

Chehalis River Surge Plain Natural Area Preserve Management Plan

.....
Grays Harbor County
Washington

(Plan Approved _____)
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Prepared by

Pacific Cascade Region
Natural Areas Program

Washington Department of
Natural Resources

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PREFACE

The Natural Area Preserves Act was enacted in 1972 by the Legislature to “secure for the people of present and future generations the benefit of an enduring resource of natural areas by establishing a system of natural area preserves, and to provide for the protection of these natural areas” (RCW 79.70). The Washington Department of Natural Resources (DNR) Natural Areas Program manages Natural Area Preserves in accordance with the Natural Area Preserves Act RCW 79.70.

Implementation of Washington’s statewide system of natural areas is a cooperative effort. Various public agencies, private groups and individuals work together to establish and manage areas. Once established, Natural Areas are managed to protect the ecological features for which the site was designated, to restore native ecosystems, and for scientific and educational use.

This plan provides guidance for management of DNR owned lands within the Natural Area Preserve boundary. Private lands within the boundary are not affected or regulated by this plan.

EXECUTIVE SUMMARY

Chehalis River Surge Plain (CRSP) Natural Area Preserve (NAP) is located on the Chehalis River between Montesano and Cosmopolis in Grays Harbor County, Washington. The site is part of the statewide system of natural areas established and maintained by the Department of Natural Resources (DNR). DNR designated the NAP in 1989 to protect the largest and highest quality coastal surge plain wetland in the state of Washington. It also protects two animal species federally listed as sensitive in Washington: the Bald Eagle and the Olympic mudminnow.

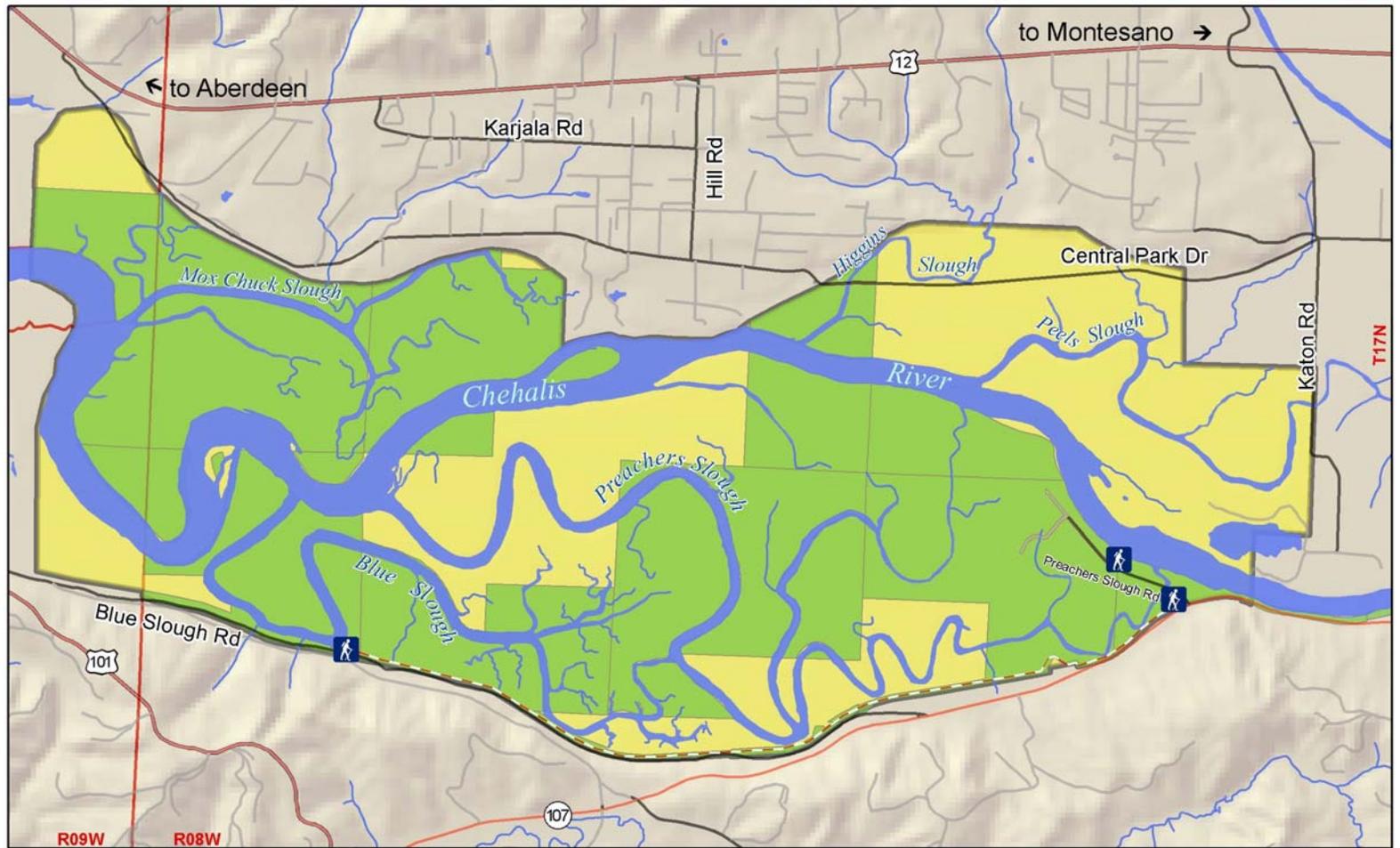
Of the approximate 7,000 acres eligible for inclusion into the NAP, DNR manages approximately 2,345 acres as NAP. The remaining acreage is under private ownership, and therefore is not managed under the provisions of this plan.

In 2007, DNR initiated the management planning process for the lands it manages within the NAP. The purpose of the plan is to define strategies to protect the primary ecological features of the site, and identify opportunities for outdoor education and low impact public use. The planning process included public and stakeholder involvement to review draft plans and discuss management options. Representatives from local and regional organizations, Washington Department of Fish and Wildlife, Grays Harbor County, business, timber companies, neighbors and other interested citizens participated in these discussions and reviews.

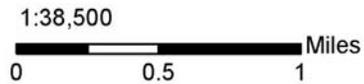
The plan outlines management goals for the preserve and lists strategies and actions to support the goals. These goals include:

- Protect the site's primary natural features
- Provide for public access compatible with management of the preserve
- Monitor threats to the natural features and the health of natural systems
- Facilitate environmental education and research on the site
- Manage non-native and invasive plant species
- Protect cultural and archeological sites

DNR Pacific Cascade Region will implement this plan with assistance from the Natural Areas ecologists and in coordination with Tribes, other DNR land managers, state, federal and local government agencies, citizens, volunteers and planning group participants. Implementation of the plan depends on the availability of resources to complete the identified actions



Chehalis River Surge Plain Natural Area Preserve



- Natural Area Preserve
- Private Lands
- Interpretive Trail
- Trailhead, Parking
- Open Water
- Streams

Figure 1. Chehalis River Surge Plain NAP Vicinity Map

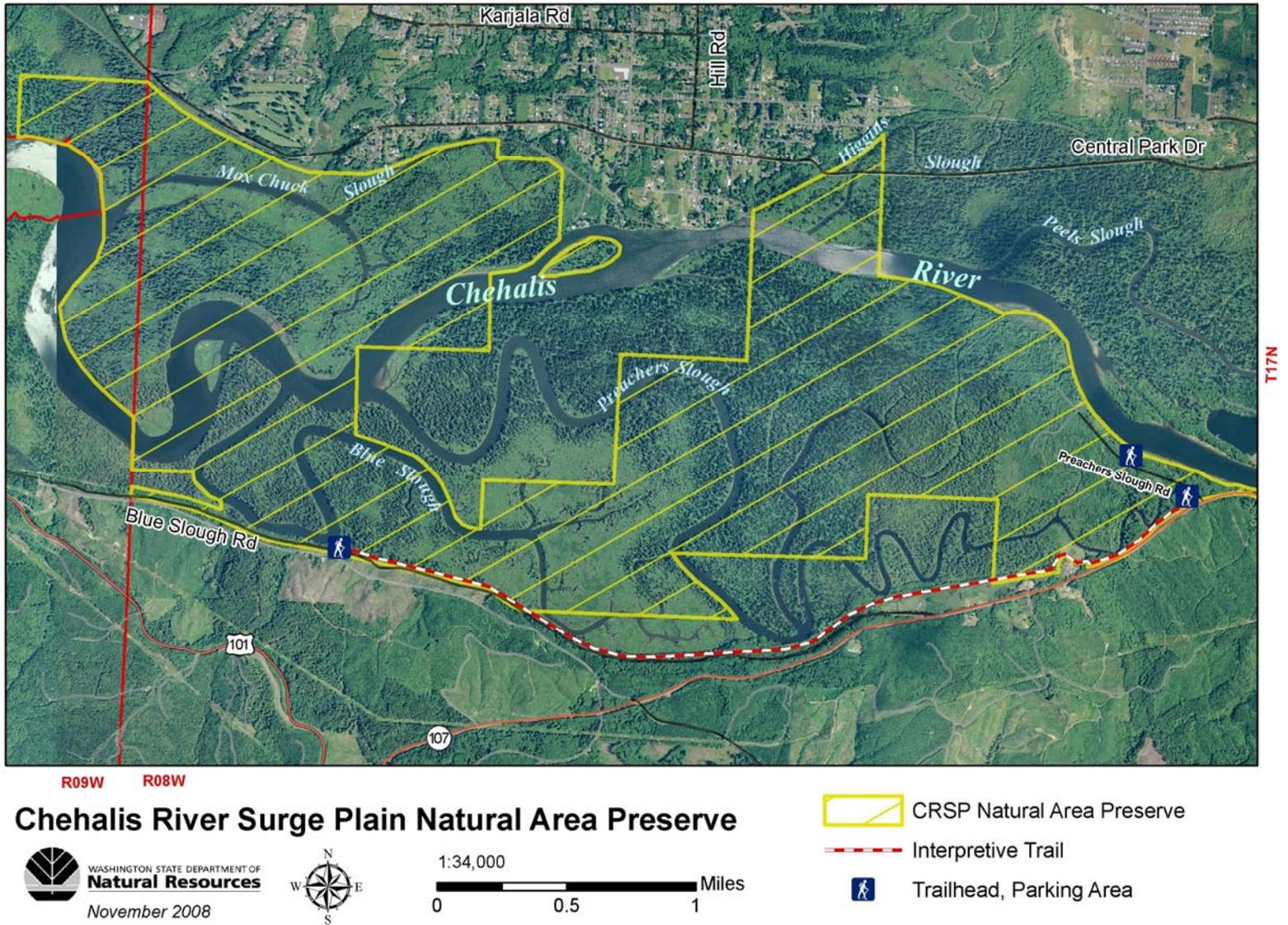


Figure 2. Chehalis River Surge Plain NAP Aerial View

I. INTRODUCTION

A. Washington's Natural Areas System

The Chehalis River Surge Plain (CRSP) Natural Area Preserve (NAP) is part of the statewide system of preserves established to secure representation of all of the state's ecosystems and rare species.

A NAP may contain the only example of a particular natural feature within the state or it may contain a high quality representative example of a more widely distributed feature. DNR is among the various state agencies, including State Parks and Recreation Commission and Washington Department of Fish and Wildlife (WDFW), as well as private organizations that manage these outstanding examples of Washington's natural features.

NAPs are important for research and education on ecological and environmental topics. Because they retain much of their natural character, NAPs also serve as examples of natural conditions for comparison with similar ecosystems that are managed for other values (e.g., resource production or utilization, and recreation).

Natural Heritage Program

The Washington State legislature recognized the need for a systematic and objective approach to guide inventory and protection efforts in order to protect features most at risk. As a result, the Natural Heritage Program was established.

The Natural Heritage Program provides a scientific approach to the process of identifying candidate sites for the natural areas system. A biennial State of Washington Natural Heritage Plan that identifies priorities for inclusion in the system provides the framework for a statewide system of natural areas.

The program tracks the state's natural features, species, and ecological systems through a classification system inventoried by location. This data is shared with agencies, organizations, and individuals for environmental assessment, conservation planning, and land management purposes.

The Natural Heritage Plan (WDNR 2007) identifies the primary features of the Chehalis River Surge Plain NAP as deserving of protection and representation in the State's preserve system.

Natural Heritage Advisory Council

The Natural Heritage Advisory Council, established by the Natural Area Preserves Act (RCW 79.70), advises DNR and other state agencies on the establishment and management of NAPs.

The Council reviews and approves or rejects natural area nominations, recommends sites to the Commissioner of Public Lands, and works with the Natural Heritage Program, Natural Areas Program staff and the appropriate DNR

regional office or other state agency staff to develop management plans for established natural areas.

The Council ensures implementation of sound management practices for the preservation and maintenance of high quality sites. The Council has 15 members including:

- Five ex-officio state agency representatives
- Ten voting members serving 4-year-terms appointed by the Commissioner of Public Lands

Of the Ten voting members:

- Five must be recognized experts in the ecology of natural areas
- One must be or represent a private forest landowner
- One must be or represent a private agricultural landowner
- Three are at large positions

Natural Areas Program

The Natural Areas Program manages DNR owned NAPs and Natural Resource Conservation Areas (NRCAs). As of 2008, the natural areas system included 52 NAPs, totaling 32,500 acres, and 29 NRCAs totaling 93,612 acres. NRCAs protect significant areas with a broad conservation policy that may include a variety of low impact uses. Examples include Mount Si, Woodard Bay, and Cypress Island.

The objective of management activities is to protect the primary natural features of each NAP and provide opportunities for research and environmental education as appropriate to each site. DNR region staff is responsible for management planning and implementation. Program staff in Olympia provide guidance, scientific expertise and project support, ensure consistency of management statewide, and participate in preserve management activities, species and community monitoring and research.

NAP Management

Active management is necessary in many natural areas to ensure the long-term viability of the priority species and ecosystems found within them.

Management issues and activities include restoring or mimicking natural ecological processes control of non-native species and addressing public use issues. NAPs are generally in good ecological condition at the time of designation. However, they are not always pristine; in many cases undisturbed examples of ecosystems no longer exist, or they may not be available for formal protection. Thus management recommendations vary depending on site condition, size and landscape context, and range from minimal site protection activities to more active site management designed to achieve specific results.

While NAPs require a conservative approach to managing public access and uses, other public lands of the state allow for a wider range of public and recreational uses.

The Department of Natural Resources

DNR manages more than 5.6 million acres of state-owned forest, range, commercial, agricultural, and aquatic lands. The department also provides wildfire protection for 12.7 million acres of private and state-owned forestlands; administers Forest Practices rules and surface mine reclamation on state and private lands; gives technical assistance for forestry and mining; and provides financial and grant assistance to local communities and individuals.

B. Chehalis River Surge Plain NAP Primary Natural Features

The Natural Heritage Program recommended the establishment of CRSP NAP to protect the largest and highest quality Sitka spruce-dominated, coastal surge plain wetland in the Washington State.

The term "surge plain" describes the natural condition created when the tide rises and the incoming salt water forms a wedge under the fresh river water, forcing fresh water to surge out over low-lying areas.

The CRSP NAP is also an important site for protection of two animal species listed as Species of Concern in Washington, the bald eagle and the Olympic mudminnow.

The following species and vegetation types are considered the "primary features" of the site:

1. Freshwater tidal surge plain wetland, including the following vegetation types within the North Pacific Intertidal Freshwater Wetland Ecological System (NatureServe 2003; WNHP 2008):
 - a. Sitka spruce (*Picea sitchensis*)/red-osier dogwood (*Cornus sericeus*)/ skunk cabbage (*Lysichiton americanum*) forest vegetation
 - b. Lady fern (*Athyrium filix-femina*) coastal herbaceous vegetation
 - c. Softstem bulrush (*Schoenoplectus tabernaemontani*) herbaceous vegetation
 - d. Red-osier dogwood (*Cornus sericeus*)– Willow species (*Salix* sp.) shrubland
 - e. Lyngby's sedge (*Carex lyngbyei*) herbaceous vegetation
 - f. Cattail (*Typha latifolia*) surge plain herbaceous vegetation
2. Bald Eagle nesting area (*Haliaeetus leucocephalus*)
3. Olympic mudminnow (*Novumbra hubbsi*)

Freshwater Tidal Surge Plain Wetland

The freshwater tidal surge plain wetland occupies virtually the entire site except for the highest upland areas. This wetland includes tidal sloughs, areas that are intermittently flooded during high tides and areas that are routinely flooded to varying depths.

The vegetation types within the wetland are associated with these different flooding regimes, as well as areas of different soil characteristics. There are only four other known wetlands of this type in Washington, all of which are substantially smaller and in poorer ecological condition than the Chehalis River Surge Plain wetland. The large size and good condition of the wetlands on this site were the basis for establishing the preserve in 1989.

Bald Eagle Nesting Area

Bald eagles have been observed nesting in various areas on the site during the past 20 years. Although the bald eagle has recovered nationwide and is no longer a federally listed endangered species, it still remains on the WDFW State Sensitive species list as of 2008. Most of the site provides high-quality nesting and foraging habitat for bald eagles.

Olympic Mudminnow Habitat

There have been observations of the Olympic mudminnow within a portion of the area. Since much of the site provides suitable habitat, the species probably exists throughout the surge plain. This species is endemic to Washington State, and lives in the southern and western lowlands of the Olympic Peninsula, the Chehalis and lower Deschutes River drainages, and Southern Puget Sound.

Ranking of Primary Natural Features

Each of these features received a priority ranking of P2 or P3 in the 2007 Natural Heritage Plan. The ranking represents the rarity of the species or ecosystem and the degree of threat present statewide.

The freshwater tidal surge plain wetland currently is a Priority 2 in the 2007 Natural Heritage Plan. The Olympic mudminnow is a Priority 3. When the site was recommended in 1989, the bald eagle was classified as Priority 2. Due to advances in its protection and increases in population size, the Natural Heritage Program no longer tracks the bald eagle but still recognizes its State Sensitive species status.

The primary tool used to develop priorities for individual species is the global and state ranking system used by NatureServe and its member Natural Heritage programs. The ranking system facilitates a quick assessment of a species' rarity by assigning a global (G) and state (S) rank of 1 to 5. A collaborative process involving both NatureServe and individual Natural Heritage Program scientists assign the global ranks. Scientists within individual Natural Heritage programs assign state ranks.

G1, for example, indicates critical imperilment on a global basis; the species is at great risk of extinction. S1 indicates critical imperilment within a particular state, regardless of its status elsewhere. A number of factors contribute to the assignment of global and state ranks. These may include total population size, the number of occurrences, and threats. The Natural Heritage Program and NatureServe develop and maintain the information supporting this ranking system.

Table 1. Primary Natural Features at Chehalis River Surge Plain NAP and their Rank

Community Common Name	Rank
Freshwater tidal surge plain wetland	G2 S1
Bald eagle	G5 S4
Olympic mudminnow	G3 S2

Other Special Attributes

In addition to the primary natural features, the Chehalis River Surge Plain site supports species recognized by the Washington Department of Fish and Wildlife (WDFW) as conservation priorities through the Endangered Species and the Priority Habitats and Species (PHS) programs. These species include:

Table 2. Species of Concern and Priority Species found in Chehalis River Surge Plain NAP

Common Name (Scientific Name)	State Status	Federal Status
Pileated woodpecker (<i>Dryocopus pileatus</i>)	Candidate	----
Vaux's swift (<i>Chaetura vauxi</i>)	Candidate	----
Osprey (<i>Pandion haliaetus</i>)	Monitor	----
Reticulate sculpin (<i>Cottus perplexus</i>)	Monitor	----
Western brook lamprey (<i>Lampetra richardsoni</i>)	Monitor	Species of Concern
Band-tailed Pigeon (<i>Columbia fasciata</i>)	Priority Species	----
Wood Duck (<i>Aix Sponsa</i>)	Priority Species	----
Mink (<i>Mylocheilus caurinus</i>)	Priority Species	----

The site provides habitat for anadromous fish (fish that live part of their lives in fresh water and part in salt water) and critical spawning habitat for resident fish species, and habitat for numerous small and large mammals.

C. Preserve Acquisition

The Washington Natural Heritage Program inventoried the Chehalis River NAP site in 1988. After identification of the site's significant ecological features, DNR developed a preserve design and made a recommendation to the Natural

Heritage Advisory Council in March 1989. The Advisory Council recommended the site for establishment as a Natural Area Preserve.

DNR began acquiring land within the Chehalis River Surge Plain in 1992 to establish the NAP. To date, the DNR has acquired 2,345 acres, from willing sellers, in 20 separate transactions. Efforts to acquire the remaining parcels within the preserve boundary will continue.

Acquisition is from willing sellers only; DNR cannot condemn private property for inclusion in the NAP. DNR will work with landowners who may be unwilling to sell by seeking their participation in joint management of the surge plain area or by pursuing the listing of their lands in the Washington Register of Natural Areas.

Preserve Design

The current design of the preserve includes the freshwater surge plain wetland comprised of low-lying terraces bisected by the Chehalis River and more finely dissected by large tidal sloughs, many small slough channels and a few freshwater creek channels.

The preserve boundary includes much of the flood plain area between River Miles 3.8 and 10.5 of the Chehalis River. The existing area owned by DNR as the CRSP NAP includes portions of sections 13, 15, 16, 17, 18, 19, 20, 21, 22, 28, 29 of Township 17N, Range 8W, Willamette Meridian (Figure 1).

The entire site is less than 20 feet above sea level and most of it is flooded during extreme high tides. The area is tidally influenced, but the water that floods the site at high tide is mostly fresh water. Brackish water occasionally inundates portions of the banks of the Chehalis River.

The current preserve ownership consists of large contiguous and smaller isolated DNR NAP parcels interspersed among parcels owned by timber companies, Grays Harbor County, and other individual private landowners. The CRSP NAP also includes the abandoned Union Pacific railroad right-of-way that forms the southern boundary of the Preserve.

Preserve ownership or management currently does not include the beds of navigable waters (bedlands) of the Chehalis River or associated sloughs that flow through the surge plain area within the boundary of the NAP.

D. Chehalis River Surge Plain (CRSP) NAP Management Planning Process

The CRSP NAP Management Plan provides functional guidelines for the site manager, other DNR staff as well as neighbors, stakeholders and the general public. The plan helps to identify priorities for management of natural features and public access to the site.

The plan describes how the DNR is applying policy and statutory requirements to specific management activities.

Limits of the Plan

The management objectives, actions and provisions outlined in this plan apply only to the CRSP NAP lands managed by DNR. DNR will implement the management actions as resources become available. The basis of future budget requests for maintenance, monitoring and operations will reflect the objectives and actions of this plan.

In developing the management plan for the CRSP NAP, DNR staff conducted inventories and collected existing information from local citizens, agencies and Tribes.

DNR staff then circulated a draft management plan for stakeholder review, public review, and final approval by the Natural Heritage Advisory Council and DNR division and region managers. The following dates outline the chronology of the planning process:

November 14, 2007: Public meeting facilitated by John M. Kliem and Deborah A. Holden of Creative Community Solutions in Montesano, Washington.

December 2007–July 2008: draft plan development.

February 20, 2008: Stakeholder meeting facilitated by John M. Kliem and Deborah A. Holden of Creative Community Solutions in Montesano, Washington.

II. General Preserve Information

A. Physical Description

Ecoregional Context

The Chehalis River Surge Plain is located within the Northwest Coast Ecoregion, which includes most of the Olympic Peninsula, the coast mountain ranges extending down to the central Oregon coast and most of Vancouver Island in British Columbia. Approximately 11 percent of Washington State is within this ecoregion.

This ecoregion characteristically has numerous streams and rivers, extensive coniferous forests (including Sitka spruce in a coastal fog belt), wetlands, bogs, riparian areas and coastal estuaries and dunes. Many of the rivers and streams are salmon-bearing and some of the estuaries are among the largest and best condition on the west coast. It is also an area of particularly high amphibian diversity.

At 2,711 square miles, the Chehalis River has the largest drainage basin of any river contained entirely within the ecoregion and is the second largest river basin within all of Washington State. The Columbia River system is far larger but it is largely located outside of the Northwest Coast Ecoregion.

Climate

The CRSP area experiences a temperate maritime climate with cool, relatively dry summers and mild, wet and cloudy winters. The average temperature is 50.4 degrees F. The average annual precipitation is 83.7 inches. The skies are clear 45 percent of the time in the summer and 20 percent in the winter. Average relative humidity in mid-afternoon is about 65-70%. The average wind velocities during winter storm events are 50-70 miles per hour and can exceed 100 miles per hour.

Climate Change

Climate change has the potential to change important variables in the CRSP NAP environment; however the effects this may have on the local environment and on the site's habitats are difficult to predict. Changes in sea level, predicted by most climate change models, would directly influence the site because of the low elevation of the entire wetland. Changes in temperature, or changes in the amount or timing of precipitation, could change the plant community composition away from plants adapted to the current cool, coastal conditions. Changes in plant communities would likely trigger changes in the animal communities that use the site, as food sources, cover, and other habitat characteristics change. While no targeted research on this threat to the preserve has been carried out, or is planned, managers recognize that climate change will likely lead to changes in the habitats and species on the site. Decisions regarding what, if any, actions should be taken to address these changes will require a better understanding of

the effects of climate change on these habitats and species, as well as what changes are actually occurring on the site.

Topography

The entire site is less than 20 feet above sea level, creating a very flat landscape contoured by river and slough channels.

Geology

Much of the lower Chehalis Basin is underlain by old ocean floor that emerged with the uplift of the Olympic Mountains. The hills and valleys were carved into these slabs of oceanic rock by erosion, resulting in low rounded hills and ravines. At the end of the ice ages, meltwater from the Puget Sound glaciers flowed down the Black River and Lower Chehalis. After the ice ages ended, sea levels rose by several hundred feet and flooded the mouth of the Chehalis. This created Grays Harbor, and caused the river valleys to fill in with sediment. Volcanic rocks (primarily basalt flows) underlie most of the basin, but have been overlain by sedimentary deposits of marine and non-marine origin or glacial material. Sedimentary rocks include those of the Eocene/Oligocene epoch and younger rocks of the Miocene epoch. Much of the basin possesses glacial deposits from at least four different glaciations. Alpine glaciers have flowed south from the Olympic Mountains, shaping the surface features of much of the lower Chehalis Basin. The major river valleys contain significant deposits of alluvial material. This material is often mixed with glacial deposits, forming a complex mosaic of unsorted material. (Envirovision 2000).

Soils

The flood plain soils within the CRSP NAP are primarily alluvium (sediment deposited by flowing water, as in a riverbed, flood plain or delta), but also include glacial drift and outwash. Alluvium soils in the surge plain appear as black, anoxic organic material over clay. Glacial drift and outwash soils are similar except that gravels underlie the clay.

The soils mapped by the Natural Resources Conservation Service show a mixture mostly of Ocosta silt clay loam and Salzer silt clay. Both are very deep, acidic, poorly drained soils that develop in alluvium. They both have a high water table and shallow rooting zone.

There are also mapped areas of Fluvaquents, Orcas peat, Chehalis silt loam, Rennie silty clay loam and Seastrand Variant muck. There is a tremendous amount of large woody debris, both buried within the alluvium and on the soil surface. This wood acts as an additional substrate for trees and shrubs.

Hydrology

The surge plain within the CRSP NAP developed due to a unique combination of factors relating to its proximity to the mouth of the estuary, low river gradient, tidal influences, and stream morphology. Water flows typically peak in winter months

during high rainfall periods, and are lowest in late summer. Because of its large size, flat topography, and minimal level of development, the surge plain plays a significant role in storing water during flood events in the lower Chehalis River system.

The water quality and quantity of the Chehalis River and Grays Harbor estuary watersheds affect the quality and composition of the vegetation communities. Changes in salinity or frequency of inundation can alter the structure and composition of those plant communities at the site, as can excessive sedimentation.

The hydrologic features of the CRSP NAP and the aquatic and wetland communities they support are very sensitive to surrounding land uses outside of the NAP boundary, including water and soil manipulations. Management of this preserve should emphasize interactions of the site with the surrounding landscape, especially in regard to hydrological management issues.

Freshwater Surge Plain Wetland

The surge plain wetland along the Chehalis River includes tidal sloughs with no visible vegetation, a variety of herb-dominated communities, shrub-dominated communities, and wet forests. All of these communities are flooded during high tides and some are permanently flooded to varying depths depending on the tide level.

Most of the surge plain wetland is dominated by Sitka spruce trees. Dominant forest vegetation in this wetland is characterized as "woolly," having many limbs near the ground. The canopy is fairly open and the understory is dense.

Sloughs form a winding and intricate network not visible in aerial photos. Much of the area is flooded during higher high tides, and portions of it are flooded during each high tide. The wetland plays a critical role in absorbing and slowing flood waters during major events such as the December 2007 flood, providing a range of important ecosystem services to the surrounding communities. This key function filters sediment and provides an escape valve for water during extreme high water events

B. Historic Use and Cultural Resources

Native American Use¹

Grays Harbor County takes its name from the broad, shallow bay that drains five rivers in southwest Washington. The original residents were members of the Quinault Tribe along the coast north of Grays Harbor and the Chehalis Tribes of the lower Chehalis River drainage. Other tribes in the area included the Queets, Humptulips, Satsop, Wynoochee, and Copalis. The Chehalis, Quinault, and Hoh tribes spoke the Coast Salish language closely related to other Salishan

¹ http://www.historylink.org/essays/output.cfm?file_id=7766

language groups in the Pacific Northwest. All the tribes used a trade jargon called Chinook.

Grays Harbor area tribes lived in permanent villages along rivers and lakes. Water defined their economic and cultural lives. They harvested salmon as the anadromous species swam upstream to spawn, as well as whales and seals along the coast. In the summers, hunters ranged inland and into the Olympic Mountains for game and to trade with other tribal groups. They developed a high degree of skill with canoes carved from cedar trees in a variety of specialized designs adapted to swift-flowing rivers, broad estuaries, and the sea.

European-American Settlement

The CRSP area has a lively history of pioneer settlement and logging. Numerous pilings still exist in the sloughs and main river channels throughout the surge plain. These are remnants of what was once an intricate network of log booms built to hold huge rafts of timber harvested from the adjacent uplands. Due to tidal inundation and extensive wetland areas, little development of the preserve area occurred beyond a few home sites and hunting cabins. Most of these structures are now abandoned.

Recent History

Lands within the surge plain, excluding the preserve, are primarily under management as commercial forestlands. Selective logging occurred in the forested stands of the preserve sometime between 1888 and 1914. The likely species removed during this period were Sitka spruce, western red cedar and western hemlock. No harvest has occurred in recent years due a combination of factors, including low timber quality and volume as well as wetland regulations.

Historically, domestic animal grazing likely occurred in the upland areas on the preserve edge and in the preserve vicinity.

The Oregon Washington Railroad and Navigation Company built a railway line in 1909 along the southern boundary of the wetland which is now the CRSP preserve. The Milwaukee Railroad Union later purchased this line, followed by the Union Pacific Railroad. Eventually, Union Pacific abandoned the line, pulled the rails, and sold the property to a private company. DNR later purchased that portion of the line adjacent to the preserve.

C. Land Uses Within and Adjacent to the NAP

Major landowners within the surge plain include the Department of Natural Resources Natural Area Preserve, Weyerhaeuser Company (which has designated part of its ownership within the surge plain as the Norm Dicks Wildlife Conservation Area), Port Blakely Tree Farms, Anderson & Middleton, Rayonier Forest Resources, and smaller undeveloped timber property landowners. The Grays Harbor Chapter of Trout Unlimited owns a recreation site adjacent to the preserve, Friends Landing, which is located on the north side of the Chehalis

River. Agricultural land and homesites occupy the adjacent uplands to the south and east.

Central Park is an unincorporated community that lies immediately north of the NAP. The community has a population of 2,558 (2000 US Census). Land use is primarily residential with very few businesses. Although the community does have a water system, it has no sewage collection system or treatment facility. Homes in the area use septic systems to treat waste water.

Fire District No. 2 provides fire protection to the surrounding area and Grays Harbor County provides law enforcement.

The railroad right of way that is part of the NAP also extends to the east through the small community of Melbourne. A formal trail has not been developed on this section of trail.

D. Public Use

The preserve is popular with a variety of different recreational groups. Frequent recreational use groups include:

- Hikers on the interpretive trail located on the old railroad grade.
- Bank fisherman accessing the river from a spur on Preacher's slough road.
- Anglers and hunters using the area via boat access and infrequent camping along the main river channel.
- Paddlers launching canoes and kayaks from the Blue Slough Access and Preachers Slough Road.
- Bird and wildlife watching.

The impenetrable vegetation beyond the shoreline discourages most recreationists from venturing from their boats into the dense thickets of the preserve.

Public and educational use of the 3.5-mile interpretive trail is part of ongoing CRSP site management. There is one completed trailhead parking area and two less developed water access sites on the Chehalis River and on Blue Slough.

E. Applicable Local, State, and Federal Regulations

This section summarizes regulations that affect planning for the CRSP preserve. This general regulatory framework shapes and limits activities and projects that are proposed within the plan.

Wetlands

Grays Harbor County classifies wetlands as all marshes, bogs, and swamps defined in the 1958 publication "Peat Resources of Washington." Category 1

wetlands are those falling within the jurisdiction of the Shoreline Management Act, and nearly all of the land within the CRSP supports Category 1 wetlands.

For protecting wetlands, the county relies on its Shoreline Master Program, the Grays Harbor Estuary Management Plan, subdivisions code (Title 16 Grays Harbor County Code), health and safety code (On-Site Sewage System, Chapter 8.16 GHCC), and the environmental review process through the State Environmental Policy Act (SEPA).

In addition to these local regulations, Grays Harbor County relies on the federal government to protect wetlands through Section 404 of the Clean Water Act.

Forest Practice rules also provide protection for wetlands and streams affected by any future timber removal activities in the area.

Grays Harbor County Regulations and Policies

Conservation of Resource Lands of Long-Term Commercial Significance²

The only resource lands designated within the boundary of the management area are forestlands of long-term commercial significance. The county identifies these lands as private properties enrolled in Open Space pursuant to Chapter 84.33 or 84.34 or lands owned by a local, state, or federal agency.

Critical Areas Protection

Critical areas within the Chehalis River Surge Plain include wetlands, frequently flooded areas, geologically hazardous areas, and fish and wildlife habitat conservation areas. Grays Harbor County relies on a variety of regulatory provisions to protect critical areas rather than a single ordinance.

Frequently Flooded Areas

Regulations relating to frequently flooded areas within the county fall under Chapter 17.56 GHCC. This chapter within the zoning ordinance creates a flood plain overlay district with boundaries based on the Flood Insurance Rate Map (FIRM) prepared by the Federal Emergency Management Agency. The county requires permits for all development within the flood plain to assure meeting provisions for flood hazard reduction.

Geologically Hazardous Areas

The Grays Harbor County Building Code is the regulatory tool used by the county for regulating development in seismic hazard areas. At the time of adoption of the critical areas resolution, the county did not have the best available science currently published on seismic hazards. Present mapping by DNR shows that the area has a moderate to high susceptibility to liquefaction and a Site Class D

² Grays Harbor County classified and designated critical areas and resource lands of long-term through *Resolution 92.39*.

rating for amplification for ground shaking. Additionally, the site is completely within the Tsunami inundation zone.

Fish and Wildlife Habitat Conservation Areas

Grays Harbor County has chosen not to designate fish and wildlife habitat conservation areas within its jurisdiction. There are no specific provisions to protect these areas outside of relying on the Grays Harbor Estuary Plan and the Forest Practices Act.

Zoning

Title 17 of the Grays Harbor County Code (GHCC) regulates zoning within the county. The majority of the NAP lies within the General Residential Five (G-5) zoning district.³ This district provides for a wide range of uses consistent with low levels of public facilities and services. Minimum lot size in the G-5 district is five acres.

The northwest corner of the NAP lies within the Industrial District (I-2). This zone extends all the way to unincorporated Junction City. This district allows a wide range of intensive permitted uses as defined by RCW 39.84.020:

"Industrial development facilities" means manufacturing, processing, research, production, assembly, warehousing, transportation, public broadcasting, pollution control, solid waste disposal, energy facilities, sports facilities, parking facilities associated with industrial development facilities as defined in this section or with historic properties as defined in RCW 84.26.020 and industrial parks.

Other permitted uses include research and development laboratories, technical and vocational schools, transportation and utility facilities, and light industrial uses.

Conditional uses in this district allow automobile wrecking and childcare centers.

There is no minimum lot size in the I-2 District.

Grays Harbor Estuary Management Plan

Shoreline management within the NAP falls under the jurisdiction of the Grays Harbor Estuary Management Plan. The jurisdiction of this master program extends from where tidal influence ends on the Chehalis River to the mouth of the estuary. The entire NAP is within Planning Area I and extends over Management Units 20, 22, and 24.

Management Unit 20 covers an area that includes Mox Chuck Slough area north of the Chehalis River. This is a "conservancy managed" unit under the county plan and does not allow activities that hinder its natural characteristic as a natural

³ Chapter 17.24 GHCC

water storage area. Special conditions allow for the extraction of aggregate outside of the river.

Management Unit 24 also is a “conservancy managed” unit located south of the Chehalis River and encompasses Blue and Preacher Sloughs. It has similar use restrictions as Management Unit 20. The management unit does allow maintenance or redevelopment of the railway.

The eastern portion of the NAP lying north of the Chehalis River is Management Unit 22. This Rural Agriculture unit is managed for agricultural activities and aggregate extraction. Dikes may be allowed to protect agricultural properties.

No Shooting Zone

Section 9.08.020 of the Grays Harbor County Code prohibits the discharge of firearms in specified areas of the county. The map in Figure 3 delineates the extent of the Central Park No Shooting Zone.

Figure 3. No Shooting Zone



Water Resource Inventory Area (WRIA) 22 & 23

The CRSP NAP lies within Water Resource Inventory Area (WRIA) 22. The Chehalis Basin Partnership is the Lead Entity for the WRIA and the agency responsible for overall watershed planning in the five-county area. Grays Harbor County provides staff support for the organization.

Two policy documents are important for protecting water and salmon resources within the CRSP NAP: The Chehalis Basin Salmon Habitat Restoration and

Preservation Work Plan for WRIA 22 and 23 (2007) and the Chehalis Basin Watershed Management Plan (2004)⁴.

The Work Plan is the Lead Entity strategy for providing guidance to project planners and funding agencies in developing, evaluating, and implementing salmon habitat restoration and protection actions within the basin. This document is a critical component of applications for funding before the Salmon Recovery Funding (SRF) Board for restoration and protection projects that benefit salmonids.

The State Environmental Policy Act (SEPA):

SEPA requires governmental agencies to consider the environmental impact of proposals before making project decisions. The management plan for the Chehalis River Surge Plain NAP is exempt from SEPA due to the inherent protection and restoration focus of management. Thus the plan does not require preparation of an environmental checklist. Management activities that have the potential to impact the environment, such as certain trail development proposals, will undergo individual project review through SEPA.

⁴ Both documents are available through http://www.co.grays-harbor.wa.us/info/pub_svcs/ChehalisBasin/Index.html

III. Natural Features Description

A. Plant Communities

Most of the surge plain wetland is dominated by Sitka spruce, with mature trees ranging from about 50 to more than 200 years old. Other common trees on the site include red alder and western red cedar. Trees are relatively widely-spaced, leaving a fairly open tree canopy and dense, shrubby understory of red-osier dogwood and salmonberry. Skunk cabbage and slough sedge are also common in the understory. Fallen trees and logs are often covered with salal and also provide an important substrate on which Sitka spruce trees become established. This Sitka spruce-dominated vegetation represents the “Sitka spruce/ red-osier dogwood/ skunk cabbage forest vegetation” type listed under the Primary Natural Features section.

Some parts of the site support shrub- or herb-dominated vegetation types without trees. The shrub types mostly consist of willow species and red-osier dogwood, although there are also dense patches of spirea. These shrub areas range from being flooded during each high tide to being permanently flooded and soils tend to be soft and mucky with relatively deep organic matter. Lady fern and skunk cabbage are also typically present in these areas. This is representative of the “red-osier dogwood–willow species shrubland” and “lady fern herbaceous vegetation” types listed in the Primary Natural Features section.

Lynby's sedge forms nearly single species swards on low banks along the Chehalis River and some of the sloughs. These areas are flooded during each high tide, and probably are occasionally flooded with brackish water. They represent the “Lynby's sedge herbaceous vegetation” type. Softstem bulrush can also be found in nearly pure stands, often mixed with small-fruited bulrush, while other areas are very diverse. This community is flooded during each high tide and represents the “softstem bulrush herbaceous vegetation” type. Cattail dominates large areas, sometimes occurring with softstem bulrush. It typically forms dense swards which range from being permanently flooded, to being flooded only during high tide. These areas represent the “cattail herbaceous vegetation” type listed in the Primary Natural Features section.

A list of plant species known to occur on the site is included in Appendix B.

B. Fish and Wildlife

Although complete surveys have not been conducted, the surge plain is known to support a number of fish, bird, and mammal species.

Fish

Olympic mudminnow

The Olympic mudminnow lives only in western Washington and is rare outside of the Olympic Peninsula and the Chehalis River Basin. The current distribution of the Olympic mudminnow includes the southern and western lowlands of the Olympic Peninsula, the Chehalis and lower Deschutes River drainages, and south Puget Sound lowlands west of the Nisqually River (Mongillo and Hallock 1999).

Olympic mudminnows live in slow-moving streams, wetlands, and ponds in the coastal lowlands. The best habitats appear to have soft, muddy bottoms, with little to no water flow, and thick aquatic vegetation. The species has a restricted tolerance for water current and salinity, but a wide tolerance for temperature and oxygen. Their ability to breathe atmospheric oxygen allows them to live in oxygen-poor water where predator fish can't follow.

Mudminnows are not actually minnows at all, but are related to the pike and musky family. They lie in wait for their prey, which consists mostly of small crustaceans and insects. Spawning takes place during late fall, subsides during the winter months, and picks up again from March until June. Peak spawning usually takes place in April and May.

Although most populations appear to be stable, the species is listed as "Sensitive" in Washington due to its limited range and the high rate of wetland habitat loss that the region has experienced. According to the Washington State Department of Fish and Wildlife, "State Sensitive" species are "any wildlife species native to the state of Washington that is vulnerable or declining and is likely to become endangered or threatened throughout a significant portion of its range within the state without cooperative management or removal of threats."

Surveys confirm that the Olympic mudminnow inhabits one area of the NAP and the presumption is that they exist throughout the site. A complete survey of the species within the NAP remains to be completed.

Salmonids

The Chehalis River Surge Plain provides rearing and migration habitat for a number of salmonid runs, including spring and fall Chinook, coho, fall chum, and both summer and winter steelhead. These fish spawn further upriver and in various tributaries and the young fry return to the ocean via the Chehalis River. The surge plain provides important habitat for these juveniles, where they can gradually adjust to salt water conditions and feed in a highly productive environment prior to returning to the ocean. The river channel and sloughs within the preserve are particularly important for juvenile coho, which are often found rearing during winter and early spring, prior to migrating into salt water or moving back upstream for extended freshwater rearing. The surge plain also provides overwintering habitat for Chinook and coho that may be forced downstream

during high river flows. The sloughs within the preserve have low-velocity water flows and provide “refugia” for young fish.

Other Fish

Other fish found in the surge plain include lampreys, sturgeons, smelts, sticklebacks, sculpins (commonly called "bullheads"), and flounders. Minnow species include the northern pike minnow, speckled dace, long-nosed dace, and peamouth.

Exotic Fish Species

Exotic fish species introduced to the west coast that now reside in the Chehalis River include American shad, bass, sunfish, carp, yellow perch, and catfish. These fish can directly impact native fish and amphibians by preying on them, or indirectly by reducing available food resources. The population levels of these fish in the vicinity of the preserve are unknown.

Birds

Appendix C contains a list of bird species that have been found within the preserve, including various song birds, waterfowl, raptors, and gulls. A total of 75 species have been documented on the site, including 50 that are likely breeding, 16 that are possibly breeding, and nine migrants or vagrants.

There are several active and alternative bald eagle nests and active osprey nests within the preserve. These species also forage in the river and sloughs. Band-tailed pigeons also likely nest on the site, and the river and slough banks exposed during low tides provide important mineral sites where these birds ingest salts early in the breeding season and again in late summer.

The preserve supports a variety of nesting habitats including:

- large shrub patches, used by many song birds (e.g. warblers)
- emergent wetlands, used by various species (e.g. Virginia rail)
- large trees, used by raptors (e.g. osprey, bald eagle)
- shorelines, used by shorebirds (e.g. spotted sandpiper)
- river banks, used by bank-nesting birds (e.g. bank swallows, kingfishers)
- snags, used by cavity nesting birds (e.g. Vaux’s swift and pileated woodpecker, both State candidate species, and wood ducks, a State priority species)

Mammals

Information about mammal use of the site is limited, however the following species have been observed: black bear, beaver, raccoon, deer, river otter, Douglas squirrel, varying (or snowshoe) hare, and harbor seal.

Amphibians and Reptiles

No formal amphibian surveys have been completed at the CRSP, however Red legged frogs are known occur on the preserve. Garter snakes and other common NW amphibians and reptiles are likely to be present.

DRAFT

IV. Management Policies and Goals

A. General Management Guidance

The Washington Natural Heritage Program identifies natural area preserves, as defined in RCW 79.70, through a scientific inventory process. The purposes of NAPs are:

- To protect outstanding examples of rare or vanishing terrestrial or aquatic ecosystems, rare plant and animal species and unique geologic features;
- To serve as baselines against which the influences of human activities in similar, but differently managed ecosystems can be compared; and
- To provide areas that are important to preserving natural features of scientific or educational value.

B. Management Goals

The guiding principle for managing the Chehalis River Surge Plain NAP is to permit natural ecological and physical processes to predominate, while controlling activities that directly or indirectly modify them. Exceptions may occur when a primary feature would be jeopardized without active intervention.

Management activities will also be implemented to maintain the site in the best condition possible for research and education. Removal or alteration of vegetation, soil, or rock is not allowed except where specifically authorized as part of this plan.

Management goals for the Chehalis River Surge Plain include the following:

- Protect the site's primary natural features
- Provide for public access compatible with management of the preserve
- Monitor threats to the natural features and the health of natural systems
- Facilitate environmental education and research on the site
- Manage non-native and invasive plant species
- Protect cultural and archeological sites

C. Public Access Policy

The Chehalis River Surge Plain NAP has special qualities and resources that attract people to the site.

The following is a summary of the DNR NAP Public Access Policy that guides public access and uses. See Appendix D for the full policy .

The Natural Areas Program prepares site-specific management plans for each NAP managed by the DNR. Protecting the natural features for which an NAP was established and maintaining natural processes are top priorities for each plan. Additionally, management plans specify types and levels of public access allowed, including management and monitoring recommendations.

Public use on NAPs is generally limited to:

- Authorized non-consumptive uses that focus on scientific study or educational purposes,
- Appropriate location, intensity, timing, and type of low-impact access outside of environmentally sensitive areas, when determined by the department through case-by-case analysis of each NAP to be consistent with conservation management and the primary purposes of research and education, or
- Traditional established aboriginal rights, or rights recognized by treaties or applicable court rulings.

The DNR may authorize land access for consumptive uses (such as hunting, or plant harvesting) only when the activity is determined:

- To be the most appropriate management tool to protect the natural features for which a preserve was designated, or
- In consultation with the WDFW, to be the most appropriate fish or wildlife management tool, or
- To increase an NAP's scientific or educational value when consistent with conservation management and non-degrading to the natural features for which the NAP was designated, or
- For a specific circumstance, to be consistent with conservation management and the primary purposes of research and education, occurring outside of environmentally sensitive areas, and of appropriate location, intensity, and timing.

Where allowed, public access is carefully controlled and monitored. Access to a preserve may be limited until resources are available to develop and properly implement the management plan or to analyze specific access requests.

D. Management Actions Summary

Table 3. Management Actions Summary

Goal	Management Action
Protect Primary Features	<ul style="list-style-type: none"> • Implement a strategy to protect the site’s primary features that includes monitoring.
Public Access	<ul style="list-style-type: none"> • Develop opportunities for public access with input from local and regional users. • Guide low impact public uses to appropriate areas • Provide informational and educational signs, parking, water access, designate trails, vehicle barriers, and enforcement.
Monitoring	<ul style="list-style-type: none"> • Monitor wetland plant community condition • Monitor invasive species • Monitor potential impacts to natural features • Pursue grants and facilitate partnerships to meet monitoring goals.
Environmental Education	<ul style="list-style-type: none"> • Encourage continued use of interpretive trail facilities and curriculum tools by local schools. • Train additional field trip leaders to work with students. • Sponsor spring and summer field trips for local residents.
Non-native invasive species	<ul style="list-style-type: none"> • Create site-specific weed management plan • Restore areas where native vegetation has been damaged, especially on shorelines
Archaeological & Cultural Sites	<ul style="list-style-type: none"> • Coordinate with Confederated Tribes of the Chehalis and the Quinault Indian Nation to ensure that cultural sites are not disturbed and information is regularly exchanged regarding projects. • Complete cultural resource surveys

V. Management Guidelines and Strategies

A. Primary Features

Management of the wetland forest and other wetland communities will promote structural and species diversity within the stand while protecting the wetland understory communities. Generally this will be achieved through protection and preservation of natural processes.

Management actions:

Monitor population trends and factors which may adversely affect the forest in order to determine future management actions. Monitor for changes in the relative abundance of native and non-native understory species. When non-native invasive species are observed to be threatening the primary features or ecological processes of the site, a weed plan that address these issues should be developed and implemented.

B. Public Access

The intention of the natural areas system is to secure representation of all ecosystems and rare plant species in the state. Because these lands are not easily replaceable if damaged, management of them should be cautious with regard to public use. Compatible public uses are identified in the plan, and activities that threaten the important features of the site will be prohibited or directed to more appropriate areas.

Decisions about public use will be in accordance with RCW 79.70 and the DNR NAP Public Access Policy, Appendix D in this document. The DNR will carefully evaluate potential impacts of proposed activities on the natural features of the site. The DNR natural areas ecologist is responsible for evaluating research requests and the DNR region natural areas manager is responsible for coordination and management of use within the NAP.

DNR can only approve public access in areas that it owns and manages. Public access across private lands that are within or adjacent to the preserve boundary is determined by the private landowner and not necessarily available to the public.

Available public access for people with disabilities is an issue of concern that DNR intends to address on a case-by-case basis. If the agency undertakes public access projects within the site, facilities will be fully accessible where possible. Additionally, DNR will continue to keep the local community informed and involved through one-on-one interactions and through community meetings when needed.

The following is a discussion of public use occurring on the site and the subsequent management actions developed to meet the NAP management goals listed above.

C. General Public Use

Public use of the preserve includes a variety of activities taking place in several areas of the preserve. The former railroad grade trail provides hiking, bird watching, and educational use along the southern margin of the preserve. Bank fishing, kayaking and canoeing, and shoreline access are possible at Blue Slough and the Chehalis River bank adjacent to Preachers Slough Road.

The objectives for establishment and management of natural area preserves (per the enabling legislation, RCW 79.70) specify educational and research activities as compatible with natural area protection. The act was amended in 2002 to allow for low impact public use within appropriate buffer areas of NAPs. Access will be designed to protect the important features of the preserve and allow for public enjoyment of the site. The following actions provide directed access to increase site protection and also enhance facilities for visitors.

Management actions:

The DNR will design public access areas with input from the community and user groups. Informational outreach materials will be provided to visitors. The message will define uses that are allowable on the CRSP preserve and why other uses are not allowed. Potential impacts from public use will be monitored on a regular basis. Current activities that negatively affect the area include garbage dumping, camping, campfires, tree and shrub cutting, and off-road vehicle use. Management actions include:

- Remove trash regularly and enforce littering laws
- Clearly establish areas where vehicles are allowed and limit vehicle access beyond those points
- Post informative signs at key access points into the preserve
- Provide natural area and CRSP interpretive information along trails to help foster stewardship of the site
- Coordinate with partners and user groups to increase volunteer stewardship
- Establish a local volunteer corps that draws on neighbors, conservation groups and recreation groups to help maintain facilities and restoration projects, and support educational events.

D. Fishing

The Chehalis River Surge Plain has been popular with anglers for many years. Anglers access multiple fishing locations inside the preserve.

The existing access points at Blue Slough and the Chehalis shoreline near Preachers Slough occur on formerly developed areas such as an old log dump and an abandoned farm/homesite. Because they are already substantially

impacted, these areas are good candidates for continued access. These sites have potential for enhancement for a variety of uses including better fishing access.

Management actions:

Access for fishing will be directed to areas that have historic fishing use and have prior human impact. Developed trails and signing will guide anglers to these locations.

The DNR will work with focus group partners to educate anglers about the NAP and about appropriate uses of the site. In addition, funding sources and partners will be identified to help with maintenance and funds for access support.

E. Hunting

Hunting occurs at low intensity on the preserve. There is evidence of hunting for deer, bear, and migratory waterfowl. The tidal characteristic of the surge plain and the density of the forest limit hunting locations and accessibility.

DNR does not regulate hunting or trapping activities; however, the department does limit access for hunting on NAPs if the activity is inconsistent with the Public Access Policy.

DNR does not restrict use of navigable waters. Hunters can access the waters within the preserve.

Management actions:

DNR will manage hunting access on the preserve in coordination with the Washington Department of Fish and Wildlife. For safety reasons, hunting is not allowed from or across trails, or in developed public areas frequently used for walking, small boat launching, educational field trips, bird watching, or other forms of low impact public use. This includes the 3.5 mile former railroad grade trail, the Blue Slough trailhead and water access site, the Preachers Slough trailhead, and the Chehalis River shoreline access area at the end of Preachers Slough Road. The safety and enjoyment of all visitors will be safeguarded.

Hunting for waterfowl and other wildlife is permitted in undeveloped areas of the preserve, which constitutes the majority of land and water at the site. If this activity poses a threat to other visitors or important features of the preserve, hunting policy may be revised to safeguard the public and the integrity of the site.

F. Research and Educational Use

The CRSP NAP is open for approved scientific research and educational activities, providing they do not adversely affect the site's natural features. Research, monitoring, and inventory projects by potential researcher groups, such as colleges, universities, and relevant research laboratories, are encouraged. Such projects must be pre-approved by the Natural Areas Ecologist

and Region Natural Areas Manager. Interested parties should contact the Region or Natural Areas Program offices regarding research proposal guidelines. Project approval or denial, including any specific conditions, will be issued within approximately two weeks of receipt of a proposal. Multi-year projects will be re-evaluated on a yearly basis.

Teachers are free to use the interpretive trail to meet their educational goals for natural history field trips. We encourage teachers to contact the natural areas manager for access to more educational materials and the possibility of scheduling an experienced interpreter to join the class. The current curriculum guide provides activities that focus on habitat and species, watershed activities, and functions and values of wetlands. Copies of the guide are available through NAP Manager or Educational School District 113.

For access to other portions of the site, or to arrange for groups larger than 20, contact the Pacific Cascade Region office at 360-577-2025.

Management actions:

The natural areas ecologist will evaluate research requests. Certain research projects (very complex projects or those that may request the use of disruptive sampling techniques) may also require review and approval of the Natural Heritage Advisory Council.

The CRSP Nature Trail

DNR maintains a portion of the abandoned Union Pacific Railroad right-of-way as a nature trail to allow the public the opportunity to experience and learn about the preserve's significant ecological and historical features. A series of interpretive signs covers topics including native Indian and recent history, birds, plants and trees, geology, and invasive species. A viewing platform at the edge of Preacher's Slough provides a large area for groups to congregate on field trips. The nature trail allows pedestrian and bicycle access along the historic railroad right-of-way that forms the southern boundary of the preserve.

Management actions:

The trail offers opportunities to explore, appreciate, and contemplate the natural features of the surge plain. In order to ensure that the educational and interpretive values of the trail are not compromised, motorized vehicles (except administrative vehicles) and horseback riding are not allowed.

G. Tribal Interests, Archaeological & Cultural Sites

The CRSP NAP is important to several Native American tribes with historic and current land and resource use of the area. It is part of the Quinault Indian Nation's treaty fishery area, and is also important to the Chehalis Tribes and their upstream fishery and land ownership. This plan does not weigh the various interests but simply recognizes that both groups have management interests in the resources supported by the preserve.

To date, there have been no archaeological surveys or assessments completed specifically for the CRSP NAP. The lands in and surrounding the CRSP NAP are known to have been inhabited and used by native people and may include important cultural sites. More information is needed to ensure that any existing sites are correctly protected.

Native plant communities at the CRSP NAP may have special values for nearby Tribes. Gathering information regarding these potential and historic uses will help guide actions in the plan.

Management actions:

- Consult with the Quinault Indian Nation and Confederated Tribes of the Chehalis regarding actions considered as part of this plan.
- Complete cultural resources surveys and consultation, which are required prior to any development or earth moving project.
- Consult with nearby Tribes regarding native plant uses that may be protected or enhanced through management and restoration.

H. Mining

Mineral leases exist within the CRSP NAP on both private and DNR - NAP lands. Drilling, mining, or uses of mineral or energy resources on the NAP are incompatible with management objectives. The Natural Areas Program will seek acquisition of mineral rights where possible. RCW 79-11-210 requires the reservation of mineral rights, in perpetuity.

Management actions:

- DNR – Natural Areas Program should initiate negotiations with individuals and corporations to obtain underlying mineral rights on the NAP through gift, trade, or purchase.

I. Roads and Utility Rights-of-Way

County roads and state highways border the preserve. Roads are the most intrusive element within and adjacent to the preserve and are the source for hazardous and solid waste dumping as well as the spread of noxious weeds.

Preachers Slough Road has several problem areas that are a high priority for resolution and management action. The end of the road in section 22 has failed and should be abandoned following transfer from Grays Harbor County. Blowdown in the storm of December 2007 effectively blocked off the failed portion of the road. Other challenges include dumped vehicles, garbage, and illicit activities that sometimes occur at the last drivable pullout on the road.

Preachers Slough Road fully blocks important off-channel fish habitat. Although the slough is accessible to fish at its western confluence with the Chehalis River, opening the eastern connection would provide access to miles of critical rearing habitat for juvenile fish.

Management actions:

- Manage roads within the preserve to minimize impacts on the environment while allowing for public access to the Chehalis River, Preachers Slough and Blue Slough where possible. Maintain Preacher's Slough Road in conjunction with Grays Harbor County until DNR acquires complete ownership. Restore the failing portion of Preachers Slough Road to its natural condition and block vehicles from entry.
- Restore fish passage to Preachers Slough where the road currently blocks it. Pursue this project in partnership with Grays Harbor County, local salmon recovery groups, Tribes, USFWS, WDFW, and WWRP restoration grants. To preserve public and tribal access, it is likely a bridge will be required.
- Erect "No Dumping" signs where needed.
- Maintain access roads mechanically rather than by spraying with herbicides if possible. Seek cooperative agreements with state highway and the county's Department of Public Services to maintain roadways in a manner compatible with preserve management.

J. Wildlife

The habitat within the CRSP supports a rich diversity of wildlife, including many WDFW -listed priority species. There has been little inventory of wildlife in the NAP partly due to the inaccessibility of the site. DNR will seek to obtain further information on wildlife diversity within the surge plain.

DNR will work with WDFW biologists and others on protection of wildlife and wildlife habitat within the surge plain. DNR will also work with WDFW biologists, The Nature Conservancy, volunteer stewards, or other researchers to conduct wildlife inventories within the CRSP.

Non-native invaders to the preserve include opossum, nutria, and starlings, all of which may have adverse impacts on native species through nest depredation, preemption of nesting cavities, and destruction of vegetation.

The NAP will monitor non-native animal species and implement a control program if they are found to have a significant adverse impact on native species.

Management actions:

Work with WDFW biologists and volunteer stewards to provide monitoring of the preserve, to inventory wildlife species diversity and abundance, and to note concerns related to invasive or non-native species. There is no active

management (reintroduction, removal, etc.) of wildlife species planned at this time.

K. Insects and Disease

The wetland forests of the preserve are susceptible to a variety of insects and other pathogenic organisms. Native insects and other pathogenic organisms are part of the preserve's natural ecological conditions and processes. As such, no management intervention will occur when infestations and diseases are the result of native organisms and natural process. Exceptions to non-intervening management may include cases when non-native, introduced insects or other pathogens create deleterious conditions in the forested buffer, law (RCW 76.6) requires management action, or if the key natural features of the preserve are jeopardized by lack of intervention.

Management actions:

Natural Areas staff, other regional employees and volunteer stewards will monitor the forested portions of the preserve for signs of insects and disease. If warranted, DNR forest pathologists will visit the site to diagnose suspected problems and recommend actions based on the above policies.

L. Fire Management

DNR is required to protect both state and private lands from wildfire (RCW 76.04.016). Fire suppression in the Chehalis River Surge Plain focuses on protecting life, resources, and property. Contrary to the guiding principle of allowing natural processes to happen, management objectives in this plan must focus on fire suppression.

Little information is available on the fire history of the Chehalis River Surge Plain Area. The near coastal zone climatic conditions of the preserve and primarily wetland habitat limit the frequency and intensity of naturally occurring fires. Forests in this area can burn, but fire-return intervals are long (hundreds of years) (Agee, 1993).

The most probable source of wildfire ignition within the preserve or preserve vicinity would be human-related, primarily due to recreational use. Although it is rarely a cause of fire in the CRSP vicinity, lightning is also a potential ignition source.

Due to the wetland conditions prevalent throughout most of the preserve, a fire that did start would probably spread slowly, if at all. The patchy distribution of the forest canopy also makes it unlikely that a crown fire would establish or spread.

Management actions:

See Appendix E for management actions.

M. Introduced Weed Species

For the purposes of this plan, an introduced weed species is a plant species that is not native to the State of Washington, and has the potential to become invasive, thereby posing a threat to site management goals. Invasive introduced species can repress or exclude native species, and are widely viewed as one of the greatest threats to ecosystem health and biodiversity worldwide. Population inventory, assessment and control of invasive weed species are top priorities in the management of the CRSP preserve.

Upland weed species of concern include:

- English ivy (*Hedera helix*)
- Scot's broom (*Cytisus scoparius*)
- Holly (*Ilex aquifolium*)
- Himalayan blackberry (*Rubus discolor*)

Wetland plant communities dominate the surge plain, so species that threaten the quality of wetlands are of primary importance. Five introduced aquatic and riparian weed species are currently of concern at the CRSP NAP:

- Purple loosestrife (*Lythrum salicaria*)
- Yellow Iris (*Iris pseudacorus*)
- Reed canarygrass (*Phalaris arundinacea*)
- Bohemian knotweed (*Polygonum bohemicum*)
- Parrotfeather (*Myriophyllum aquaticum*)

Purple loosestrife is a class B noxious weed in Grays Harbor County. It forms dense monotypic stands, and in some situations is capable of displacing native freshwater wetland communities. Purple loosestrife within and near the preserve has been surveyed annually since 1997. Many individual plants have been pulled from the major sloughs and small channels. The only large patches found within the preserve have been along the mainstem of the Chehalis, and near the mouth of the Wynoochee River. Large infestations were also found along Highway 12 adjacent to the northern border of the preserve.

Yellow iris also forms dense monotypic stands along streams and wetlands, potentially displacing native wetland plants. Yellow iris has been found and inventoried growing along the waterways of Blue, Preachers, and Peels Sloughs, and along the banks of the Chehalis mainstem.

Reed canarygrass is an exotic species introduced throughout western Washington for soil stabilization purposes. It is a serious problem in wetlands, as it overtakes native vegetation and forms dense monocultures. It grows in disturbed areas along the banks of the Chehalis River and in slough channels adjacent to roadways.

Bohemian knotweed is a hybrid of giant knotweed and Japanese knotweed. Originally introduced from Asia as an ornamental, these species have escaped to roadsides, waste areas, ditch banks, and pastures throughout western Washington. They are aggressive invaders, very difficult to eliminate completely. In the CRSP preserve vicinity, Bohemian knotweed occurs in roadside ditches along Highway 107 and Blue Slough roads, and on private land adjacent to the Preserve. Since it occurs in the Chehalis River basin upstream from the preserve, there is a strong likelihood that it will be brought into the preserve by floodwaters. Before restoration work in the preserve, knotweed was established along the banks of Preachers Slough, and small amounts remain there.

Parrotfeather is an aquatic species that has the potential to form floating mats, choking sloughs and degrading fish habitat and water quality. It has been a serious problem in some parts of the upper Chehalis River basin, and a patch of it has been found and controlled in the CRSP preserve.

Management actions:

- The Natural Areas Program will develop a weed control plan for the site that balances the primary objectives for preserve management with the realistic financial, technical, and logistical factors involved in an invasive species control program. Weed control will follow Integrated Weed Management principles, using methods or combinations of methods that are most effective with the least adverse impacts. The weed management plan will refer to and build upon the December 2006 Integrated Aquatic Plant Management Plan for the Chehalis Basin, developed by Washington Department of Fish and Wildlife.
- Weed control actions will be coordinated with the Chehalis River Aquatic Weed working group, the coordinating body for cooperative grants and initiatives in the Chehalis Basin. The working group organizes survey and control efforts and regularly updates the plan with new information.
- Efforts to control invasive species are coordinated with non-profit, local, and federal agencies that are involved with similar control efforts. Cooperative control efforts also include coordinating with adjacent landowners.
- Purple loosestrife, yellow iris, and Bohemian knotweed populations have been mapped and inventoried in the preserve since 1997. Inventories of these and other invasive species will continue on an annual basis.
- Bohemian knotweed has been controlled in some areas where it previously formed large stands through the use of herbicides. These herbicide treatments will continue, and areas where knotweed has been removed will be monitored for any potential re-sprouting of root remnants.
- Reed canarygrass is so widespread in the preserve that it is not practical to attempt a control program. In areas where it has formed a monoculture,

it is possible to plan localized control treatments and restoration with native species that will competitively shade out the reed canarygrass.

- Soil and vegetation disturbance should be minimized in any activities that occur within or adjacent to the NAP boundary to reduce establishment of invasive species.

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VI. Monitoring of Natural Features

The list below contains the important monitoring needs identified by the Natural Areas Ecologist and other contributors to the plan. These are considered priorities for the Chehalis River Surge Plain NAP because they focus on the site's primary natural features. Invasive species distribution will be the primary focus of monitoring, while the remaining monitoring will be conducted as funding and staffing allow, or through partnerships with other entities:

- Invasive species distribution
- Shoreline conditions
- Olympic mudminnow population status
- Surge plain wetland plant community condition

Invasive species are of primary concern because they are a direct threat to most of the preserve's features and they require frequent monitoring to assess distribution and trends. Periodic inventory and mapping will provide feedback on the extent and distribution of invasives, their impact on the site's natural features, and on the level of success of control efforts.

Shoreline conditions are an important factor to monitor because these are sensitive locations that are easily impacted and they have direct effects on water quality in the sloughs and river. Methods for monitoring shorelines could include measurements of vegetation cover and of exposed soils within particular stretches of the river and sloughs.

Monitoring the status of the Olympic mudminnow population would provide direct feedback on this primary feature of the site, as well as on the conditions of the surge plain wetland community which is an important component of its habitat. Methods for monitoring this species could include periodic capture and release sampling, and body measurements to assess condition of individuals. Olympic mudminnow monitoring should be coordinated with WDFW, which has conducted assessments and monitoring of some populations within the state.

Surge plain wetland plant communities would be monitored to assess their species composition and structure, and to assess long-term changes in these variables. Methods could include standard forest vegetation plots, as well as periodic assessment of aerial photography.

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APPENDIX A. CRSP NAP WORKSHOP PARTICIPANTS

Name	Affiliation
H. Max Zahn	WDFW
Brian Blake	State Representative
Tony Wells	Eyes in the Woods
Ken Guza	Volunteer canoe steward
Reed Waite	WWTA
Andy Mesojednik	Local businessman; Ducks Unlimited
Lonnie Crumley	Streamworks LLC
Pete Holm	ICG
Sarah Krueger	WWTA
Lee Napier	Grays Harbor County
Phil Cook	Weyerhaeuser
Rob Radford	Local volunteer
Anne Radford	Local volunteer
Janet Strong	Chehalis River Land Trust, Audubon
Linda Kunze	Former Heritage scientist who proposed CRSP Natural Area; Currently with Nisqually Land Trust
Carol Seaman	Nearby landowner
Joann Yost	
Doug Fricke	
Lori Lennox	
Wally Vincent	
Steve Robecker	
Jay Sterling	
Dan Boeholt	
Jack Smith	WDFW
Casey Black	Port Blakely
Ron Schillinger	Mayor of Montesano
Dean Schwickerath	Gray's Harbor Audubon
Diane Schwickerath	Gray's Harbor Audubon

APPENDIX B. PARTIAL PLANT LIST

Common Name	Scientific Name
Trees and Shrubs	
Red alder	<i>Alnus rubra</i>
Red-osier dogwood	<i>Cornus sericea</i>
Scot's broom*	<i>Cytisus scoparius</i>
English ivy*	<i>Hedera helix</i>
English holly*	<i>Ilex aquifolium</i>
Indian plum	<i>Oemleria cerasiformis</i>
Sitka spruce	<i>Picea sitchensis</i>
Black cottonwood	<i>Populus balsamifera</i> ssp. <i>trichocarpa</i>
Himalayan blackberry*	<i>Rubus discolor</i>
Salmonberry	<i>Rubus spectabilis</i>
Willow	<i>Salix</i> spp.
Red elderberry	<i>Sambucus racemosa</i>
Douglas' spirea	<i>Spirea douglasii</i>
Western red-cedar	<i>Thuja plicata</i>
Western hemlock	<i>Tsuga heterophylla</i>
Herbs	
Pacific silverweed	<i>Argentina egedii</i> ssp. <i>egedii</i>
Goatbeard	<i>Aruncus sylvester</i>
Lady fern	<i>Athyrium filix-femina</i>
Deer fern	<i>Blechnum spicant</i>
Angled bittercress	<i>Cardamine angulata</i>
Lyngby's sedge	<i>Carex lyngbyei</i>
Slough sedge	<i>Carex obnupta</i>
Siberian miner's lettuce	<i>Claytonia sibirica</i>
Bed straw	<i>Galium</i> sp.
Cow parsnip	<i>Heracleum maximum</i>
Pacific waterleaf	<i>Hydrophyllum tenuipes</i>
Jewelweed	<i>Impatiens</i> sp.
Yellow iris*	<i>Iris pseudacorus</i>
Skunk cabbage	<i>Lysichiton americanum</i>
Purple loosestrife*	<i>Lythrum salicaria</i>
Mitrewort	<i>Mitella</i> sp.
Parrotfeather*	<i>Myriophyllum aquaticum</i>
Pacific water-parsley	<i>Oenanthe sarmentosa</i>
Sweet coltsfoot	<i>Petasites frigidus</i>
Reed canarygrass	<i>Phalaris arundinacea</i>
Bohemian knotweed*	<i>Polygonum bohemicum</i>
Sword fern	<i>Polystichum munitum</i>
Softstem bulrush	<i>Schoenoplectus tabernaemontani</i>
Small-fruited bulrush	<i>Scirpus microcarpus</i>
Piggyback plant	<i>Tolmiea menziesii</i>
Cattail	<i>Typha latifolia</i>
Stream violet	<i>Viola glabella</i>
* = Introduced	

APPENDIX C. BIRD SPECIES LIST

Preliminary Bird List for Chehalis River Surge Plain Natural Area Preserve

Birds seen at the CRSP August 8, 2000 (Pearson), on Blue Slough canoe loop and Preachers Slough Road walk on June 2, 1998 and brief visit April 25, 1998 (Chris Chappell and Amy Stock).

Probable Breeding Species
American Robin - many, singing
American/Northwestern Crow – many
Bald Eagle - 2, known to nest
Bank Swallow
Band-tailed Pigeon - several seen flying low in a number of locations, one seen foraging on fruiting shrubs
Belted Kingfisher – 2
Bewick's Wren - many, singing
Black-capped Chickadee – many
Black-headed Grosbeak - many, singing
Black-throated Gray Warbler - many, singing
Brown Creeper - few, singing, fledglings seen
Brown-headed Cowbird - few, singing
Bushtit – few
Caspian Tern
Cedar Waxwing – many
Chestnut-backed Chickadee – many
Common Nighthawk - 2 together, courtship displays
Common Yellowthroat - many, singing
Downy Woodpecker
European Starling - many, nest seen
Glaucous-winged Gull and Wester & Glaucous-winged Gull Hybrid
Golden-crowned Kinglet - several, singing
Hairy Woodpecker - 4, drumming heard
Hutton's Vireo - 2 singing
Killdeer
Mallard - 2
Marsh Wren - several, singing
Northern Flicker – several
Northern Rough-winged Swallow - few, nesting on adjacent bluffs, foraging over NAP
Orange-crowned Warbler - many, singing
Osprey - 1, known to nest
Pacific-slope Flycatcher - several singing
Pileated Woodpecker - heard calling and drumming on 25 Apr
Pine Siskin
Purple Finch - many, singing
Rufous Hummingbird - several, courtship displays
Song Sparrow - many, abundant
Spotted Sandpiper - 3, calling
Steller's Jay – many
Swainson's Thrush - many, abundant
Tree Swallow - several, nest seen
Warbling Vireo - few, singing
Western Gull
Western Sandpiper

Western Wood-Pewee - 7, more than I expected, in spruce swamp with open canopy
Willow Flycatcher - several, singing
Wilson's Warbler - many, singing
Winter Wren - many, singing
Wood Duck - few, one seen perched in spruce tree
Yellow Warbler - 4, 2 singing, 2 females, surprisingly few

Possible Breeding Species
American Goldfinch - few, flyovers
Common Merganser - 2 females seen
Common Snipe - 2 seen during May (date?) in potential breeding habitat, A. Stock
Dark-eyed Junco - 1 singing
Downy Woodpecker - 1 each on 25 Apr and 2 June
Great Blue Heron - few, flyovers
Red Crossbill - flock of several in spruce woodland
Red-breasted Nuthatch – 2 seen
Red-breasted Sapsucker - 1 seen
Red-tailed Hawk - one seen
Red-winged Blackbird - few singing 25 Apr, none in June!! surprising its not more common
Sharp-shinned Hawk - 1 adult seen
Vaux's Swift - 4, flying over short ways above treetops in spruce woodland, courtship call heard
Virginia Rail - 1, territorial calling on 25 Apr, just outside NAP boundary
Western Tanager - 2 singing
White-crowned Sparrow - 1 singing

Visitors or Migrants
Barn Swallow - 2 flyovers, perhaps foraging
Canada Goose - heard June
Common Raven - 1 flyover
Evening Grosbeak - several flyovers
Ruby-crowned Kinglet - few on 25 Apr
Townsend's Warbler - few on 25 April
Turkey Vulture - 2 flyovers
Varied Thrush - few on 25 Apr
Yellow-rumped Warbler - several on 25 April

Additional Notes:

We played a tape of Yellow-billed Cuckoo many times and had no responses, though it was effective in exciting *other* bird species.

Band-tailed Pigeons are probably most attracted to this site by the great abundance of fruiting shrubs, especially salmonberry, red-osier dogwood, black twinberry, to a lesser degree, cascara. Of these only cascara has been reported in the literature as a major food, but this could be due to a lack of adequate sampling.

The paucity of Yellow Warblers was amazing considering the willow thicket habitats (both tall and short) that we surveyed. Perhaps they are naturally low in abundance in the Sitka spruce zone even in apparently suitable habitat. The breeding bird atlas shows them as absent from large areas of that zone, including the CRSP NAP.

Also saw 4 river otter, saw and heard several Douglas squirrels, saw a lone varying hare, saw 2 harbor seals.

APPENDIX D. POLICY MANUAL

Department of Natural Resources

Cancels: PO13 - 001 Natural Area Preserve Public Use dated April 28, 1997

PO13-002 NATURAL AREA PRESERVE PUBLIC ACCESS DISCUSSION

The Washington State Legislature established a system of natural area preserves (NAPs) to preserve and protect the natural heritage of the state.

“All areas within the state, except those which are expressly dedicated by law for preservation and protection in their natural condition, are subject to alteration by human activity. ... It is, therefore, the public policy of the state of Washington to secure for the people of present and future generations the benefit of an enduring resource of natural areas by establishing a system of natural area preserves, and to provide for the protection of these natural areas.”

(RCW 79.70.010)

Preserves are identified through an organized scientific inventory process that is guided by the State of Washington Natural Heritage Plan. The purpose of NAPs is:

- To protect outstanding examples of rare or vanishing terrestrial or aquatic ecosystems, rare plant and animal species and unique geologic features;
- To serve as baselines against which the influences of human activities in similar, but differently managed ecosystems can be compared; and
- To provide areas that are important to preserving natural features of scientific or educational value.

NAPs, due to their statewide ecological significance and rarity, are a very select subset of all the lands managed by the department and have high value for scientific and educational purposes. These lands are not easily replaceable with other lands if damaged.

Some NAPs are not appropriate for public access due to highly sensitive natural features or limited opportunities for locating public use that would not degrade the ecological values or features of the site. However, on a case-by-case basis, low levels of public access outside of environmentally sensitive areas may be approved on some NAPs when consistent with the conservation, research, and education goals of those NAPs.

While the purposes of NAPs require public use to be strictly managed, other public lands of the state, such as state parks or wildlife areas, have been established for broader public and recreational uses. Department-managed trust lands also provide for multiple uses.

PO13-002 Natural Area Preserve Public Access

Natural Resources Conservation Areas managed by the department provide additional opportunities for low-impact public use, while also protecting outstanding ecological and scenic values.

The department manages NAPs through the Natural Areas Program, in coordination with the Natural Heritage Program and the Washington State Natural Heritage Advisory Council.

Policy

It is the policy of the department to prepare a site-specific management plan for each NAP. Such plans will be developed utilizing the best available science and will give top priority to protecting the natural features that led to the designation of each site as an NAP and to maintaining natural processes.

Management plans will be developed in consultation with other appropriate Department of Natural Resources divisions and programs, state and federal agencies, area local governments, interested local tribes, and the public.

Among other issues, the management plans will specify what public access is allowed, where access will occur, and how it will be managed and monitored, using the following guidelines⁵.

Public use on NAPs will be limited to:

- Authorized non-consumptive uses that focus on scientific study or educational purposes,
- Appropriate location, intensity, timing, and type of low-impact access outside of environmentally sensitive areas, when determined by the department through case-by-case analysis of each NAP to be consistent with conservation management and the primary purposes of research and education, or
- Traditional established aboriginal rights, or rights recognized by treaties or applicable court rulings.

Determination of public access and uses generally will occur within the management planning process. Baseline ecological data will be required to make a determination about public access opportunities. Efforts will be made to monitor the effects of any approved public access and practice adaptive management to eliminate unacceptable impacts.

Recognizing that resource limitations may not allow management planning to occur soon for each NAP, the department retains the authority to manage NAPs

⁵ RCW 79.70.030(1)(b): "The plan must identify the significant resources to be conserved consistent with the purposes of this chapter and identify the areas with potential for low-impact public and environmental educational uses. The plan must specify the types of management activities and public uses that are permitted, consistent with the purposes of this chapter. The department must make the plans available for review and comment by the public, and state, tribal, and local agencies, prior to final approval."

outside of the management planning process. As needed, the department may analyze and address specific management issues to assure protection of the natural features for which an NAP was designated until such time as resources are available to develop and properly implement a management plan.

The department may authorize land access for consumptive uses (such as hunting, fishing, trapping, or plant harvesting) only when:

Determined by the department to be the most appropriate management tool to protect the natural features for which a preserve was designated, or

Determined by the department, in consultation with the Washington Department of Fish and Wildlife, to be the most appropriate fish or wildlife management tool, or

Determined by the department to increase an NAP's scientific or educational value when consistent with conservation management and non-degrading to the natural features for which the NAP was designated, or

Determined by the department, for a specific circumstance, to be consistent with conservation management and the primary purposes of research and education, occurring outside of environmentally sensitive areas, and of appropriate location, intensity, and timing.

Where management actions impact fish or wildlife resources, or existing access for fishing or hunting, the department will consult with the Washington Department of Fish and Wildlife prior to determining a course of action in recognition of overlapping administrative authorities for conservation, habitat, and species management. The department may limit access to a preserve until resources are available to develop and properly implement a management plan or to analyze specific access requests. The department will seek resources to accomplish these tasks and provide access to NAPs for scientific and educational purposes, and for low-impact public uses outside of environmentally sensitive areas as determined on a case-by-case basis per Chapter 79.70 RCW and this policy. Completion of management planning and other site-specific analyses will be prioritized to address NAPs within each department region that have a high need for resource protection, ecological restoration, or public use management.

Implementation

The division responsible for NAPs will provide program guidance to the regions to implement this policy. The division will also provide scientific assistance for ecological inventories, data and trend analysis, and management activities. The regions will develop site management plans using the guidelines developed by the division. If the region lacks staff or expertise to develop site plans assistance will be provided by the division. Management plans, public access issues analyzed and addressed outside of the management planning process, and consumptive uses on NAPs, other than emergency measures necessary to protect public resources, will be approved by the Natural Heritage Advisory Council and the region and division managers responsible for the NAP.

Policy and Administration

SEE ALSO

Chapter 79.70 RCW - Natural Area Preserves Act

Chapter 79.71 RCW - Natural Resources Conservation Areas Act

State of Washington Natural Heritage Plan

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APPENDIX E. FIRE MANAGEMENT STRATEGY

Management Jurisdiction

Fire suppression on the NAP is the responsibility of the DNR's Fire Control Program. DNR's Fire Control Program is responsible for fires on the non-federal, unimproved portions of Grays Harbor Counties where the NAP is located.

Ignition Sources

Potential ignition sources include: cigarettes thrown from vehicles or by site visitors, parked vehicles, fireworks and lightning.

Preferred Suppression Tactics

"Light on the Land" fire techniques should be employed whenever possible, with specific guidelines listed below. Sensitive areas identified on maps should be avoided whenever possible, particularly for use of retardants or heavy equipment. These sensitive areas are primarily located along the shoreline of the river and sloughs. The following are preferred fire suppression tactics:

When safe and reasonable, use natural fuel breaks or control lines outside the NAP boundary for fire suppression.

Water and hand tools should be used to stop the spread of wildfire, except under extreme conditions or if an improved structure is threatened. Crews should use a mist (instead of straight stream) water application where possible.

Helicopter landing areas and fire camps should not be established within the NAP

Under extreme conditions or when an improved structure is threatened, foam or retardants are preferable to bulldozers. It is preferable not to use foam or retardants on the salt marsh because of negative effects to the aquatic community and fertilizing effects to the plant community.

Fire vehicles will be confined to roads and, when applicable, bulldozed fire trails.

Trees and snags will not be felled unless they pose a threat to firefighters.

Location and extent of mop-up, and type of mop up activity will be determined by the Incident Commander in consultation with Natural Areas staff. Mop-up activities should be minimized in the sensitive areas identified on maps and soil disturbance minimized by using water as much as possible.

After fires have been suppressed, site restoration will be supervised by the region Natural Areas Manager in consultation with the west side Natural Areas Ecologist.

Site Representatives

If wildfire involves or threatens the NAP, one of the following DNR personnel shall be contacted and placed as a consultant to the Fire Incident, using the closest available person first:

Natural Areas Manager
Pacific Cascade Region
360-577-2025 work center 360-596-5144

Natural Areas Ecologist
Asset Management and Protection Division
(360) 902-1600

If the incident occurs after normal working hours, contact emergency services #911. Emergency services will contact the DNR Pacific Cascade Region standby staff, who will then contact a Natural Areas representative from the above list at home.

The representative will inform the Incident Commander of:

1. The purpose of the NAP;
2. The management objectives for the primary features of the NAP; and
3. The need to employ "Light on the Land" fire suppression techniques when possible. The Incident Commander should contact the Region representative or the Division before beginning mop-up activities within the NAP.

Post-Fire Rehabilitation

In the event of a wildfire, the Natural Areas Ecologist will determine whether revegetation is required to protect ecological features of the preserve. Natural recolonization by native vegetation is the preferred restoration strategy when damage to vegetation has occurred. Revegetation (planting or reseeding with species native to the site) will only occur if natural recolonization is impeded by factors such as lack of seed source and proliferation of exotic weed species, or if extreme soil erosion presents a threat to natural features or processes (see restoration guidelines in Appendix F). If revegetation is deemed necessary, the Natural Areas Ecologist will develop a plan, and any restoration costs above and beyond erosion control measures typically implemented by Fire Control will be the responsibility of the Natural Areas Program.

APPENDIX F. PLANT SPECIES RESTORATION AND INTRODUCTION/REINTRODUCTION

Restoration activities are carried out to implement site recovery where allowing natural ecological and physical processes to predominate would threaten the continued existence or condition of the primary features that the conservation area was intended to protect.

Any ecological restoration activity should consider the following:

- When possible, use plants and seeds from adjacent sites.
- Plant species selected should mimic natural plant communities, or at least an appropriate seral stage of these communities.
- When purchasing “native” species, attempt to locate material originating from local stock (within approx. 30 miles), from similar climate and topographic conditions. If such stock cannot be located, use material that originated from the same ecoregion and is the same variety as that found on the site.
- Do not use invasive native species that are likely to have a negative impact on adjacent native vegetation.
- Do not use “native species” that are not native to the site.
- Use soils from adjacent sites. When soils are imported, it is critical that they are sterilized to minimize the potential import of exotic weed species.

For larger restoration projects, a detailed restoration plan should be developed identifying the purpose and objectives, methods, and monitoring.

APPENDIX G: PUBLIC PARTICIPATION MEETING NOTES

PUBLIC MEETING NOVEMBER 15, 2007

The group discussed a need to maintain the current and historic access of the Chehalis River Surge Plain. Many participants focused on hunting and fishing access; some for and others against. Several people came to the meeting for the express purpose of voicing their fear that DNR would prohibit hunting and fishing. The surge plain is extremely difficult to access due to its nature. Nevertheless, folks do not want to be told they cannot fish and hunt in the area. Naturally, many people would like the preserve to prohibit hunting, stating that shooting within the surge plain poses a danger to people walking the trails and living in the nearby community. There was a suggestion that only short-range guns be allowed.

Along with the idea of access, we heard that there should be better access points for boaters. This would include more parking and updated boat ramps.

The public would like to see the walking trails extended, perhaps along the old train rails, thus linking the trail to the nearby communities to the east and west.

Stakeholders would like to see the Chehalis River Surge Plain NAP continue its efforts of protecting fish, wildlife and plants in conjunction with removal of noxious weeds and invasive species. They see the value in maintaining and restoring the ecosystem of the area. Pollution and littering problems on Preacher's Slough Road and other areas on the preserve are major concerns. There is a fish barrier on Preacher's Slough Road that can be removed.

The community sees real value in educational opportunities at the preserve. It would be beneficial to increase the educational opportunities, particularly addressing the function of a surge plain. The meeting, held shortly after the flooding to nearby areas, contributed to community awareness that the Chehalis River Surge Plain saved their homes from severe flooding. They discussed the benefit the preserve offers for flood control and in order for the surge plain to work the way it does, the area must remain natural.

The Department of Natural Resources should establish a volunteer group to help them with management tasks. Volunteers can help clean up and remove trash, remove invasive species, and report inappropriate usage among other tasks. The volunteers can include people who regularly use the walking trails, nearby neighbors, hunters, fishers, and bird watchers.

The group addressed their concern of the lack of long term funding. They are worried that DRN won't be able to maintain existing structures and keep up with other maintenance.

Areas of possible conflict exist. Hunting which is historic to the area is a concern to walkers. Land acquisition will prevent new construction in and near the preserve and allow for a more extensive trail system.

STAKEHOLDER MEETING FEBRUARY 20, 2007

Our stakeholder meeting addressed several issues: Preacher's Slough Road, Hunting & Fishing, Trails & Water Access, Education & Public Information, and Safety.

Preacher's Slough Road:

Stakeholders want to see Preacher's Slough Road improved for vehicle access. They would like to replace or repair the culvert for water-flow and fish passage. DNR should remove the blocking fill and put in a grated bridge. A gate would allow for day use only. Several stakeholders want an improved gravel parking lot in the area near the river.

Alternatively, stakeholders suggested replacing the road with a path. This would provide for walk-in access only with parking above, eliminating vehicle access altogether.

DNR should fix the current boat access and provide additional access points.

Volunteers can assist DNR in maintaining the preserve. There needs to be community outreach, or some other way to provide volunteer opportunities. Essentially, stakeholders would like to form a CRSP NAP Support Group.

DNR and Grays Harbor County currently own separate sections of Preacher's Slough Road. Ideally, one of the two will vacate the road allowing the other to take full management responsibilities.

Hunting & Fishing:

A strong percentage of stakeholders want to maintain the historic hunting access, an equally strong percentage want to prohibit hunting. Some compromises discussed were:

- Allow upland hunting
- Create firearms restriction zones
- Restrict hunting near areas of high use
- Encourage self management and education for hunters
- Designate hunting to species hunted with seasonal firearm restrictions (i.e., deer hunting allowed for shorter season)

There is concern about the hunting impact to large animal species, particularly bear.

Derelict gear in and around the preserve should be removed. There is a need for improved parking, and more access points for fishers. Stakeholders want to discourage trampling of natural vegetation. They suggested putting in pathways for fishers. Hunting and fishing groups should volunteer to maintain the areas they use.

Trails & Water Access:

Major requests for access include:

- extend the trails (purchase land where necessary)
- improve canoe and kayak access
- improve parking and create more access points

The stakeholders clearly want more trails. They made specific trail requests, including a small trail along the riverbank from Preacher's Slough parking to the bank fishing areas and riverbank, the replacement of Preacher's Slough Road with a trail, a trailhead and parking at Blue Slough Road, trails connecting lands to the east and west, trails on Katon Road and Central Park Drive, and interpretive trails with signage.

While creating better access the hope is that pedestrians will use trails and stay off vegetation. DNR with the help of volunteers should continue its efforts to remove invasive species.

Education / Public Information:

The educational opportunities at the preserve would be not only for local school environmental education, but also for preserve users. DNR should integrate with Seaport Tall Ships and use that forum to talk to the public about the surge plain.

DNR can develop a CRSP NAP website, which would include information about the preserve, ecological values of the surge plain and its value to fish and wildlife, stewardship possibilities, and conservation efforts. Teachers around the state could incorporate the surge plain into lesson plans using both handouts and information from the website.

Stakeholders came up with an idea for an annual tour or Appreciation Day. The appreciation day would be an event that spotlights volunteer projects, raises public awareness, involves press and offers an ecological tour with bird watching.

Stewardship of the site is essential. Stakeholders want to be involved. They suggested starting a "friends group," or, as stated above, a CRSP NAP Support Group, with focus on conservation values.

Signage within the preserve can be used for many purposes. For instance, a bulletin board could provide a map with information on water trails and access points. The bulletin board could be useful in educating the public about proper use of the site in an effort to promote ethical behavior such as removing trash and gear. Stakeholders suggested that signage be bilingual.

Safety:

Birdie Davenport talked about the major safety issues at the CRSP NAP such as dumping, illicit drug use and manufacture, tidal awareness, and people driving off-road. Stakeholders want more enforcement in the area. They suggested that DNR partner with local law enforcement and WDFW. Local citizens and users

should be encouraged to report for illicit activity. DNR or stewards should gate and close the road at night.

Warn users about hunting activity as well as tides, currents, and winds. There should also be information about large woody debris in the water and muddy beaches at low tide. Post notices on a bulletin board along with a list of emergency contact numbers. A rescue / response action plan should be in place. Improve parking areas with good signage and shoulder turn-offs.

Pet owners need to abide by leash laws.

Stakeholders would like to see the creosote covered pilings and other hazardous materials removed.