

Salmon Habitat Monitoring Overview



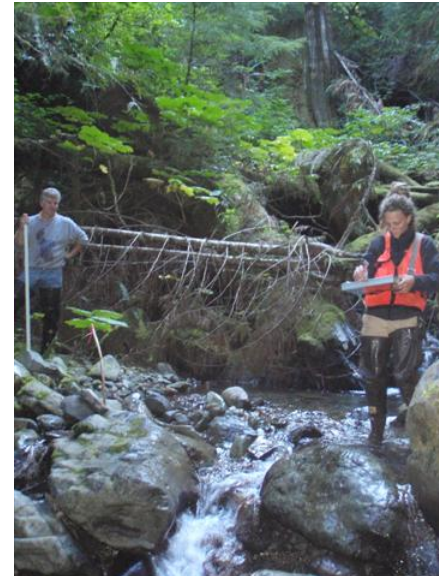
February 26, 2015

Salmon Habitat Monitoring Project

- Goals of the Habitat Monitoring Project
 - Establish baseline of current habitat conditions
 - Determine whether habitat conditions are stable, improving or degrading over time
 - Provide a means to compare trends in salmon habitat conditions in Ag-NRL & Rural Resources
 - NRL zoned land versus other lands in under Skagit County jurisdiction.

Salmon Habitat Monitoring Project

- Sampling sites equally distributed between Ag-NRL / RR-NRL and other lands under Skagit County jurisdiction
- Sampling to be conducted on sites where County staff have been granted permission by the landowner
- Only wadeable stream that are or have the potential to be fish bearing.
- Only area under direct jurisdiction of Skagit County.



Salmon Habitat Monitoring Project

- Objectives;
 1. Establish statistically valid baseline conditions of habitat conditions during the first year – 2004
 2. Conduct additional Habitat conditions monitoring in future year to be used to analyze trends over time.
 3. Determine whether habitat conditions are degrading or remaining static in Ag lands.
 4. Provide a means to compare trends in salmon habitat in Ag land versus other lands.
- Constraints
 - Wadeable streams
 - Landowner permission
 - As such, “Skagit County understands that it can only make statements related to the stream network covered by the survey”

Environmental Monitoring and Assessment Program (EMAP)

- We used EMAP protocol with slight modification
 - Stream discharge
 - Thalweg Profile
 - LWD tally
 - Channel Characterization
 - Substate
 - Fish cover
 - Bank characterization
 - Slope
 - Riparian Characterization
 - Legacy trees
 - Non-native riparian plants
 - Human disturbance



Project Implementation

Sampling outline :

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
AG/RR-NrI	30	10	10	10	10	30	10	10	10	10
Other Lands	30	10	10	10	10	30	10	10	10	10
Total # of sites	60	20	20	20	20	60	20	20	20	20



Sampling would continue indefinitely

Project Implementation

- Problems from the start of the program included:
 - Right of entry(ROE) for 60 sites
 - 328 ROE sent out only 82 returned
 - Of the 82 only 45% allowed us access
 - 2004 only 40 of 60 sites surveyed
 - 2005 sampling combined with 2004 to get to the 60 sites
 - Ongoing problems
 - Access denied or landowner unavailable
 - Stream dried up
 - Too much flow
 - Suspected bias by only being able to sample where access was permitted.



Salmon Habitat Monitoring Project

- As we attempted to implement the monitoring plan it became clear that the design of the plan would not be able to successfully document changes to habitat on the scale necessary to make decisions on the effectiveness of our COA ordinance for Ag lands.
- In 2007 the legislature granted a three year time-out
 - 2010 extended to July 2011
- In 2011 it became clear that the County would pursue the Voluntary Stewardship Program

Questions

- For more information on Skagit County's Salmon Habitat Monitoring Program, please contact:
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