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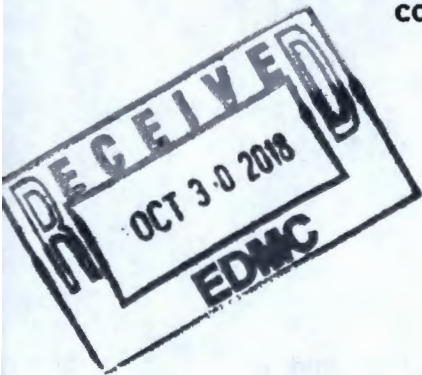
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**Internal
Memo**

From: Geotechnical Engineering
Phone: 376-2554 H4-14
Date: June 13, 1994
Subject: ECOLOGICAL SURVEY CONDUCTED FOR THE N-SPRINGS EXPEDITED RESPONSE PROJECT AT 100-N AREA

ES94-100-13
REISSUED

To: G. J. Jackson H6-04

cc: K. A. Gano X0-21
A. R. Johnson H6-30
D. S. Landeen H4-14
M. R. Sackschewsky H4-14
S. W. Seiler G3-10
J. C. Sonnichsen H4-14
P. J. Valcich H6-04
R. S. Weeks H6-26
S. Weiss H6-02
ES LB



The attached survey provides the results of an ecological survey conducted for the N Springs Expedited Response Project at 100-N Area.

A handwritten signature in black ink, appearing to read "M. R. Sackschewsky". The signature is fluid and cursive, written over the printed name below.

M. R. Sackschewsky, Sr. Scientist
Biological Sciences

mjm

Attachment

ECOLOGICAL SURVEY FORM

REPORT #: ES94-100-13

LOCATION: T14N R26E S22&28

PROJECT: N-Springs Expedited Response Action

PLANT SURVEY DATE: 06/02/94

INVESTIGATOR: M. R. Sackschewsky

ANIMAL SURVEY DATE: 06/02/94

INVESTIGATOR: D. S. Landeen

FEDERALLY LISTED THREATENED AND/OR ENDANGERED SPECIES:

PLANTS: None
WILDLIFE: None

SPECIES OF SPECIAL CONCERN OBSERVED:

PLANTS: Columbia River mugwort
WILDLIFE: None

IS THE AREA UNDER VEGETATION MANAGEMENT: No

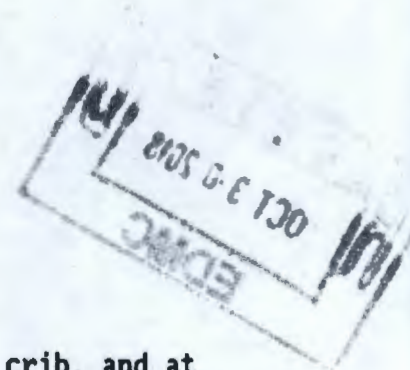
DESCRIPTION OF AREA: The areas around the 1301-N crib, 1325-N crib, and at the proposed well sites in the vicinity of these cribs are a highly disturbed area that is primarily covered with a thick stand of cheatgrass, low shrub coverage, Gray rabbitbrush, and very few scattered sagebrush. The proposed location of the containment wall near the river is a dry, steep slope that is dominated by cheatgrass, Sandberg's bluegrass, sagebrush shrubs, and an assortment of other bunchgrasses with scattered gray rabbitbrush. The slope flattens out at the shoreline, much of which is covered with large boulders. The strip of shoreline is dominated by Reed canarygrass and Kentucky bluegrass with considerable amounts of english plantain, willowleaf dock, sweetclover, and St. John's wort.

PLANTS OBSERVED: (See pages 3 through 5 of Attachment for plant lists.)

WILDLIFE OBSERVED: Bird species observed included the horned lark, house sparrow, starling, mourning dove, western kingbird, yellow-headed blackbird, rock dove, mallard, and American coot. There are no roosting sites present at N-Springs that could be utilized by bald eagles in the winter time.

Other animals which utilize the area include pocket mice, coyotes, badgers, mule deer, and the northern Pacific rattlesnake.

SUMMARY AND CONCLUSIONS: Construction activities associated with building a barrier wall and installing wells will have no impact on any sensitive animal species listed by the state and/or federal governments. The proposed activities will not occur near any bald eagle roosting site buffer zones (Fitzner and Weiss 1992) and therefore will not have an impact on the bald eagle.



The Columbia River mugwort is classified by the State of Washington as a class 3 monitor plant species. Species in this category have been found to be more abundant and/or less threatened than believed at some point in the past, and are therefore not of primary concern. Species in this class can be considered as indicators of native or relatively undisturbed habitats.

No plant species listed as threatened, endangered, or sensitive were observed in the vicinity, although, the timing of the survey was not ideal since most of the wetland species do not become apparent until late summer. However, most of the shoreline is covered with large boulders, and is therefore not the usual habitat for the species of concern such as the Columbia yellowcress, Southern mudwort, false pimpernel, or Shining flatsedge. The installation of the containment wall, groundwater wells, or the movement of soil around the cribs will have no impact on plant species of concern.

Other surveys that have been conducted in the N-Springs environs in 1993 include 93-100-4 (Conex boxes) and 93-100-7 (1325-N Crib). These surveys did not document the presence of any sensitive plant or animal species.

References:

Fitzner, R. E. and S. G. Weiss. 1992. *Bald Eagle Site Management Plan for the Hanford Site, South Central Washington*, WHC-EP-0510.

Landeen, D. S., M. R. Sackschewsky, and S. Weiss. 1993. *100 Areas CERCLA Ecological Investigations*, WHC-EP-0620.

Plant Species Observed around the 1301-N and 1325-N Cribs	
Species	Common Name
SHRUBS:	
<i>Artemisia tridentata</i>	Big Sagebrush
<i>Chrysothamnus nauseosus</i>	Gray Rabbitbrush
GRASSES:	
<i>Agropyron spicatum</i>	Bluebunch wheatgrass
<i>Bromus tectorum</i>	Cheatgrass
<i>Poa sandbergii</i>	Sandberg's bluegrass
<i>Sporobolus cryptandrus</i>	Sand dropseed
ANNUAL FORBS:	
<i>Melilotus albus</i>	White sweetclover
<i>Salsola kali</i>	Russian thistle
<i>Sisymbrium altissimum</i>	Jim Hill Mustard
PERENNIAL FORBS:	
<i>Achillea millefolium</i>	Yarrow
<i>Artemisia campestris</i>	Pacific sage
<i>Asclepias speciosus</i>	milkweed
<i>Balsamorhiza careyana</i>	Carey's balsamroot
<i>Centaurea diffusa</i>	diffuse knapweed
<i>Tragopogon dubius</i>	Salsify

Plant Species Observed Along N-Springs Shoreline	
Species	Common Name
SHRUBS/TREES:	
<i>Artemisia tridentata</i>	Big Sagebrush
<i>Chrysothamnus nauseosus</i>	Grey rabbitbrush
<i>Morus alba</i>	Mulberry
GRASSES:	
<i>Agropyron dasytachyum</i>	Thickspike wheatgrass
<i>Agropyron repens</i>	Quackgrass
<i>Agropyron spicatum</i>	Bluebunch wheatgrass
<i>Agrostis scabra</i>	Ticklegrass
<i>Bromus japonicus</i>	Japanese Brome
<i>Bromus tectorum</i>	Cheatgrass
<i>Festuca arundinacea</i>	Tall fescue
<i>Oryzopsis hymenoides</i>	Indian ricegrass
<i>Phalaris arundinacea</i>	Reed canarygrass
<i>Poa nevadensis</i>	Nevada bluegrass
<i>Poa pratensis</i>	Kentucky bluegrass
<i>Poa sandbergii</i>	Sandberg's bluegrass
<i>Sitanion hystrix</i>	Bottlebrush squirreltail
<i>Sporobolus cryptandrus</i>	Sand dropseed
<i>Stipa comata</i>	Needle-and-thread
ANNUAL FORBS:	
<i>Amsinckia lycopoides</i>	Fiddleneck tarweed
<i>Cirsium arvense</i>	Canada thistle
<i>Convolvulus arvensis</i>	Field bindweed
<i>Conyza canadensis</i>	Horseweed
<i>Dianthus armeria</i>	Grass pink
<i>Erodium cicutarium</i>	Cranesbill
<i>Lactuca serriola</i>	Prickly lettuce

<i>Medicago lupulina</i>	Black medic
<i>Melilotus alba</i>	White sweetclover
<i>Plantago lanceolata</i>	English plantain
<i>Potentilla norvegica</i>	Norwegian cinquefoil
<i>Rorippa islandica</i>	Marsh yellowcress
<i>Salsola kali</i>	Russian thistle
<i>Sisymbrium altissimum</i>	Jim Hill Mustard
PERENNIAL FORBS:	
<i>Achillea millefolium</i>	Yarrow
<i>Apocynum cannabinum</i>	Dogbane
<i>Artemisia campestris</i>	Pacific sage
<i>Artemisia dracunculus</i>	Tarragon
<i>Artemisia lindleyana</i>	Columbia river mugwort
<i>Artemisia ludoviciana</i>	Prairie sage
<i>Asclepias speciosa</i>	Milkweed
<i>Centaurea diffusa</i>	Diffuse knapweed
<i>Coreopsis atkinsoniana</i>	Tickseed
<i>Equisetum sp.</i>	Horsetail
<i>Gaillardia aristata</i>	Blanketflower
<i>Helenium autumnale</i>	Sneezeweed
<i>Hypericum perforatum</i>	St. John's wort
<i>Polygonum persicaria</i>	Heartweed
<i>Rumex salicifolius</i>	Willow dock
<i>Tragopogon dubius</i>	Salsify
<i>Verbascum thapsus</i>	Woolly mullein