What are the conditions in the South Schneider Sub-watershed?

Current conditions

Approximately two percent of the South Schneider Sub-watershed is covered by urban land uses (see Figure 16 and 16a. Classification Percent Totals for South Schneider Sub-watershed). South Schneider basin has a drainage area of 2.5 square miles.

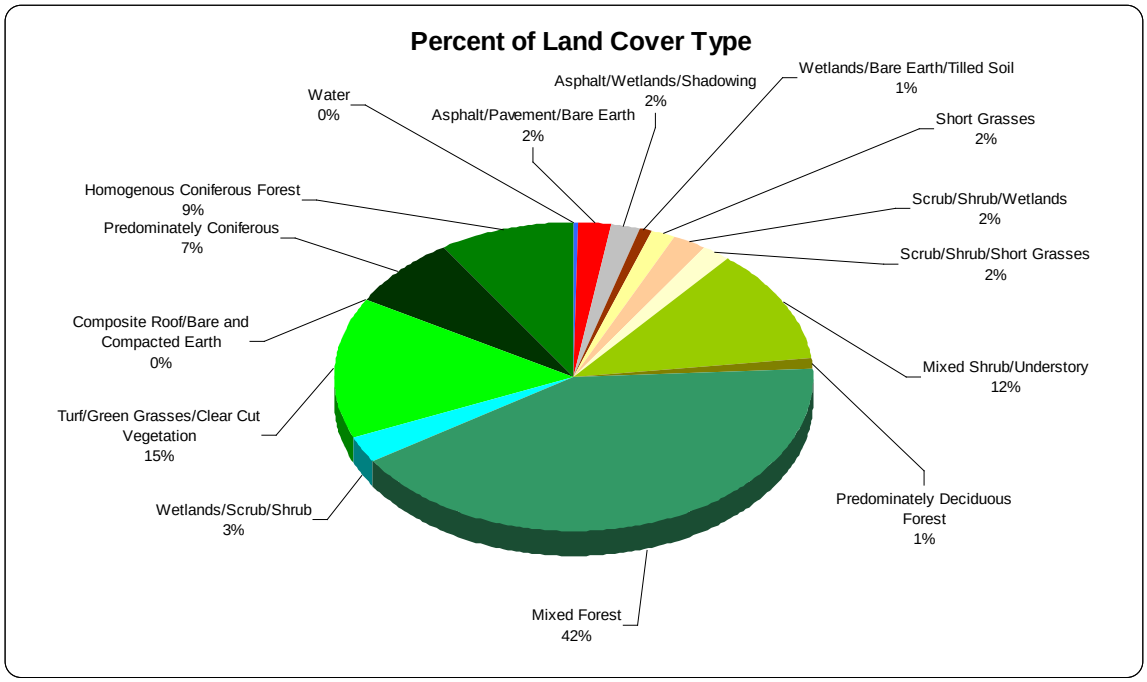


Figure 16a. Classification Percent Totals for South Schneider Sub-watershed

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 in the South 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 South Schneider Sub-watershed is in a “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 South Schneider 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 an "at risk" condition, with two DAUs “properly functioning”.

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 South 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 South Schneider Sub-watershed is primarily in a “not properly functioning” condition for the delivery and routing of large wood. Exceptions include two DAUs that are conditioned to be in an “at risk” condition.

Human alteration to the natural movement of pollutants

The effects of human land use on the natural delivery and routing of pollutants in the South 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. There is no data to rank 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 South 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 South Schneider Sub-watershed is primarily in an “at risk” condition for the delivery and routing of large wood. The exception is one DAU that is “not properly functioning.”

Aquatic integrity

The effects of human land use on aquatic integrity in the South Schneider and its tributaries in the South 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 to rank aquatic integrity.

Habitat Connectivity

Forest covers sixty percent of the South Schneider 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 South 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. South Schneider has primarily high and moderate ecological benefit, with no DAUs ranked as low (Figure 17. South 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 8. South Schneider Environmental Benefit Ranking of Natural Resource Sites

South Schneider Potential Restoration Sites				
Rank	Wetland	Riparian	Floodplain	Total
High	1	2	NA	3
Medium	1	2	NA	3
Low	7	9	NA	16

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 South Schneider Sub-watershed totaled approximately 82 acres. It is estimated that approximately 13 acres of the sub-watershed, are currently wetlands or degraded/destroyed wetlands with some restoration potential. (Figure 18. South Schneider Sub-Watershed Resource Sites).

Riparian condition

Development has encroached on approximately 109 acres of the 67-meter wide riparian corridors in the South Schneider basin. Of the 595 acres, approximately 109 acres have some restoration potential (Figure 18. South Schneider Sub-Watershed Resource Sites).

Floodplain Condition

There is no regulated floodplain in the South 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 six sites were of high or medium environmental benefit (Figure 19. South Schneider Ecological Processes and Resource Site Scoring).

Fish Habitat

There were 13 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 20. South Schneider Potential Stormwater Restoration Sites).

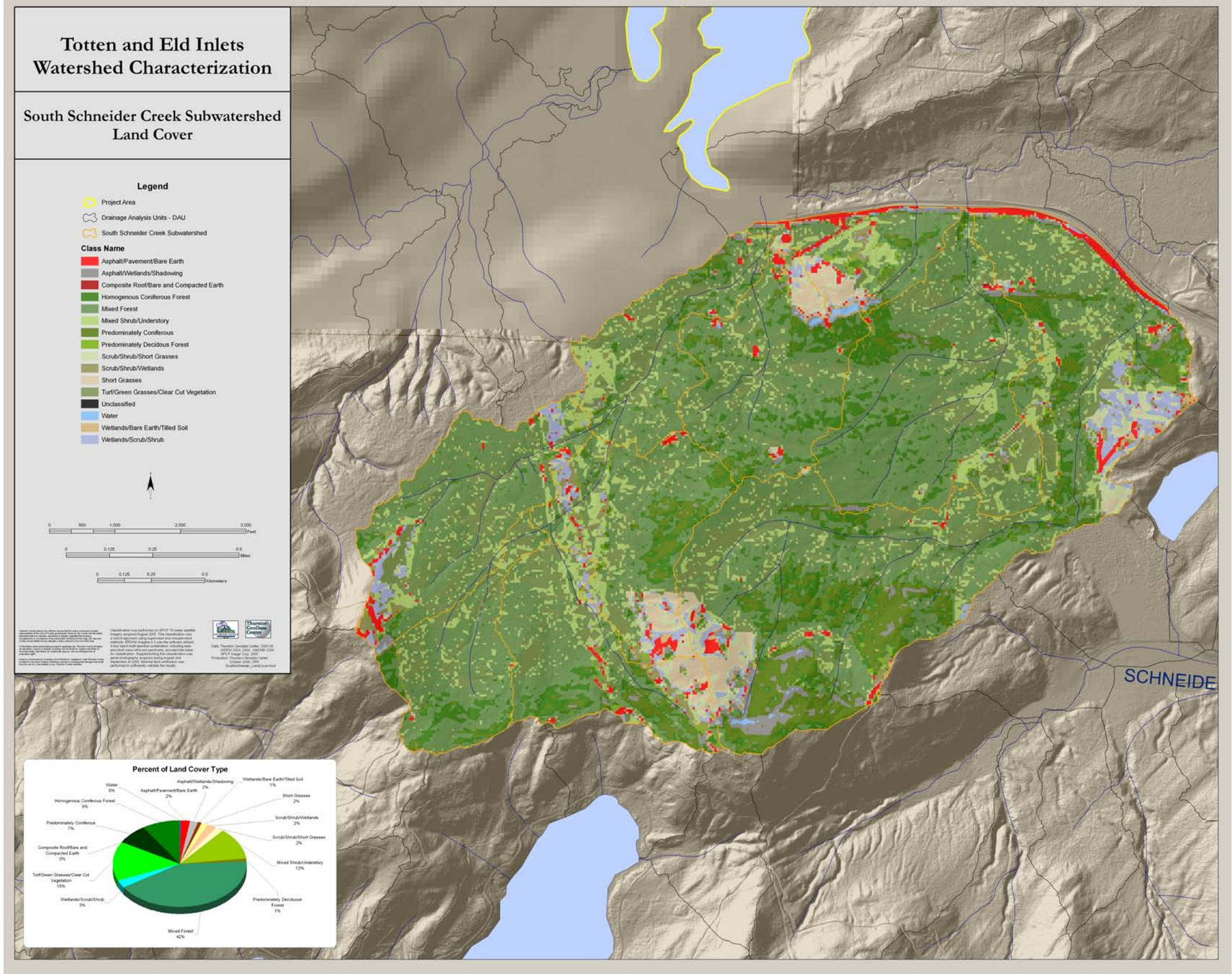
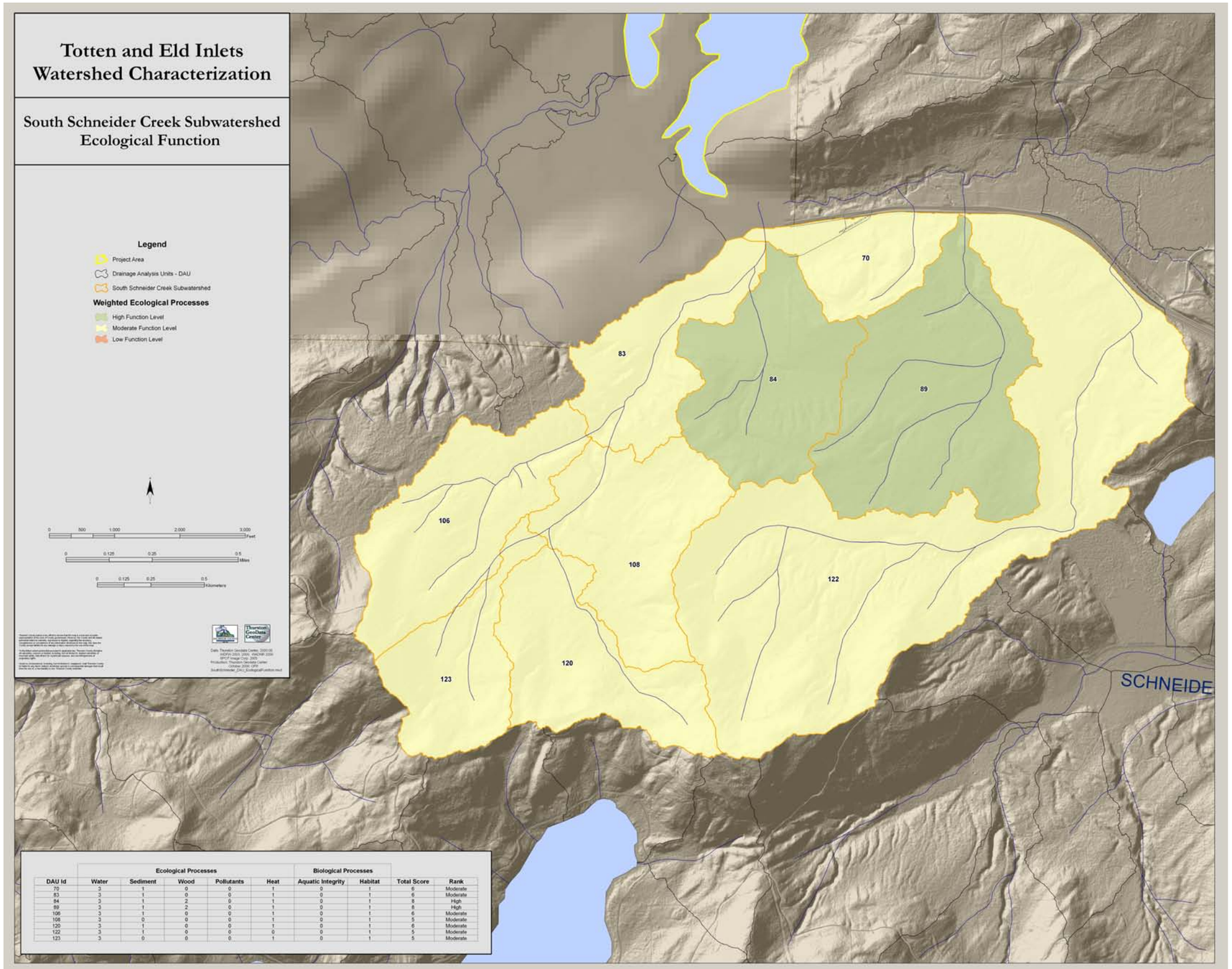


Figure 16 South Schneider Creek Sub-watershed Land Cover



DAU id	Ecological Processes					Biological Processes		Total Score	Rank
	Water	Sediment	Wood	Pollutants	Heat	Aquatic Integrity	Habitat		
70	3	1	0	0	1	0	1	6	Moderate
83	3	1	0	0	1	0	1	6	Moderate
84	3	1	2	0	1	0	1	8	High
89	3	1	2	0	1	0	1	8	High
106	3	1	0	0	1	0	1	6	Moderate
108	3	0	0	0	1	0	1	5	Moderate
120	3	1	0	0	1	0	1	6	Moderate
122	3	1	0	0	0	0	1	5	Moderate
123	3	0	0	0	1	0	1	5	Moderate

Figure 17 South Schneider Creek Sub-watershed Weighted Processes

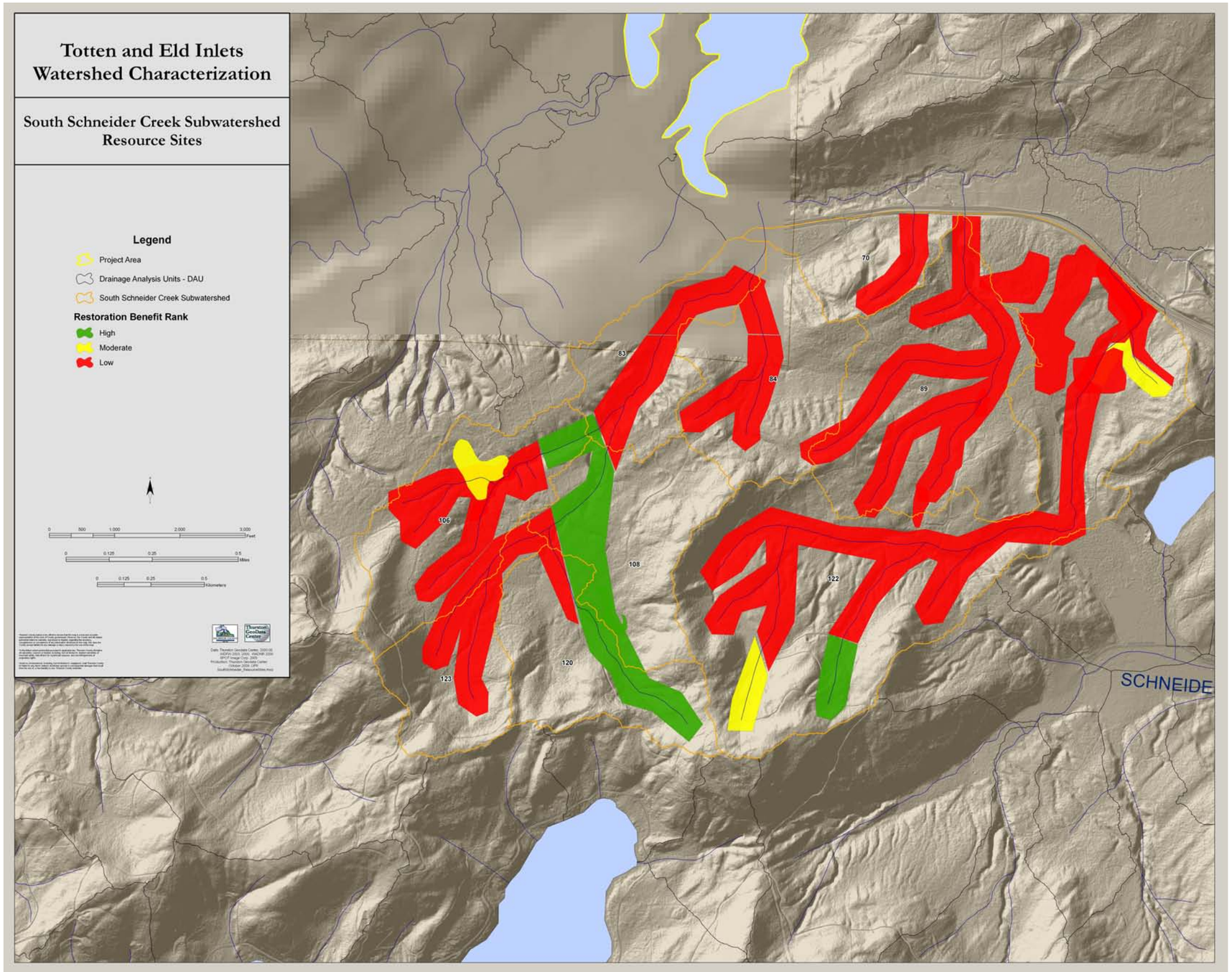


Figure 18 South Schneider Creek Sub-watershed Resource Sites

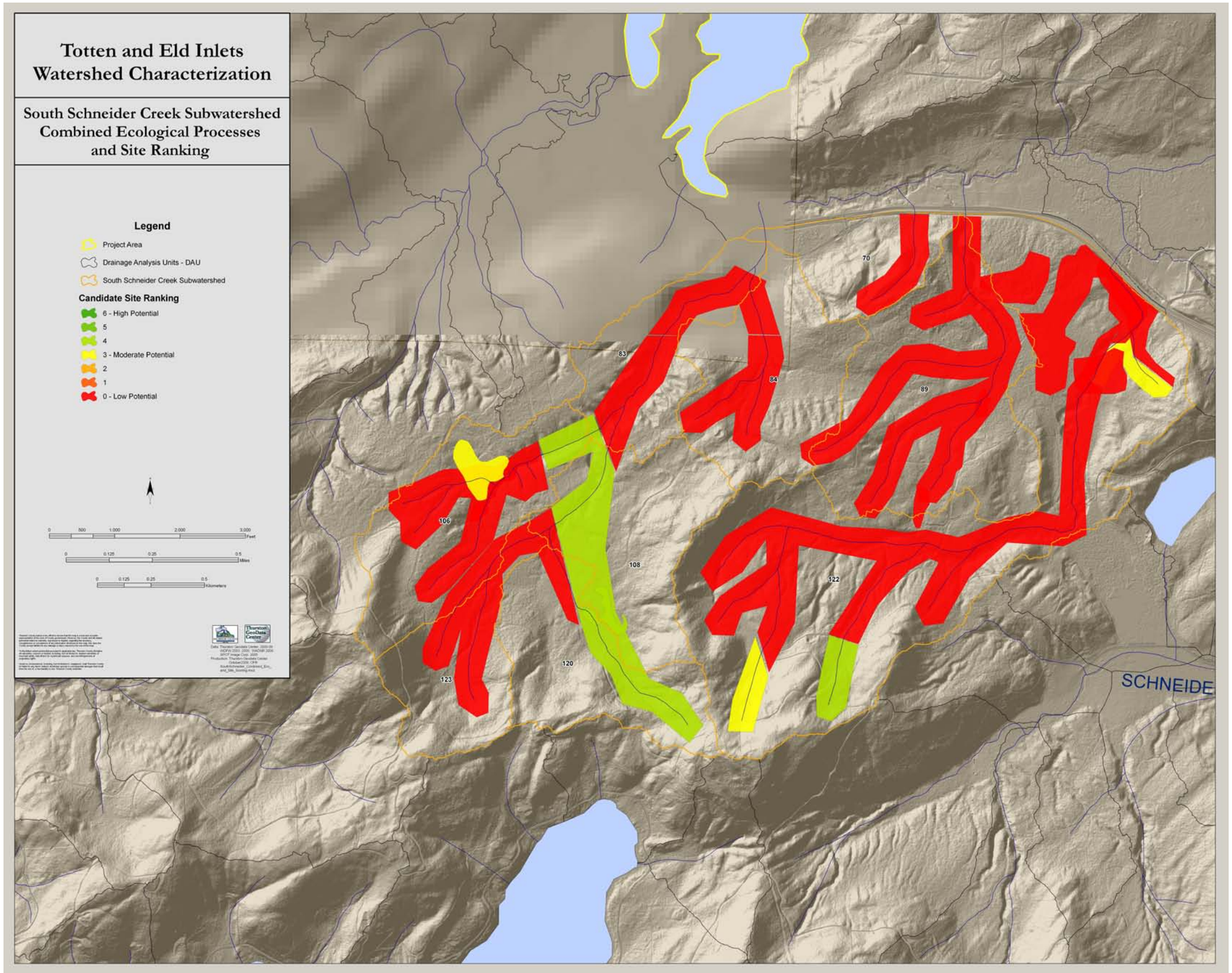


Figure 19 South Schneider Creek Sub-watershed Ecological Processes and Resource Site Scoring

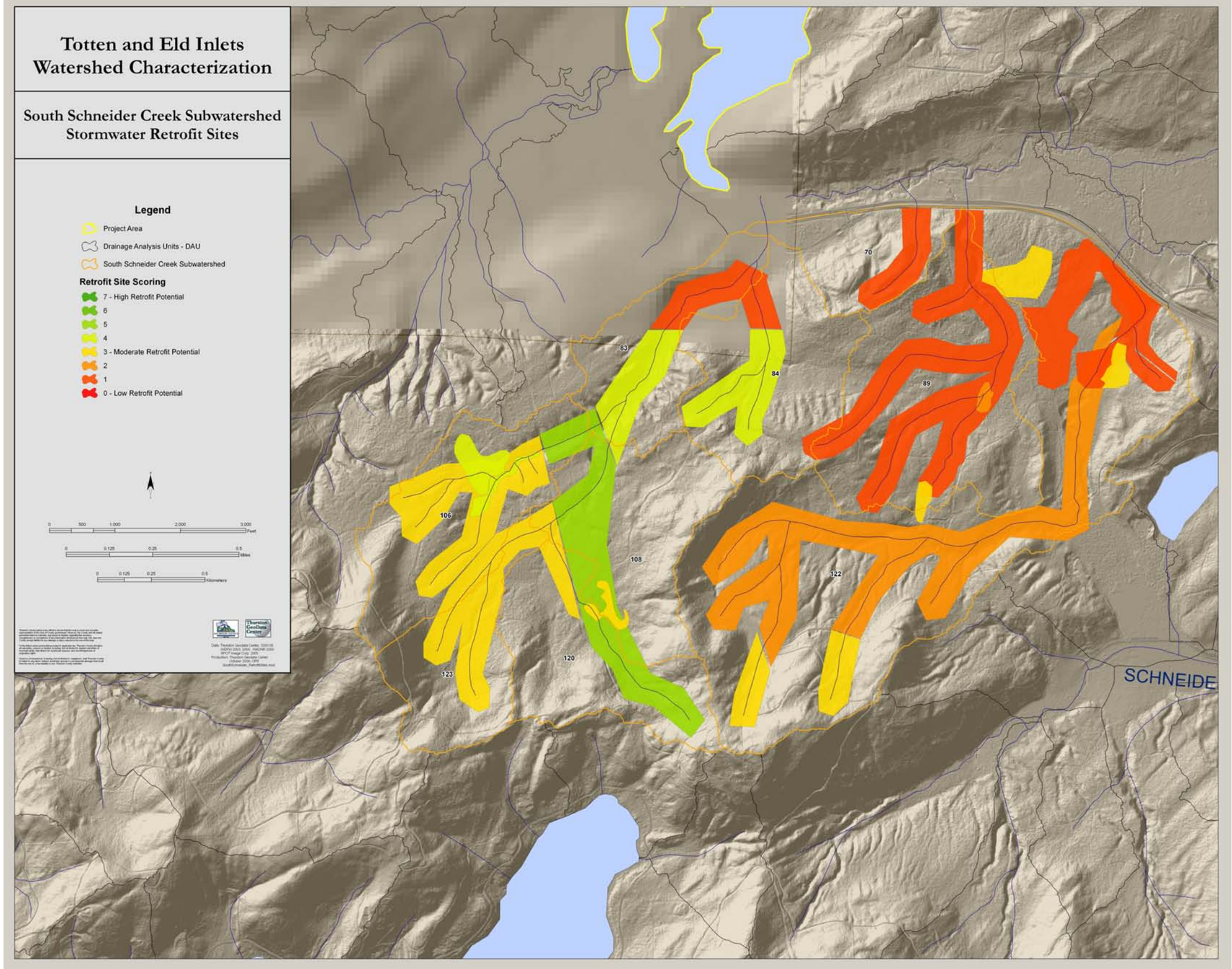


Figure 20 South Schneider Creek Sub-watershed Retrofit Sites