

What are the conditions in the Perry Creek Sub-watershed?

Current conditions

Approximately four percent of the Perry Creek Sub-watershed is covered by urban land uses (see Figure 51 and 51a, Classification Percent Totals for Perry Creek Sub-watershed). Perry Creek has a drainage area of 6.6 square miles.

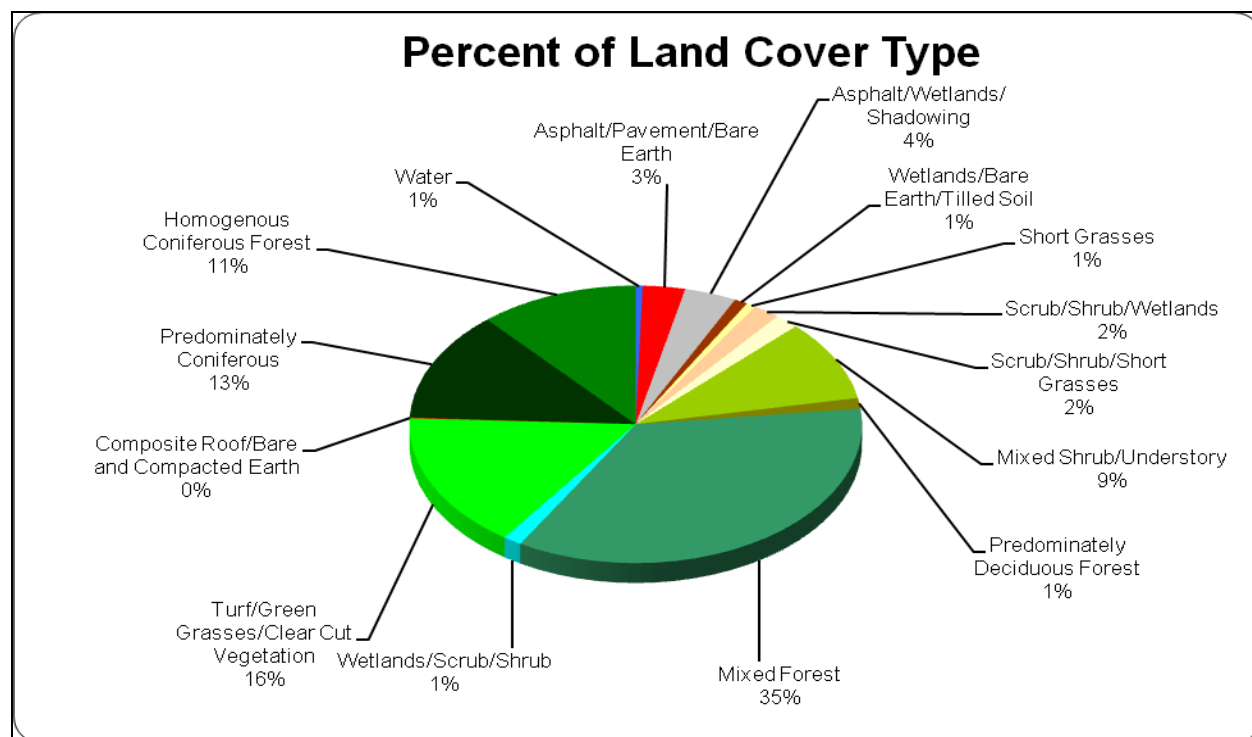


Figure 51a. Classification Percent Totals for Perry Creek Sub-watershed

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 Perry Creek and its tributaries in the Perry Creek 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 Perry Creek 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 Perry Creek 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. However, because there are no forestry activities or unstable slopes in the sub-watershed,

road density was the only applicable indicator. The result is a “properly functioning” and SR condition for sediment.

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 Perry Creek 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 Perry Creek Sub-watershed is primarily in an “at risk” and “not properly functioning” 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 Perry Creek 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. Results indicate that the Perry Creek 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 Perry Creek 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 Perry Creek 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 Perry Creek and its tributaries in the Perry Creek 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 to rank aquatic integrity.

Habitat Connectivity

Forest covers sixty-one percent of the Perry Creek Sub-watershed, concentrated in the south west sub-watershed. Most of the forest is in rural residential areas and the sub-watershed’s primary land cover is composed of commercial and long-term forestry. The Perry Creek Sub-watershed is considered “properly functioning” and “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. Perry Creek has primarily high and moderate ecological benefit, with only one DAU ranked as low (Figure 52. Perry Creek 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 15. Perry Creek Environmental Benefit Ranking of Natural Resource Sites

Perry Creek Potential Restoration Sites				
Rank	Wetland	Riparian	Floodplain	Total
High	5	0	NA	5
Medium	3	13	NA	16
Low	16	22	NA	38

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 Perry Creek Sub-watershed totaled approximately 98 acres. We estimate that approximately 37 acres are currently wetlands or degraded/destroyed wetlands with some restoration potential. (Figure 53. Perry Creek Sub-Watershed Resource Sites).

Riparian condition

Development has encroached on approximately 156 acres of the 67-meter wide riparian corridors in the Perry Creek basin. Of the 951 acres, approximately 156 acres have some restoration potential (Figure 53. Perry Creek Sub-Watershed Resource Sites).

Floodplain Condition

There is no regulated floodplain in the Perry Creek 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 21 sites were of high or medium environmental benefit (Figure 54. Perry Creek Ecological Processes and Resource Site Scoring).

Fish Habitat

There were 35 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 55. Perry Creek Potential Stormwater Restoration Sites).

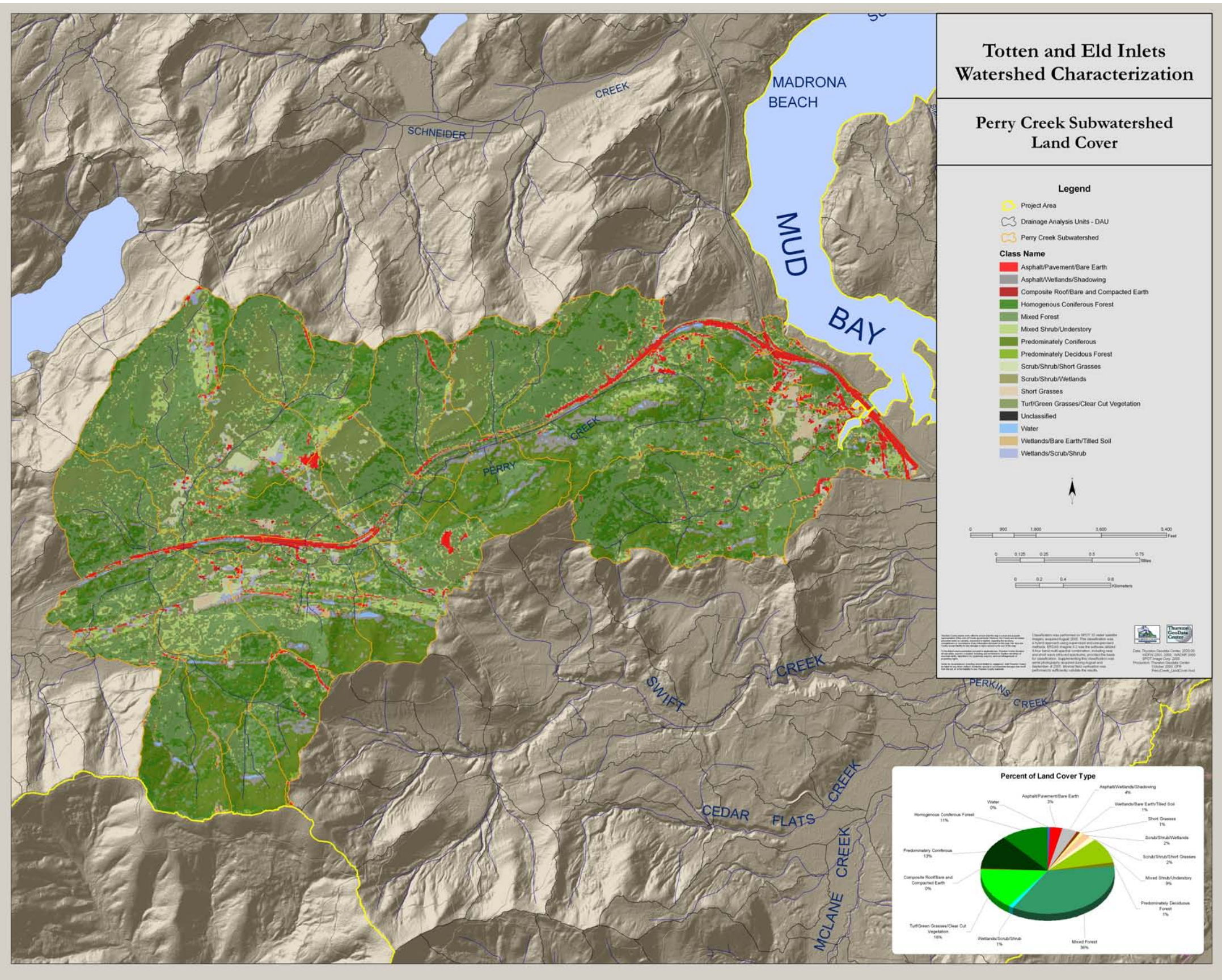
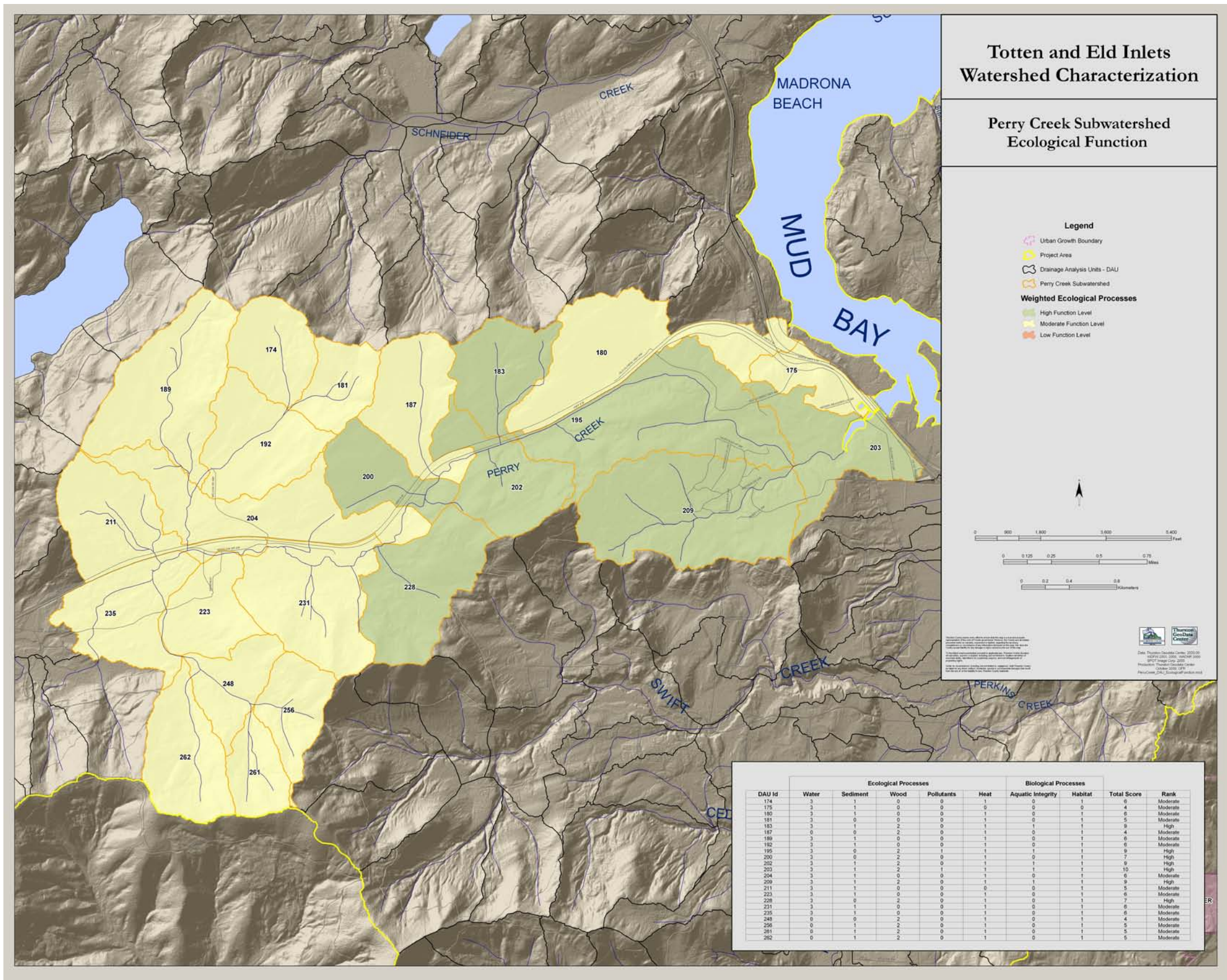


Figure 51 Perry Creek Sub-watershed Land Cover



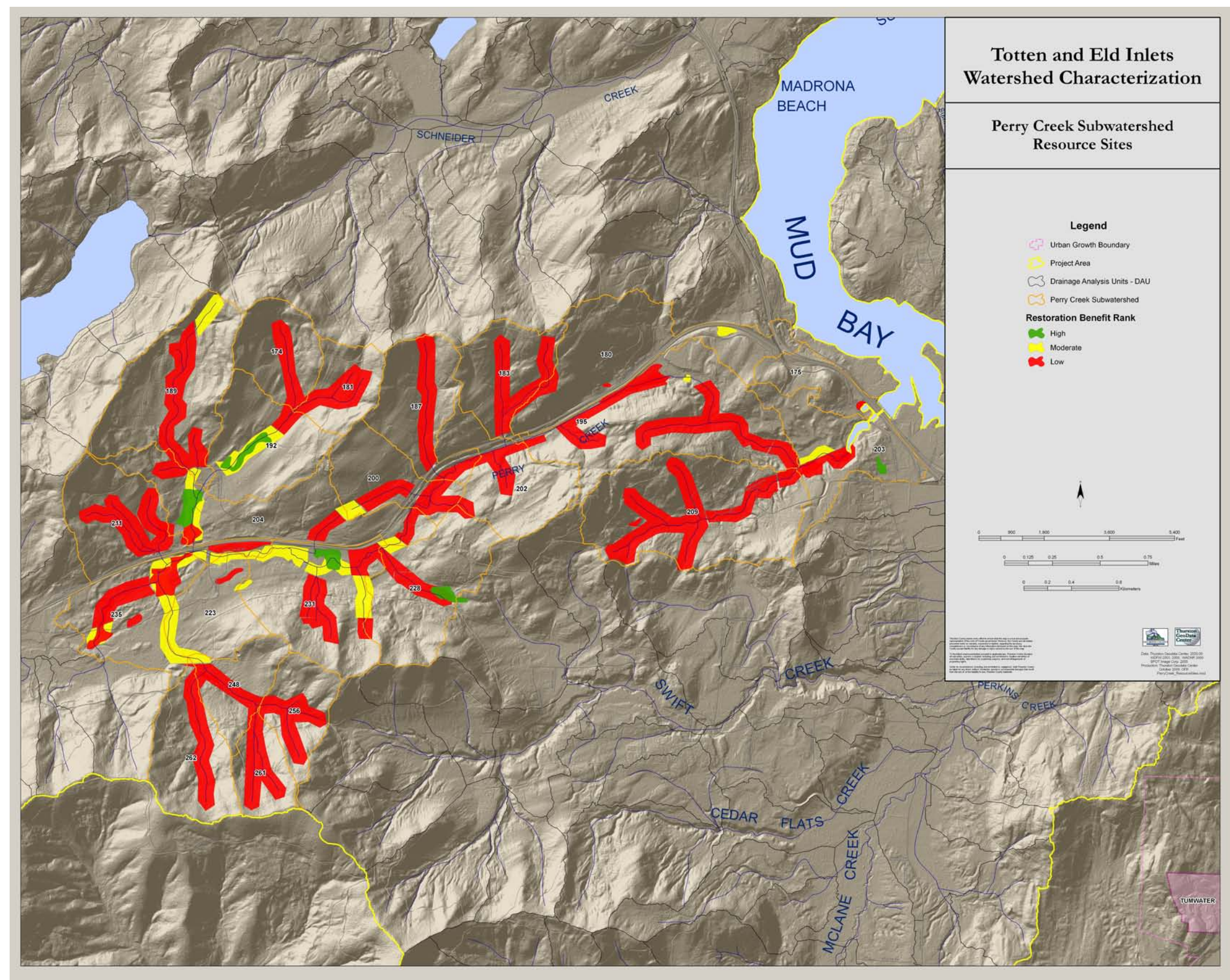


Figure 53 Perry Creek Sub-watershed Resource Sites

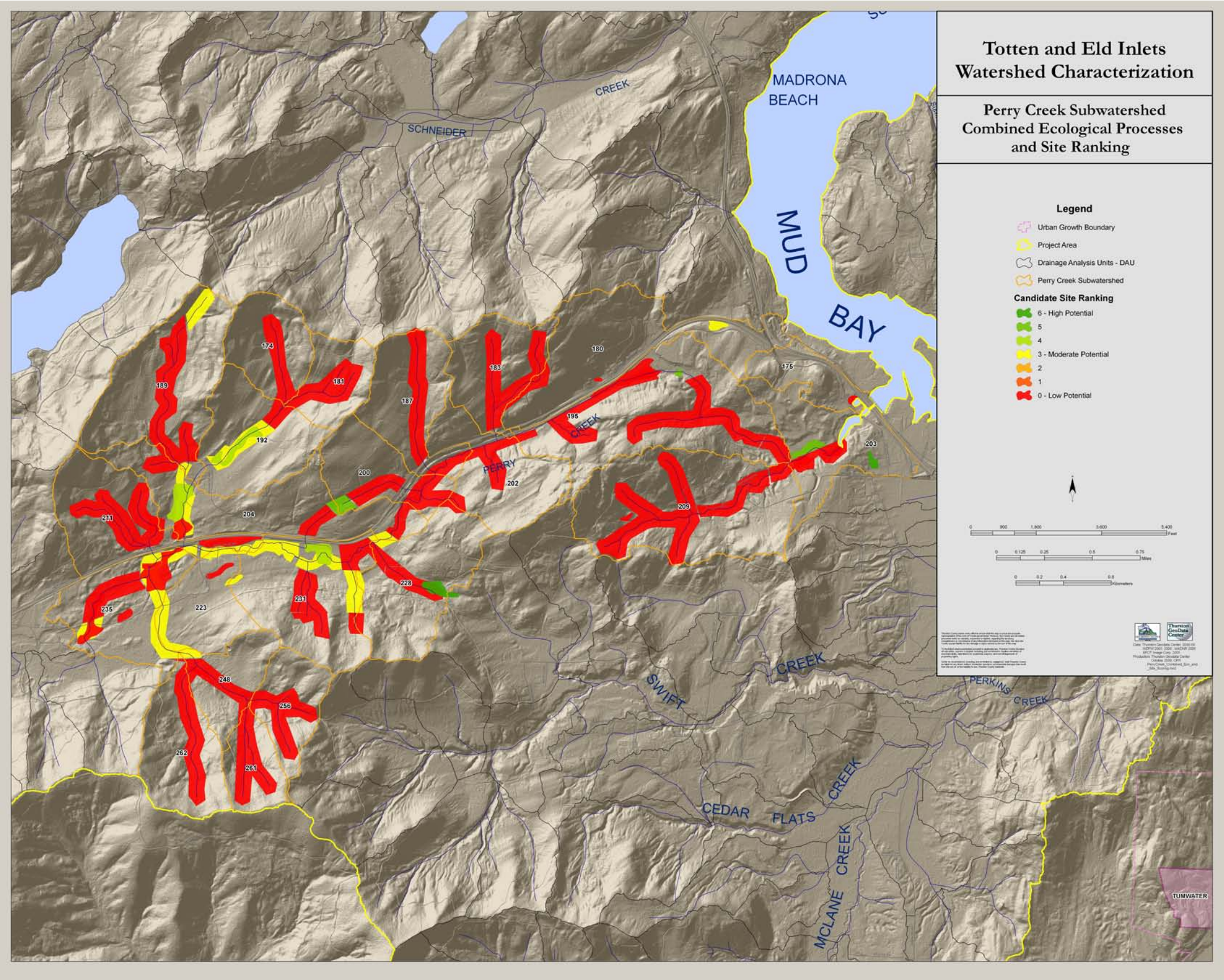


Figure 54 Perry Creek Sub-watershed Ecological Processes and Resource Site Scoring

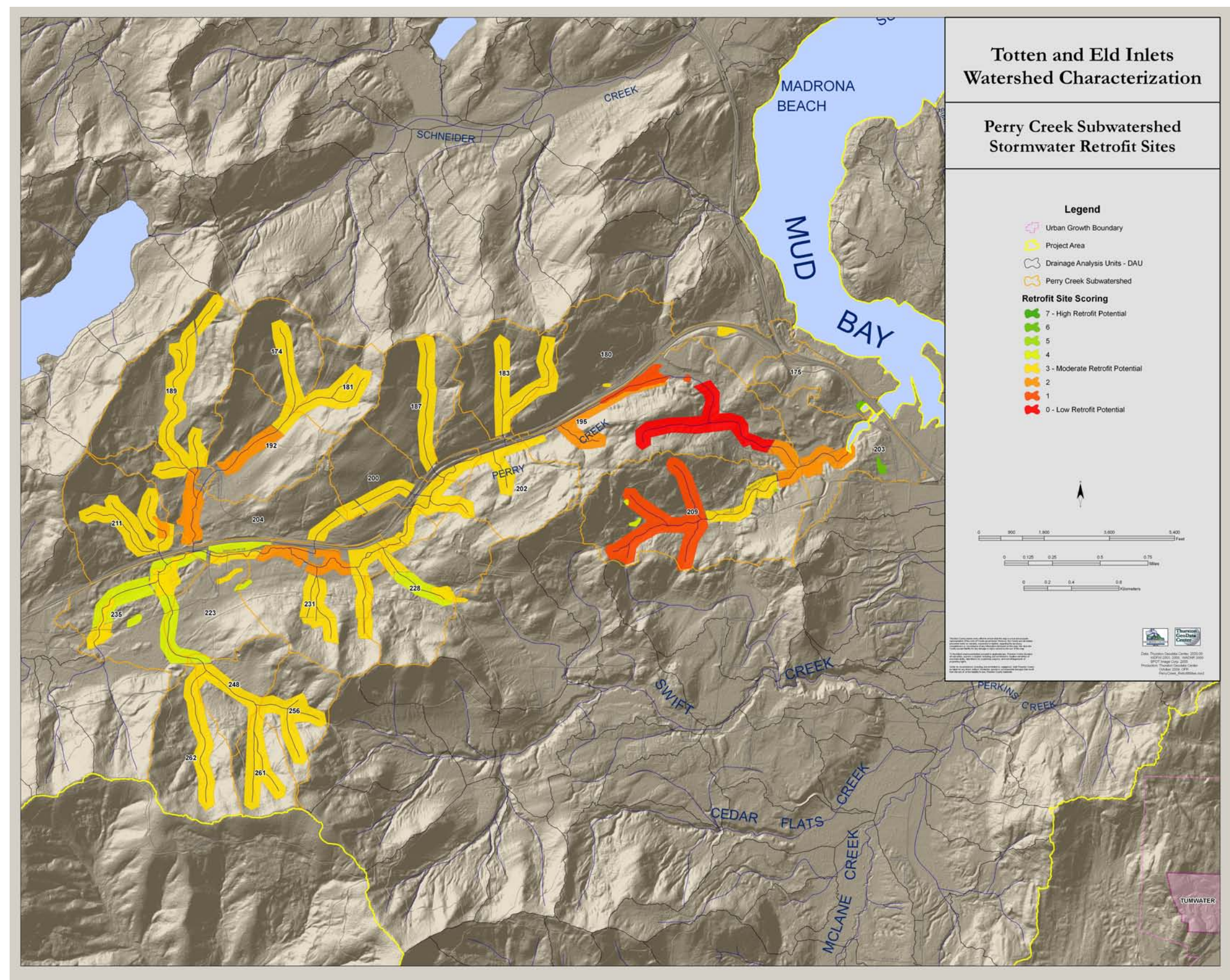


Figure 55 Perry Creek Sub-watershed Retrofit Sites