

APPENDIX E.3.6

***TECHNICAL MEMORANDUM FOR
SPECIAL STATUS PLANT STUDY***

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1.0 Introduction

Special-status Plant Study

Purpose of Study

To identify any special-status plant species within the Project boundaries

2.0 Study Methods

1. Floristic surveys were made of all special-status plant species. All of the undeveloped land comprising the Enloe Dam project area was surveyed by a two-person team of biologists in July 2006. Additional surveys were conducted along the proposed new access road in 2007.
2. Based on flowering periods and phenology of the special status species potentially present in the project area, one special-status plant survey was conducted in July 2006 and July-August 2007. The entire Enloe Dam project area was surveyed, except for areas that are unsafe to access. Areas unsafe for access included steep cliffs, unstable slopes, and areas bounded by impassable stream conditions. Such areas were inspected with binoculars.
3. With the exceptions stipulated above, the entire area will be walked or, in the case of access roads, possibly driven at a walking speed.
4. All species observed were identified to the extent necessary to determine whether or not they are special-status species.
5. The locations of all special-status plant species observed within the Enloe Dam project area were to be mapped on prints of aerial images or topographic maps or recorded with a GPS unit. To the extent possible, photographs showing diagnostic floral characteristics were to be taken of any special-status plant species observed

within the study area. Voucher specimens of special-status plants were to be collected in accordance with government collecting regulations.

3.0 Results

Based on the literature review and discussions with resource agencies, one special-status plant species was identified as potentially occurring in the vicinity of the Project prior to the initiation of botanical surveys. This plant is Ute ladies'-tresses (*Spiranthes diluvialis*). An additional special-status plant species has since been documented in the Similkameen watershed. This species is Snake River cryptantha (*Cryptantha spiculifera*).

Ute Ladies'-tresses

This species is a perennial terrestrial orchid that flowers from mid-July through August in Washington (WNHP 2005). It is found in early to mid-seral vegetation in wet meadows, stream or river banks, irrigated hay meadows, and wetlands associated with wet meadows, springs, streams, lakes, irrigation ditches, and reclaimed gravel and peat mines (Fertig 2005).

One Washington location is in a periodically flooded alkaline flat. The other three are on stabilized gravel bars along the Columbia River (WNHP 2005). Washington populations are at elevations ranging from 720 to 1,500 feet (WNHP 2005). The nearest known population to the Enloe Project is at Wannacut Lake, approximately 5 air-miles to the southwest. Wannacut Lake is in the Whitestone Creek watershed, and the Whitestone Creek confluence with the Okanogan River is approximately 9.8 miles downstream of the Similkameen River confluence with the Okanogan River.

No individuals of Ute ladies'-tresses or any other species of *Spiranthes* were observed during botanical surveys in 2006 or 2007.

Snake River Cryptantha

Snake River cryptantha is a State Sensitive species. This cryptantha is a perennial that is recognizable from May to July. It is found on dry, open, flat or sloping areas, generally in relatively unvegetated areas in stable or stony soils (WDNR 2000).

No individuals of this species were observed in the study area during botanical surveys in 2006 or 2007. The study area for special-status plant species was primarily in dense vegetation along the perimeter of the reservoir, although an additional area along the proposed new access road was included.

4.0 Conclusion

No federally or state-listed plant species or other special-status plant species have been found within the Project boundaries.

Table 1: Plant Species Observed Within the Project Area

Scientific Name	Common Name
<i>Acer glabrum</i>	Rocky Mountain maple
<i>Acer saccharinum</i>	silver maple
<i>Acer</i> spp.	maple
<i>Achillea millefolium</i>	yarrow
<i>Agropyron spicatum</i>	bluebunch wheatgrass
<i>Alisma plantago-aquatica</i> var. <i>americanum</i> = <i>A. triviale</i>	northern water-plantain
<i>Allium</i> sp.	onion
<i>Alnus incana</i>	mountain alder
<i>Amelanchier alnifolia</i>	western serviceberry
<i>Apocynum cannabinum</i>	hemp dogbane
<i>Artemisia ludoviciana</i>	western mugwort
<i>Artemisia tridentata</i>	big sagebrush
<i>Artemisia tripartita</i>	threetip sagebrush
<i>Asclepias speciosa</i>	showy milkweed
<i>Balsamorhiza sagittata</i>	arrowleaf balsamroot
<i>Berberis</i> spp.	Oregon-grape
<i>Betula occidentalis</i>	water birch
<i>Betula papyrifera</i>	paper birch
<i>Bromus tectorum</i>	cheatgrass
<i>Calochortus</i> spp.	mariposa lily
<i>Campanula</i> sp.	bellflower
<i>Carex</i> spp.	sedge
<i>Ceanothus</i> spp.	ceanothus
<i>Centaurea</i> spp.	knapweed
<i>Chenopodium</i> spp.	goosefoot
<i>Chrysothamnus nauseosus</i>	gray rabbitbrush
<i>Cirsium undulatum</i>	wavy leaf thistle
<i>Clematis</i> spp.	clematis
<i>Convolvulus arvensis</i>	field bindweed
<i>Cornus sericea</i> = <i>C. stolonifera</i>	red-osier dogwood
<i>Crataegus douglasii</i>	black hawthorn
<i>Eleocharis palustris</i>	common spikerush
<i>Equisetum hyemale</i>	common scouring rush
<i>Equisetum</i> spp.	horsetail
<i>Eriogonum</i> spp.	buckwheat
<i>Erodium</i> spp.	filaree
<i>Euthamia occidentalis</i>	western goldtop
<i>Festuca idahoensis</i>	Idaho fescue
<i>Gaillardia aristata</i>	blanket flower
<i>Grindelia squarrosa</i>	resinweed
<i>Gypsophila paniculata</i>	baby's breath
<i>Hypericum</i> spp.	St. John'swort
<i>Iris</i> spp.	iris (cultivated)
<i>Juncus</i> spp.	rush

Scientific Name	Common Name
<i>Juniperus</i> spp.	juniper
<i>Lactuca serriola</i>	wild lettuce
<i>Linaria dalmatica</i>	Dalmatian toadflax
<i>Lupinus</i> spp.	lupine
<i>Lycopus asper</i>	rough water-horehound
<i>Machaeranthera canescens</i>	tall hoary aster
<i>Medicago sativa</i>	alfalfa
<i>Melilotus alba</i>	white sweetclover
<i>Opuntia</i> spp.	prickly pear
<i>Orthocarpus</i> spp.	owl's clover
<i>Phacelia</i> spp.	scorpionweed
<i>Phalaris arundinacea</i>	reed canarygrass
<i>Philadelphus lewisii</i>	Lewis' mock orange
<i>Pinus ponderosa</i>	ponderosa pine
<i>Plantago major</i>	big plantain
<i>Plantago patagonica</i>	Patagonia plantain
<i>Poa sandbergii</i>	Sandberg's bluegrass
<i>Poa</i> spp.	bluegrass
<i>Polygonum hydropiperoides</i>	swamp smartweed
<i>Populus balsamifera</i> ssp. <i>trichocarpa</i>	black cottonwood
<i>Populus tremuloides</i>	quaking aspen
<i>Prunus virginiana</i>	western chokecherry
<i>Pseudotsuga menziesii</i>	Douglas-fir
<i>Purshia</i> spp.	bitterbrush
<i>Purshia tridentata</i>	antelope bitterbrush
<i>Rhus glabra</i>	smooth sumac
<i>Rhus radicans</i>	poison ivy
<i>Ribes</i> spp.	gooseberry
<i>Rosa woodsii</i>	Wood's rose
<i>Salix bebbiana</i>	Bebb's willow
<i>Salix rigida</i>	yellow willow
<i>Salix</i> spp.	willow
<i>Sambucus cerulea</i>	blue elderberry
<i>Scutellaria galericulata</i>	marsh skullcap
<i>Sisymbrium</i> spp.	tumblemustard
<i>Solidago canadensis</i>	Canada goldenrod
<i>Stephanomeria</i> spp.	wirelettuce
<i>Symphoricarpos</i> spp.	snowberry
<i>Tanacetum vulgare</i>	tansy
<i>Tragopogon dubius</i>	yellow salsify
<i>Tribulus terrestris</i>	puncturevine
<i>Typha</i> sp.	cattail
<i>Verbascum thapsus</i>	common mullein
<i>Xanthium strumarium</i>	cocklebur

5.0 References

Fertig, W., R, Black, and P. Wolken. 2005. *Rangewide status review of Ute ladies'-tresses (Spiranthes diluvialis)*. Prepared for the US Fish and Wildlife Service and Central Utah Water Conservancy District. 30 September 2005.

U.S. Fish and Wildlife Service (USFWS). 2000. *Guidelines for conducting and reporting botanical inventories for federally listed, proposed and candidate plants*.

Washington Department of Natural Resources (WDNR). 2000. *Cryptantha spiculifera*. Produced as part of a cooperative project between the Washington Department of Natural Resources, Washington Natural Heritage Program, and the U.S.D.I. Bureau of Land Management. Available at: <http://www1.dnr.wa.gov/nhp/refdesk/fguide/pdf/crsp.pdf>. Downloaded April 11, 2003.

Persons needing this information in an alternate format may call (360)902-1340 or TTY (360)902-1125.

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