

**Geomorphic cluster:** deviation from bankfull 1, channel condition 1, hydrologic alteration 1, bank stability 1

**Fisheries cluster:** pool status 1, instream fish cover 1, riparian zone 1, canopy 1

Water quality cluster: water appearance 10, nutrient enrichment 10,

Invertebrate cluster: invertebrate habitat 3

**SVAP Aggregate score:** 31/11 items scored = 2.8 (poor)

**key impacts:** geomorphic, fisheries, invertebrate

**Problem Reach 3.3** Example of downstream erosion, widening & pool loss from an undersizd bridge producing a flume effect (with high/erosive velocities) under high water conditions – worsened by the absence of a riparian buffer!



**Geomorphic cluster:** deviation from bankfull 10, channel condition 3, hydrologic alteration 3, bank stability 7

**Fisheries cluster:** pool status 7, instream fish cover 7, riparian zone 1, canopy 1

Water quality cluster: water appearance 10, nutrient enrichment 10,

Invertebrate cluster: invertebrate habitat 7

**SVAP Aggregate score:** 66/11 items scored = 6 (fair)

key impacts: geomorphic > fisheries

**Problem Reach 3.3** Example of erosion on an inside bend on a Rosgen F4 stream due to tree removal with a loss of protective root systems.



**Geomorphic cluster:** deviation from bankfull 1, channel condition 1, hydrologic alteration 1, bank stability 7

**Fisheries cluster:** pool status 1, instream fish cover 1, riparian zone 1, canopy 1

Water quality cluster: water appearance 5, nutrient enrichment 10,

**Invertebrate cluster:** invertebrate habitat 7

**SVAP Aggregate score:** 32/11 items scored = 2.9 (poor)

key impacts: geomorphic, fisheries

Problem Reach 3.5 Example of a channelized, leveed, rip rapped F3 stream reach



**Geomorphic cluster:** deviation from bankfull 1, channel condition 1, hydrologic alteration 1, bank stability 7

**Fisheries cluster:** pool status 1, instream fish cover 1, riparian zone 1, canopy 1

Water quality cluster: water appearance 5, nutrient enrichment 10,

**Invertebrate cluster:** invertebrate habitat 3

**SVAP Aggregate score:** 32/11 items scored = 2.9 (poor)

key impacts: geomorphic, fisheries

**Problem Reach 3.6** Example of a large delta deposit from the small stream entering from the right, an indicator of excessive bedload transport. Note how the main stream has had to adjust to this sediment input by shifting the entire channel leftward and modifying its pool.



Problem Reach Riffle Embeddeness = 3 Note sand between the cobbles and partially covering the gravel gravel is > 40% embeddedness