



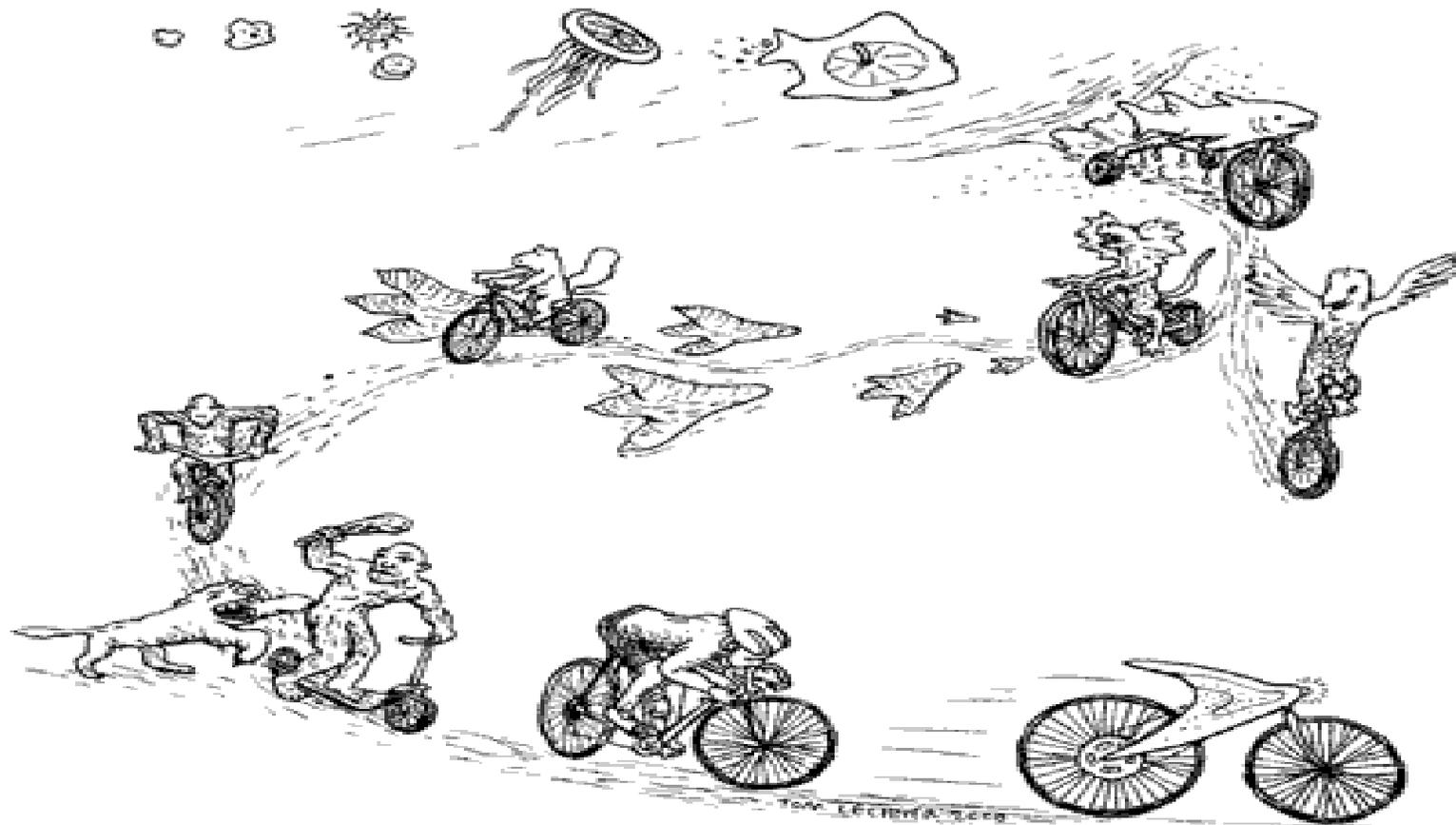
WRIA 9 Adaptive Management:

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An Evolving Program

“A system of projects or services intended to meet a public need.”



Adaptive Management?



Why Are We Developing An Adaptive Program?

- **ESA 4(f) coverage:**

“Objective, measurable criteria which, when met, would result in a determination, in accordance with the provisions of this section, that the species be removed from the list.”

- **Uncertainty:**

The Puget Sound TRT has determined that the watershed plans have a high degree of uncertainty. We therefore need to track the success of our plan actions over time.

- **Accountability:**

It makes sense.

Basic Principles of Adaptive Management

- Integrates science and policy in decision making.
- Develops indicators, triggers for actions, and criteria for decisions.
- A means to reduce the risk of insufficient investment and misdirection of funding.
- Method for communicating information to the public and building understanding.

Elements of the WRIA 9 Plan Adaptive Management Approach

- Identify Key Uncertainties and Conservation Hypotheses
- Determine appropriate monitoring
- Identify appropriate measures
- Identify potential outcomes and decision triggers
- Make explicit the institutional structure including communications and decision making
- Identify potential resources

WRIA 9 Realities

- WRIA 9 includes only one of 22 independent Chinook populations within the Puget Sound ESU.
- The Green/Duwamish is a hatchery dominated system with over 3 million juvenile Chinook released annually.
- Estimating VSP parameters for NORs is therefore very difficult.

What's REALISTIC For WRIA 9 Monitoring?

- Project specific implementation and effectiveness monitoring
 - document whether a project was implemented, and
 - document whether the project had the desired effect.
- Population-level VSP monitoring
 - monitoring largely in place including spawner surveys, otolith analysis, smolt trapping, CWT analysis for harvest done by others including WSDOT, USFWS, and NMFS.

WRIA 9 Adaptive Management Monitoring Focus

- **Short Term (Ten Year):** Implementation monitoring of individual projects that address WRIA 9 priorities.
 - Transition zone
 - Spawning and rearing habitat
- **Longer Term:** VSP Validation monitoring.
 - productivity
 - spatial structure

Monitoring Needs

- Need to set realistic goals.
- Need to determine what makes sense to monitor.
- Need performance standards or triggers.
- Need Criteria for change.

Current WRIA 9 Monitoring

- **Baseline and effectiveness monitoring for:**
 - Codiga off channel, Burien seawall, North Winds Weir, and Olympic Sculpture Park tidal embayment.
- **Habitat Effectiveness Monitoring**
 - Designing freshwater and estuarine effectiveness monitoring programs at North Winds Weir and Newaukum Creek.

Where Does Adaptive Management Fit Into This?

One Approach: Define progress toward a biological reference point. For example, link decision criteria to progress toward achieving necessary future conditions.

Adaptive Management Work Group

- **Purpose:**

Develop a monitoring and adaptive management (MAM) plan for the WRIA 9 watershed.

- **Some Questions:**

-Can we scientifically test conservation hypotheses or do we use indicators that are related to the goals of the conservation hypotheses?

-To what extent should the Plan focus on effectiveness monitoring versus VSP monitoring?

-What contingencies should be developed in plan for funding short falls?

Adaptive Management Work Group

- **Schedule:**

1st quarter 2006: Hired consultant and invited potential Work Group members to participate.

2nd quarter 2006: Convene Work Group to review preliminary draft of the MAM Plan and recommend changes..

3rd quarter 2006: Prepare final draft of MAM Plan for final Work Group review. Conclude AM Work Group meetings.

4th quarter 2006: Final MAM Plan recommended to Steering Committee, review with Steering Committee and Forum. MAM Plan adoption by Forum end of 2006.

The Future



Example Project Monitoring Schedule:

- 1st 2 years: develop and initiate monitoring plan tied to project work schedule.
- year 3+: effectiveness assessments
- year 5+: use information to evaluate progress and priorities for continued funding of projects