

II-B. LAND USE PLAN

All places lie at a unique intersection of geography and history. In some places, that intersection has led to events that are momentous and representative of major societal changes. The Nisqually-Mashel State Park Site is one such place.

It combines earth form, water flow, biological diversity, visual prospect, intimacy, and a profound accumulation of the life and events of many people. The site is in the middle reaches of the Nisqually River watershed – half way between the Nisqually River delta on the Puget Sound (*Whulge*) and Mount Rainier (*Tacobet*). Here, three waterways come together: Ohop Creek, the Mashel River and the Nisqually River. These waterways, formed on the mountain, gather power in its foothills and continue to carve through the glacial moraine materials that form the geologic base of the park. It's a geographic and biological transition point between forested cascade foothills and the southern Puget Sound prairies.



Figure B-1: Site Photos

Although the plateaus and hilltop forests of the park have been successively logged and replanted for many years, much of the mature fir, hemlock, cedar, cottonwood, alder and maple forests growing on the steeply banked valley edges and floodplains remain. Thus the park represents a very diverse Pacific Northwest eco-region – shaped by earthquakes, volcanic eruptions, floods, storms, fire and humankind.

Culturally, the park is also home to a rich convergence of people, traditions, events and values. For millennia, the ancestors of the Nisqually Tribe have found shelter and sustenance in the Nisqually River watershed. Beginning in the mid-1800's new non-Native American settlers began arriving.

Partnerships between the tribal groups, state and local governments and community groups will be important to the development of the park site. The site offers unique potential for conveying powerful stories of conflict, reconciliation and renewal.

Classification and Management Plan (CAMP)

The Long-Term Park Boundary for the Nisqually-Mashel State Park Site was determined by identifying those lands that have the highest potential to:

- Establish a sustainable environmental framework
- Provide for short-term (using existing roads) and long term access (when proposed circulation system is complete), for all transportation forms
- Provide scenic visual framework
- Identify land for recreational and educational use and interpretation

The Long-Term Park Boundary is established on the east by the State Route 7 (SR-7) highway right of way (including land currently controlled by the University of Washington's Center for Sustainable Forestry at Pack Forest and a small area owned by Tacoma Power). On the south, the Long-Term Park Boundary is defined by a line running roughly east-west from the southwest corner of the southernmost State Park property line (with a 600 foot adjustment southward to encompass an upland terrace/bluff and forest road). On the west it extends to the westernmost margins of the Ohop Creek Valley –from the Ohop Creek / Nisqually River confluence to the SR-7 highway corridor. The north boundary is located 300 feet north of the SR-7 highway right of way – extending to Pack Forest land at the SR-7-Mashel River Bridge. The goal at the north boundary is to create a parkway feel along the highway corridor. The current (2009) State Park property ownership area encompasses 1,230 acres. The total Long-Term Park Boundary area would include approximately 3,434 acres.

The CAMP includes a land classification map, Long-Term Park Boundary and a park management plan. It was generated by State Parks concurrent with the evolution of the master plan concept and stakeholder feedback. The CAMP is included in the Appendix to this document.

Master Plan Land Use Description

The park is composed of four broad geographic areas. Each area is described below in text, table and shown on the accompanying diagrams. Linking these zones is a circulation network, including roads, trails, bridges and overlooks. The site areas, described in detail below, are:

- The Central Plateau
- The East Mashel Plateau
- South Bank of the Nisqually
- River and Creek Valleys

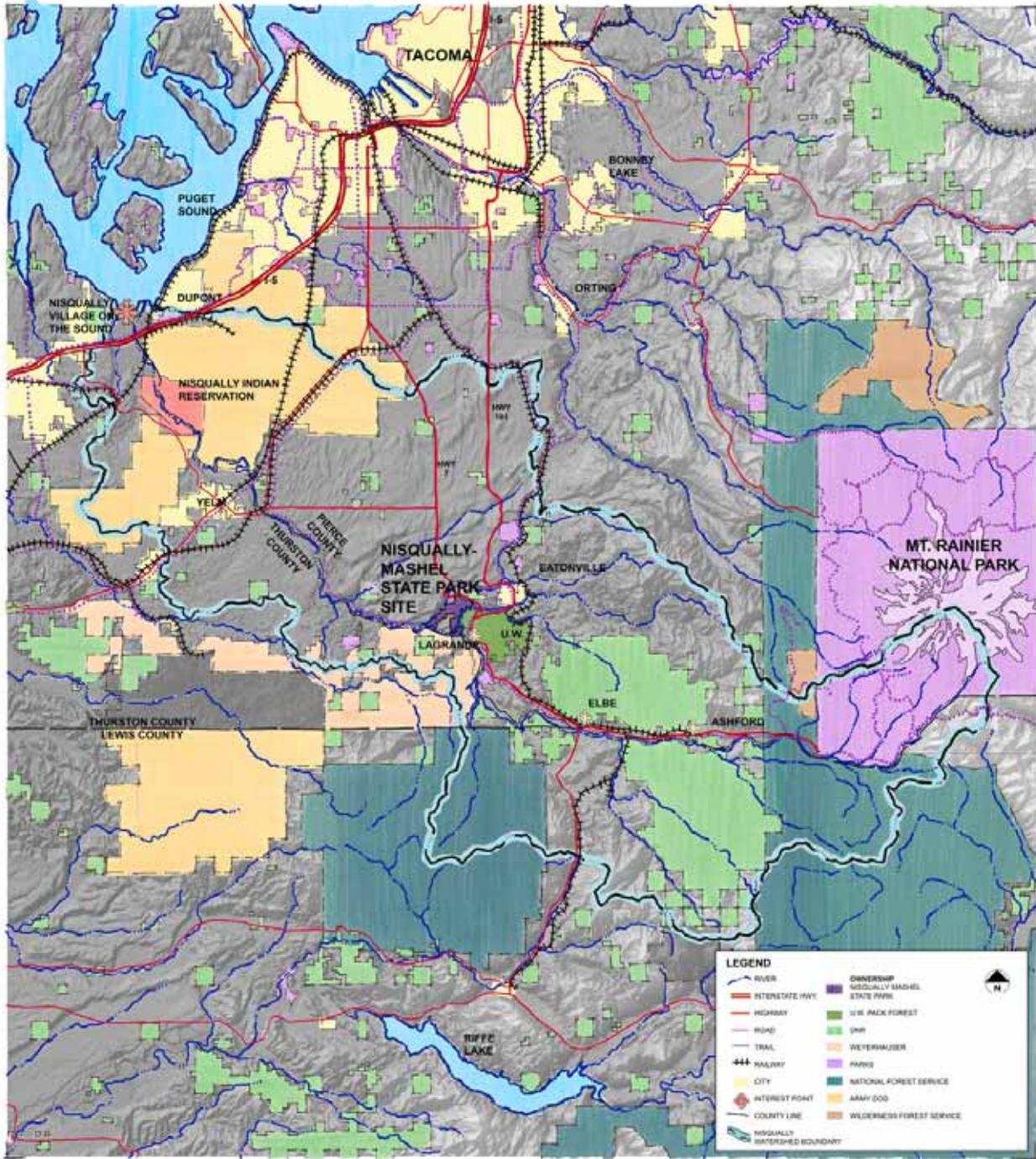


Figure B-2 Regional Area Map

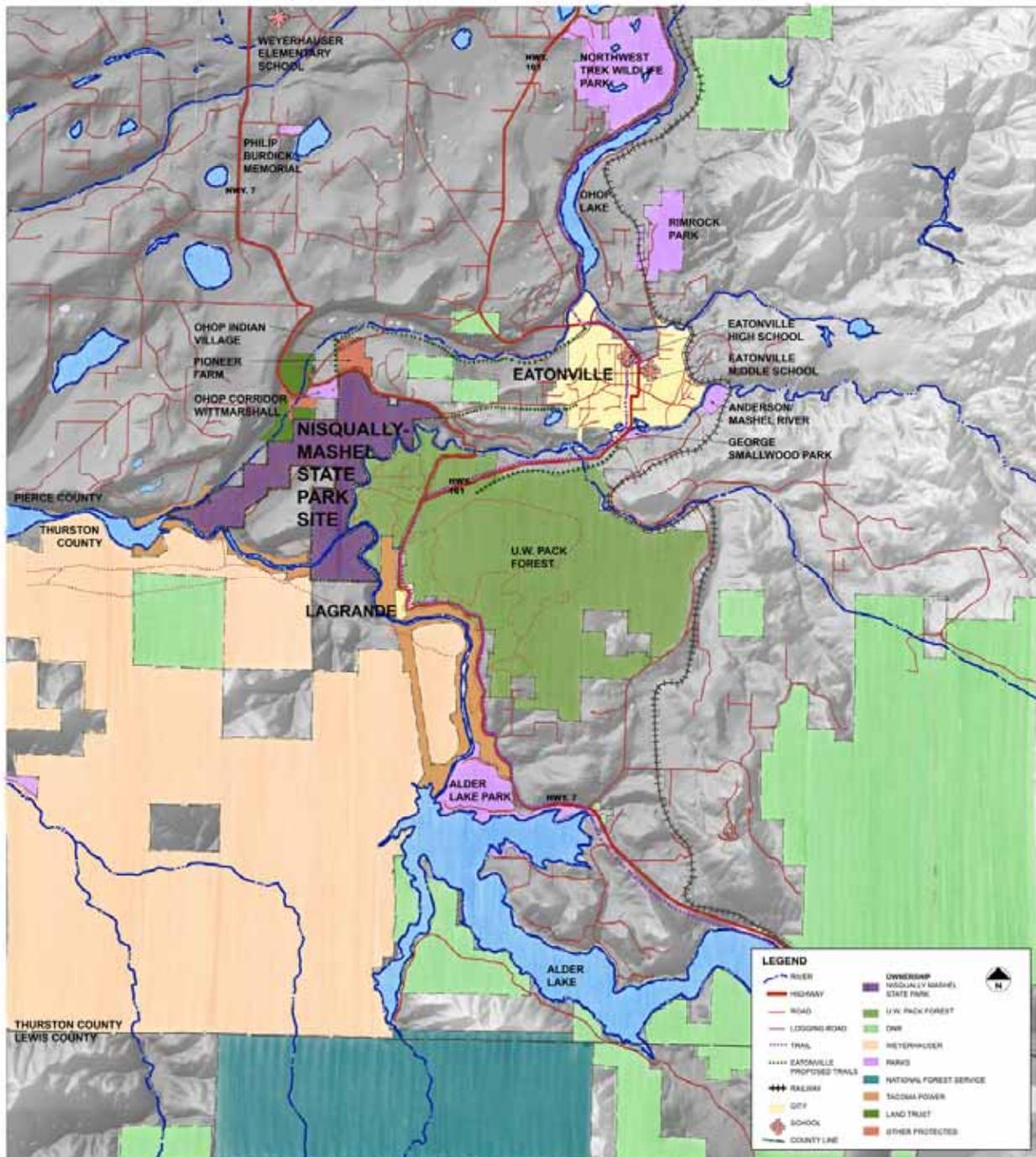


Figure B-3: Local Area Map

The master plan proposes centers of activity contained within the two plateau areas, as well as gathering nodes and trails at selected locations within the valleys.

The physical development of the park is clustered in two primary nodes – the Village Center and the People’s Center – both on the Central Plateau. Secondary and tertiary nodes include the Ohop Equestrian Center above Ohop Creek; camping, biking and backcountry horse facilities on the East Mashel Plateau; river access points; and high bridges serving as both river crossings and as destinations in themselves. The Village Center and People’s Center are linked by a paved multi-use loop trail that serves both pedestrians and bicyclists. A network of spurs and secondary loops, including some dedicated equestrian and bicycle trails, provides access to other destinations and allows for trips of varying length and experience.

The Central Plateau

The central area of the park is located on the plateau bounded on the east by the Mashel River, on the south by the Nisqually River and by Ohop Creek to the west. This portion of the park is the primary land use and development area. All major development on the plateau, with the exception of the People’s Center, is located northward close to SR 7, away from the park’s critical areas and forest resources. The Central Plateau contains the park’s Village Center, People’s Center and Ohop Equestrian Center.

Park Entry and Welcome Center

Located astride the park entry road, the State Parks Welcome Center provides for visitor information, orientation and potentially fee collection with drive thru lanes. Park gates allow for periodic closure and access control. The modest building provides space for service windows, office, restrooms and storage. A small staff parking area and outside rest area and table is provided.

Village Center

Several buildings are clustered around the park commons – the core of the Village Center. This key park area sets the stage for all park activities and programs. It also serves as the orientation point for the park’s interpretive programs and facilities. Cabin Rental and Tent and RV camping areas are adjacent to the dramatic Mashel River bluff.

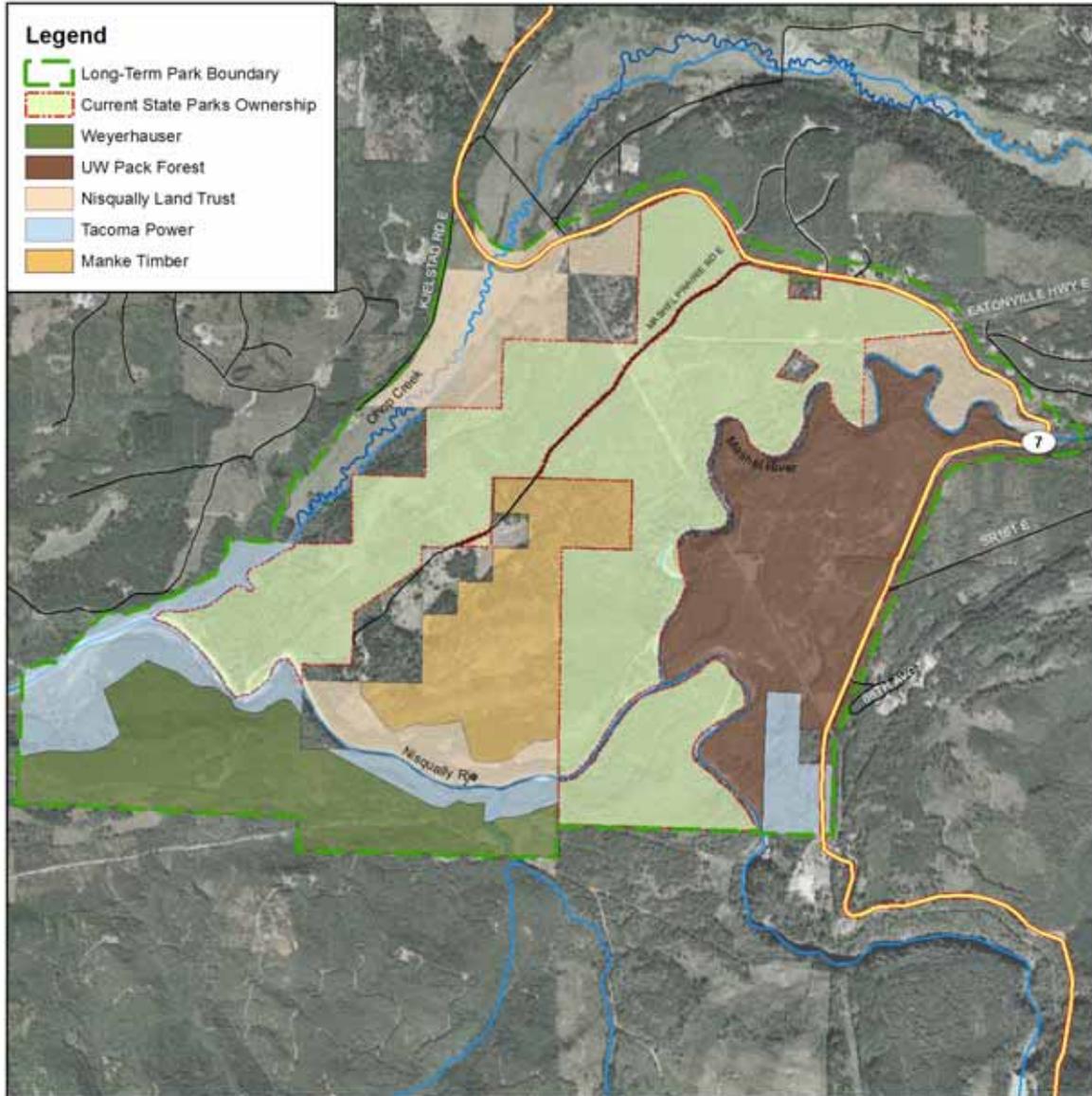


Figure B-4
Major Property Owners within the Long-Term Boundary

0 1,000 2,000 4,000 6,000 Feet





Figure B-5: Village Center Commons

Paved multi-use trails provide easy and accessible movement throughout the Village and to the Ohop Equestrian Center. Maintenance and utility facilities are also located in strategic proximity to the Village Center.

The landscape of the village center – and throughout the rest of the park – will use native plantings and demonstrate Low Impact Development practices in treating storm water runoff. At build out the Village Center will include:

- Headquarters Building
- Camp Store
- Laundry
- Overnight Residence for permanent or seasonal employees – potentially located as a second floor above the headquarters building
- The Great Meadow, a multi-acre opening of the existing forest - developed to the north and to the east of the Village Center. The Great Meadow provides areas for events and program activities, stormwater fishing pond, meadow habitat, views to the mountain and a setting for Village Center facilities.
- Forest thinning and clearing will provide light, views, grass activity areas, and access to the great meadow.
- Fishing Pond fed from storm water runoff of impervious surfaces. This large storm water and fishing pond is sited west of the Village Commons complex and near day use, event area parking and maintenance areas. The pond may require seasonal additions of water to support fishing use.

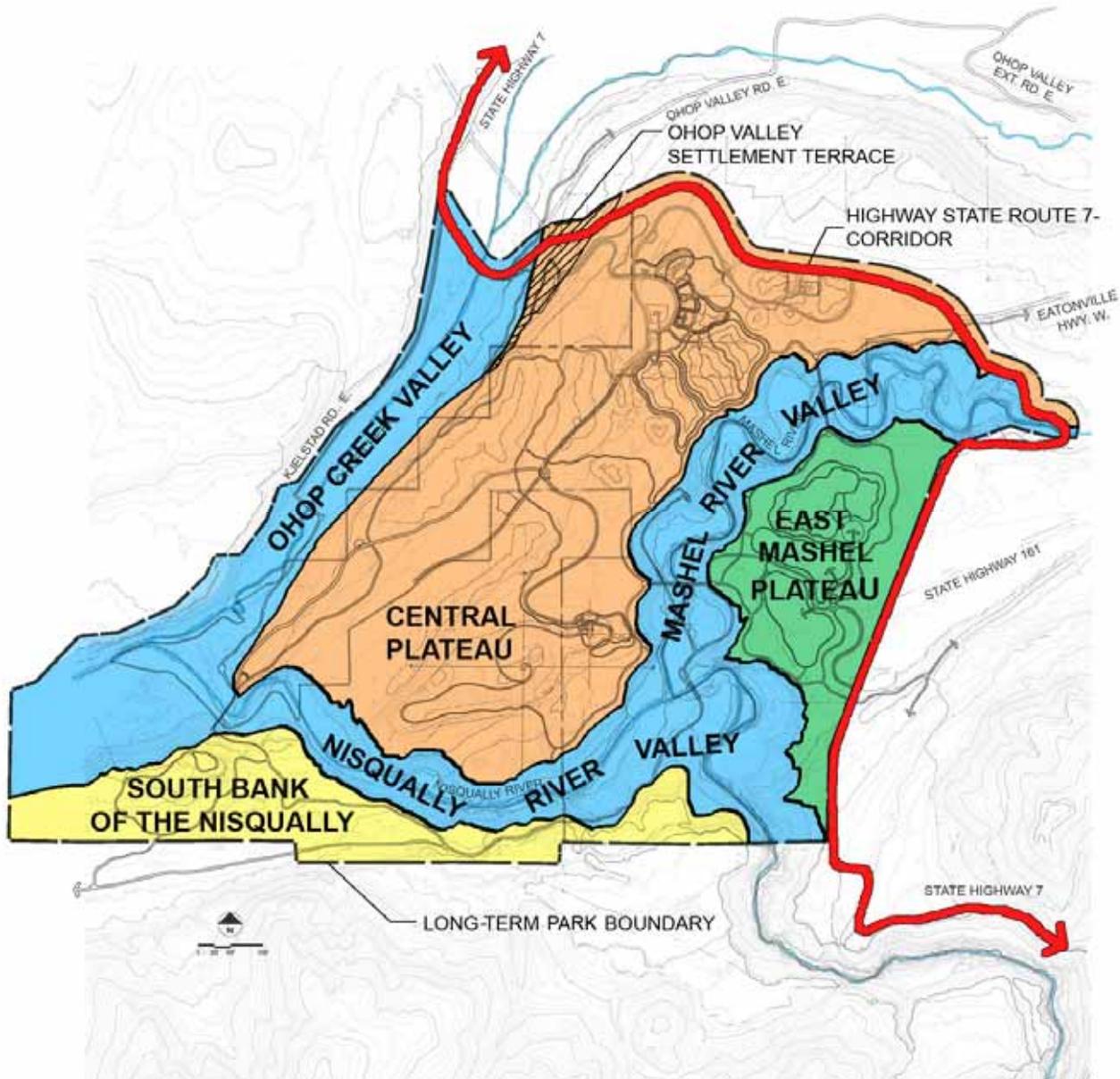


Figure B-6: Development Areas

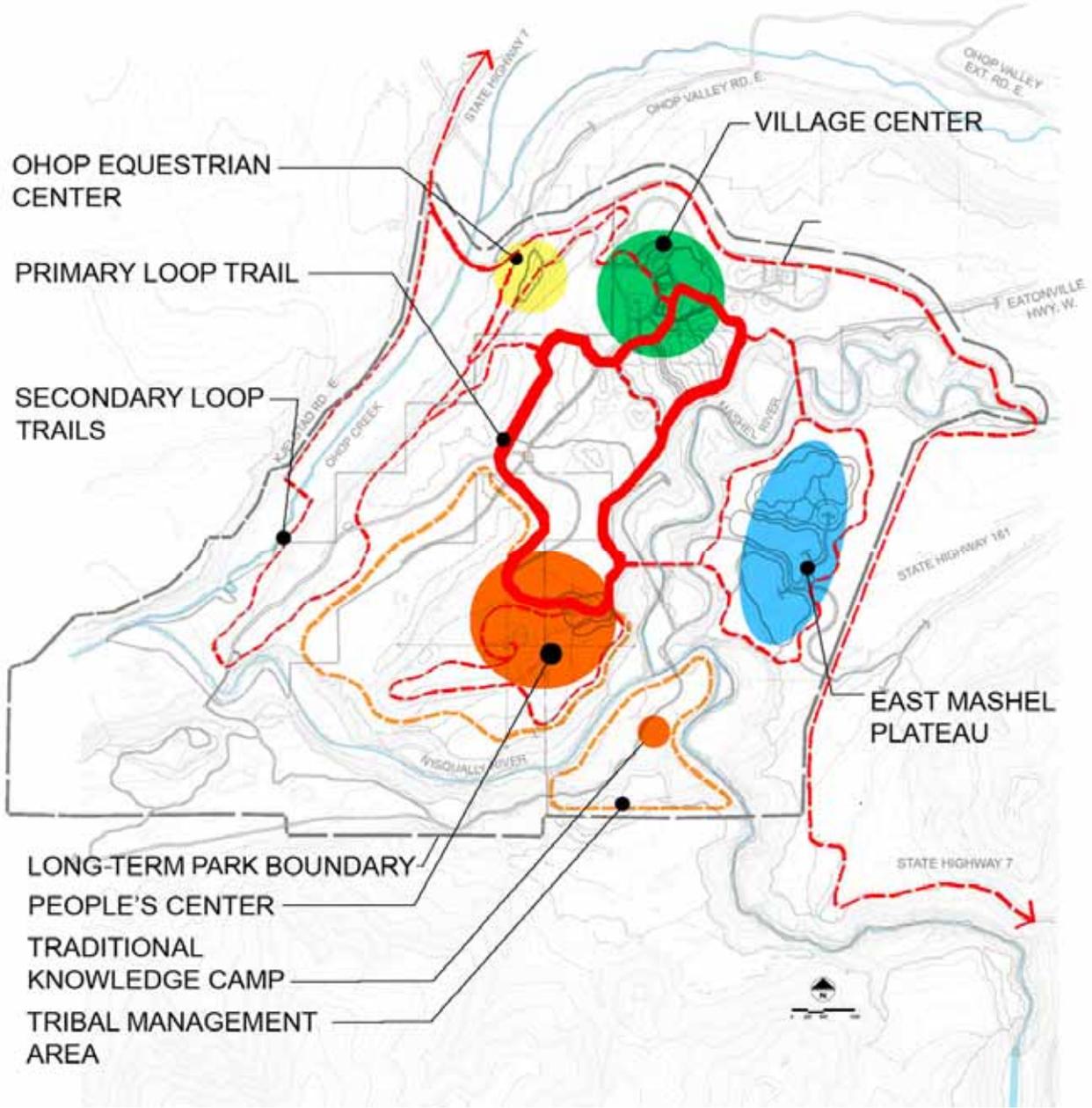


Figure B-7: Conceptual Organization

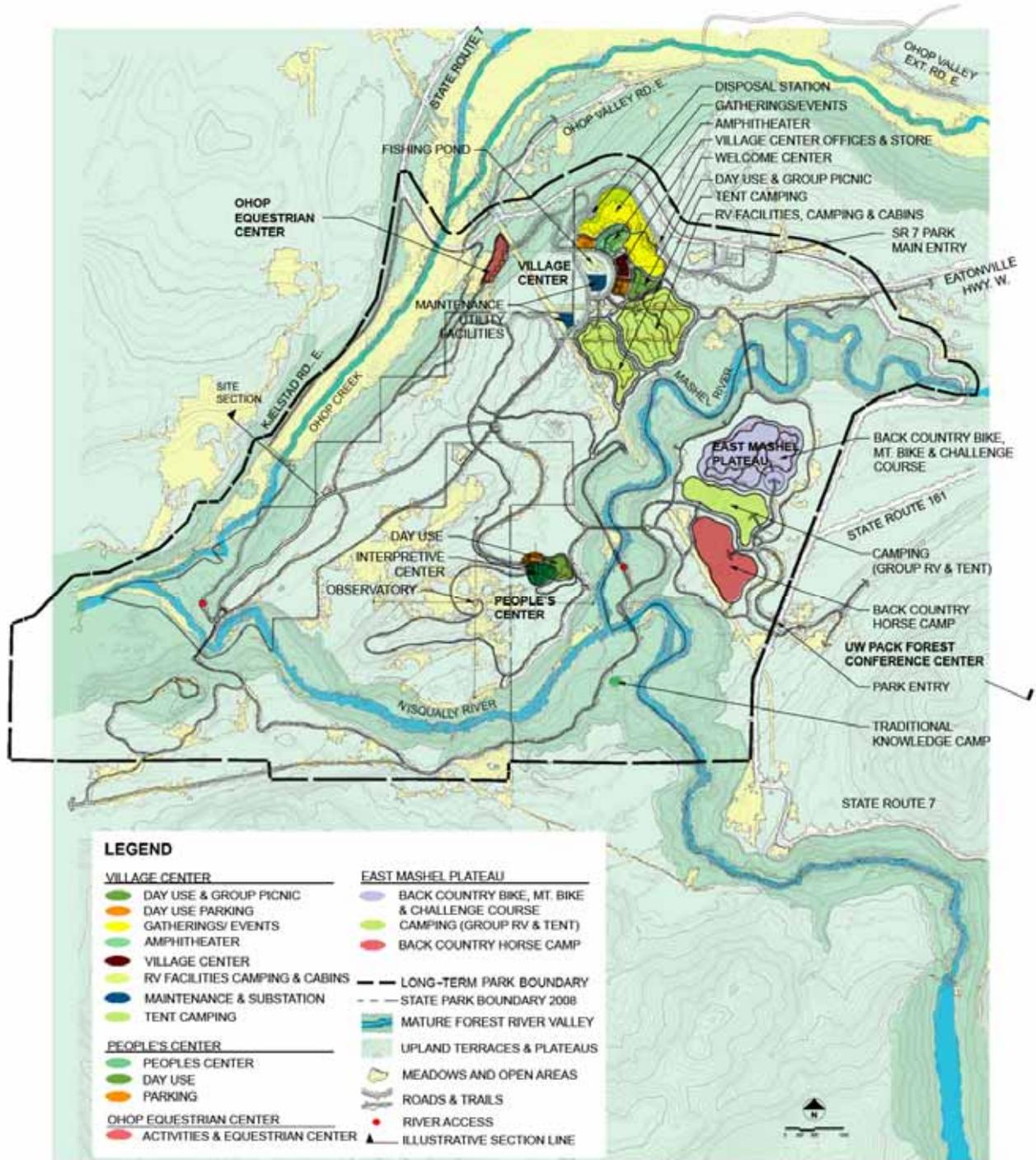


Figure B-8: Illustrative Master Plan

- Gathering and Event area, comprised of a terraced earth and grass amphitheatre; a covered stage with equipment and storage facilities; restroom and concession facility; and a 200-vehicle event parking meadow.

Day Use and Group Picnic Area

Adjacent to the Village Center is the day use and group picnic area. An information and interpretive kiosk will orient visitors to the offerings of the park. Picnic shelters and uncovered picnic tables, both for small and large groups are provided. A woodland themed play structure allows the younger visitor to exercise and release energy accumulated during the drive to the park. All facilities will include power, water, and accessible trail access.

Camping Areas

Three adjacent and separate camping areas are sited south of the Village Center. They include camp loops for recreational vehicle camping, vehicle and tent camping, and cabins. As the “living” area of the park, camping areas provide a range of flexible and comfortable camping experiences for both first timer and experienced campers; those



Figure B-9: Campground Sketch

with recreational vehicles and those with tents; campers who desire a cabin experience; and backcountry horse campers. Camping types are segregated into clustered cabins, RV areas (both individual and group) and vehicle/tent camping. A camp site density of from three to five sites per acre (3 to 5/acre) will guide camping area site design and layout. No remote area camping is currently envisioned for the park.

In support of the camping loops, the park will provide a range of the following amenities:

- Host Camp Site
- Kiosks
- Recycling/Refuse Center
- Restrooms and Water Sources
- Play Areas
- Picnic Shelters (at group camps)
- Camp Area clearings/meadows for habitat diversification, play, picnicking and views
- Camp Sites for RVs and tents with varying levels of service:
 - Full Hookup services (power, water, WIFI, sewer) at RV loops
 - Basic services (water and power) at tent loops
 - No services at tent loops

Maintenance and Infrastructure Facilities

The central maintenance and shop complex is adjacent to the village center, located within the area bounded by the village loop road. This area, and the adjacent substation at the intersection of the Bonneville Power Administration and Tacoma Power rights of way, provide for Ohop Mutual Light Company, water well(s), tank storage and distribution, wastewater treatment facilities as well as vehicle and equipment storage.

Facilities are set back from park roadways, the Village Center and camping areas – allowing for retention and enhancement of screen from existing forest vegetation. This complex will include:

- Central Maintenance and Shop Offices and Bays
- Equipment Storage
- Loading Dock
- Wood and Materials Storage
- Vehicle Parking
- Security Fencing

Ohop Equestrian Center

Located on a terrace above Ohop Creek, the Ohop Equestrian Center utilizes the historic Milk Barn as its base of operations, capitalizing on the natural connection between the Ohop Creek valley's settlement history and the new equestrian uses. This zone of the park provides opportunities to experience and interpret the agricultural and ecological development within the creek's floodplain. The Center is the starting point for trail rides along the park's equestrian trails and may also host related activities like hay rides or barn dances.



Figure B-10: Milk Barn

Rehabilitation and adaptive reuse of the existing barn provides for the concessionaire's stabling and corral needs. The area will also include a sustainable manure waste handling center. A small visitor parking area is provided at the end of the spur road leading from the village center.

People's Center

The People's Center is the focus of cultural interpretation at the Nisqually-Mashel State Park Site. The access road rises up the site's central ridge to a false summit where the interpretive facility is located. An arrival plaza, drop-off, turnaround and parking for 200 cars are provided. The interpretive center includes exhibits, tribal program space and equipment/materials storage. Outside spaces include a gathering area and trailhead that leads to the high bridge, the Observatory and a reconstructed Leschi's village.

This facility, proposed for development in partnership with the Nisqually Tribe, is the primary destination within the park and will provide significant opportunities to convey the park's unique character and interpretive message. The larger Nisqually Tribal Management Area may eventually encompass managed forest, restored Mashel Prairie,

and rehabilitation, protection, interpretation of the Shaker Church, Indian Henry Cemetery, Leschi's Village and Medicine Springs.



Figure B-11: Observatory

The Observatory is located on the high point of the site, at a previously logged meadow. The circular observatory plaza and surrounding seat wall is oriented to the four cardinal directions and distant landmarks: Mt. Rainier (*Tacobet*), the Olympic Mountains and the Puget Sound (*Whulge*). Portions of the current cleared area will be maintained to limit tree and high shrub development in order preserve the key view orientations. Interpretive materials and panels will enhance visitor knowledge of the terrain and historical sites within the park. The Observatory will also provide a place for ceremonial and educational programs.

Leschi's Village is conceived as a re-creation of the Nisqually Chief Leschi's tribal village. At this time little is determined as to the scope, functions and character of Leschi's Village. It is presumed that the village will be a sacred place and provide opportunity for visitors to see the style and character of pre-Columbian and post-Columbian Native American villages and the lifestyle they represent.

Other planned facilities, include:

- Equipment/materials storage building
- Day use areas
- Potential for water well and associated equipment building and security facilities

East Mashel Plateau

The East Mashel Plateau area supports three primary land use areas: Backcountry Horse camp, Group RV/Tent camp and Backcountry and Challenge Course Bike area. These areas are accessed from an entry off of SR 7 (across from the University of Washington's Center for Sustainable Forestry at Pack Forest) and managed through a Welcome Center and vehicle control points. Trails and access roadways connect eastside park users to the Mashel River bluff, bridges and confluence areas. The eastside park area provides immediate access to nearby Pack Forest conference facilities, forest and regional trails.

Park Entry and Welcome Center

The park's second Welcome Center will provide visitor information, orientation and potential fee collection at drive thru lanes. Park gates allow for periodic closure and access control. The modest building provides space for service windows, office space, restrooms and storage. A small staff parking area and outside rest area and table is provided.

Camping Areas

Two camping areas are provided on the East Mashel Plateau, a Backcountry Horse Camp and a Group RV and Tent Camp. The horse camp and associated truck and trailer parking is provided for 50 to 100 sites within a 40 acre area. The area has easy access to the SR 7 undercrossing and Pack Forest trail system. The Group RV and Tent Camp area provides park expansion areas tailored to this segment of the camping market.

Backcountry and Challenge Bike Course

To meet the growing demand for recreational mountain bike use, the master plan provides a 60 acre bike-focused area on the northern portion of the East Mashel Plateau. This self-contained area avoids potential incompatibilities with pedestrian or equestrian users.

South Bank of the Nisqually

The area on the south side of the Nisqually provides for a Tribal managed Traditional Knowledge Camp, and trail access to a proposed future Thurston County regional trail. The camp is located on a terrace above the 100-year floodplain and provides space for tribal elders to pass on knowledge to younger tribal members related to traditional use of the land for shelter and sustenance. The South Bank of the Nisqually is accessed by two bridges, one high bridge above the Ohop/Nisqually confluence and one low bridge over the Nisqually near the Mashel confluence.

River and Creek Valleys

The majority of the Mashel and Nisqually rivers and Ohop Creek valleys and their side slopes are protected and managed to provide for the health of habitat, wildlife, critical slopes, river hydrology, and scenic values. Trails and five low bridges (including the existing Mashel River Bridge) are planned along with controlled access to the two confluence areas – each with interpretive viewing platforms, seasonal river access and limited vehicle loading and parking.

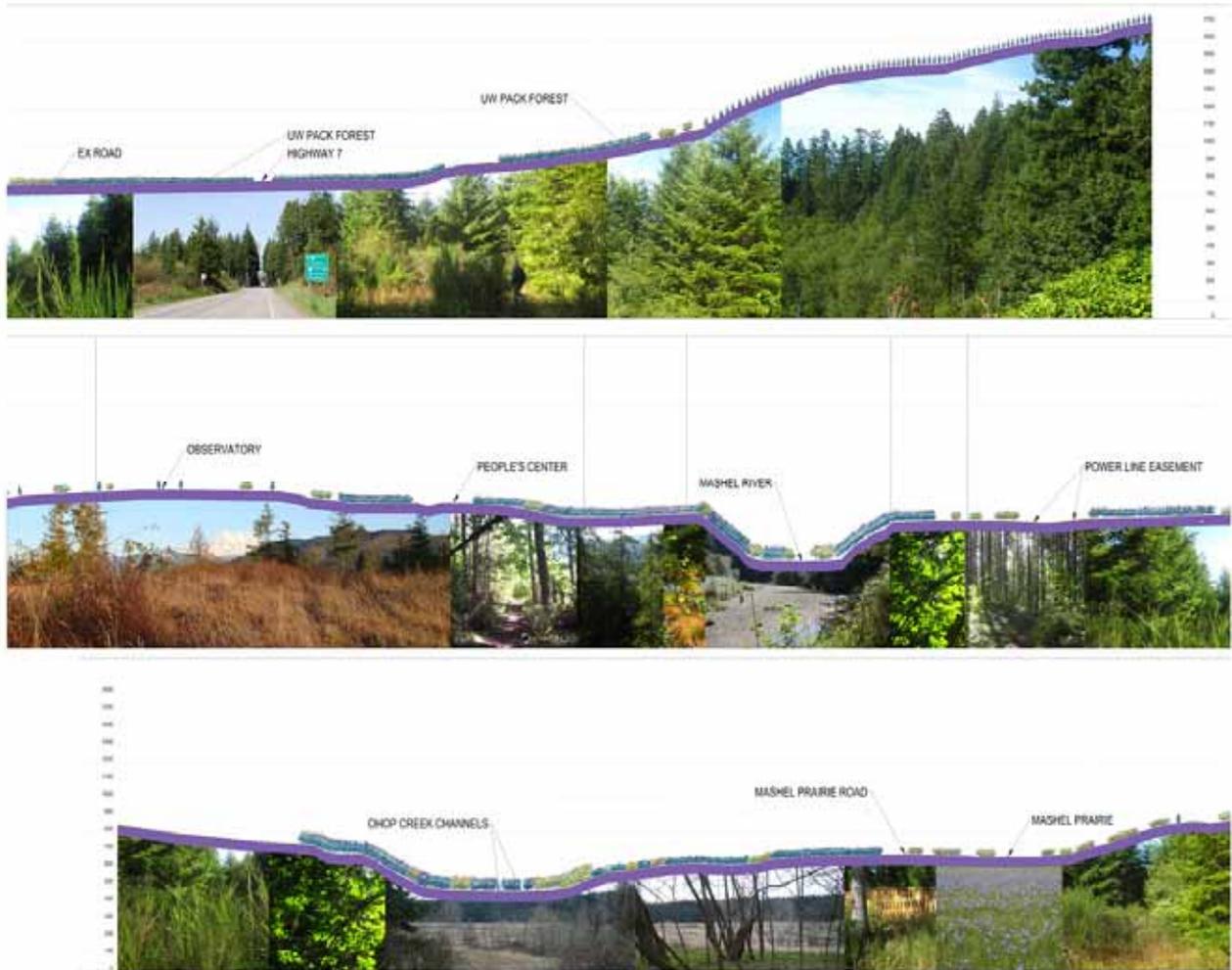


Figure B-12: East – West Section

Development and Land Use Issues

The master plan addresses 10 primary development and land use issues:

1. Land Acquisition

Additional land acquisition, and access and use agreements are necessary for both short and long term park development, these include:

Short-Term Agreements

- The section of land in middle/east edge of park (Manke Timber Company)
- The in-holding alongside SR 7 on the north boundary of the park (Weyerhaeuser Timber Co. and an adjacent residential parcel)
- The in-holding along the edge of Mashel River bluff in northeast part of park (Former landfill)
- The Mashel/Nisqually River confluence (UW Center for Sustainable Forestry at Pack Forest)
- Access agreements for use of the East Mashel Plateau and to connect to the Pack Forest Conference Center and trail system (UW Center for Sustainable Forestry at Pack Forest)
- Water right, or well by purchasing existing in-holding
- Historic Milk Barn parcel (Nisqually Land Trust)

Long-Term Agreements

- Access agreements or purchase for park development of the East Mashel Plateau (UW Center for Sustainable Forestry at Pack Forest)
- Purchase of residential properties along Mashel Prairie Road.

2. Vehicle Access/Entry

Replacing the existing SR 7 / Mashel Prairie Road intersection with a safe vehicle access point for park visitors is necessary. The current intersection with SR 7 has turning movement and sight distance limitations.

3. Access to In-holdings

The park must maintain access to in-holdings and homes along Mashel Prairie Road.

4. Wetland Identification

A number of wetlands and their associated buffers were identified throughout the park site and immediate area. More detailed delineation efforts will likely identify additional unmapped wetlands in other areas of the park, which subsequent design implementation projects must address.

5. Water Source

None of the park's land parcels have an associated water right. The park lies outside of the Town of Eatonville's Urban Growth Boundary and is not within its water district. It is unlikely the park can receive water from an approved off-site source. The State should initiate application for a water right and begin process to drill a well.

6. Trail Access at the Mashel River

The lost connection, due to a landslide adjacent to a bend in the Mashel River channel, between the park's Central and East Mashel Plateaus remains an important circulation route. The master plan proposes a bridge to span the landslide, to minimize impacts to the riparian area and allow continued migration of the river channel. When improvements are designed and constructed, these potential impacts will be evaluated and reviewed with the Nisqually Tribe. Steps will be taken to potentially mitigate sediment flow into the river the river and mitigate potential obstructions to river migration to the extent possible.

7. Nisqually River Bridge

A bridge over the Nisqually River, to replace the one washed out in an earlier flood, is needed upstream of the confluence with the Mashel River. It will provide access to park lands on the south side of the Nisqually River.

8. Long Term Trail Connections

The best opportunity for trail connectivity comes from the north and northeast along multi-use trails proposed by the Town of Eatonville, Pierce and Thurston counties and the National Park Service. Both counties show future trail connections to the State Park Site, one on each side of the Nisqually River. Either involves over 20 miles of trail, through many private holdings. Park planning must consider these future southern and southwestern connections – but realize that implementation is likely very long term.

9. River Access

Nisqually River access for rafters, kayakers and boaters is proposed at the river's confluences with Ohop Creek and the Mashel River. State Parks will identify time periods that will not impact fisheries resources and develop management guidelines through a separate process to control access. Washington Department of Fish and Wildlife has indicated that fishing will be closed on the two rivers and creek when public use and access within the park increases.

10. Easements and Use Agreements

To fully implement the master plan, existing easements and use agreements must remain in place and development of new agreements are required, including:

- Bonneville Power Administration, Tacoma Power (power line corridors)
- Pierce County road and access point off SR 7, and related access to private in-holdings (Mashel Prairie Road)
- UW Center for Sustainable Forestry at Pack Forest (East Mashel Plateau)
- Nisqually Land Trust (east slope of the Ohop Creek Valley)
- Tacoma Power (south side of Nisqually River)
- Weyerhaeuser Timber Company (south side of Nisqually River)
- Washington State Department of Natural Resources (North of SR 7 and South of Nisqually River)

Park Utilities Information

The utilities for the park will conform to State Parks' standards, and will support the clusters of activity defined in the Master Plan. A summary of the utilities constraints, opportunities and expectations is as follows:

Potable Water

Two wells with storage tanks and distribution piping are proposed to serve the park. In addition, an on-site chlorine generation system will disinfect the water system.

Two wells are located to serve the Village Center and the East Mashel Plateau and adjacent areas. The number and size of the wells will determine regulatory requirements and future test borings, test well pumping rates, peak use, and fire flow requirements. At a minimum it is assumed that a well, well pump, storage tank, and distribution piping are included in the potable water system. The water distribution systems follow the main roadways, and in many areas also follow the power and telephone systems. Where practical, a common utility trench is proposed. Residual monitoring and disinfection is part of the onsite generation system.

Wastewater Treatment

A relatively simple onsite treatment system will store wastewater solids in septic tanks near each restroom or building, while the effluent is pumped in small diameter pipelines to a sand filter and drain field system. Electrical feeds will serve pumps and the centralized treatment facility. These systems meet all regulatory requirements and typically require smaller leachate fields due to improved effluent quality over traditional septic tanks. The collection pipelines would follow the roadways and trails. The collection pipelines will follow the main roadways, similar to the power lines. Alternate approaches may examine the potential for a composting system.

Restrooms are to serve buildings, gathering places, and campsites. Restrooms are also to serve outlying Welcome Centers and are piped to nearest centralized treatment center. Assumptions related to the number of campsites served by each restroom and restrooms including showers are included in the calculations.

Solid Waste

No solid waste handling services are included. Solid waste removal and handling is typically contracted directly with a nearby municipality or private company such as LeMay Enterprises (Pierce County Refuse). Containers and hauling are provided by the private company with little capital cost to the facility. Minimal infrastructure is required to store trash bins. Container storage areas typically include a paved pad with curbing and bollards if necessary and are incidental to the cost of the site improvements.

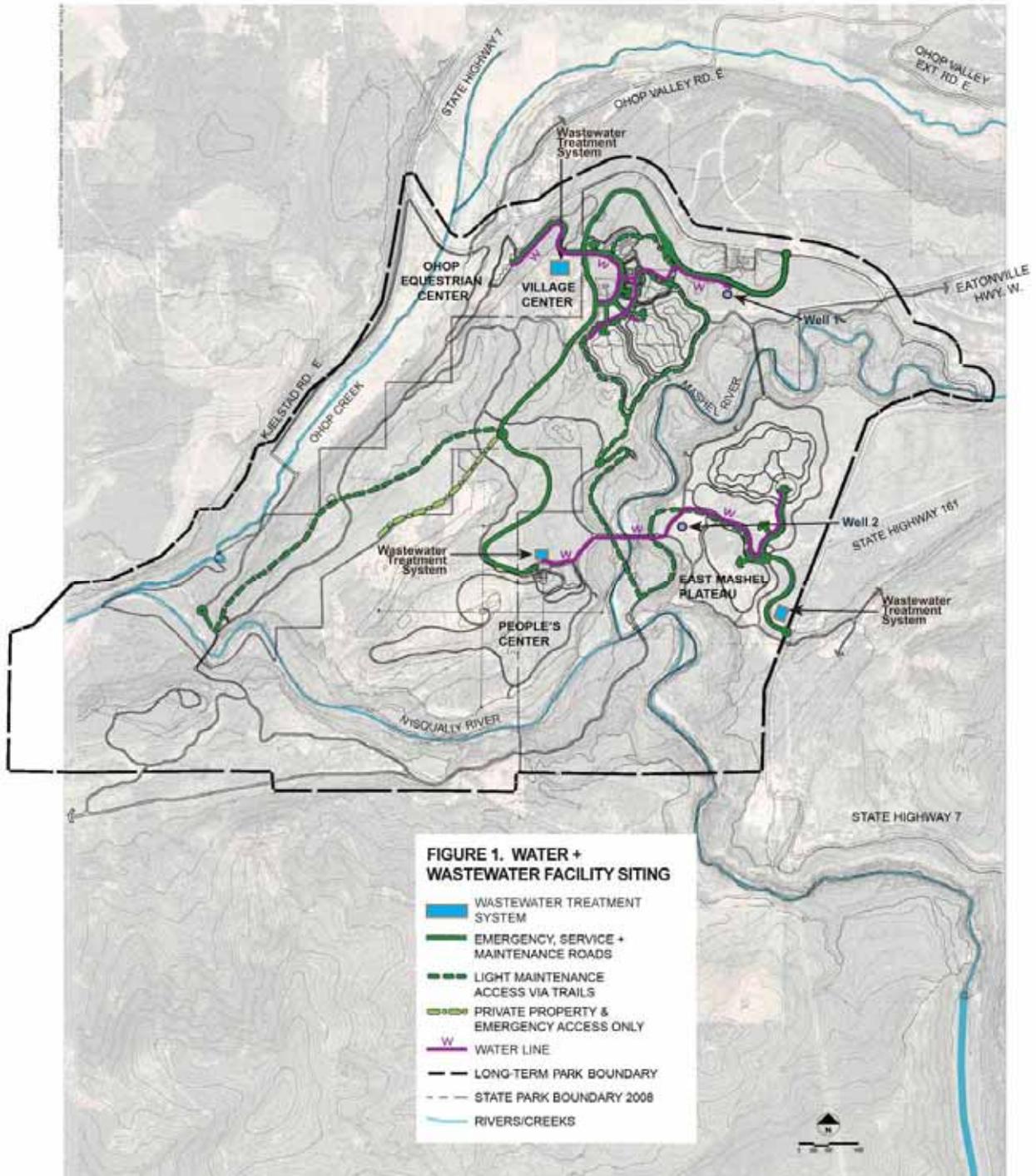


Figure B-13: Wastewater Facilities Plan

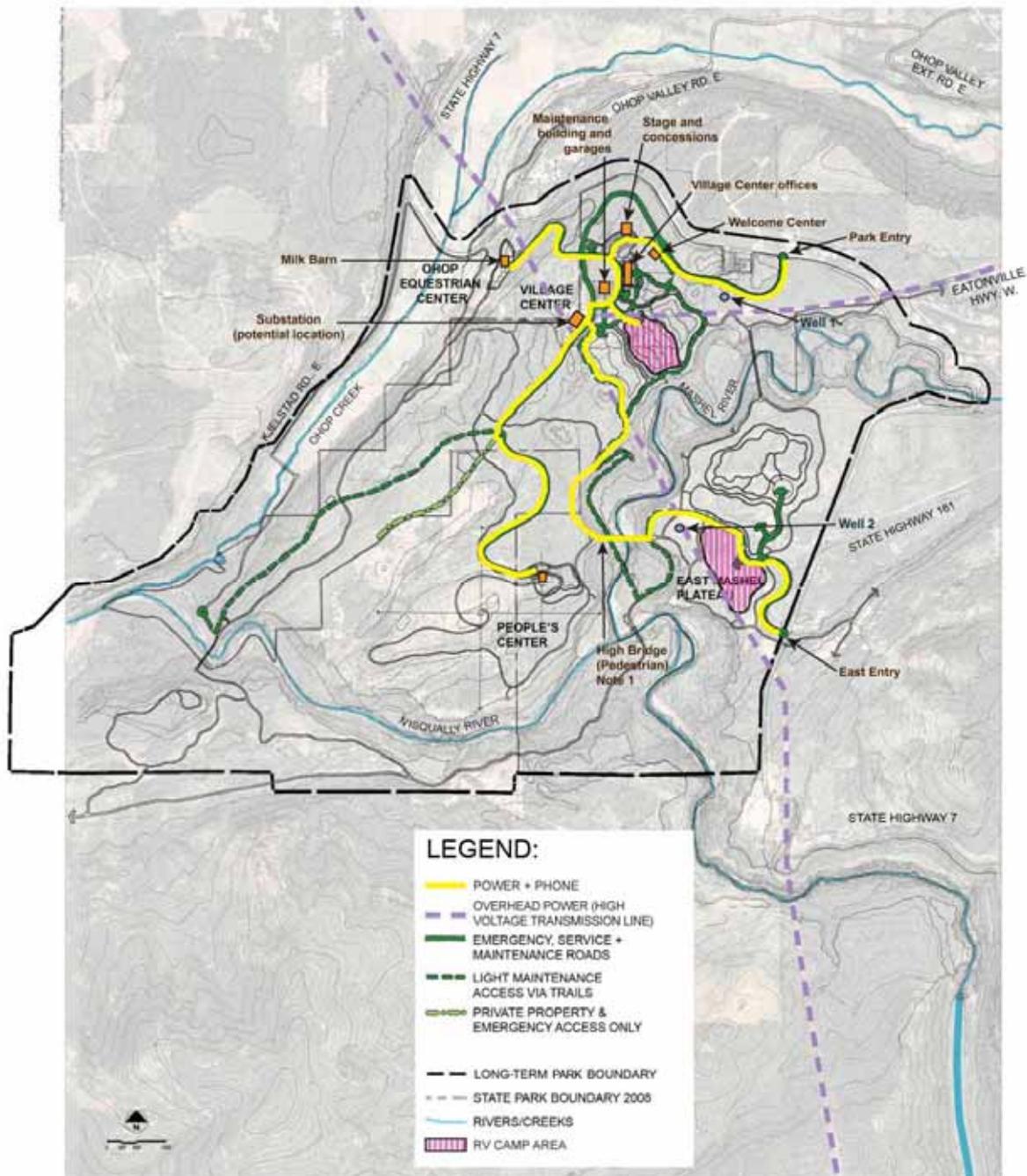


Figure B-14: Preliminary Utilities Plan

Electrical Power

A Bonneville Power Administration (BPA) high voltage power line bisects the site running northwest. Branching off this transmission line is a Tacoma Power overhead transmission line that supplies power east to Eatonville via a substation on Lynch Creek. The local electrical utility is Ohop Mutual Light Company. Ohop Mutual is planning to build a substation where the Tacoma Power transmission line ties to the BPA transmission line. Ohop Mutual has an existing power distribution line (overhead) that supplies power to local residences along Mashel Prairie Road. This is a potential electrical power source for the State Park. Burial is recommended for these existing overhead power lines to improve park aesthetics.

The proposed power distribution system planned to serve the following Park facilities:

- Village Center (offices and residences)
- Maintenance Area
- Entrance Gate (Street lights and Entrance signs)
- Amphitheater Site
- East Entrance Gate (Lighting and Signage)
- People's Center
- Ohop Equestrian Center (Milk Barn)
- Cabins and RV Sites near the Village Center and on the East Mashel Plateau
- Water supply wells

The distribution system will provide high voltage buried power to all the main electrical service areas. Transformers, located at each main service area to step the power down for local distribution to the buildings, camp sites, residences and other structures are required. The power lines are shown following the roadways to simplify construction. To extend power to the East Mashel Plateau, conduits along the underside of the high level pedestrian bridge are recommended. This route is more cost effective than following the much longer route down to the low level vehicle bridge and back up the east side of the valley.

Telephone Service

Rainier Connect provides local telephone service for the Eatonville mid-Nisqually River watershed area. Once service is available to the park site, a commercial phone system will be provided to the following locations:

- Village Center
- Ohop Equestrian Center (Milk Barn)
- Amphitheater Site
- Maintenance Area
- People's Center
- Park Staff Residences

In addition to the Park’s internal phone system, the phone company can install a pay phone at the two main campground areas. A common trench with 12” separation for phone and power lines is recommended.

Internet Service

Internet service is also available from the local phone company, Rainier Connect.

SUMMARY TABLE OF PARK LAND USE: AREAS, FACILITIES AND ELEMENTS

Park Development Area/Element	Central Plateau and Ohop Creek Valley	Description	East Mashel Plateau	Description	South Bank of the Nisqually	Description
Vehicle Entry and Access	New entry along SR 7 Interim entry at existing Mashel Prairie Road & SR 7	1 entry with Primary Park Sign 1 acre	New entry along SR 7 @ UW Center for Sustainable Forestry at Pack Forest Conference Center	1 entry with NMSP Eastern Mashel Plateau Camp sign 1 acre	Vehicle access via Thurston County - logging roads (not currently permitted)	2 access points via bridge and overland logging road
Welcome Center	<u>Park Welcome Center:</u> Check-in Station Orientation	1 Welcome Center 1 acre	<u>Park Welcome Center:</u> Check-in Station Orientation	1 Welcome center 1 acre		
Visitor Services	<u>Village Center :</u> Village Commons Headquarters Store Day use area	1 Facilities cluster 5.1 acres 6.5 acres				
Camping*	RV Group/Individual Vehicle/Tent Cabins	70 acres - 130 sites 20 cabins	Backcountry horse Vehicle/Tent RV Group/Individual	40 acres – 50-100 sites 36 acres - 150 sites	Remote camping	1 acre – 4 sites
Specialty Recreation	Outdoor gathering meadow - amphitheater Fishing pond and associated meadow Equestrian Center at Ohop Valley: Milk Barn events center Training corrals	20 acres 5 acres 4.3 acres	Mountain/ Backcountry Bicycle Challenge Course and Event Area Mashel River Confluence	60.5 acres		
Destinations & Attractions	People’s Center Observatory / clearing Leschi’s Village Shaker Church Reconstruction Cemetery Springs (protected/managed)	6.1 acres 80.0 acres 5.0 acres 1.0 acres 1.0 acres 10.0 acres	Access to UW Center for Sustainable Forestry at Pack Forest Conference Center, Museum, Trails Mashel River Confluence		Traditional Knowledge Camp Native American Management Area	5 acres 80 acres

Park Development Area/Element	Central Plateau and Ohop Creek Valley	Description	East Mashel Plateau	Description	South Bank of the Nisqually	Description
Roadways	Use of existing Mashel Prairie Road (Including in-holder portion) and logging roads New park roadway from highway to Visitor Center & camping areas & Mashel Prairie Road to People's Center	6,425 LF <u>17,550 LF</u> 12 acres	Use of existing logging roads New park roadway from highway to Village Center & Camping Areas	5,400 LF <u>5,000 LF</u> 4 acre corridor	Use of existing logging roads (not currently permitted)	
Parking	Welcome Center Village Center Day Use Gathering Event Camping Equestrian Center People's Center Ohop Creek -controlled Tribal Areas – controlled	10 50 100 400 30 50 200 10 10	Welcome Center Day Use Camping Mashel River - controlled	10 30 20 10	Tribal Areas - controlled	6
Trails	Multi-use (pedestrian & bike) Pedestrian Equestrian	<u>21,700 LF</u> 11 acre corridor <u>29,500 LF</u> 10.8 acre corridor <u>28,050 LF</u> 10.3 acre corridor	Multi-use Pedestrian Equestrian	<u>4,100 LF</u> 2 acre corridor <u>17,675 LF</u> 8.9 acre corridor <u>13,000 LF</u> 6.6 acre corridor	Pedestrian – ½ on existing logging roads and trails	<u>19,300 LF</u> 6.6 acres
Bridges, Crossings & Overlooks	Two bridges over Ohop Creek Two Highway 7 crossing River Valley overlooks	2 low bridges 1 grade separated undercrossing 1 at grade 5 overlooks	Four bridges over the Mashel River One highway crossing River Valley overlooks	2 High Bridges 2 low (one existing and one new) 1 grade separated undercrossing 2 overlooks	Two bridges over the Nisqually River River Valley overlooks	1 high bridge 1 low bridge 1 overlook

Park Development Area/Element	Central Plateau and Ohop Creek Valley	Description	East Mashel Plateau	Description	South Bank of the Nisqually	Description
Utilities and Maintenance Infrastructure	Water well(s)	Potential for 2 wells 1 @ Village Center 1 @ People's Center 1 - 2 acres	One well	<u>1 well</u> 1/2 acre	Potential for 1 well	<u>1 well</u> 1/4 acre
	Drainage system	Each development area	Drainage system	Each development area	Drainage System	Each development area
	Wastewater System (s): Localized: Compost Toilets near-term, and Centralized/package treatment facility long-term	2 compost 1 central facility 1 acre	Wastewater System: Localized Compost Toilets near-term, and Centralized/package treatment facility long-term	2 compost 1 central facility 1 acre	Localized Compost	1 Compost
	Power: Ohop Mutual Light Co. substation	Power distribution Alternative energy Underground along road and trail corridors	Power	Power distribution Alternative Energy Underground along road and trail corridors	Alternative Energy	
	Communication	Telephone, WiFi	Communication	Telephone, WiFi	Communication	Telephone, WiFi
	Dump Station	1.5 acres	Dump Station	1.5 acres		
	Maintenance/Shop facilities	<u>1 compound</u> 3 acres		<u>1 small facility</u> 1 acre		

Park Development Area/Element	Central Plateau and Ohop Creek Valley	Description	East Mashel Plateau	Description	South Bank of the Nisqually	Description
Long-Term Park Boundary 3,434 acres Current State Park 1,230 acres						
Total Park Development Area = 525.20 acres		265 acres		165 acres		94.6 acres
Estimated Cleared Area Required – All Park Areas = 234 acres		148 acres		76 acres		10 acres
Total Roads – Paved/Unpaved = 40,375 LF 7.65 Miles Does not include camp areas		<u>23,975 LF</u> 4.54 Miles		<u>10,400 LF</u> 1.97 Miles		<u>6,000 LF</u> 1.14 Miles
Total Trails Paved /Unpaved = 133,325 LF 25.25 Miles		<u>79,250 LF</u> 15 Acres		<u>34,775 LF</u> 6.59 Miles		<u>19,300 LF</u> 3.66 Miles

* The densities for each defined camping area can range from 3 to 15 sites per acre. This density range reflects, at the low range, existing state park campground standards and enterprise recreation RV campgrounds at the high end.

