



Department of Commerce



DEPARTMENT OF  
**ECOLOGY**  
State of Washington



Washington  
Department of  
**FISH and  
WILDLIFE**

# Critical Areas Monitoring and Adaptive Management

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February 27, 2018  
Seattle Workshop

# Workshop Goals



- Introduce the concept of critical areas permit monitoring and adaptive management
- Explain/explore why monitoring might be beneficial
- Share tools for monitoring critical areas permit implementation and effectiveness
- Discuss challenges and identify resources

# Why Monitor? Legal basis?

- No statutory requirement to monitor under GMA or SMA.
- Best Available Science WAC 365-195:
  - Encourages monitoring and evaluation of critical areas protection efforts (905(6))
  - In absence of valid scientific information, recommends a “precautionary or no risk” approach, or an interim adaptive management approach (920)
- Monitoring has been required in some hearings board cases under certain circumstances:
  - Jefferson County choosing less stringent protection standards against seawater intrusion into potable water supplies(2002)
  - Skagit County choosing to take a less-than-precautionary approach for protection (2003)
  - San Juan County limitations on modeling and data regarding impact of increased UGA densities on seawater intrusion into critical aquifer recharge area (2006)

**Permit  
Implementation  
Monitoring**

**Permit  
Effectiveness  
Monitoring**

**Ecological  
Validation  
Monitoring**

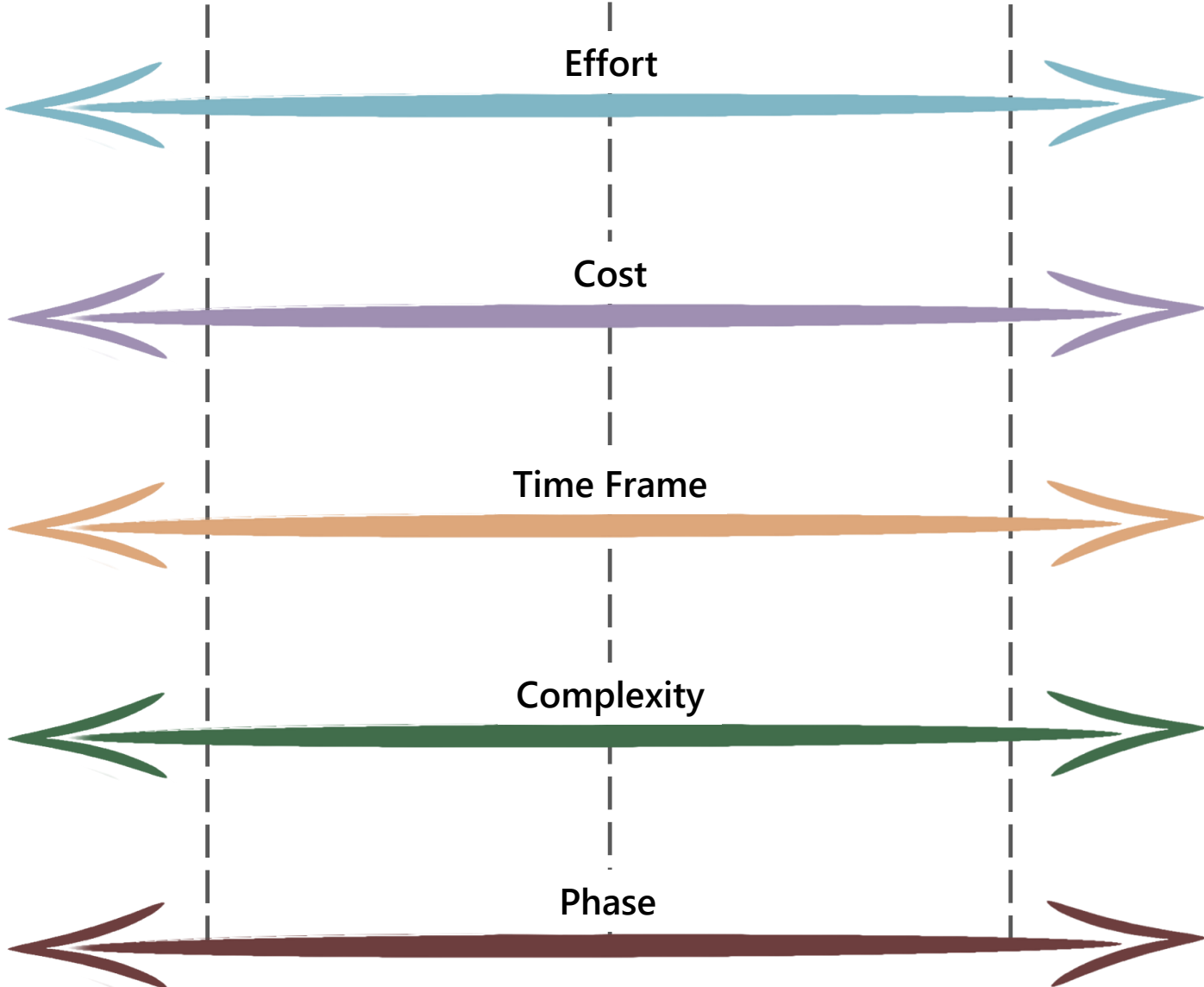
Effort

Cost

Time Frame

Complexity

Phase

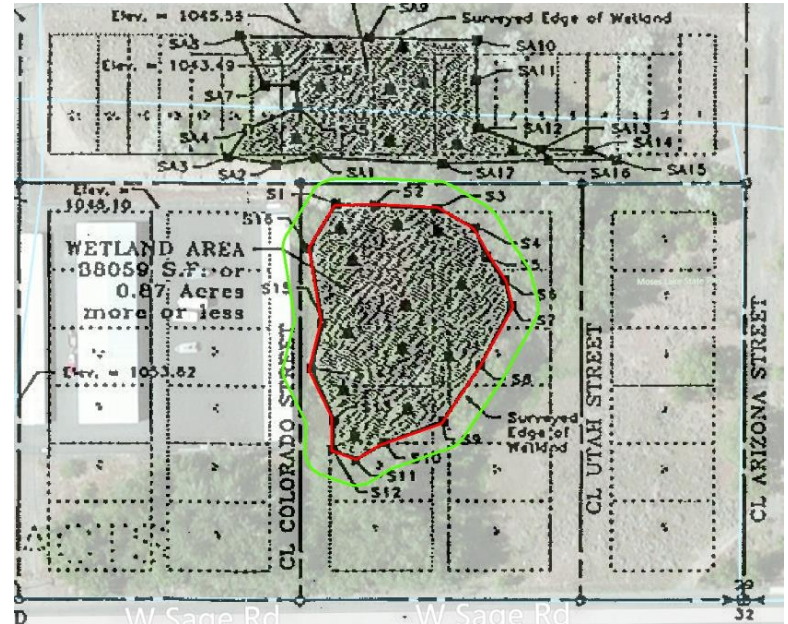


# Primary emphasis of this guidance

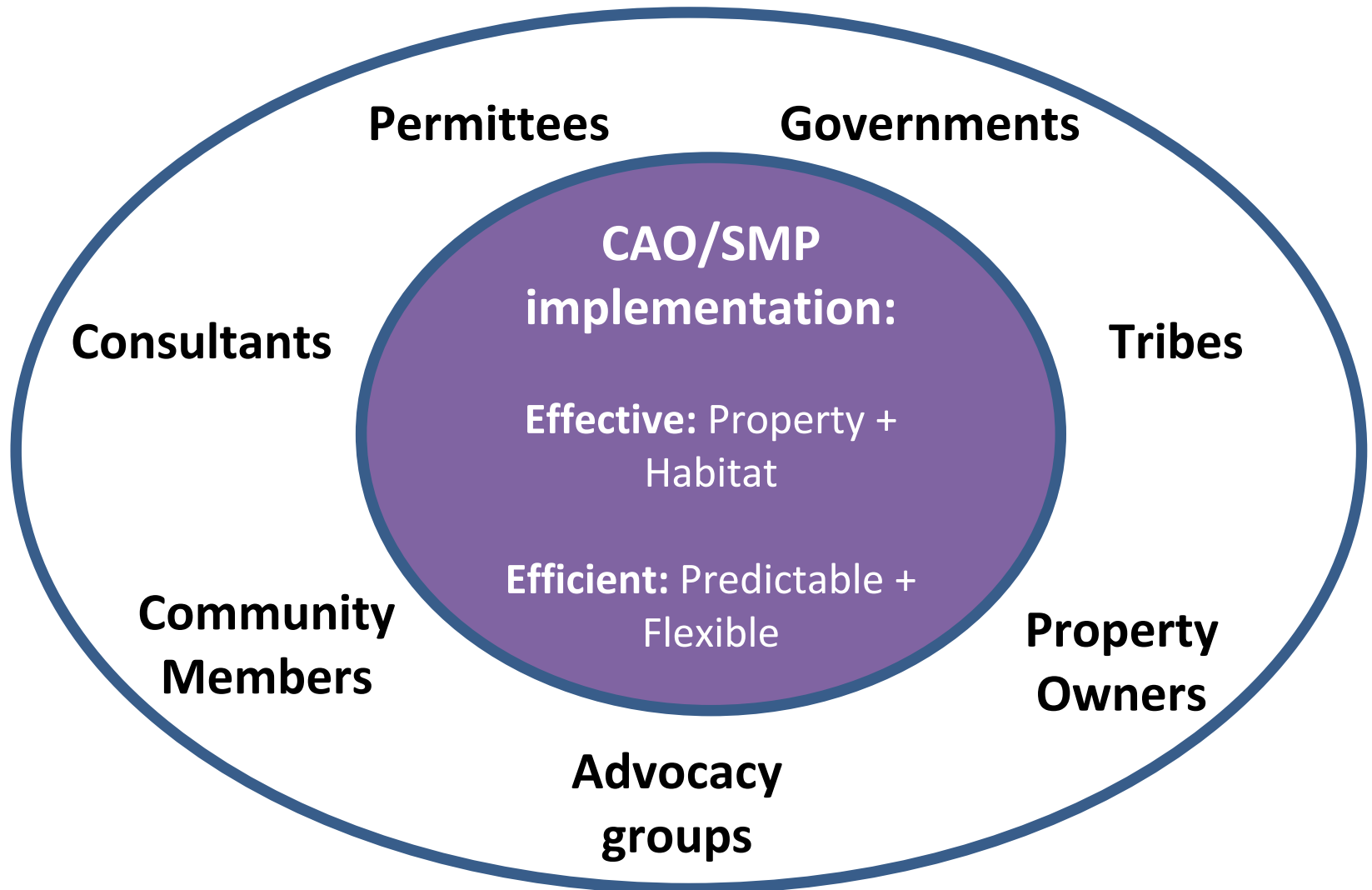
Monitoring or tracking permit implementation and/or applicant compliance with mitigation requirements.

Adaptively managing based on results, e.g.:

- Staff review process, training
- Application forms, guidance for applicants
- Administration interpretations
- Revising regulations



# Why Monitor? Addressing Common Interests



# Are we achieving “no net loss?”

We can only know if we are achieving No Net Loss through implementation over time

Guiding principles as we build “feedback loops:”

- Humility
- Curiosity
- Respect
- Partnerships



*Prepared for*

**City of Benton City**  
City Hall  
708 9th Street  
Benton City, Washington 99320



**SMPs:** Cumulative impact analysis projected forward and determined regulations would achieve “No Net Loss.”

# Benefits of monitoring: Feedback from Previous Workshops



- Ensures regulations are being implemented
- Data is better than anecdote
- Provides area-wide trends
- Provides opportunities to educate applicants – fosters support
- Helps determine what you don't need to require
- Identifies risk of planned development to people and ecological function
- Mitigates legal liability
- Updates critical areas inventory and status
- Creates consistency over time
- Tracks performance standards/mitigation
- Validates efforts
- Demonstrates no net loss/progress to officials
- Adaptive management could lead to code clarification/simplification
- Informs inter-relatedness of regulations
- Identifies cross-team improvements

# Challenges of monitoring: Feedback from Earlier Workshops



- Lack of resources – staff, funds, state budget/grants
- Changes in leadership
- Lack of political will
- Lack of training/knowledge
- Changing state mandates
- Balancing property rights
- Conflicts of interest (jobs v. environment)
- Homeless populations moving into critical areas
- Single-family residence permittees lack funds to pay for monitoring
- Baseline data
- Database challenges – sorting, monitoring, transferring information
- Delay in acquiring data
- Data/technology to keep up with climate change
- Loss of institutional knowledge
- Property owners' privacy concerns (e.g., drones)
- Discrepancy between jurisdictions

# Break Out Activity

**What questions would you like to answer by monitoring critical areas?**

**Silently write down responses**



**1 Minute**

**In pairs, discuss responses**



**2 Minutes**

**In groups of 4, discuss responses**



**4 Minutes**

**Report out any major themes to the group**



**5 Minutes**

# Monitoring and Adaptive Management Steps



1. Articulate reasons for Monitoring
2. Identify Key Study Questions/Objectives
3. Design Monitoring Program
4. Determine Monitoring Time Frame
5. Evaluate Results and Make Recommendations

# Step 1: Articulate Reasons for Monitoring

- Direction from core plans or policy documents, ordinances
- Inadequate protection of specific critical
- Unpermitted activities
- Community complaints
- Desire to improve transparency and accountability
- Improve the permit process



Courtesy of City of Bellingham

# Step 2: Identify Study Questions/Objectives

## Key Questions

- **How do we ensure that these conditions are implemented?**
  - Implementation monitoring
- **How do we know if performance standards are met over time?**
  - Effectiveness monitoring
- **Without one you don't have the other**

Courtesy of Island County

# Step 3: Designing A Program

- Discrete categories of actions?
- Reliable way to track permits and conditions?
- Sample size and random selection?
- Selection bias/access to permit information?

City of Bellingham  
Department of Public Works Laboratory  
April 2015

## URBAN STREAMS MONITORING PROGRAM REPORT 2014



# Step 4: Monitoring Time Frame



Every 5 years?

Every 8 years  
for update?

Retroactive  
review?

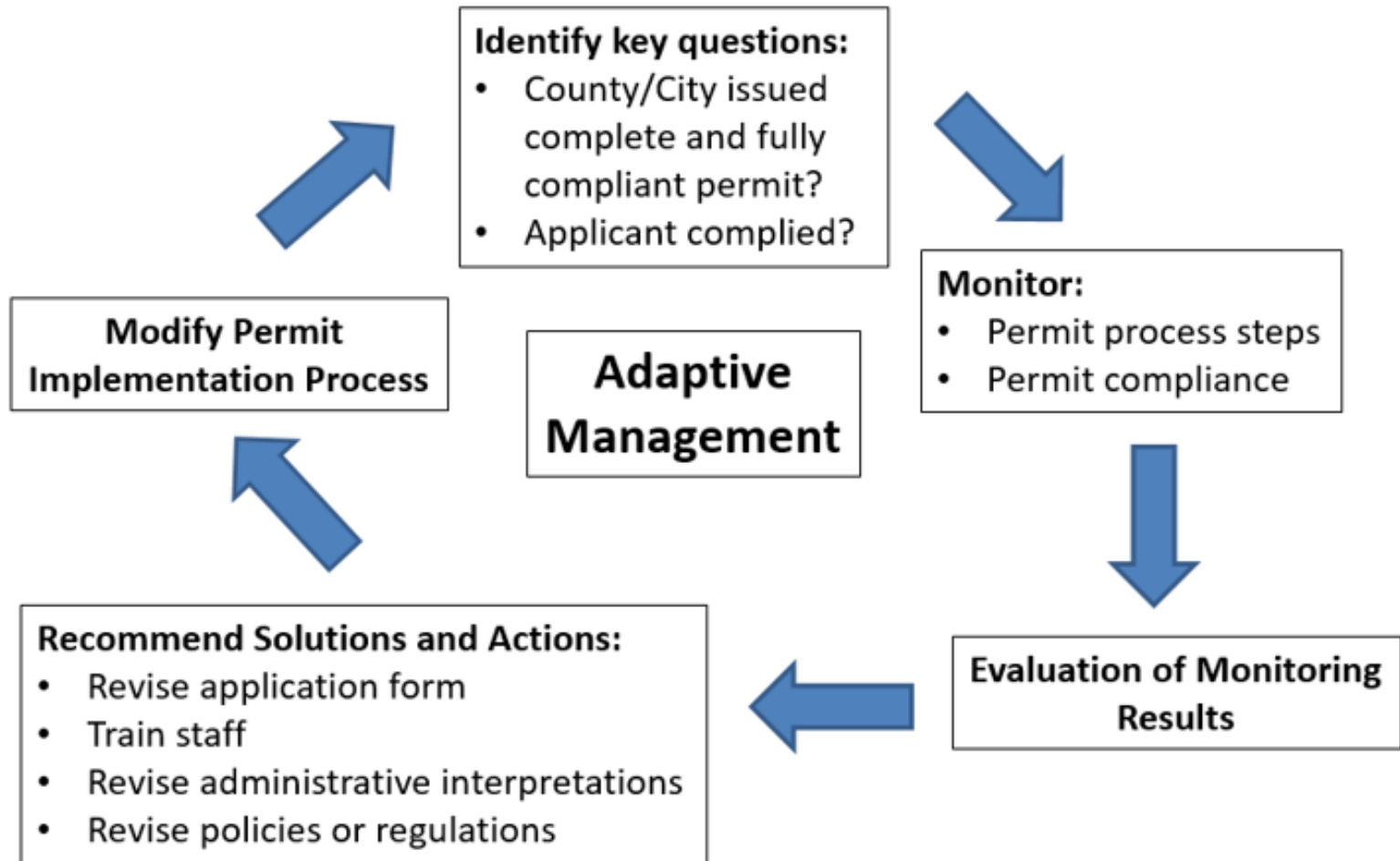
- Scope of monitoring?
- Ongoing or limited time frame?
- Specific reporting periods?

# Step 5: Evaluation and Recommendations

- Evaluate results
- Produce reports that answer the monitoring questions
- Make recommendations for training staff, tweaking/improving the permit process, revising regulations



# Permit Monitoring and Adaptive Management





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Questions?

[Draft Monitoring and  
Adaptive Management  
Chapter](#)

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