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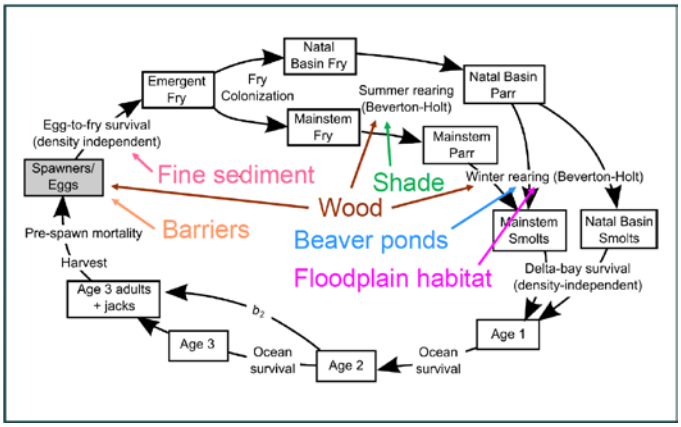
National Estuary Program

SALMON LIFE CYCLE MODEL FOR THE SNOHOMISH BASIN

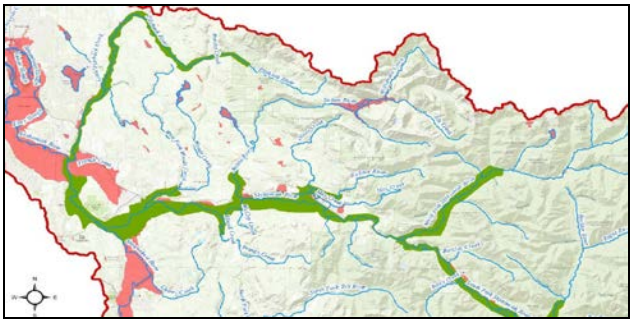
Floodplain restoration is an important recovery strategy identified in the Snohomish Basin Salmonid Conservation Plan. Complex networks of land ownership, competing interests, and conflicting government mandates has limited progress such that we are not meeting our 10-year targets. Several multi-benefit processes are engaged in finding mutually beneficial solutions in the basin but are hamstrung by information gaps. This project will use the most up-to-date information to conduct a habitat change analysis and salmon life cycle model in the Snohomish Basin.



Chinook conceptual life cycle model, with diagnostic scenarios. Beechie et al. 2019

What we're doing

- Quantify the effect of floodplain restoration and degradation on salmon, clarifying actions and effort necessary to recover populations.
- Use new data to quantify current habitat conditions, capacities, and productivity.
- Estimate historical conditions as proxy for full restoration, including population capacities and productivity.
- Compare to estimate relative effects of different habitat restoration scenarios on populations.



Floodplain characterization, Snohomish floodplain acquisition strategy.

WHY THIS ISSUE IS IMPORTANT

Interfacing with competing interests is key to making floodplain restoration progress, and a multi-benefit process must be informed by the best available information. Understanding the effects of different restoration scenarios will help to identify and prioritize actions in this multi-benefit space.

WHAT YOU CAN DO

Resource managers can compile their best available habitat data for their watershed and use the open source base model we are developing with NOAA to quantify habitat quantity and quality, Chinook and Coho capacities and productivities, and evaluate restoration scenarios.

ABOUT THE TULALIP TRIBES

The Tulalip Tribes is a federally recognized sovereign Indian tribe, and signatory to the 1855 Treaty of Point Elliott. Under the Treaty, the Tulalip Tribes reserved rights necessary to continue lifeways. The Snohomish River supports a variety of cultural and treaty resources. Some, like Chinook Salmon, are endangered, and depend on complex habitat throughout the watershed. This project will aid collaborative planning and restoration efforts and improve resources managers and the tribe's ability to affect recovery for the salmon resource, and the River.

FOR MORE INFORMATION

https://nr.tulaliptribes.com/

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