

# Essential Elements of Adaptive Management Plans for Puget Sound Salmon Recovery

Puget Sound Technical Recovery  
Team

# Why take an Adaptive Management approach for Recovery Plans?

## Basic principles and features of Adaptive Management

- Systematic process for improving future management actions by learning from the outcomes of implemented actions.
- A means to reduce the risk of insufficient investment and misdirection of future funding.
- A rigorous, transparent process to set reasonable expectations and timeframes.
- Support for taking action even though there is uncertainty.
- Method for communicating information to the public and building understanding.
- Expecting surprise and capitalizing on “crisis”.
- Method for distinguishing mistakes from failure.

# Questions an Adaptive Management program is designed to address for Salmon Recovery

Questions answered directly by implementation of Adaptive Management program

- How well does a specific project work?
- Are the collective projects achieving the anticipated results? In the short-term, long-term?
- Are the hypotheses for what is limiting recovery valid and is our strategy appropriate?
- Are we achieving recovery of salmon in our watershed and across Puget Sound?

# Questions an Adaptive Management program is designed to address for Salmon Recovery

Questions answered indirectly by implementation of Adaptive Management program

- What are the major impediments to achieving our goals and what strategies will we implement to address the factors limiting recovery?
- How can the certainty of achieving watershed objectives be increased through monitoring and reviewing and modifying management actions?
- Are we implementing actions that we committed to and at a rate to reach the 10-year milestones?

# Essential elements of a plan implementation framework that is “adaptive”

## Structural elements of an Adaptive Management plan

- Goals – implementation, restoration, process and participation.
- Assumptions and uncertainties about key habitat and species factors related to the goals
- Specific actions leading to achievement of goals
- Hypotheses about contributions of actions to goals
- Measures to assess effectiveness of the actions, including triggers
- Data collection, analysis and evaluation supporting measures to assess effectiveness

# Essential elements of a plan implementation framework that is “adaptive”

Elements of an Adaptive Management plan that support and facilitate implementation

- Communication at all levels of results of actions and improvement of knowledge; including explicit decision support system
- Resources sufficient to carry out each element over time and geographic area
- Decision making structure defining roles and responsibilities for each element
- Commitments to implementing plan and actions
- Systematic process linking these elements together predictably

# Elaborations of Plan Elements as examples

Data collection, analysis and evaluation supporting measures to assess effectiveness and gauging progress

- Implementation, direct and cumulative effectiveness, validation monitoring.
- Specify what will be monitored under each type of monitoring
- Develop procedures and protocols that allow assessments to be rolled up across stream reaches and watersheds to the ESU level.
- Estimate costs of monitoring
- Identify roles for each monitoring need and who is currently funding the projects.

# Elaborations of Plan Elements as examples

Decision making structure defining roles and responsibilities for each element

- Tracking and guiding plan implementation
- Making technical assessments about effectiveness of hatchery, harvest and habitat actions
- Evaluating progress and making decisions about priorities within and across H's.
- Communicating progress
- Managing data, describing plan effectiveness
- Securing funds to support plan implementation

# Elaborations of Plan Elements as examples

Systematic process linking all elements of plan together predictably

- Specify plan timeline e.g., 10-year horizon for plan
- Specify appropriate spatial scales for monitoring, reporting and evaluation
- Specify timeframe and groups to whom reporting of results will occur and in which decisions will be made.  
For example:
  - 1st 2 years: develop detailed monitoring plan, initiate monitoring, reporting on implementation
  - year 3+: effectiveness assessments and continue implementation reporting
  - year 5+: use info to evaluate progress and priorities for continued funding of projects, engage discussion with broader policy committee for these decisions