

## What are the conditions in the North Schneider Sub-watershed?

### Current conditions

Approximately four percent of the North Schneider Sub-watershed is covered by urban land uses (see Figure 11 and 11a, Classification Percent Totals for North Schneider Sub-watershed). North Schneider basin has a drainage area of 6.5 square miles.

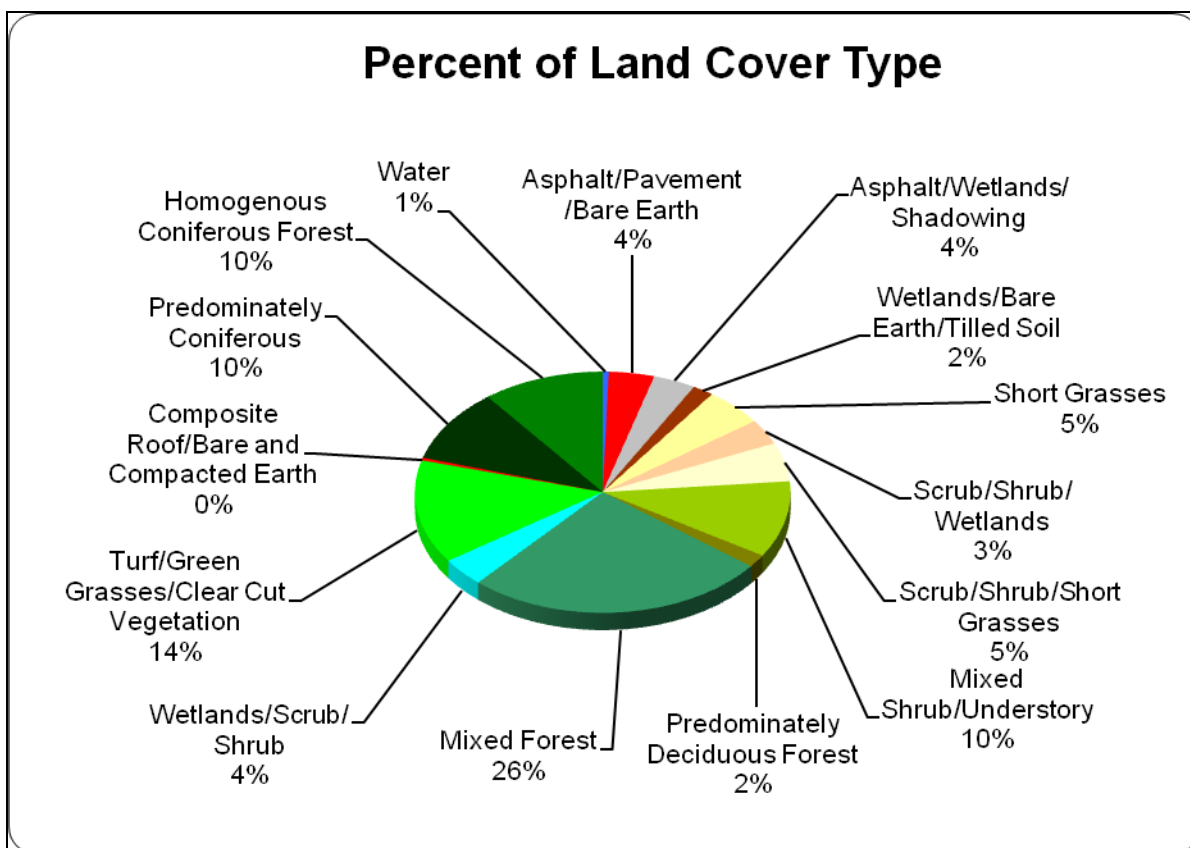


Figure 11a. Classification Percent Totals for North Schneider Sub-watershed

Land cover data from 2005 SPOT imagery.

### Human alteration to the movement of water

The effects of human land use on the natural delivery of water to the North Schneider and its tributaries in the North Schneider Sub-watershed were characterized using the following landscape attributes: percent TIA, percent forest land, and percent wetland cover at the DAU scale. Results indicate that the North Schneider Sub-watershed is in an “at risk” condition for the delivery of water.

### **Human alteration to the natural movement of sediment**

The effects of human land use on the natural delivery of sediment to the North Schneider and its tributaries in the Kennedy Creek Sub-watershed were characterized using the following landscape attributes: percent bare soils, road density, and percent unstable slopes at the DAU scale. The result was “properly functioning” and “at risk” conditions.

### **Human alteration to the natural movement of large wood**

The effects of human land use on the natural delivery and routing of large wood in the North Schneider and its tributaries were characterized using the following landscape attributes: percent forested riparian and average number of stream crossings per kilometer of stream at the DAU scale. Results indicate that the North Schneider Sub-watershed is primarily in a “not properly functioning” and “at risk” condition for the delivery and routing of large wood.

### **Human alteration to the natural movement of pollutants**

The effects of human land use on the natural delivery and routing of pollutants in the North Schneider and its tributaries were characterized using the following landscape attributes: Extent of 303(d) listed water bodies for nutrients, toxicants, and bacteria and condition and extent of wetlands at the DAU scale. Limited data indicates that the North Schneider Sub-watershed is in an “at risk” condition for the delivery and routing of pollutants.

### **Human alteration to the natural movement of heat**

The effects of human land use on the natural delivery and routing of heat in the North Schneider tributaries were characterized using the following landscape attributes: Extent of 303(d) listed water bodies for nutrients, toxicants, and bacteria, percent 67 meter riparian zone with mature canopy, road density, and percent TIA at the DAU scale. Results indicate that the North Schneider Sub-watershed is primarily in an “at risk” condition for the delivery and routing of heat.

### **Aquatic integrity**

The effects of human land use on aquatic integrity in the North Schneider and its tributaries in the North Schneider Sub-watershed were characterized using the following landscape attributes: percent riparian forest, percent TIA, and available B-IBI scores at the DAU scale. There is no data available to rank the aquatic integrity.

### **Habitat Connectivity**

Forest covers forty-eight percent of the North Schneider Sub-watershed, The North Schneider Sub-watershed is considered “at risk”, for habitat connectivity.

## Ecological Benefit

All DAUs within the study area having ecological and biological processes that are considered “at risk” under current land use conditions were identified for further consideration. DAUs in the “at risk” category for multiple key ecological and biological processes are assumed to provide the greatest potential to maximize environmental benefits when restored. The process scores are then ranked according to the weight criteria, and converted to a high, medium, or low process rank. North Schneider has primarily high and moderate ecological benefit, with only one DAU ranked as low (Figure 12. North Schneider Sub-watershed Weighted Processes).

## Environmental Benefit

Once all the DAUs were ranked for their ecological benefit, all natural resource sites were ranked for their environmental benefit. Only the high and medium scoring sites were used in further evaluation to develop natural resource, fish habitat, and stormwater preservation and restoration sites.

**Table 7. North Schneider Environmental Benefit Ranking of Natural Resource Sites**

North Schneider Potential Restoration Sites				
Rank	Wetland	Riparian	Floodplain	Total
High	4	0	NA	4
Medium	8	22	NA	30
Low	25	24	NA	49

The following wetlands, riparian and floodplain sections describe the environmental benefit ranking of the natural resource sites.

### Wetlands

Prior to human alteration, wetlands in the North Schneider Sub-watershed totaled approximately 493 acres. We estimate that approximately 247 acres of the sub-watershed, are currently wetlands or degraded/destroyed wetlands with some restoration potential. (Figure 13. North Schneider Sub-Watershed Resource Sites).

### Riparian condition

Development has encroached on approximately 178 acres of the 67-meter wide riparian corridors in the North Schneider basin. Of the 746 acres, approximately 178 acres have some restoration potential (Figure 13. North Schneider Sub-Watershed Resource Sites).

### Floodplain Condition

There are no floodplain sites in the North Schneider Sub-watershed.

## **Natural Resource Sites**

All potential natural resource sites were evaluated for their environmental benefit and ranked high, medium, or low. Following evaluation, a total of 34 sites were of high or medium environmental benefit (Figure 14. North Schneider Ecological Processes and Resource Site Scoring).

## **Fish Habitat**

There were 46 sites evaluated for habitat value to salmonid fish species. These sites were then used to evaluate potential natural resource sites that have the potential to be stormwater retrofits sites. While the goal is to use natural resource sites as stormwater retrofit sites, we don't want to compromise high quality fish habitat sites.

## **Stormwater Retrofit**

All the natural resource sites were evaluated for stormwater retrofit sites (Figure 15. North Schneider Potential Stormwater Restoration Sites).



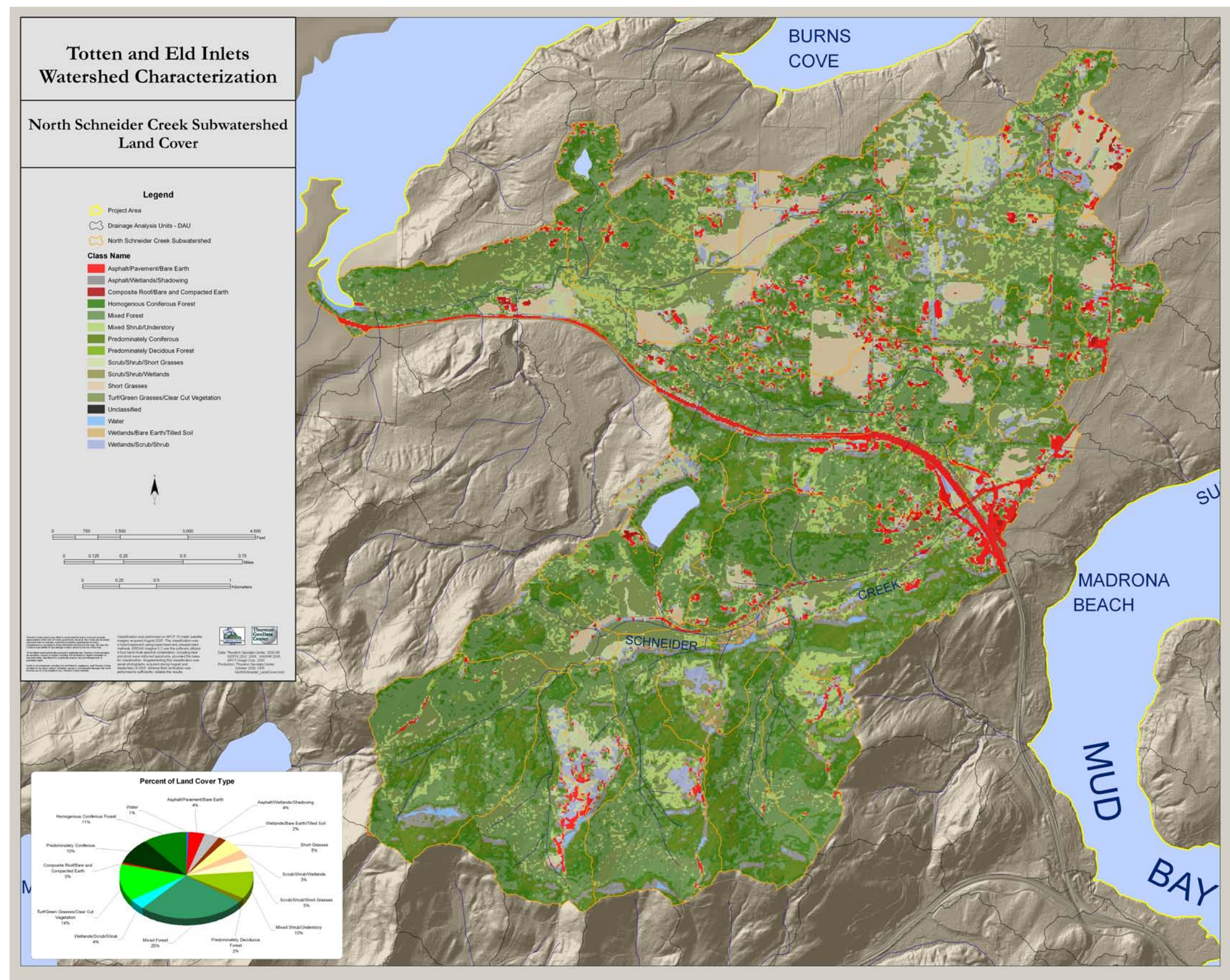


Figure 11 North Schneider Creek Sub-watershed Land Cover



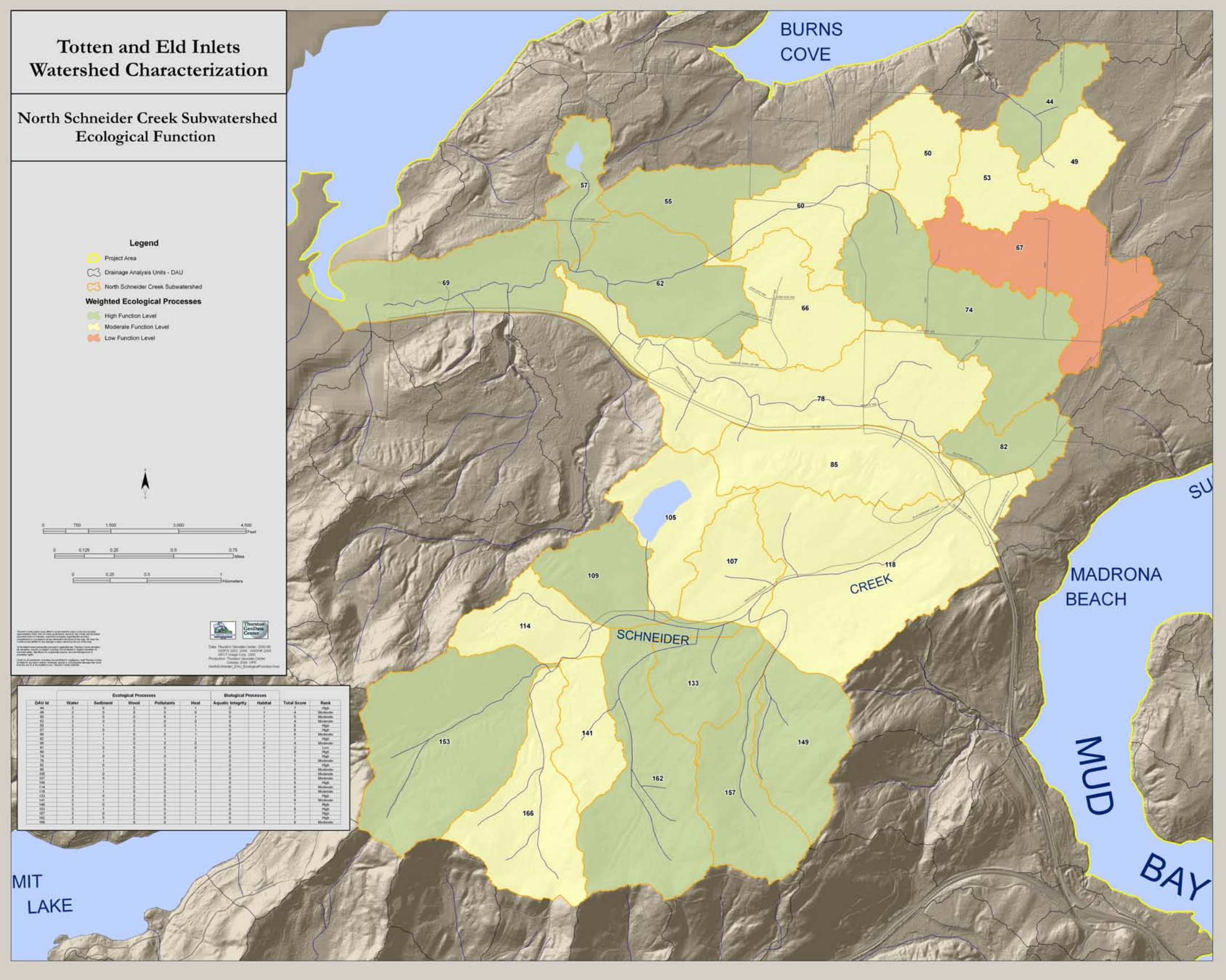


Figure 12 North Schneider Creek Sub-watershed Weighted Processes



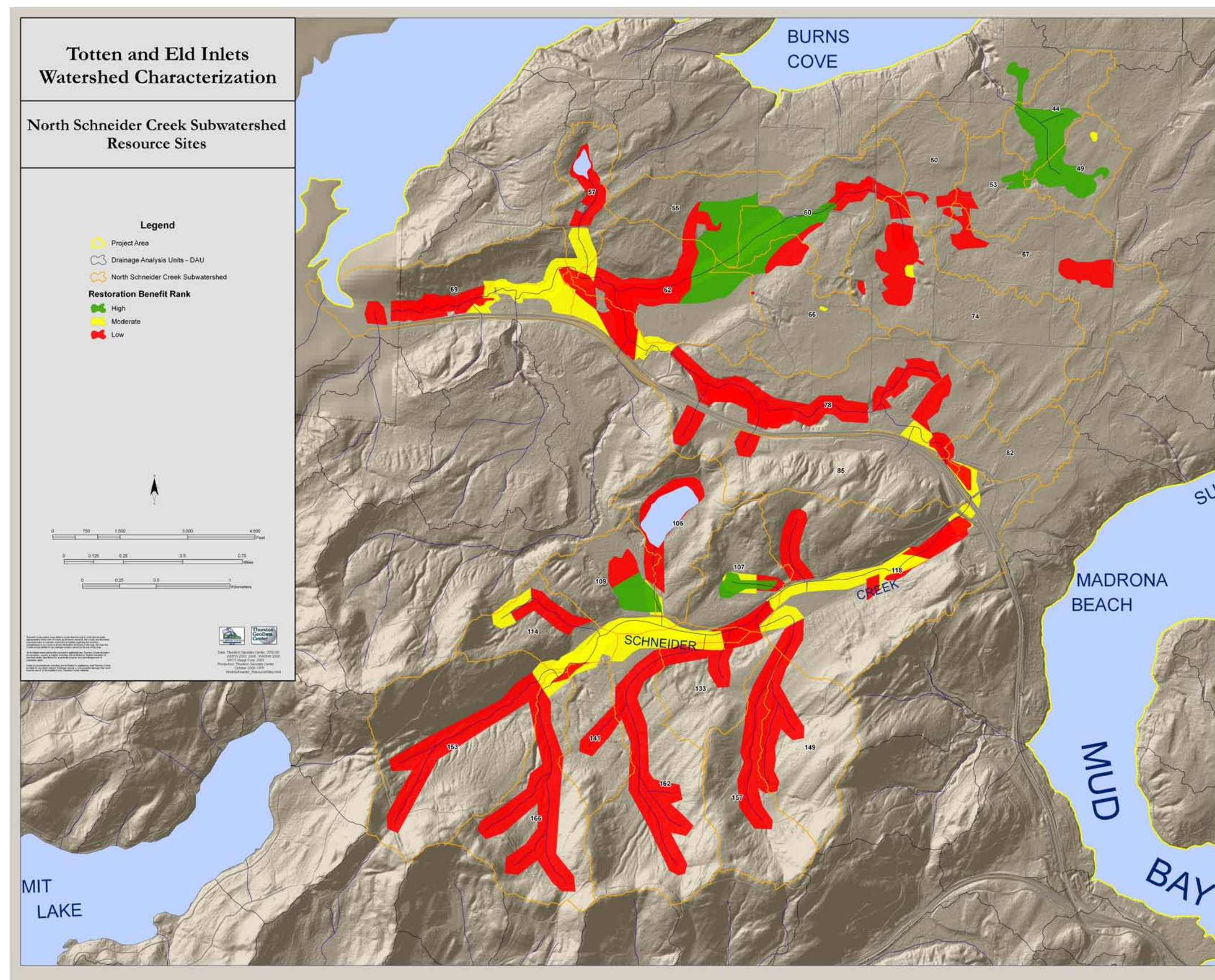


Figure 13 North Schneider Creek Sub-watershed Resource Sites



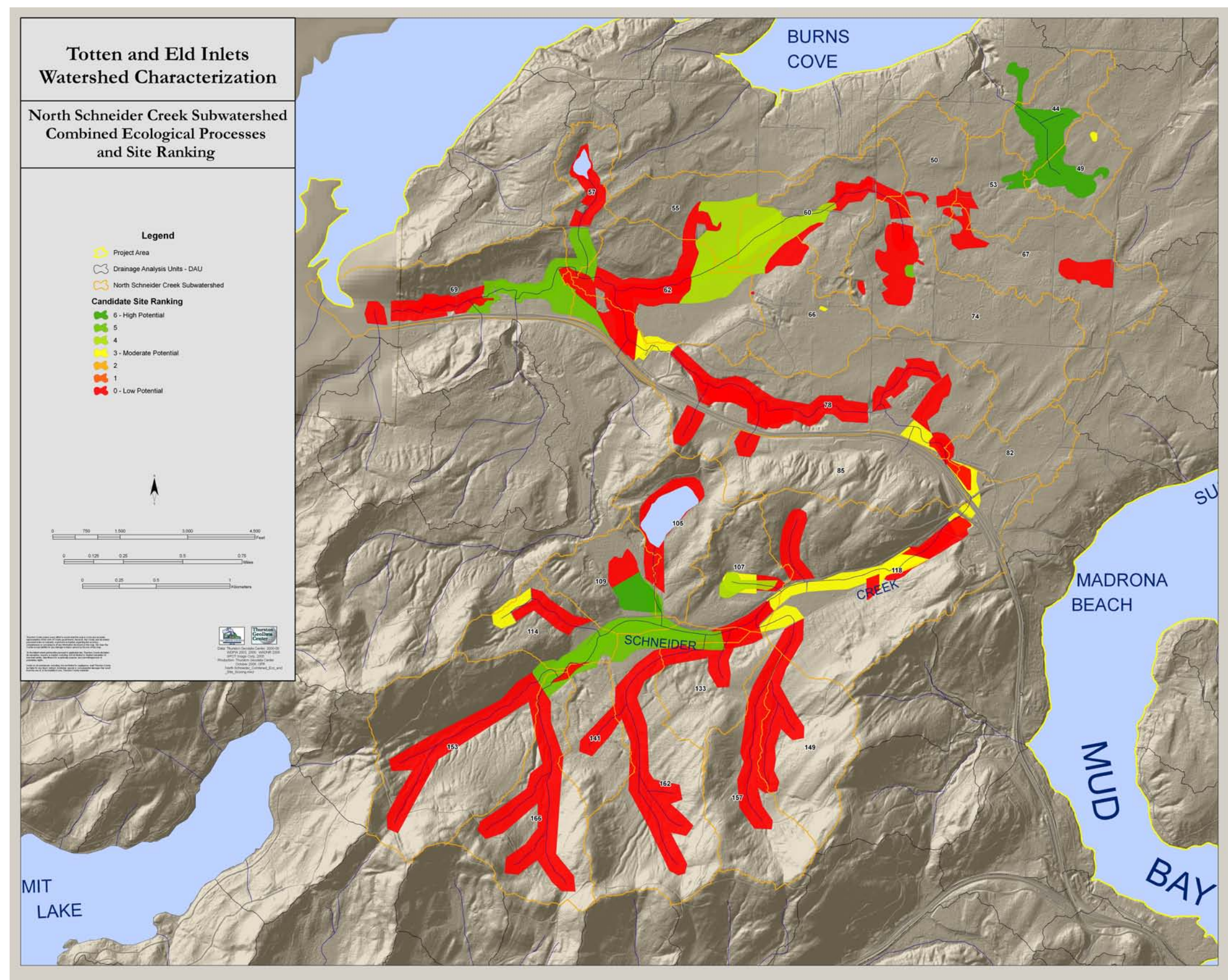


Figure 14 North Schneider Creek Sub-watershed Ecological Processes and Resource Site Scoring



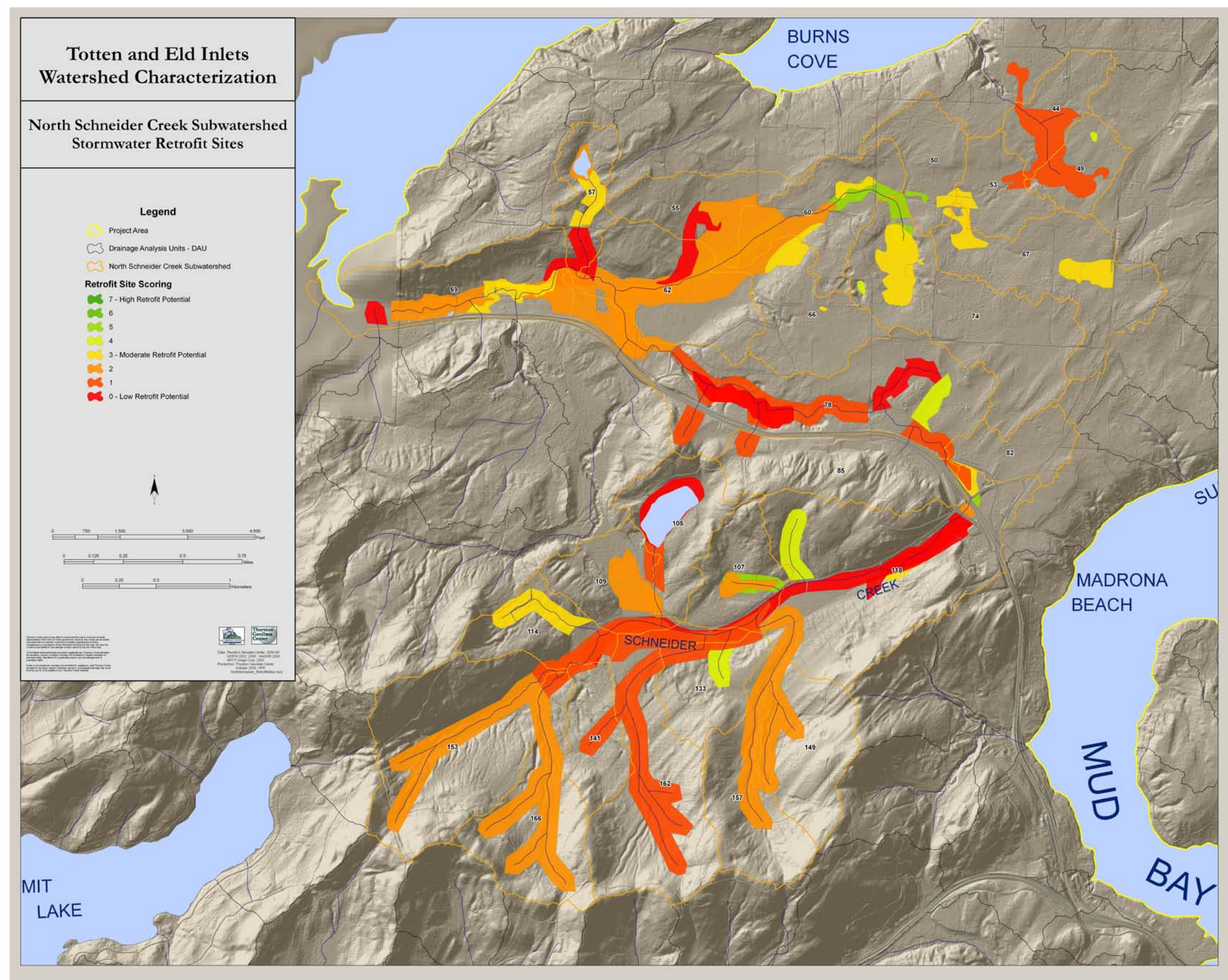


Figure 15 North Schneider Creek Sub-watershed Retrofit Sites