

tree was established about 275 years ago and appears typical of the old-growth cohort in the park.

Other natural disturbances in the park include wind and geomorphic disturbance. Windthrow evidence is scattered throughout, indicating a pattern of small-scale wind disturbance that is typical of this region's forests. However, there is also limited, intense, recent blowdown associated with a north-south road corridor in the Classic U. This blowdown is mostly confined to a strip 50-100 feet wide in the mature stands bordering the east side of the clearing, with one spot somewhat wider.

Geomorphic disturbances, such as soil slumping, appear to be predominant on the steep west-facing slope above the water. The slope has a series of small terraces at various elevations and intervening steeper portions. Some of the steep slopes are mostly exposed. Much of the forest probably regenerated on exposed substrates after soil movements.

Portions of the Classic U have been logged in the past. Good-sized stands of young forest located in the northeast and southeast corners are a result of logging 50-75 years ago. Hygrading in a portion of the northwest corner of the Classic U left a small young hemlock stand, removed the largest Douglas fir and redcedar, and encouraged alder regeneration.

There has been sporadic selective logging in a few sections of mature stands in the Classic U, most notably about 10 years ago. Logging roads were constructed and forest cleared in a narrow strip along them in the Classic U, but now 10-15 year old alder densely covers the borders of the roads and makes most of them impassable to vehicles.

Most roads, trails, and developed areas are located west of the major paved road that passes north-south through the park. This includes a large campground, picnic areas, parking lots, and park offices. Two trails lead from the campground down to the water and a loop trail passes through mature Douglas fir forest to the south of the developed area. A loop trail also passes through a portion of the Classic U east of the main road.

The plant communities are present in poor, fair, and good ecological condition. The Douglas fir-western hemlock/swordfern community which covers most of the park is represented primarily by mature post-fire Douglas fir-hemlock forest with a few old-growth residuals. It has been lightly selectively logged in some places, but is still functioning relatively naturally.

The red alder/swordfern community, located on the bluff, consists of young to mature red alder-bigleaf maple forest with scattered conifers. The understory is a diverse assemblage of herbs and shrubs with swordfern and salmonberry generally important; wet spots on terraces are dominated by giant horsetail, Dewey's sedge, or skunk cabbage. Human disturbance is limited to trails and some trampling.

The western redcedar-western hemlock/skunk cabbage community, located in small wet spots east of the main road, is mature and dominated by a mixture of redcedar, hemlock, bigleaf maple, alder, and Sitka spruce. Portions of it have been hygraded, but others appear undisturbed by humans.

The Sitka spruce-western hemlock/deerfern community is a small natural-origin mature stand of Sitka spruce with some western redcedar. Western hemlock reproduction is abundant and deerfern dominates the understory. This community has not been described from the region.

A red alder/slough sedge wetland is located south of the park office adjacent to the highway. The alder appears to be quite young, but there is no obvious sign of logging.

LANDSCAPE SETTING

The natural forest within the park is internally fragmented by the paved road through the park and the old logging roads in the Classic U. The surrounding landscape is a mixture of low-density rural residential and managed young forest. Most of the immediate boundary of the park is young Douglas fir and alder forest. A very few houses border the park to the south. The southern portion of the east edge is bounded by a relatively recent clear-cut (within last 10 years). The natural forest is bordered to the west primarily by Admiralty Inlet. The overall quality of the landscape is adequate to support the natural forest as a significant fragment.

RATIONALE FOR NATURAL FOREST AREA BOUNDARIES

Most of the area qualifies as natural forest because of its mature forest cover that has been little disturbed by logging. The recommended Natural Forest Area includes all of the mature and natural-origin forest outside of existing developments, and a small stand of young hemlock that is located amidst mature forest. The proposed South Whidbey Natural Forest Area will include two Natural Heritage Plan plant community element occurrences.

The protected area is bounded by park boundaries, existing development, and in the northeast and southeast corners, young logged stands (Map 2).

MANAGEMENT RECOMMENDATIONS

General

1. Implement trail and hazard management within Natural Forest Areas such that natural forest processes are maintained near trails and visitors do not need to leave trails to view natural structures and processes. Buffer zones are unnecessary around trails and unpaved service or fire roads within Natural Forest Areas.
 - a. Limit hazard tree felling along trails within Natural Forest Areas to high risk trees only. This may include very unstable snags or trees immediately adjacent to trails that are likely to fall if bumped. Snags or trees that are not seriously leaning or unstable should be left standing for their habitat value.
 - b. Maintain trails and service roads within Natural Forest Areas with minimum impact to ecosystem structure and function. In most cases, only the section of a log lying on the trail itself should be cut out and moved a short distance into the adjacent forest. Logs that fall on trails should generally not be removed from the forest because they are a critical component of ecosystem function. Only in the case of excessive blowdown, would the many sections that lay on the trail need to be removed from the forest.
2. Post signs where trails enter Natural Forest Areas. These signs should include a list of approved and prohibited uses, as well as some explanation of the ecological values of the site. We encourage the use of interpretive signs within Natural Forest Areas, which may draw from the information in these reports.
3. Use barriers to prevent use of trails by horses, bicycles and motorcycles in areas that are sensitive to their impacts. Generally, this would include all trails that provide access to grasslands, "balds", and wetlands. Barriers may include gates, trenches, or large rocks that are appropriately located and designed. Recreational use, including mountain bikes and equestrians, is not permitted in Natural Forest Areas (WAC 352-16-020).
4. Investigate the introduction of prescribed fire as a natural process management tool to maintain particular plant communities. The application of prescribed fire will depend upon specific park objectives and the results of research investigations. More research is needed on the role and effects of fire in Puget Trough plant communities.

Specific

We recommend future development be confined to the southeast corner of the Classic U. The northeast corner appears to be unsuitable for development because of wet soils and steep slopes. Keeping the northeast corner in undeveloped forest would also protect most of the watershed that feeds the forested wetland in the Classic U (the western redcedar-western hemlock/skunkcabbage community).

There are a number of possible scenarios for access to potential future development in the southeast corner of the park. We prefer alternatives that would close all old roads through the recommended Natural Forest Area, thereby maintaining maximum future forest integrity. One such alternative would be to construct a new road along the southern park boundary to reach the parcel. Another would be to convert the old road to the southeast corner to a trail and have a walk-in campground.

We recommend restoring the old roads and associated disturbance within the Natural Forest Area to a more natural forest environment. A passive management strategy to meet this objective would involve letting the alders continue to grow and blocking access to the roads. A more active strategy would involve restoration of soils on the road surface, removal of the alder, and planting Douglas fir and hemlock. The active strategy, if properly planned and implemented, would return the disturbed areas to a more natural condition more quickly than the passive alternative.

SURVEY EFFORT

The entire park, including the Classic U, was surveyed during one day.

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The boundary and management recommendations are those of the Washington Natural Heritage Program. Official boundary designations and management activities require approval by the State Parks & Recreation Commission.

APPENDIX A. Partial list of vascular plant species of South Whidbey State Park.

Trees

bigleaf maple	<i>Acer macrophyllum</i>
Douglas fir	<i>Pseudotsuga menziesii</i>
grand fir	<i>Abies grandis</i>
Pacific madrone	<i>Arbutus menziesii</i>
Pacific yew	<i>Taxus brevifolia</i>
red alder	<i>Alnus rubra</i>
Scouler's willow	<i>Salix scouleriana</i>
Sitka spruce	<i>Picea sitchensis</i>
western hemlock	<i>Tsuga heterophylla</i>
western redcedar	<i>Thuja plicata</i>

Shrubs and Vines

baldhip rose	<i>Rosa gymnocarpa</i>
blackcap	<i>Rubus leucodermis</i>
coast black gooseberry	<i>Ribes divaricatum</i>
coast red elderberry	<i>Sambucus racemosa</i> var. <i>arborescens</i>
English holly	<i>Ilex aquifolium*</i>
evergreen huckleberry	<i>Vaccinium ovatum</i>
hairy honeysuckle	<i>Lonicera hispidula</i>
low Oregongrape	<i>Berberis nervosa</i>
oceanspray	<i>Holodiscus discolor</i>
red huckleberry	<i>Vaccinium parvifolium</i>
salal	<i>Gaultheria shallon</i>
salmonberry	<i>Rubus spectabilis</i>
swamp gooseberry	<i>Ribes lacustre</i>
trailing blackberry	<i>Rubus ursinus</i>

Forbs and Ferns

American speedwell	<i>Veronica americana</i>
bracken	<i>Pteridium aquilinum</i>
clasping-leaved twisted-stalk	<i>Streptopus amplexifolius</i>
Cooley's hedge-nettle	<i>Stachys cooleyae</i>
coralroot	<i>Corallorhiza</i> sp.
deer-fern	<i>Blechnum spicant</i>
enchanter's nightshade	<i>Circaea alpina</i>
false lily-of-the-valley	<i>Maianthemum dilatatum</i>
fireweed	<i>Epilobium angustifolium</i>
fragrant bedstraw	<i>Galium triflorum</i>
giant horsetail	<i>Equisetum telmateia</i>
lady-fern	<i>Athyrium filix-femina</i>
Siberian montia	<i>Montia siberica</i>
skunk cabbage	<i>Lysichitum americanum</i>
spreading wood-fern	<i>Dryopteris expansa</i>
stinging nettle	<i>Urtica dioica</i>
sword-fern	<i>Polystichum munitum</i>

three-leaved foamflower
 twinflower
 water-parsley
 western starflower

Tiarella trifoliata
 var. trifoliata
 Linnea borealis
 Oenanthe sarmentosa
 Trientalis latifolia

Graminoids

bearded fescue
 blue wildrye
 Columbia brome
 common velvetgrass
 Dewey's sedge
 field woodrush
 slough sedge
 small-flowered woodrush
 western fescue

Festuca subulata
 Elymus glaucus
 Bromus vulgaris
 Holcus lanatus*
 Carex deweyana
 Luzula campestris
 Carex obnupta
 Luzula parviflora
 Festuca occidentalis

* = exotic species that has become established in forests,
 grasslands or wetlands, i.e. has spread beyond trails, road
 edges or developed areas.

SOURCE: Field inventory by C. Chappell, 9 July 1992.

APPENDIX B. Partial list of wildlife species of South Whidbey State Park, visited 9 July 1992.

C = common at time of visit; B = probable or confirmed breeder.

Birds

osprey	B (active nest, Classic U)
bald eagle	
band-tailed pigeon	B
downy woodpecker	B
hairy woodpecker	B
pileated woodpecker	B
Pacific-slope flycatcher	CB
violet-green swallow	
barn swallow	
Steller's jay	B
American crow	B
chestnut-backed chickadee	CB
red-breasted nuthatch	CB
brown creeper	B
Bewick's wren	B
winter wren	CB
golden-crowned kinglet	CB
Swainson's thrush	CB
American robin	CB
Hutton's vireo	B
orange-crowned warbler	B
black-throated gray warbler	B
Townsend's warbler	B
Wilson's warbler	CB
western tanager	CB
black-headed grosbeak	
rufous-sided towhee	B
song sparrow	CB
dark-eyed junco	CB
brown-headed cowbird	B
purple finch	
red crossbill	
pine siskin	B
evening grosbeak	

Other Vertebrates

red-legged frog
 black-tailed deer
 Douglas squirrel
 Townsend's chipmunk

SOURCE: Field inventory by C. Chappell, 9 July 1992.