

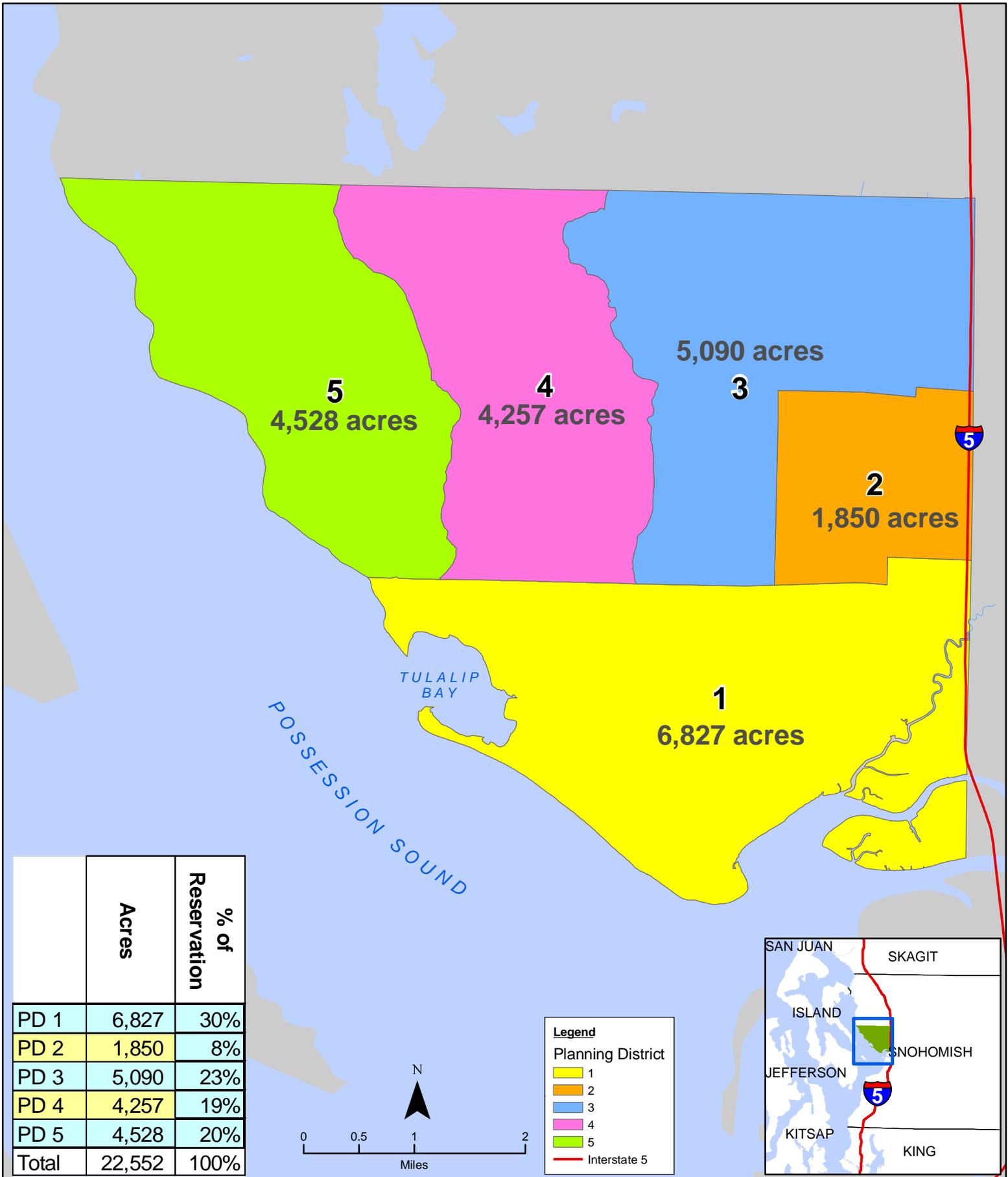
## Land Suitability Analysis

In order to determine what land on the Reservation is best suited for development, a land suitability analysis was completed. This analysis combines all the constraints and opportunities for development identified in the Comprehensive Plan to determine where future development should occur. To facilitate the creation of the Future Land Use Map, Planning Districts have been created to segment the Reservation into smaller sub-areas for evaluation purposes. **Map 2-3** shows the districts with the total calculations of land use within each district. **Map 2-4** shows all of the ground-disturbed areas by land use type within each district. These land uses are not identified on a parcel-by-parcel basis, but are based on the amount of ground-disturbed area they inhabit.

**Table 9** shows all of the constraints and opportunities considered for analysis. This analysis was done using Geographic Information Systems (GIS).

**Table 9 : Development Opportunities and Constraints**

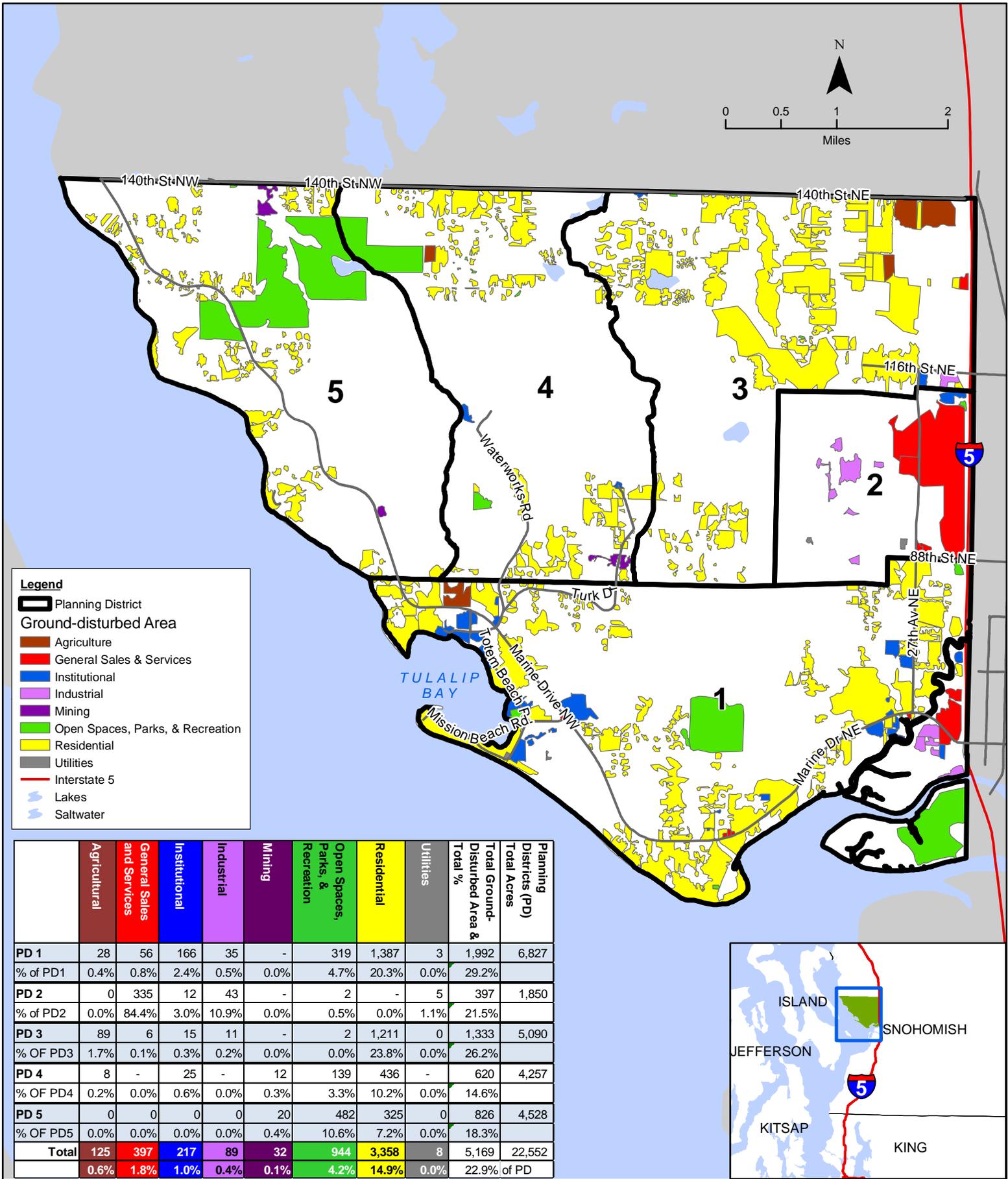
<b>Opportunities</b>	<b>Constraints</b>
Access to Water Lines	Unsuitable Soils for Septic Systems
Access to Sewer Lines	Within Stream Buffers (Classification I, and II)
Access to the Roadway Network	Within Wetland Buffers (Category I, II, and III)
Near Existing Development	Near the Wastewater Treatment Plant
	Within the Critical Aquifer Recharge Area
	Within a Tribal Forestry Area
	Within a Wildlife, Hunting, and Wildlife Corridor Areas
	Within a Culturally Sustainable Area
	Within a Landslide Area
	Within Steep Slope Areas
	Within a Marine Shoreline Area



**Map 2-3 Planning Districts**



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**Legend**

- Planning District
- Ground-disturbed Area**
- Agriculture
- General Sales & Services
- Institutional
- Industrial
- Mining
- Open Spaces, Parks, & Recreation
- Residential
- Utilities
- Interstate 5
- Lakes
- Saltwater

	Agricultural	General Sales and Services	Institutional	Industrial	Mining	Open Spaces, Parks, & Recreation	Residential	Utilities	Total Ground-Disturbed Area & Total %	Total Acres	Planning Districts (PD) Total Acres
<b>PD 1</b>	28	56	166	35	-	319	1,387	3	1,992	6,827	
% of PD1	0.4%	0.8%	2.4%	0.5%	0.0%	4.7%	20.3%	0.0%	29.2%		
<b>PD 2</b>	0	335	12	43	-	2	-	5	397	1,850	
% of PD2	0.0%	84.4%	3.0%	10.9%	0.0%	0.5%	0.0%	1.1%	21.5%		
<b>PD 3</b>	89	6	15	11	-	2	1,211	0	1,333	5,090	
% OF PD3	1.7%	0.1%	0.3%	0.2%	0.0%	0.0%	23.8%	0.0%	26.2%		
<b>PD 4</b>	8	-	25	-	12	139	436	-	620	4,257	
% OF PD4	0.2%	0.0%	0.6%	0.0%	0.3%	3.3%	10.2%	0.0%	14.6%		
<b>PD 5</b>	0	0	0	0	20	482	325	0	826	4,528	
% OF PD5	0.0%	0.0%	0.0%	0.0%	0.4%	10.6%	7.2%	0.0%	18.3%		
<b>Total</b>	<b>125</b>	<b>397</b>	<b>217</b>	<b>89</b>	<b>32</b>	<b>944</b>	<b>3,358</b>	<b>8</b>	<b>5,169</b>	<b>22,552</b>	
	<b>0.6%</b>	<b>1.8%</b>	<b>1.0%</b>	<b>0.4%</b>	<b>0.1%</b>	<b>4.2%</b>	<b>14.9%</b>	<b>0.0%</b>	<b>22.9%</b> of PD		



## Map 2-4 Ground-disturbed Areas



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Source: Community Development Department, 2009

All of these opportunities and constraints were analyzed together to determine appropriate areas for development. Many of the opportunities are based on proximity. For example, property adjacent to a water line has a higher development potential than a property one mile from the same water line. Also, properties in close proximity to roadways and sewer systems have a higher development potential and are considered more developable.

Conversely, many of the constraints are considered on an “inside/outside” basis whereby property is evaluated based on whether or not it is inside a constraint area. For example, a property that is located within a Tribally-designated Forestry Area does not have as high a development potential as a property outside of this area. The same goes for every constraint, if the property lies within the outside boundary of the constraint, its development potential is incrementally lowered.

**Map 2-5 to Map 2-7** show each opportunity and constraint separately as well as combined to see the cumulative effects of all these factors. Property on the Reservation was assigned point values based on if they fall inside or outside various areas. For instance, if a property is on a steep slope (slope greater than 15 degrees) it would receive no score, but if the property was not on a steep slope it would receive a higher score. In this way, scores were calculated and added together to determine what property is best suited for development. On **Map 2-5** through **Map 2-7**, the darker shades of red show greater levels of constraints and darker shades of green show greater levels of opportunities on Reservation acreage. Lighter shades of red or green mean fewer constraints or opportunities in the area, respectively.

In addition to measurements of inside/outside of various opportunities and constraints, proximity was measured where appropriate. An example of this proximity measure is access to water lines: properties within  $\frac{1}{4}$  mile of water lines receive the highest possible score and properties greater than  $\frac{1}{4}$  mile from water lines receive a lower score.

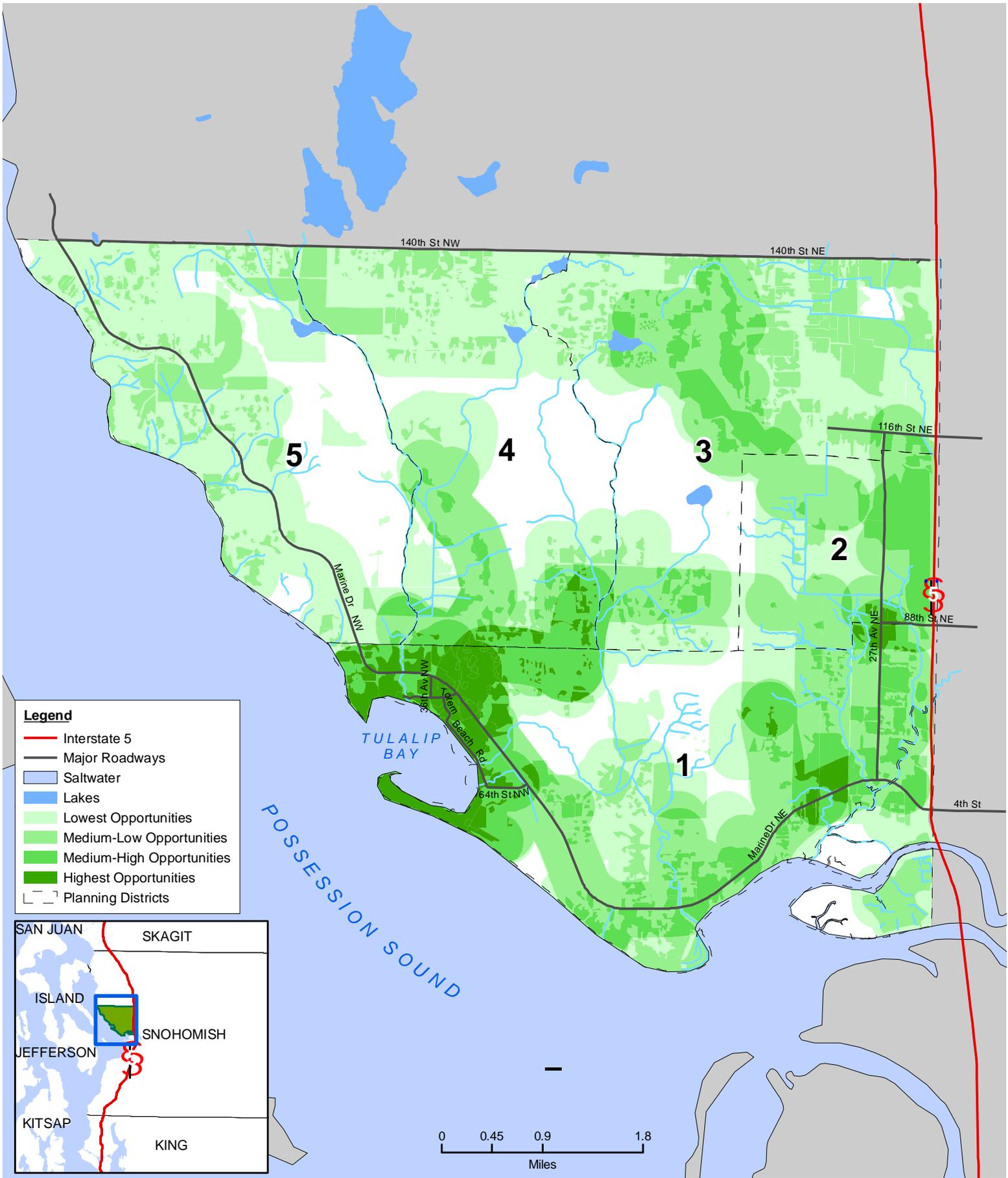
Further explanation of the land suitability analysis including scores and weights is in **Appendix C**.

Planning Districts were created as a further evaluation tool and are based on a number of criteria including: political boundaries; an aquifer recharge area; soil conditions; topography; and ground-disturbed areas. The following is a description of the opportunities and constraints within each Planning District:

- **Planning District #1:** this 6,827 acre area has some of the greatest development potential on the Reservation. Much of this potential is due to existing infrastructure and the expansion of new water and sewer lines through this district. The Tulalip Bay area has many opportunities for development (including access to roads, water supply, and sewer system) but has some constraints as well. While much of the Bay area is already developed, the long-term plan for the Bay area includes siting a future Tribal village and significant redevelopment opportunities. Through the central part of District #1, opportunities for development include existing development in the area and access to local roads. Primary constraints for this area include Tribal forest lands, wildlife areas,

and wetlands. The eastern portion of District #1 has some areas of significant development potential including National Pollution Discharge Elimination System areas (a Federal program that controls water pollution), existing roadway infrastructure, existing development, and proposed water lines into this area. The most significant constraints in this area include culturally sensitive areas located around waterways, a wildlife corridor, and soil unsuitability for septic systems.

- **Planning District #2:** this 1,850 acre area is in the Consolidated Borough of Quil Ceda Village (QCV). The eastern part of this district has significant potential for development, and much of it is already developed. The available infrastructure in this area is some of the newest on the Reservation. The western portion of this district has many constraints primarily hunting areas, steep slopes, and a wildlife corridor in the southwestern corner of this district. Other constraints include Tribal forestry lands throughout the western part of this district as well as soil unsuitable for septic systems and wetlands present through the central area. A master plan for QCV guides development within Planning District #2.
- **Planning District #3:** this 5,090 acre area has some of the greatest development potential on the Reservation. Along with District #1, this district has the greatest amount of opportunities for development including an established road network and already developed property – especially through the northern portion of the District. However, there are also significant constraints in the District such as continuing concern around John Sam Lake and other parts of this District due to limited drinking water. These water limitations make this area a candidate for lower-density development. The southernmost portion of this district also has opportunities for development such as existing development, access to road network, and extension of a proposed water line through the area. There is a hunting area through the south-central portion of this District.
- **Planning District #4:** this 4,257 acre area is largely constrained by factors that limit development. Much of the northern portion of the District is a critical aquifer recharge area, and many of these same areas do not have access to piped water. Even though it is in a critical aquifer recharge area, the northern part of this District has development potential with an existing road system and existing development in the area. The central portion of this District has constraints including limited road access, hunting areas, and Tribal forest lands. The Bernie Kai-Kai Gobin Fish Hatchery is also located in this central portion and relies on the underlying aquifer for its operation. Any well water withdrawals in the northern and central portions of this District compete with the Hatchery for the limited supply of water in the aquifer. There are few constraints within the southeastern corner of this district and some opportunities for development including existing development, existing roadways, and a proposed water line going through this area.
- **Planning District #5:** this 4,528 acre area has potential for development through the northern and western portion. There are some constraints including steep slopes and culturally sensitive areas in the west and a critical aquifer recharge area in the north.



## Map 2-5 Land Suitability Opportunities



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 August 13, 2009

Disclaimer:  
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Map Path: R:\Community\_Development\Comprehensive Plan\Tulalip Tribes Comprehensive Land Use Plan\Maps\ArcMap2-5

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