POST PROJECT MONITORING

MODULE 13 - TAMMY SCHMIDT
Tammy Schmidt

Fish Passage Biologist
Headquarters Environmental Services Office
WSDOT

Current duties: Provide fish passage project support for NW Region. Lead WSDOT’s statewide post-project monitoring program.

Background & Experience: Tammy’s background is in wildlife biology, stream restoration, and veterinary technology. Tammy was a licensed veterinary technician who transferred into the world of wildlife where she ultimately settled in as a wildlife biologist specializing in Western Pond Turtles and Oregon Spotted Frogs. Tammy spent a total of 17 years at the WA Department of Fish and Wildlife as a district wildlife biologist in Region 6 working on wildlife management/species recovery and more recently as a habitat biologist in the Fish Passage Division at HQ working with private ag producers to correct barriers to fish passage. She now works in the Stream Restoration Section of the Biology Branch at WSDOT HQ.

Education: The Evergreen State College, BS in Environmental Sciences and Pierce College, Associate in Veterinary Technology

Personal interests: Tammy enjoys training and field trialing with her basset hounds.

Post Project Monitoring

The purpose of this module is to provide an awareness of the post-project Monitoring Program at WSDOT. We’ll explore topics which make up the framework of the Monitoring Program. We will discuss the difference between assessing fish passage and stream performance, identify specific design elements that can impact fish passage, and touch on how the monitoring results can inform future designs.
Post Project Monitoring

Nyctophobics
Claustrophobics
Arachnophobics
Beware!!

Purpose: To provide awareness of WSDOT’s post-project Monitoring Program – the requirements under the Injunction, what is monitored, and why

- Program genesis
- Injunction requirements
- Protocol evolution
- Plan content
- What’s not included
- Data results
- Project feedback

Monitoring Program History

Washington State and Western Washington Treaty Tribes
(Gravel Extraction Implementation Guidelines 2019)
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Post Project Monitoring

Monitoring Intervals

- 2020: Post-Construction Inspection
- 2021: Year 7 (Over-Winter) Evaluation
- 2025: Year 10 Long-term Evaluation
- 2030: Year 15 Long-term Evaluation

Protocol Evolution

- 2017: Monitoring program launched throughout the jurisdiction area
- 2018: Expanded for alternative design appicability
- 2019: Added evaluation of design and habitat features, scour and aggradation
- 2019: Incorporated monitoring data and launched mobile data collection

Post-Construction Inspection

- Structure type
- Alignment/Configuration
- Structure dimensions
- Streambed substrate
- Streambed shape (cross section)
- Streambed slope (profile)
- Hydraulic and habitat features identified in the design
Design substrate    Native substrate

Design substrate    Native substrate

Year 1 (Over-Winter) Inspection
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Day 3: Fish Passage and Stream Restoration Training

Channel Performance – all Intervals

- Streambed material
- Channel flow
- Channel shape
  - (cross section)
- Streambed slope
  - (profile)
- Channel spanning hydraulic drops
- Function of hydraulic and habitat features
- Fish passage
- Report concerns, maintenance activities, fish presence

High Flow

Low Flow →
Day 3

Fish Passage and Stream Restoration Training
Not included in Monitoring Plan

- Limited access fencing
- Landscape/plant establishment
Not included in Monitoring Plan

- Site specific hydraulic analyses
- Wildlife passage

- SR 120 Buford Cr
- US 101 Mosquito Cr

1-99 North Fork Issaquah Creek

Culvert
Day 3  Fish Passage and Stream Restoration Training

- Is the project fish passable

- Does the project meet the guidance standards under which it was designed

Hydraulics Manual

2013

Water Crossing Design Guidelines

Washington State Department of Natural Resources

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**Actions Determined by Monitoring**
- No Action Needed
- Increased Monitoring
- Repair
- Modify
- Replace

**Results Feedback Loop**

**New Construction Techniques**
- Install bed in 12" Lifts
The End