic Places.

**Comments on
FERC's
Scoping Document No. 1
Wallowa Falls Hydroelectric Project
FERC Project No. 308-005
Wallowa-Whitman National Forest
USDA Forest Service**

June 2011

Introduction

The following information constitutes the USDA Forest Service (Forest Service) review of the Federal Energy Regulatory Commission's (FERC) Scoping Document 1 for Wallowa Falls Hydroelectric Project (SD1) and presents the agency's issues and concerns, which should be addressed in the environmental analysis.

SD1 lists many of the general issues related to the relicensing of the Wallowa Falls Hydroelectric Project (Project); however, there are additional issues which must be analyzed before the Forest Service will be able to determine if the Project is consistent with the management direction established in the Wallowa-Whitman National Forest Land and Resource Management Plan, as amended.

Section 3.1

The Forest Service has no objection to using a no action alternative to establish a baseline for comparison of action alternatives. We note that action alternatives may include consideration of measure to address impacts associated with original Project construction¹.

Section 4.2 Resource Issues

Issue: Effects of project operation and maintenance on soil erosion, particularly along the upper portion of the East Fork dam access road.

1

The Ninth Circuit U.S. Court of Appeals decision on August 11, 1999, in *American Rivers et al. v. FERC* (#98-70079, 187F3d. 1007, 9th Cir. 1999), affirmed the Commission's interpretation of its responsibilities under the FPA and NEPA as reasonable, and that an attempt to recreate pre-project conditions was unnecessary under applicable law (NEPA and FPA). However, the Court also stated "Moreover, we agree with the Commission that the adoption of an existing project baseline" [for the Commission's environmental analysis] "does not preclude consideration and inclusion of conditions in a license that enhance fish and wildlife resources to reduce negative impacts attributable to a project since its construction. See Order on Reh'g, 81 Fed. Energy Reg. Comm'n Rep. (CCH) at 62,327. Past environmental impacts are relevant in determining what measures are appropriate to protect, mitigate and enhance natural resources..."

The Forest Service agrees in concept with the stated issue. However, in addition to the forebay access road, the Forest service suggest the issue be expanded to include the length of the penstock, as ruptures of the pipe have occurred historically and have the potential to affect soils and riparian habitat through erosion.

Aquatic Issues:

The Forest Service agrees with the three identified issues. However, an additional issue is one that addresses the effects of project operations on the overall function and health of the East Fork Wallowa River including vegetative species structure and composition, and macroinvertebrates.

Terrestrial Issues:

The Forest Service agrees in concept with the stated issue. The issue statement should identify agency specific species lists for species of interest as well as rare and sensitive species. For the Forest Service there are four specific lists for wildlife and botanical resources: these include the Regional Forester's Sensitive species list, the Wallowa-Whitman National Forest LRMP Management Indicator Species (MIS) list, the USFWS Oregon county species list, and the Wallowa County Noxious weed list.

Threatened and Endangered Issue:

The Forest Service agrees in concept with the stated issue. However, the issue statement should be modified to include the Canada lynx.

Recreation and Land Use

Issue: The adequacy of existing recreation facilities and public access within the project boundary to meet current and future (over the term of a new license) recreational demand.

The Forest Service disagrees that this is an important issue associated with the relicensing of the Wallowa Falls Hydroelectric Project. The Forest Service believes that adequate recreation opportunities exist in the area as evidenced by the numerous activities offered by the trail system, the State Park system, the Wallowa Mountain Tramway and other private recreation experiences.

Issue: Effects of the project on the recreational experience of users accessing the Wallowa-Whitman National Forest and Eagle Cap Wilderness.

The Forest Service agrees in concept with FERC's proposed issue. However, the issue statement should specifically discuss the growing winter use of the area as facilitated by the forebay access road, and the existence of several braided and eroding social trails that are serving as a funnel for unrecorded visitors from the Pacific Park campground who access the National Forest.

These issues should be included because the Project has an impact on recreational use by the existence and maintenance of a faster and somewhat safer (due to avalanche paths) route for skiers and other winter recreationists. While not in the immediate project area, the campground exists within the project vicinity and due to lack of management several social trails have developed that directly facilitate access to the National Forest. These visitors are not counted nor do they use the mandatory permit system.

Cultural Issue:

The Forest Service agrees with the stated issue.

Aesthetics

Issue: Effects of project facilities and operations on the aesthetic/visual experience of visitors and residents using project lands and waters.

The Forest Service agrees in concept with FERC's proposed issue but proposes that the issue statement should be more specific. It should include effects to the soundscape from the noise of the generator and the visual intrusion of the pipeline and forebay structures as seen from along the USFS trail.

Section 5.0 Proposed Studies

In response to the Commission's request for studies, the Forest Service is providing study requests that are in addition to the studies proposed by PacifiCorp.

The Forest Service supports implementation of all PacifiCorp proposed studies either agreeing with the study as described or agreeing in concept with the proposed study and recommending additions to affectively assess any potential Project effects to the NFS lands and resources. All studies proposed with the exception of bull trout monitoring have the potential to affect NFS lands and resources.

The Forest Service as administrating agency for NFS lands must analyze all potential Project affects to ensure that planning, construction, operations and modifications are consistent with Forest Service resource management direction in applicable land and resource management plans: Wallowa-Whitman National Forest Land and Resource Management Plan, as amended.

Management direction for NFS lands and resources is contained in a variety of laws, policies and management plans. **Exhibit I** contains applicable management direction for the resource studies.

6.0 Request for Information

USDA Forest Service. 2011. Wilderness Permit Information for Wallowa Lake Trailheads. Information included in Forest Service's response to Pre-Application Document.

USDA Forest Service. 1995. Eagle Cap Wilderness Stewardship Plan. 39p.

Study Requests
Wallowa Falls Hydroelectric Project
FERC Project No. 308-005
Wallowa-Whitman National Forest
USDA Forest Service

June 2011

Study - Pacific Park User Trail

Study Description and Objectives

Currently, campers at the Park have created an unofficial trail system that allows them to bypass the USFS trail and access the Eagle Cap Wilderness. The exact number of visitors is unknown since they bypass the permit system at the trailhead. This study would provide this information and allow the USFS to incorporate these visitor numbers into capacity and planning studies.

Study Area - The trail system leading from the Park in Section 29.

Resource Management Goals - USDA Forest Service Resource Management Goals

The following describes recreational trail and management policy relevant to the Project:

2350.3 - Policy

1. Manage trail, river, and similar recreation opportunities and their recreational access and support facilities under the principles enumerated in FSM 2303.
2. Emphasize recreation opportunities and supporting facilities that are consistent with applicable Recreation Opportunity Spectrum classes.
3. Coordinate management of trail, river, and similar recreation opportunities with management of neighboring recreational sites and facilities, including campgrounds, picnic areas, ski areas, resorts, and, as appropriate, recreational facilities off National Forest System (NFS) lands.

(2) The following describes the process for determining capacity in an area:

41.53e - Needs Assessment, Resource Capacity Analysis, and Allocation of Use

Allocate outfitting and guiding use in a project decision pursuant to 36 CFR Part 215 or in a programmatic decision pursuant to a wilderness plan, wild and scenic river plan, or plan for another type of congressionally designated area. Follow the direction in section 41.53e, paragraphs 1, 2, and 3, as applicable. These procedures also may be used to allocate outfitting and guiding use when competitive interest exists for the same resources or type of use or when considering significant changes to current use or demand. Allocate use in service days or quotas for both temporary and priority use (sec. 41.53j and 41.53m).

1. Conduct a needs assessment to determine the public or agency need for authorized outfitting and guiding activities. A needs assessment may be conducted as part of public scoping during a NEPA analysis. Consider accessibility, size of the area, difficulty of the terrain, current levels of outfitting and guiding, and demographics of visitors to the area.
 - a. When conducting a needs assessment for outfitting and guiding activities in a wilderness area, assess whether these activities are necessary for realizing the recreational or other wilderness purposes of the area and the extent to which the activities may be authorized consistent with maintaining the wilderness character of the area.
 - b. Review previous needs assessments when reauthorizing use to ensure that they remain relevant to current and projected use trends, and update them if necessary.
2. When monitoring demonstrates that impacts associated with use may exceed desired conditions, conduct a resource capacity analysis to assess the amount of use and types of activities that may be conducted without detrimental environmental and associated impacts. The resource capacity analysis may be conducted at a programmatic level or at a project level to address specific activities or geographical areas. In analyzing resource capacity, consider:
 - a. The applicable land management plan and other applicable programmatic and project decisions.
 - b. Inventoried conditions.
 - c. Current visitor use and visitor use trends (amount, type, length of stay, and group size).
 - d. Correlation of visitor use to plan guidance and inventoried conditions

Existing Information and Need for Additional Information

There is one main foot trail that leaves the junction of the Chief Joseph Trail and the West Fork Wallowa Trail. It travels the ridge for a short way and then drops toward Pacific Park. Over time users have caused erosion of the soil surface and have sought additional routes down to the Park. Currently three trails branch out and end in the Park. No information is available on how many people use this trail annually. This information is needed because it represents a segment of visitation that is unaccounted for to USFS lands and in particular to the Eagle Cap Wilderness.

Nexus to Project Operations and Effects

If the Park did not exist, visitors would not be using these routes. Instead they would be using the official USFS trails and filling out a wilderness permit, which is mandatory and gives the USFS a record of the use that occurs. This assists in planning for future projects, in determining user capacity and in the level of trail maintenance required.

Proposed Study Methodology

The study would take place in the summer (May 31-Sept. 30 or when the Park is open) and would consist of a beam traffic counter placed near the intersection of the ridgeline and the official trail system.

A wilderness permit box would be placed at the point where the user trail intersects the ridge but far back enough from the USFS trail so that it does not confuse visitors on the official trail.

Schedule - Generally, May through September is the main season of use.

Compliance with the wilderness permit system has been determined to be 85%. It is the Forest Service accepted method for counting visitor use. Traffic counters if calibrated properly are commonly used for low-cost and easy visitor monitoring. Other methods, such as random sampling, are more expensive and time consuming as they require personnel on site, although they would yield more specific information. Due to the irregular use of the area, this would not be cost-effective for PacificCorp.

PacificCorp would pay for materials and construction of a USFS wilderness permit box (unless the USFS has one in stock) and would install the box in a site identified by USFS personnel. PacificCorp personnel would be given permit envelopes to stock the box, but permits would be collected by USFS. The end product will have a monthly total of counter hits divided by two (to eliminate double counting by users coming back).

Progress Reporting – A seasonal total by month would be expected by the end of each summer season (September 30th).

Level of Effort and Cost

A beam traffic counter that runs on batteries is relatively inexpensive. The only work that would be incurred would be to monitor battery usage and to set the beam so it is not triggered by movement of tree branches and the like. The output would need to be tabulated at regular intervals and the counter reset.

The USFS permit box is inexpensive and once installed would need little or no maintenance. Personnel would need to check it as often as weekly to ensure there were still permit envelopes available. The time for this would be minimal.

Study - Winter Recreation Use Study

Study Description and Objectives

This study would determine actual visitor use of the forebay road in the winter months.

Specifically it would measure winter use of the forebay access trail as measured just beyond where it intersects with the USFS East Fork Wallowa Trail # 1804 using a beam traffic counter.

Resource Management Goals - USDA Forest Service Resource Management Goals

The following describes recreational trail and management policy relevant to the Project:

2350.3 - Policy

1. Manage trail, river, and similar recreation opportunities and their recreational access and support facilities under the principles enumerated in FSM 2303.
2. Emphasize recreation opportunities and supporting facilities that are consistent with applicable Recreation Opportunity Spectrum classes.
3. Coordinate management of trail, river, and similar recreation opportunities with management of neighboring recreational sites and facilities, including campgrounds, picnic areas, ski areas, resorts, and, as appropriate, recreational facilities off National Forest System (NFS) lands.

(2) The following describes the process for determining capacity in an area:

41.53e - Needs Assessment, Resource Capacity Analysis, and Allocation of Use

Allocate outfitting and guiding use in a project decision pursuant to 36 CFR Part 215 or in a programmatic decision pursuant to a wilderness plan, wild and scenic river plan, or plan for another type of congressionally designated area. Follow the direction in section 41.53e, paragraphs 1, 2, and 3, as applicable. These procedures also may be used to allocate outfitting and guiding use when competitive interest exists for the same resources or type of use or when considering significant changes to current use or demand. Allocate use in service days or quotas for both temporary and priority use (sec. 41.53j and 41.53m).

1. Conduct a needs assessment to determine the public or agency need for authorized outfitting and guiding activities. A needs assessment may be conducted as part of public scoping during a NEPA analysis. Consider accessibility, size of the area, difficulty of the terrain, current levels of outfitting and guiding, and demographics of visitors to the area.
 - a. When conducting a needs assessment for outfitting and guiding activities in a wilderness area, assess whether these activities are necessary for realizing the recreational or other wilderness purposes of the area and the extent to which the activities may be authorized consistent with maintaining the wilderness character of the area.

- b. Review previous needs assessments when reauthorizing use to ensure that they remain relevant to current and projected use trends, and update them if necessary.
2. When monitoring demonstrates that impacts associated with use may exceed desired conditions, conduct a resource capacity analysis to assess the amount of use and types of activities that may be conducted without detrimental environmental and associated impacts. The resource capacity analysis may be conducted at a programmatic level or at a project level to address specific activities or geographical areas. In analyzing resource capacity, consider:
 - a. The applicable land management plan and other applicable programmatic and project decisions.
 - b. Inventoried conditions.
 - c. Current visitor use and visitor use trends (amount, type, length of stay, and group size).
 - d. Correlation of visitor use to plan guidance and inventoried conditions.

Existing Information and Need for Additional Information

There is very little information on winter recreation use in the area beyond anecdotal reports. The District will soon be embarking upon a winter recreation capacity study and analysis. This information will be very helpful in determining future outfitter allocations, wilderness management decisions and trail maintenance levels.

The existing Eagle Cap Wilderness Stewardship Plan (1995) references the maximum allowable capacity in RVDs for each Wilderness Resource Spectrum (WRS) class but does not differentiate by trail system or area. The forebay location is .5 miles from the Eagle Cap Wilderness boundary in a Semi-Primitive class.

Nexus to Project Operations and Effects

The existence of the Project, in particular the forebay access road, directly facilitates a safer, easier and quicker approach for backcountry skiers and snowshoers to Aneroid Basin. These users funnel back onto the USFS trail at either the bridge or the forebay. While impacts to the resource may be slight from this use, it still represents a concentrated use and higher rate of encounters in designated wilderness that would otherwise not exist. It is unknown whether the levels of encounters exceed the desired condition for the area. Many of these users stay overnight at a private inholding, but others choose to winter camp. These users generally expect the USFS trail to be cleared of blowdowns; if budget and staffing allows, the USFS will divert resources from other projects to maintain the trail, though this is not required.

Proposed Study Methodology

A traffic counter would be placed in an obscure location near the junction of the USFS trail and the forebay access road. It would be calibrated to ensure it only recorded pedestrian, human traffic.

Schedule – Monitoring would begin in December of the study year and last through March. Ideally this study would take place for two years.

Consistency with generally accepted scientific practice: Traffic counters if calibrated properly are commonly used for low-cost and easy visitor monitoring. Other methods, such as random sampling, are more expensive and time consuming as they require personnel on site, although they would yield more specific information. Due to the irregular use of the area and the sometimes severe winter conditions, monitoring of this type is not practical in winter.

Final Work Product – The end product will have a monthly total of counter hits divided by two (to eliminate double counting by users coming back).

Progress Reporting – A seasonal total by month would be expected by the end of each winter season.

Level of Effort and Cost

A beam traffic counter that runs on batteries is relatively inexpensive. The only work that would be incurred would be to monitor battery useage and to set the beam so it is not triggered by movement of tree branches and the like. The output would need to be tabulated at regular intervals and the counter reset.

Exhibit I

USDA Forest Service Management Direction

The following management direction will guide the Forest Service in relicensing of the Wallowa Falls Hydroelectric Project:

Department of Agriculture Regulation 9500-4 directs the Forest Service:

- To manage “habitats for all existing native and desired non-native plants, fish, and wildlife species will be managed to maintain at least viable populations of such species.”
- To improve “...fish and wildlife habitats, and to ensure the presence of diverse, active and desired non-native population of wildlife, fish and plant species...”
- “Land and water management activities will integrate fish and wildlife habitat needs with other resources and programs and will, where possible, mitigate habitat losses...”
- To “...conduct its activities and programs to assist in the identification and recovery of threatened and endangered plant and animal species and to avoid actions which may cause a species to become threatened or endangered.”
- To “...alleviate damage by plant and animal pests ... to forest and urban trees, wildlife and their habitats.”

The National Forest Management Act (NFMA) directs that national forests be managed to “provide for a diversity of plant and animal communities” 16 U.S.C. 1604(g) (3) (B).

Code of Federal Regulations, 36 CFR 219.1 (b) states “...the overall goal of managing the National Forest System is to sustain the multiple uses of its renewable resources in perpetuity while maintaining the long-term productivity of the land.”

36 CFR 219.10 (b) states “The overall goal of the ecological element of sustainability is to provide a framework to contribute to sustaining native ecological systems by providing ecological conditions to support diversity of native plant and animal species in the plan area.

(1) Ecosystem diversity and (2) Species diversity are the primary means to sustain ecological systems. These are defined in 36 CFR 219.16

- Ecosystem diversity: The variety and relative extent of ecosystem types, including their composition, structure, and processes within all or a part of an area of analysis.
- Diversity of plant and animal communities: The distribution and relative abundance or extent of plant and animal communities and their component species, including tree species, occurring within an area.

- Species-of-concern: Species for which the Responsible Official determines that management actions may be necessary to prevent listing under the Endangered Species Act.
- Species-of-interest: Species for which the Responsible Official determines that management actions may be necessary or desirable to achieve ecological or other multiple use objectives.
- Ecological conditions: Components of the biological and physical environment that can affect diversity of plant and animal communities and the productive capacity of ecological systems. These components could include the abundance and distribution of aquatic and terrestrial habitats, roads and other structural developments, human uses, and invasive, exotic species.

Forest Service Manual (FSM) 2600 – 2670 Wildlife, Fish and Sensitive Plant Habitat

Management addresses cooperative relationships; habitat planning and evaluation; management of fish and wildlife habitat; and threatened, endangered, and sensitive plants and animals.

Applicable policies, objectives, and standards include:

FSM 2526.03 – policy directs the USDA Forest Service to “...emphasize protection and improvement of soil, water, and vegetation, particularly because of their effects upon aquatic and wildlife resources.”

FSM 2526.03 – policy directs the USDA Forest Service to “Give attention to land along all stream channels capable of supporting riparian vegetation.”

FSM 2526.03 – policy directs the USDA Forest Service to “Give special attention to land and vegetation for approximately 100 feet from the edges of all perennial streams....”

FSM 2601.2 - Habitats for all existing native and desired non-native plants, fish, and wildlife species will be managed to maintain at least viable populations of such species. In achieving this objective, habitat must be provided for the number and distribution of reproductive individuals to ensure the continued existence of a species throughout its geographic range. Monitoring activities will be conducted to determine results in meeting population and habitat goals. Land and water management activities will integrate fish and wildlife habitat needs with other resources and programs and will, where possible, mitigate habitat losses, consistent with Forest Plan goals and objectives as developed in the planning process.

FSM 2610.1 – “...conduct studies and recommend measures to protect, develop, and improve wildlife and fish habitats affected by water-use projects involving Federal lands...”

FSM 2630.3 - policy directs the USDA Forest Service to “...mitigate the negative effects of other resource projects upon wildlife and fish habitat.”

FSM 2670.22 states: “Maintain viable populations of all native and desired nonnative wildlife, fish, and plant species in habitats distributed throughout their geographic range on National Forest System lands. A viable population is further defined by FSM 2670.5 as one that has the estimated numbers and distribution of reproductive individuals to ensure the continued existence

of the species throughout its existing range (or range required to meet recovery for listed species) within the planning area.”

FSM 2670.31 - Threatened and Endangered Species states in part: “Identify and prescribe measures to prevent adverse modification or destruction of critical habitat and other habitats essential for the conservation of endangered, threatened, and proposed species. Protect individual organisms or populations from harm or harassment as appropriate.”

FSM 2670.32: Requires the agency to monitor other “watch-lists or species of concern” that maybe declining, but have reach critical population levels. USDA Forest Service policy includes the requirement to, as part of the NEPA process, review programs and activities, through a Biological Evaluation, to determine their potential effect on Sensitive Species, and to avoid or minimize impacts to species whose viability has been identified as a concern.

FSM 2672.41: USDA Forest Service policy implementing the NFMA, NEPA and the ESA establishes objectives and direction to ensure that actions on NFS lands do not contribute to trends toward Federal listing or loss of viability of any native or desired non-native species.

The Pacific Northwest Region, Region 6 Regional Foresters sensitive species list which includes the Wallowa-Whitman National Forest was updated in July, 2004. The Wallowa-Whitman Land and Resource Management Plan iterates similar goals specific to TES species stating its goal is to “Protect and manage habitat for the perpetuation and recovery of plants and animals which are listed as threatened, endangered, or sensitive. And to “assure that management activities do not jeopardize the continued existence of sensitive species or result in adverse modification of their essential habitat” (page 4-30).

The Wallowa-Whitman Land and Resource Management Plan provides goals for invasive species and states on page 4-55 the goal to “

The standards and guidelines in the Wallowa-Whitman National Forest Land and Resource Management Plan (USDA Forest Service 1990), directs the agency to:

- Aggressively pursue control of identified noxious weeds on lands where such activities are not precluded by management area direction. This will be accomplished through Forest Activities and through coordination with county, State and other Federal agencies as funds permit.
- Maintain and enhance soil productivity, water quality and water quantity and to meet or exceed State water quality standards,
- Maintain and enhance the unique and valuable characteristics of riparian areas and to maintain or improve water quality, wildlife habitat, and fish habitat near or within riparian ecosystems,
- Mitigate negative impacts causing reduction in water quality to return water quality to previous levels in as short a time as possible,
- Prevent measurable temperature increases in Class I streams (less than a 0.5 degree Fahrenheit change),
- Temperature increases on SMU Class II (and Fish-bearing SMU Class III) stream will be limited to the criteria in State stream temperature standards as listed below.

Oregon Administrative Rules (July 13, 2007)

Oregon Administrative Rules (July 13, 2007)

OAR 340-041-0028:

(4) Biologically Based Numeric Criteria. Unless superseded by the natural conditions criteria described in section (8) of this rule, or by subsequently adopted site-specific criteria approved by EPA, the temperature criteria for State waters supporting salmonid fishes are as follows:

(f) The seven-day-average maximum temperature of a stream identified as having bull trout spawning and juvenile rearing use on subbasin maps set out at OAR 340-041-0101 to 340-041-0340: Figures 130B, 151B, 160B, 170B, 180A, 201A, 260A, 310B, and 340B, may not exceed 12.0 degrees Celsius (53.6 degrees Fahrenheit).

(11) Protecting Cold Water:

(a) Except as described in subsection (c) of this rule, waters of the State that have summer seven day-average maximum ambient temperatures that are colder than the biologically based criteria in section (4) of this rule, may not be warmed by more than 0.3 degrees Celsius (0.5 degrees Fahrenheit) above the colder water ambient temperature. This provision applies to all sources taken together at the point of maximum impact where salmon, steelhead or bull trout are present.

(12) Implementation of the Temperature Criteria:

(c) Air Temperature Exclusion. A water body that only exceeds the criteria set out in this rule when the exceedence is attributed to daily maximum air temperatures that exceed the 90th percentile value of annual maximum seven-day average maximum air temperatures calculated using at least 10 years of air temperature data, will not be listed on the section 303(d) list of impaired waters and sources will not be considered in violation of this rule.

(h) Other Nonpoint Sources. The department may, on a case-by-case basis, require nonpoint sources (other than forestry and agriculture), including private hydropower facilities regulated by a 401 water quality certification, that may contribute to warming of State waters beyond 0.3 degrees Celsius (0.5 degrees Fahrenheit), and are therefore designated as water-quality limited, to develop and implement a temperature management plan to achieve compliance with applicable temperature criteria or an applicable load allocation in a TMDL pursuant to OAR 340-042-0080.

- Protect instream flow on National Forest System lands through critical analysis (via NEPA) of proposed water uses, diversions, and transmission application and renewal of permits.

The East Fork Willowa River is a Class 1 stream as defined by the WWNF LRMP because it is a perennial stream while on NFS lands and is used by fish for spawning, rearing or migration (WWNF LRMP, Glossary p. 45).

Region 6 recently completed the Pacific Northwest Region Invasive Plant Program Preventing and Managing Invasive Plants Record of Decision and Final Environmental Impact Statement

(April 2005). Management goals described in this documentation as well as in the Wallowa-Whitman National Forest Noxious Weed Management Plan (April 1992) would be relevant.

Inland Native Fish Strategy (INFISH) Standards and Guidelines

Management of federal lands in the Project vicinity is also directed by the INFISH. This strategy is designed to implement measures to arrest the degradation, and begin the restoration of riparian and aquatic ecosystems in watersheds with inland native fish habitat (FR 61, 177, September 11, 1996). INFISH requires that hydroelectric and other surface water developments maintain instream flows and habitat conditions that maintain or restore riparian resources, favorable channel conditions and fish passage, reproduction and growth. For existing hydroelectric facilities within RHCAs, the Forest Service is directed to provide recommendations to the Federal Energy Regulatory Commission (FERC) to assure that the facilities will not prevent attainment of the Riparian Management Objectives (RMOs) and that adverse effects on inland native fish are avoided.

INFISH standard and guideline LH-1: Require instream flows and habitat conditions for hydroelectric projects and other surface water development proposals that maintain or restore riparian resources, favorable channel conditions, and fish passage, reproduction and growth. During relicensing of hydroelectric projects, provide written and timely license conditions to the FERC that require fish passage and flows and habitat conditions that maintain/restore riparian resources and channel integrity. Coordinate relicensing projects with State agencies.

Attachment 1

2011 Wallowa County Weed List

Common name	WR code	Gov code	Scientific name
Absinth Wormwood	AWW	ARAB3	<i>Artemisia absinthium</i>
<u>Annual Bugloss</u>	<u>ABL</u>	<u>ARMI2</u>	<u>Anchusa arvensis</u>
Bachelor Button	BAB	CECY2	<i>Centaurea cyanus</i>
Black Henbane	BLH	HYNI	<i>Hyoscyamus niger</i>
Himalayan Blackberry	HBB	RUAR9	<i>Rubus armeniacus</i>
Blooddrop	BDP	ADAD	<i>Adonis annua</i>
Bouncingbet	BBT	SAOF4	<i>Saponaria officinalis</i>
Buffalo Bur	BFB	SORO	<i>Solanum rostratum</i>
Bur Buttercup	BBC	CETE5	<i>Ranunculus testiculatus</i>
Bur Chervil	BRC	ANCA14	<i>Anthriscus caucalis</i>
Canada Thistle	CTH	CIAR4	<i>Cirsium arvense</i>
Chicory	CHK	CIIN	<i>Cichorium intybus</i>
Clary Sage	CSG	SASC	<i>Salvia sclarea</i>
Common Bugloss	CBL	ANOF	Anchusa arvensis
Common Burdock	CBD	ARMI2	<i>Arctium minus</i>
Common Crupina	CCP	CRVU2	Crupina vulgaris
Common Tansy	CTZ	TAVU	<i>Tanacetum vulgare</i>
Common Teasle	CMT	DIFU2	<i>Dipsacus fullonum</i>
Common Reed Grass	CRG	PHAU7	<i>Phragmites australis</i>
Dalmation Toadflax	DTF	LIDA	<i>Linaria dalmatica</i>
Diffuse Knapweed	DKW	CEDI3	<i>Centaurea diffuse</i>
<u>Dyers Woad</u>	<u>DYW</u>	<u>ISTI</u>	<u>Isatis tinctoria</u>
<u>False Hoary Allysum</u>	<u>FHA</u>	<u>BEIN2</u>	<u>Berteroa incana</u>
Field Bindweed	FBW	COAR4	<i>Convolvulus arvensis</i>
Foxtail	FXT	HOMUL	<i>Hordeum leporinum</i>
<u>Garlic Mustard</u>	<u>GMS</u>	<u>ALPE4</u>	<u>Alliaria petiolata</u>
Hounds Tongue	HDT	CYOF	<i>Cynoglossum officinale</i>
<u>Italian Thistle</u>	<u>ITH</u>	<u>CAPY2</u>	<u>Carduus pycnocephalus</u>
<u>Japanese Knotweed</u>	<u>JKW</u>	<u>POCU6</u>	<u>Polygonum cuspidatum</u>
Johnsongrass	JNG	SOHA	<i>Sorghum halepense</i>
Jointed Goatgrass	JGG	AECY	Aegilops cylindrica
Kochia	KCH	KOSC	<i>Kochia scoparia</i>
Leafy Spurge	LSP	EUES	Euphorbia esula
Long Spine Sandbur	LSS	CELO3	<i>Cenchrus longispinus</i>

Common name	WR code	Gov code	Scientific name
Meadow Hawkweed	MHW	HICA10	<i>Hieracium pratense</i>
<u>Meadow Knapweed</u>	<u>MKW</u>	<u>CEDE5</u>	<u><i>Centaurea pratensis</i></u>
<u>Mediterranean Sage</u>	<u>MSG</u>	<u>SAAE</u>	<u><i>Salvia aethiopis</i></u>
Medusahead Rye	MHR	TACA8	<i>Taeniatherum caput-medusae</i>
Mullein	MLN	VETH	<i>Verbascum thapsus</i>
<u>Musk Thistle</u>	<u>MTH</u>	<u>CANU4</u>	<u><i>carduus nutans</i></u>
<u>Myrtle Spurge</u>	<u>MSP</u>	<u>EUMY2</u>	<u><i>Euphorbia mysinites</i></u>
<u>Orange Hawkweed</u>	<u>OHW</u>	<u>HIAU</u>	<u><i>Hieracium aurantiacum</i></u>
<u>Oregano</u>	<u>ORE</u>	<u>ORVU</u>	<u><i>Origanum vulgare</i></u>
Oxeye Daisy	OED	LEVU	<i>leucanthemum</i>
Perennial Peavine	PPV	LALA4	<i>Lathyrus latifolius</i>
<u>Perennial</u>			
<u>Pepperweed</u>	<u>PPW</u>	<u>LELA2</u>	<u><i>Lepidium latifolium</i></u>
Perennial Sowthistle	PSO	SOAR2	<i>Sonchus arvensis</i>
<u>Plumeless Thistle</u>	<u>PTH</u>	<u>CAAC</u>	<u><i>Carduus acanthoides</i></u>
Poison Hemlock	PHK	COMA2	<i>Conium maculatum</i>
Puncturevine	PVN	TRTE	<i>Tribulus terrestris</i>
Purple Loosestrife	PLS	LYSA2	<i>Lythrum salicaria</i>
<u>Purple Starthistle</u>	<u>PST</u>	<u>CECA2</u>	<u><i>Centaurea calcitrapa</i></u>
Queen Anne's Lace	QAL	DACA6	<i>Daucus carota</i>
Reed Canary Grass	RCG	PHAR3	<i>Phalaris arundinacea</i>
Rose Campion	RCP	LYCO	<i>Lychnis coronaria</i>
Rush Skeletonweed	RSW	CHJU	<i>Chondrilla juncea</i>
<u>Russian Knapweed</u>	<u>RKW</u>	<u>ACRE3</u>	<u><i>Acroptilon repens</i></u>
Russian Olive	ROL	ELAN	<i>Elaeagnus angustifolia</i>
<u>Scotch Broom</u>	<u>SCB</u>	<u>SYSC4</u>	<u><i>Cytisus scoparius</i></u>
Scotch Thistle	SCT	ONAC	<i>Onopordum acanthium</i>
Silverleaf Nightshade	SNS	SOEL	<i>Solanum elaeagnifolium</i>
Skeletonleaf Bursage	SLB	AMTO3	<i>Ambrosia tomentosa</i>
Sow Thistle	SOT	SOAR2	<i>Sonchus arvensis</i>
<u>Spotted Cats Ear</u>	<u>SCE</u>	<u>HYRA3</u>	<u><i>Hypochaeris radicata</i></u>
Spotted Knapweed	SKW	CEBI2	<i>Centaurea stoebe</i>
St. Johnswort	STJ	HYPE	<i>Hypericum perforatum</i>
Sulfur Cinquefoil	SCQ	PORE	<i>Potentilla recta</i>
Sweet Briar Rose	SBR	ROEG	<i>Rosa eglanteria</i>
Tall Buttercup	TBC	RAAC3	<i>Ranunculus acris</i>

Common name	WR code	Gov code	Scientific name
Tamarisk/Saltcedar	TMR	TARA	<i>Tamarix ramosissima</i>
<u>Tansy Ragwort</u>	<u>TRW</u>	<u>SEJA</u>	<u><i>Senecio jacobaea</i></u>
Tree of Heaven	TOH	AIAL	<i>Ailanthus altissima</i>
Ventenata	VTA	VEDU	<i>Ventenata dubia</i>
Western Water Hemlock	WWH	CIDO	<i>Cicuta douglasii</i>
<u>White Bryony</u>	<u>WBR</u>	<u>BRAL4</u>	<u><i>Bryonia alba</i></u>
White Campion	WCA	SIAL12	<i>Silene alba</i>
<u>Whitetop</u>	<u>WTP</u>	<u>CADR</u>	<u><i>Cardaria draba</i></u>
<u>Yellow Flag Iris</u>	<u>YFI</u>	<u>IRPS</u>	<u><i>Iris pseudacorus</i></u>
<u>Yellow Starthistle</u>	<u>YST</u>	<u>CESO3</u>	<u><i>Centaurea solstitialis</i></u>
<u>Yellow toadflax</u>	<u>YTF</u>	<u>LIVU2</u>	<u><i>Linaria vulgaris</i></u>

KEY

Wallowa County "B" and/or "Watch" List Noxious Weed Species

Wallowa County "A" List Noxious Weed Species (Bold)

Wallowa County "T" List Noxious Weed Species (Underline)

Wallowa County "A" & "T" List Noxious Weed Species(Bold & Underline)

Attachment 2

NOXIOUS WEED PLANT OCCURRENCE RECORD WALLOWA-WHITMAN NATIONAL FOREST

 : Noxious Weed

Listed: Category :

SCIENTIFIC NAME: _____ COMMON NAME: _____

PROJECT: _____ DISCOVERY DATE: _____

LOCATION

RANGER DISTRICT: _____ COUNTY: _____

QUAD(S):

LEGAL SUBDIVISION:

GPS-datum/lat&long (decimal,degree)

LOCATION (directions, landmarks, etc):

Land Owner:

DATES OF FIELDWORK:

BY:

INFESTATION

SIZE OF SITE: _____ NUMBER OF PLANTS: _____

DESCRIPTION (phenology, age class, density, etc.):

VOUCHER (collector and number, where stored):

SUITABILITY FOR MONITORING:

HABITAT

ELEVATION: _____ **ASPECT:** _____ **SLOPE:** _____

Riparian: _____ **Upland:** _____ **Site Composition:** _____

DESCRIPTION (microhabitat, timber type, plant associates, soil type, etc.):

NATURE OF DISTURBANCE (if any):

MONITORING STATUS:

ERADICATION

METHODS USED (if any):

RECOMMENDATIONS (for further control efforts):

REPORTER: _____ **JOB TITLE:** _____ **DATE:** _____

Photos: _____

Attachment 3

Wallowa Falls Botanical Inventory Methodology

Study Proposal Work Description

The work to be performed consists of botanical surveys for **Plant Species of Interest** within the Wallowa Falls Hydroelectric Project Vicinity.

Plant Species of Interest includes Proposed, Threatened, Endangered and Sensitive species on the Wallowa-Whitman Sensitive Plant List. Additional Species of Interest for this project include Wallowa-Whitman Strategic plant species and species from the Wallowa-Whitman (Wallowa County) Noxious Weeds Plant List. In addition to the Wallowa-Whitman Sensitive Plant List, any species with status for Oregon on the U.S. Forest Service Region Six Sensitive Plant List would also be considered a Plant Species of Interest. The W-W Sensitive plant list was created by the Forest based on our best professional judgment of what plants on the Region 6 FS list would have potential to be found on this Forest. There is always the potential for unexpected finds. Plants listed on the U.S. Fish and Wildlife County Species List for National Forests (available on USFWS web site) will also be considered – though these often correspond with the Forest Sensitive species lists.

Surveys for Wallowa Falls Hydroelectric Project rare plants will be conducted using the “intuitive controlled method,” whereby study area habitats with high potential to support these species will be surveyed with greater intensity than areas with low potential (Nelson 1985). This method is often used by the USFS and is one of the most common and efficient ways of surveying for rare plants. Survey protocols for non-vascular plants will also follow those for vascular plants found in the USDA *Threatened, Endangered and Sensitive Plant Survey Field Guide and Form*. Botanists searching for these species typically look for textural differences in the cover of non-vascular plants on trees, soil, or rocks while conducting surveys in potential habitats for vascular and nonvascular rare plants. Habitat features with observed textural differences are investigated further for the presence of rare non-vascular plants, especially in and along streams and riparian areas. Particular attention will be given to mossy rocks, large tree trunks, and down trees when these habitat features are encountered. Surveys should be scheduled to occur throughout two field seasons at times dictated by the most detectable phenological phase of target species plant growth. The timing of the surveys may require fine-tuning depending on the growing season conditions in 2012 & 2013, as well as any changes to the target rare plant list.

Wallowa Falls Hydroelectric Project rare plants will be identified in the field using the Flora of the Pacific Northwest (Hitchcock and Cronquist 1973) with synonymy cross-referenced to new plant names as recorded in the NRCS PLANTS data base. Plant species of questionable or unknown identification will be collected and sent to taxonomic specialists.

Survey should generally be organized in three phases – the Pre-Field Review, Field Work, and Documentation

Pre-Field Review

There are three necessary components in completion of the Pre-field Review – the actual pre-field review effort, a survey design, and a work plan.

The Pre-field Review, when completed, reflects Pacific Power and the Forest Service's review of literature and records of potential Sensitive plants and or known Sensitive Plant sites and the determination of the probability of habitat that may support Sensitive Plants within the Project Vicinity.

Survey Design: This step, precedes field surveys, and defines a survey strategy and how the results will be reported. Depending on the size and complexity of the terrain to be inventoried, the Survey Design may result in the division of the project area into logical survey blocks. These survey areas or blocks should generally be made up of terrain with similar geographic, topographic, geologic, ecologic/habitat, treatment, or access attributes. The survey design should generally account for areas with low, moderate, or high potential habitat for the various Plant Species of Interest, and addresses the requirements of the Field Survey described below.

The Work Plan is a description of approximately when and where project surveys will take place.

Field Surveys

a. The desired outcome of floristic field surveys would focus on conformation to the standards of the professional botanical community. The most favored and accepted technique is the Intuitive-control methodology including the following standard actions:

- search for and verification of **Plant Species of Interest** at known, reported, and all suitable habitat,
- identification to species of all vascular plant species encountered during field surveys,
- a list of all species encountered by each field crew member during field work (one comprehensive list would be turned in as part of the results documentation – see specifics below).

b. A desired outcome of (Intuitive-Control) unit field surveys is that major topographic features and areas of high probability potential habitat, are surveyed by walking routes. A desired outcome of field surveys is also that a representative cross-section of minor topographic features, plant associations, and moderate to low probability habitats are surveyed by walking routes. Each area shall be surveyed intensively enough to locate unique habitats and high probability areas for Sensitive Plants. A representative portion of moderate and low probability habitats shall be surveyed for each area. The location of unique habitat and high probability areas is essential to the Forest Service and can generally be accomplished by physically covering at least 40% of the ground and leaving no un-surveyed areas greater than 5% of the total Project Vicinity. It is assumed that the route walked accounts for a wide observational swath on either side of the surveyor's path. It is not expected that a uniform grid or transect method be deployed as part of the survey methodology. It is expected that the Botanists will apply their best professional judgment (Intuition) in implementing these surveys.

c. As a result of field surveys all Plant Species of Interest shall be looked for in areas that are identified to have potential effects associated with project activities. Professional botanical standards require a 100% intensively walked survey of these areas.

d. The Forest Service maintains a high interest in all "**Special Habitats**" occurring on Forest Service lands. A desired outcome of field surveys shall be to have an inventory and mapping of these Special Habitats to assure that all unique ecological features are located. **Special Habitats for this project area are defined as including aspen stands cottonwood stands, mountain mahogany stands, fens, bogs, springs, wet cliffs, vernal pools, camas meadows (patches), natural caves, natural salt licks ,&calcareous rock outcrops.**

Lastly, if an area is found by the Botanist to be uncommon or azonal within the project area, but is not defined above it should be noted as simply as possible. If you find something really cool and unusual, we want to know!

e. Due to the invasive nature of noxious weeds, various treatments are implemented on Forest Service lands and often coordinated with adjacent private land owners. A desired outcome of field surveys shall be to know if any Sensitive or Strategic species are located in or near known or newly discovered weed sites. This knowledge allows for correct weed treatment decisions to be made. This survey effort should identify which weed species to search for (from the provided Wallowa County Lsit) and the level of documentation is required for each species. Specifications for recording GPS data on selected weed sites are the same as for Sensitive plants – see “Documentation. 3. d.” below.

f. Based on general climatic knowledge and the topographic complexity of the Wallowa-Whitman, it is estimated that the appropriate field survey time falls between April and September. Professional botanical knowledge of plant phenology would allow the professional botanist to fine tune that estimate for a given project area.

Most of the plant species on the Wallowa-Whitman National Forest potential Sensitive plants list can be identified via various plant characteristics over a span of time that could last several weeks although each has an optimal season. A subset of this list can only be positively identified during a short (spring) growth cycle. Not every species of interest can be surveyed for during any given week. It is expected that some areas may need to be visited more than once to properly survey for species that are evident at different times of the field season.

In rare instances, livestock grazing may have reduced the amount of available plant characters used to determine species taxonomy. If habitat is encountered that should be good potential habitat for a given Sensitive plant species, but the plant material is too compromised (from herbivory) to sufficiently determine presence, then document where the habitat is and for what species, such that targeted surveys could be conducted by the Forest Service during future field seasons.

Documentation

Documentation of field survey results assists the Forest Service with resource management. The Forest Service, under Agency policy, the National Forest Management Act (NFMA), and the Endangered Species Act (ESA), must be accountable for finding and protecting rare Plant Species of Interest, and managing the weed species. The following steps in documentation are essential to this accountability:

1. For each project area surveyed the Botanist / Pacific Power shall provide a completed Project Area Report study report containing the following:

a. To confirm the adequacy of field work, a list of all plant species encountered in each survey area shall be kept by the survey team. These lists shall be all inclusive, legible (but not required to be typewritten), and use complete scientific names and Natural Resource Conservation Service (NRCS) “PLANTS” codes for each species encountered, and should be organized by vascular and non vascular plant groups.

b. One typed, comprehensive species list with both complete scientific names and NRCS codes should be provided for each survey area within the Project Vicinity. Plant occurrence by area

may be reported by columns representing area occurrence in one comprehensive project list, or in a format that is found to be efficient by Pacific Power. This (these) list(s) shall also be provided on a computer disc in a Microsoft compatible format. Cite the source for your taxonomic determinations. Provide the synonymy for species with recent taxonomic changes – if new names are used as compared to the taxonomy of the Flora of the Pacific Northwest.

c. Botanical Survey notes shall be completed for each area, without regard to the presence of Plant Species of Interest. These area survey notes should include a **brief** professional description of the general condition of the habitat found within the survey unit.

d. For each survey area, a map of all surveys routes shall be completed. These routes should represent, to the degree feasible, the actual locations walked on the ground. They can be hand drawn or plotted from GPS data. This map shall be keyed to the Botanical Survey notes. Surveys of the same area at different times of the year need to be distinguished. The date of each survey route shall appear on this map (or legend). Report survey routes by depicting them on one of the following: aerial photo copies, or ortho-photo project maps, or topographic quad-style maps generated by the Botanist including township and ranges (electronic shape files of route reporting would also be accepted but not required).

e. For each survey area, a **map** showing the locations of all Sensitive plants, Strategic list plants, and Special Habitats found shall be completed. This shall be on a separate map from the survey routes, and keyed to the Botanical Survey notes. The Botanical Survey notes, when completed, shall discuss Special Habitats and correlate to the map. Each element needs to be distinguished. A legend shall be included which clarifies what each item is. Report these elements by recording as described in d above.

f. For each survey area, a map depicting the locations of all encountered Noxious weed sites (of select species) shall be completed. This shall be on a separate map from d. and e. above, and keyed to the Botanical Survey notes. Each species needs to be distinguished. A legend shall be included which clarifies what each item is, or the complete scientific name of each species found can be indicated next to the dot or polygon. Report these elements by recording as described in d above.

3. To provide the protection of **Sensitive Plants** required under the Forest Service policy, the NFMA, and the ESA, the Forest Service needs to permanently document each Wallowa-Whitman / Region Six Sensitive Plant Population encountered during surveys. Similar, but less detailed reporting is also required for **noxious weed** occurrences and additional **species of interest** – see below in sections 4 & 5.

Assign newly discovered patches of Sensitive plants to an existing occurrence (see c. below) or to a new occurrence based on the site specific situation. Although the contractor will not be assigning occurrence numbers, nor have to make final decisions on occurrence configuration prior to data submission - when filling out occurrence forms for this study apply professional judgement as to what is a distinct occurrence. The intent is to record as many patches as appropriate on as few forms (as few occurrences) as feasible, while still retaining enough detail for management and monitoring purposes. It is expected that the Botanist will rely on a considerable amount of professional judgment to accomplish this task, and will confer with the FS botanist if there are any questions. It is expected that the contractor will need to use some form of temporary number to tie the occurrence form to the report notes and maps.

To facilitate occurrence recording, each Sensitive plant occurrence discovery needs to be documented following the guidelines below:

- a. An R-6 Threatened, Endangered, and Sensitive (TES) Plant Sighting Form (Exhibit B) shall be filled out completely for each Sensitive Plant occurrence found (or revisited) during the course of the survey. **There are many new fields on this years form, to accommodate our new National Resource Information System (NRIS) database program – only the required (“R”) fields need to be competed.** An occurrence will be one to many patches of the plant. One (or more if needed) 8.5 x 11 size map showing the extent of the occurrence location (all the patches in the occurrence) shall be attached to each sighting report. This map can be a copy from the project area map, or a quad-like topographic map. These maps and photos shall be clearly marked with the Quad name, and the Township, Range, and Section that the population is in. Also provide a copy of the corresponding aerial photo (with the occurrence depicted) with each sighting report. This applies only to contracts where the Forest Service supplies aerial photo materials. All plant names used shall be the scientific names, spelled correctly. Provide synonymy for recent taxonomic name changes.

Alternatively, plotted GPS data can be used to create these maps – see below.

- b. A sketch map of the TES occurrence site(s) shall be completed and submitted with the site report. This map shall show local features, and micro habitat information for aiding future relocation. This map shall be clearly marked with the Quad name, and the Township, Range, and Section that the population is in and shall be clearly keyed to the Sighting form. A digital photo of the occurrence, or of each patch in the occurrence should accompany the sketch map, with the photo-point indicated on the sketch map. Depending on the extent and distribution of the particular occurrence it may not be feasible to capture it in one or two digital photos. The Botanist will pick photos they feel best represents the occurrence setting.
- c. To provide for the protection of Sensitive plants, it is imperative to know the current condition of all known Sensitive plant occurrences – new or previously known. Pacific Power will be given copies of existing Sensitive plant occurrence forms (for occurrences with in the units) to go with the provided map(s) of known occurrences in the Project Vicinity. All previously known occurrences within the area will need to be revisited and the Sensitive Plant Sighting form will need to be completed for revisit observations including changes in occurrence distribution patterns. Discoveries of new patches adjacent to known occurrences can be tied to the existing occurrence form when applicable.
- d. Sensitive plant occurrences and noxious weed occurrences need also (in addition to the map drawing discussed above) to be documented with GPS technology. Sensitive plant occurrences less than ½ acre can be delineated with a central point and those greater than ½ acres can be delineated with a suite or cloud of points representing its location on the ground. Flag the GPSed central point location. Apply this guidance to occurrences with multiple patches as the situation requires.

Specifications for collection and mapping with GPS equipment as follows:

All GPS points will also be provided to the Forest Service as UTM's, (Universal Transverse Mercator). This data should be collected in Albers 1983, (the FS preference) or as a second choice, collected in the North American Datum (NAD) 1927 earth model projection. Use only one and state which one was used in the final report. The contractor shall document Sensitive plant and noxious weed occurrences

within survey units with GPS points recorded as UTM coordinates with accuracy of 50 feet or better. These points should be mapped to correspond with mapping instructions above. The GPS point data should also correspond with the mapping requirements discussed in the documentation section. At sites where an accurate GPS reading is not available, due to terrain and/or canopy cover, the points may be marked by hand on corresponding map. The text field in the GPS unit should be used to label the point with the species and occurrence that is being recorded.

In addition to providing a map of the collected points, GPS locations shall be provided to the Government in an electronic format.

e. For occurrences in forested habitats or small openings in forested terrain, a representation of the center of the population shall be clearly flagged, with a 12 inch, or longer, streamer of blue polka-dot flagging. A select number of the flags need to be accompanied with GPS point data representing that patch/occurrence. Directions for relocation shall be detailed enough that the Forest Service may find the site regardless of whether Pacific Power is present. Depict the location of the routes to the occurrence on the sketch map and aerial photo that accompanies the sighting form.

For occurrences in non-forested habitats, implement the following: When the pattern of plant distribution is discretely patchy, utilize red pin flags (instead of the polka-dot ribbon flagging) of appropriate height to delineate the (approximate) center of the patch/occurrence. GPS that flag. Write the species code and date with a permanent marker on each pin flagged used. When the pattern of plant distribution is generally widely scattered individuals (not growing in apparent patches or clusters), utilize red pin flags to mark select individuals or small clusters most represent the setting of the overall occurrence. GPS those flag locations. Key the location of these pin flags to the sketch map and aerial photo attached to the occurrence form. If a distribution pattern is encountered that does not easily fit into one of these scenarios, or the occurrence overall (all patches/sites) is larger than 5 acres, or near a high use / high visibility recreation site, contact the Forest Service and propose a flagging strategy based on your professional judgment. The intent is to provide the minimal amount of flagging or pin flags that will function to mark the site on the ground (as a complement to the mapping and GPS work) so that the Forest Service knows they are at the right piece of ground during site visits. Pacific Power may also conduct a joint site visit with the Forest Service to develop a manner of delineating the site on the ground to make it easy to relocate on subsequent visits.

f. For newly located Sensitive plant occurrences **that are isolated and smaller than 1/4th acre**, select a tree nearest the occurrence or the main patch of the occurrence/population shall be used for attaching an occurrence reference tag. If possible this tree shall be alive and larger than 21 inches in diameter. A small metal tag shall be nailed to the base of the tree. This tag shall have the NRCS code for the species, the investigator's initials, and the date scratched into the surface. The site form location directions shall include a distance and azimuth from this reference tree to the occurrence. A GPS point should be gathered at this reference tree. The reference tree needs to be depicted on the maps accompanying the site form. Sites in grassland areas may be exempt from this requirement - reference tags will not be required for occurrences in non-forested terrains when the plant patches are further than 1/4th mile from forested habitat and road access.

g. A voucher specimen of the sensitive plant shall be collected, pressed, and submitted to the Forest Service within 14 calendar days of discovery. It shall be accompanied by a fully completed R-6 Sensitive Plant Sighting form and a digital photo of the occurrence vicinity. A specimen shall be collected only if the population exceeds 20 individuals. If the population does

not allow collection, the Forest Service shall be provided with a completed R-6 Sensitive Plant Sighting form and digital photo of the site within eight calendar days of discovery.

4. To facilitate occurrence recording, each **noxious weed occurrence** discovery needs to be documented following the guidelines below. Mapping and GPS data gathering should follow the specifications provided for Sensitive plant documentation. The provided Wallowa County Noxious Weed list is divided into 3 parts; “A”, “B” and “T”. This list is developed in conjunction with our partners in the county and is primarily organized by treatment priorities. For the purposes of this study effort map all species the same way as defined below.

Known Noxious weed occurrences will be projected on project area maps reviewed as part of the pre-field review. Revisits and documentation of weed sites within or directly adjacent to the project vicinity need to be completed in concert with new site documentation. Noxious weed occurrences also require GPS data collection, but need only have one central point collected for each located occurrence or each located/discrete patch of a multi-patch occurrence. Flag noxious weed sites as described above for Sensitive plants but use a separate flagging print that relates to noxious weeds. The GPS data should also be keyed to the respective sighting forms and report maps.

5. Wallowa-Whitman **Strategic plant list species**, shall be mapped as discussed above. A rough estimation of the number of plants present shall be indicated on the map. Gather one GPS point at the patch center. The species and numbers found shall also be discussed in the results area of the botanical survey forms for the appropriate units. **These species will not require any sighting forms, or flagging.**

Special habitats shall be mapped as described above and discussed in the botanical survey record form. No flagging or GPS data gathering is required for these areas.

Preferred Report Components

The following list reflects those products that would be most useful to the Forest Service in the study report.

- Pre-field Survey documentation, Survey Design and Work Plan and Schedule.
- Maps of occurrences of plant species of interest as described above –one for Sensitive plant occurrences & for survey routes, one for noxious weed occurrences, and one for Wallowa-Whitman Strategic plant list species.
- Project Area Report containing:
 - Botanical Survey Records (by unit or area as applicable to the specific contract),
 - Comprehensive plant list and Microsoft compatible CD of plant list and report text,
 - Sensitive plant and noxious weed occurrence forms.
- A Table that references the (electronic) GPS data.. Table column headings need to include at least the following: Point Type (what kind of resource is it representing), Waypoint number (from the GPS unit), Zone (11T) Easting, Northing, and comments as applicable (include the species name for applicable points if not in column 1)

Attachment 4

Wallowa-Whitman National Forest sensitive and strategic species list distilled from the Region 6 RFSSS list.

Attachment 5

A pre-field review of sensitive plant species that are most likely to be found in the Project vicinity.

Attachment 6

TES survey field guide and forms

Attachment 7

TES element occurrence field guide and forms