

# **SRFB/Forum Monitoring Review**

Presented by Ken Dzinbal  
October 2009

# Review Questions for Forum:

- Is the SRFB funding the correct monitoring programs?
  - Are there gaps?
  - Are there things that no longer need to be monitored?
- Is the funding allocation among monitoring programs correct?
- Have we learned enough to revise or update technical design, sampling details, or general monitoring program details?
- Can we improve the timing of funding cycles, avoid last-minute requests, and improve stability of long-term programs?

# Different Types of Monitoring Address Different Questions

## Implementation Monitoring

- Were funded projects completed as planned?

## Effectiveness Monitoring

- Do habitat restoration projects work?
- Can we actually improve fish habitat?

## IMW Monitoring

- Does habitat restoration actually increase fish production and abundance?

## Status & Trends

- What is the current condition, or trends?
  - at targeted sites
  - for streams or watersheds generally (based on random, representative samples)

# Forum Recommendations to SRFB

## Important Monitoring Categories:

- \*Implementation Monitoring
- \*Project Effectiveness Monitoring
- \*Intensively Monitored Watersheds
- Status and Trends Monitoring
  - \*fish
  - habitat
  - water quality
- Nearshore / Marine Restoration Monitoring
- Data Management



# Distribution of Monitoring Funds, 2008

■ Funding level based on PCSRF requirement for “a minimum of 10% of budget for monitoring”

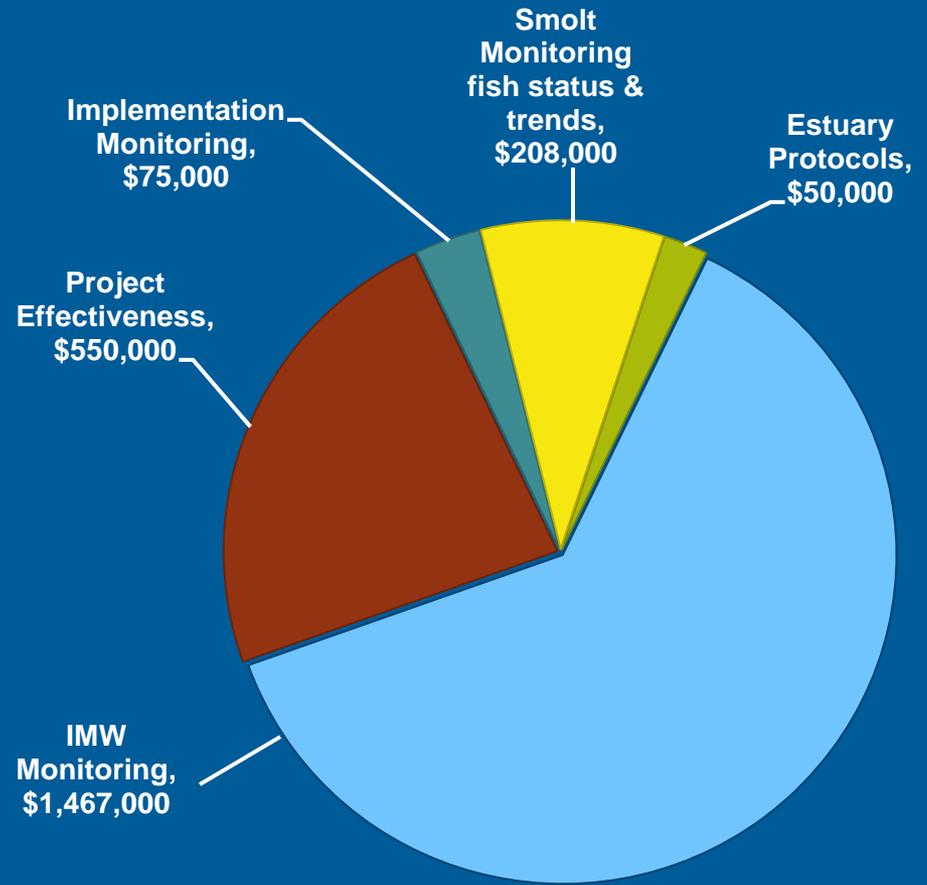
— Total 2008 PCSRF = \$23.5 million

- Monitoring 10% = \$2.35 million

— Total 2009 PCSRF = \$26.5 million

- Monitoring 10% = \$2.65 million
- Increase over 2008 of \$300,000

### Monitoring Funds, 2008



# Implementation Monitoring

## Important Monitoring Categories:

- \*Implementation Monitoring
- \*Project Effectiveness Monitoring
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- Status and Trends Monitoring
  - \*fish
  - habitat
  - water quality
- Nearshore / Marine Monitoring
- Data Management

# Implementation Monitoring

- SRFB currently dedicates \$75,000 to implementation Monitoring
- This funds project final inspection and reporting by RCO grant managers to assure each project was completed as planned

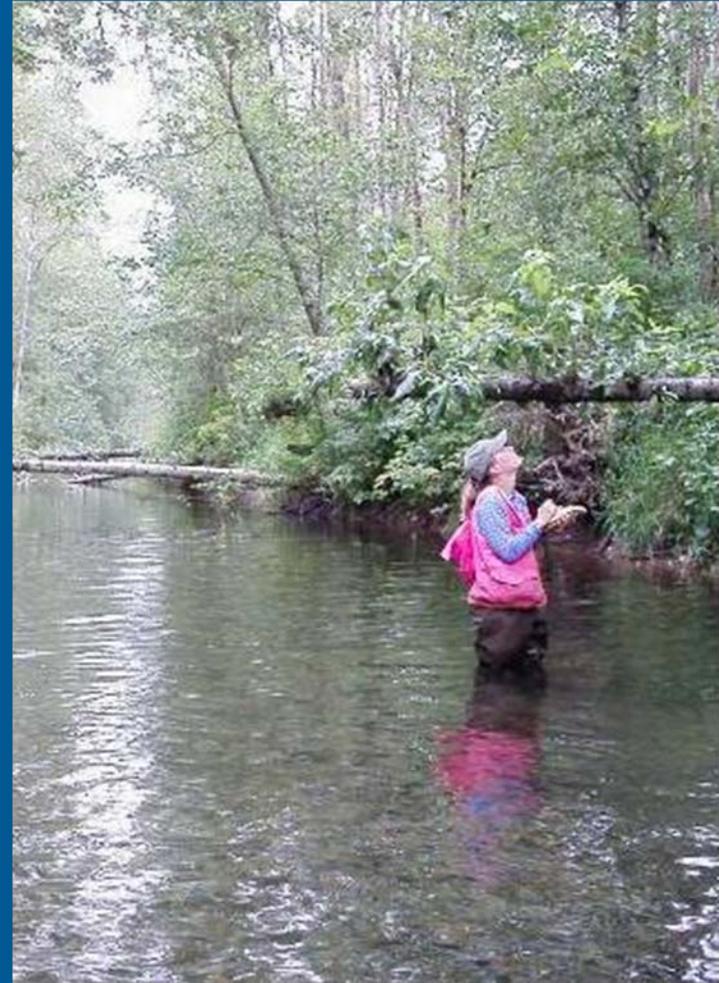
## Recommendation from Forum:

- Continue project implementation monitoring for PCSRF funded projects with 2009 funds

# Project Effectiveness Monitoring

## Important Monitoring Categories:

- \*Implementation Monitoring
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- Status and Trends Monitoring
  - \*fish
  - habitat and water quality
- Nearshore / Marine Monitoring
- Data Management

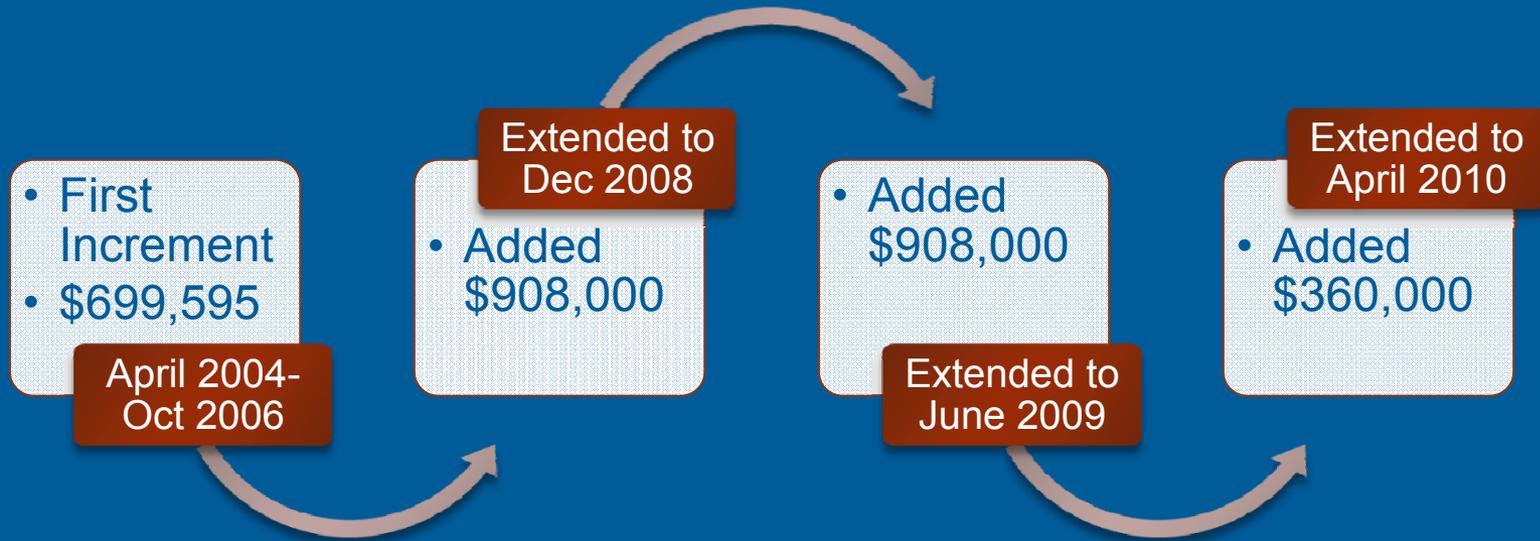


# Project Effectiveness Monitoring

- SRFB currently dedicates \$550,000 to Project Effectiveness Monitoring.
- This monitoring is conducted by contract with Tetra Tech
  - Coordinated program to independently evaluate the success of funded projects
  - Repeatable, standardized approach
  - Evaluates the cost-effectiveness of different project categories
  - Provides accountability for expenditures
  - Results can be used to improve the design of future projects

# Project Effectiveness Monitoring

- Originally planned as a 12 year project.
  - Just completed year 5
- Certain project categories/variables were understood to have response times of 5-10 years or longer



# Project Categories

**Fish Passage**

**In-Stream  
Structures**

**Riparian Plantings**

**Livestock  
Exclusions**

**Constrained  
Channels**

**Channel  
Connectivity**

**Spawning Gravel**

**Diversion  
Screening**

**Habitat Protection**

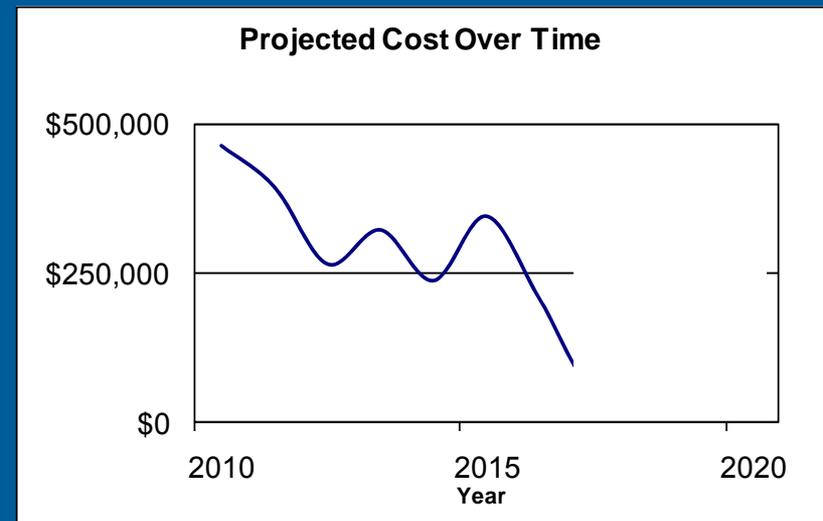
# Project Effectiveness Monitoring: Results

- Five Years of Data Collection
  - Conclusions for some categories – no further monitoring required
  - Need larger sample sizes in some others
  - Should make data and results more easily available to help project sponsors improve project design and implementation
- Cost effectiveness analysis
  - Identifies projects that provide the greatest results for the least cost
  - Can help prioritize funding for project sponsors
- Coordination and cost savings via partnership with Oregon
  - Could be achieved with other agencies with additional coordination

# Project Effectiveness Monitoring

## Forum Recommendations:

- 1) Stay the course, with some adjustments to current contract
  - Discontinue monitoring in 3 project categories
  - Combine project categories to increase sample size
  - Implement Tetra Tech 5-year review recommendations
  
- 2) Finish out original project schedule and sampling matrix
  - Costs fluctuate up and down with sampling schedule until 2017
  
- 3) Improve adaptive management out-reach to project sponsors and lead entities
  - Web-based project category summaries with results and outcomes
  - Interactive map of project-specific data by location



# Effectiveness Monitoring Recommendations

- 4) Forum should develop a statewide (multi-agency) approach to effectiveness monitoring
  - Partner with other agencies to increase sample sizes in key project categories
  - Align protocols where possible
  - Align project effectiveness sites with fish-in/fish-out sampling where possible
  - Will need contractor support to help compile information
  
- 5) Migrate reach-scale effectiveness monitoring data to an existing state database
  - Data should be web-accessible



# Intensively Monitored Watersheds

## Important Monitoring Categories:

- \*Implementation Monitoring
- \*Project Effectiveness Monitoring
- \*Intensively Monitored Watersheds
- Status and Trends Monitoring
  - \*fish
  - habitat and water quality
- Nearshore / Marine Monitoring
- Data Management



# IMW Monitoring Questions

- This is the only type of monitoring that tells whether restoration results in more salmon.
- Key Questions:
  - Does habitat restoration produce more fish?
  - Can we identify the most effective restoration efforts?
  - What are the actual cause-effect relationships between habitat restoration and fish production?

# IMW Monitoring

## ■ SRFB's IMW History

— Monitoring plan calls for 10 year program duration

### Phase 1

- July 2003 – Oct 2005: \$1,650,674

### Phase 2

- July 2005 – June 2006: \$980,257

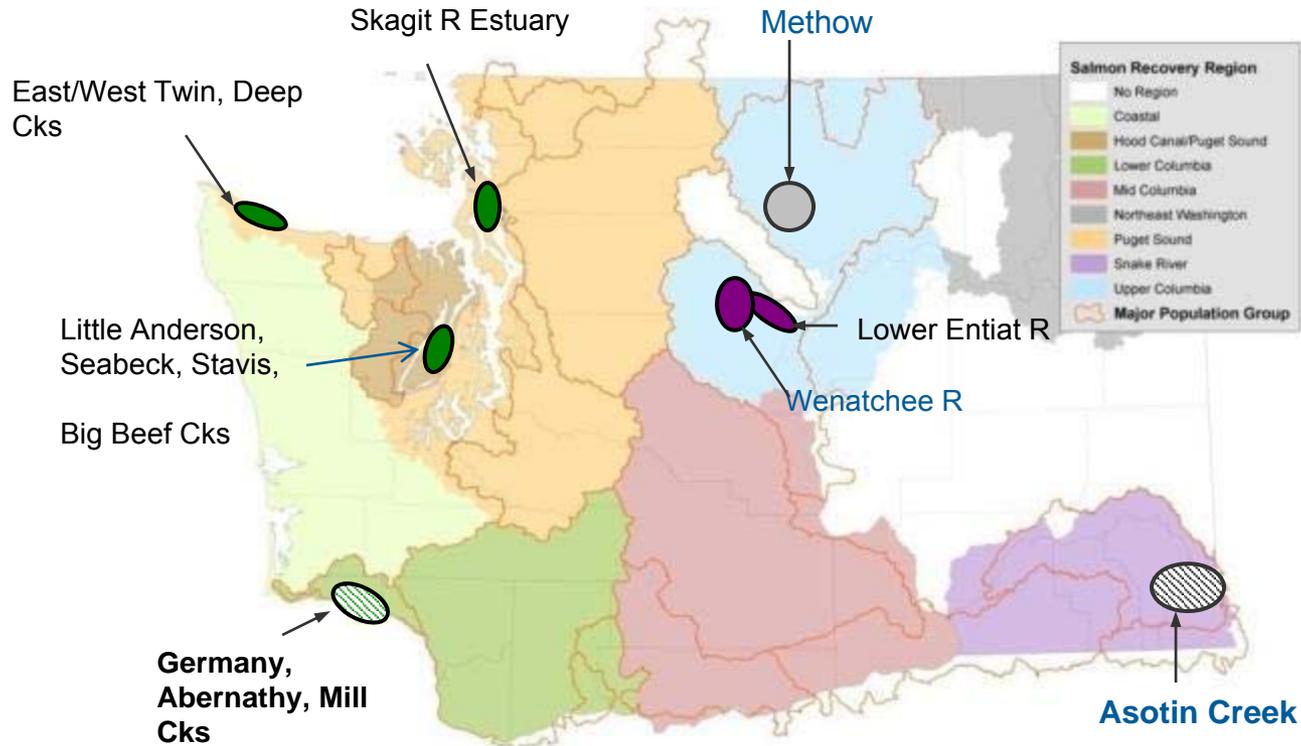
### Independent Scientific Review of Program

- 2006: \$5,127

### Full Implementation

- July 2006 – June 2007: \$1,200,000
- July 2007 – Oct 2008: \$1,467,989
- Oct 2008 – Oct 2009: \$1,467,989
- July 2009 - June 2010: \$1,467,989

# Washington IMWs



# SRFB-funded IMWs



# IMW Monitoring: Findings

- The IMW questions are consistent with the Comprehensive Monitoring Strategy and remain a high priority.
- The IMW Program as currently designed is capable of assessing fish population response to restoration at the watershed scale
- Policy-level help is needed to ensure local watersheds can support and implement the IMW treatment plans
- The recommendations offered by the ISP in 2006 remain relevant and should be revisited

# IMW Monitoring Recommendations

## Forum's Recommendations:

- 1) Stay the course with current program in the short term
  - Complete 2010 field season including data assessment and reporting
  
- 2) SRFB needs to determine whether this is an area in which to continue investing:
  - Are projects being proposed to meet the IMW plan?
  - If not, why not?
  - What is necessary to get lead entities to propose projects in IMW treatment watersheds?
  - Funding for restoration in IMWs doesn't always support the IMW treatment plans, compromising the value of IMW monitoring.
  
- 3) Connect IMW Monitoring staff with lead entities and regions to improve implementation of IMWs
  - May need policy support from SRFB for that relationship.

# IMW Monitoring Recommendations

- 4) The Forum can assist the SRFB in improving the IMW program and in assessing whether to continue funding
  - Forum can help improve coordination between SRFB-funded IMW's and other IMW studies in the Pacific NW
  - Forum can scope and host a state-wide IMW workshop
  - Forum can help develop procedures to resolve site-specific impediments to IMW success, as they emerge
  - Forum can provide a mechanism for reviewing adjustments to the IMW program

# IMW Monitoring Recommendations

- 5) Other IMW improvements:
- Compare IMW protocols and data management with those used for Status & Trends, and Project Effectiveness
  - Improve coordination between IMW efforts and Project Effectiveness Monitoring
  - Evaluate opportunities to include IMW restoration projects in the Project Effectiveness sampling pool



# Status & Trends Monitoring

## Important Monitoring Categories:

- \*Implementation Monitoring
- \*Project Effectiveness Monitoring
- \*IMW Monitoring
- Status and Trends Monitoring
  - \*fish
  - habitat and water quality
- Nearshore / Marine Monitoring
- Data Management



# Status & Trends Monitoring – Fish-in / Fish-out

- The SRFB currently contributes \$208,000 to WDFW's fish-in/fish-out monitoring.
  - This is 7% of the total fish-in/fish-out program.
- The current SRFB funded program monitors adult spawners and juvenile out migrants in four watersheds
- Directly supports the Forum's high-level indicators for salmon



# Status & Trends Monitoring Recommendations

## Forum Recommendations:

- 1) Continue SRFB contribution to fish-in/fish-out monitoring
- 2) Habitat / WQ Status & Trends monitoring is required to support the Forum's high-level indicators for watershed health. Currently, there are several gaps:
  - In-stream habitat S&T has just started (Puget Sound in 2009). Need to watch that current funding is maintained for statewide implementation
  - SRFB should consider helping local and regional organizations use the habitat Status & Trends (Ecology) monitoring database, sampling framework, and “tool kit” of standard protocols, training, field forms, etc.
  - SRFB should consider supporting development of a landscape habitat remote sensing program

# Nearshore / Marine Monitoring

## Important Monitoring Categories:

- \*Implementation Monitoring
- \*Project Effectiveness Monitoring
- \*IMW Monitoring
- Status and Trends Monitoring
  - \*fish
  - habitat and water quality
- Nearshore / Marine Monitoring
- Data Management



# Nearshore Monitoring Recommendations

- The SRFB has been interested in monitoring the effectiveness of funded nearshore projects.
- SRFB held \$50,000 in 2008 to develop nearshore monitoring protocols

## Forum Recommends:

- Dedicate the \$50,000 set-aside for the development of a nearshore monitoring approach and protocols
  - Formal presentation on this proposal later on the agenda

# Data Management

## Important Monitoring Categories:

- \*Implementation Monitoring
- \*Project Effectiveness Monitoring
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# Data Management Recommendations

## Forum Recommends

- 1) Build on success of Water Quality and smolt data exchanges
  - Don't over-reach on statewide data management strategies
  - Add adult salmon to smolt data exchange network
  - Support state proposals to consolidate agency GIS layers
  - Support habitat Status & Trends database web interface
  - Support effectiveness monitoring data archive and migration (consider aligning with Status and Trends data mgmt system)



# SRFB/Forum Monitoring Review

# SRFB/Forum Monitoring Review

- Is the SRFB funding the correct programs? **Yes**
  - Currently funded programs address core monitoring questions
- Are there gaps? **Yes**
  - Habitat status & trends
    - In-stream S&T just starting
    - Landscape-scale (remote sensing) still needed
  - Nearshore – awaiting proposal
  - Data mgt – address next steps; caution against over-reaching

# SRFB/Forum Monitoring Review

- Is the funding allocation among programs correct?
  - Implementation monitoring
    - Covers RCO's costs
  - IMW monitoring
    - “right-sized” for current program scope
    - Need to address whether projects are being implemented as planned in each IMW and if not, what to do about it
  - Project effectiveness
    - Incorporate technical and design recommendations
    - Build statewide strategy for effectiveness monitoring
    - Re-scope for 2010 (and beyond?)
    - Develop web tools for outreach (adaptive management)

# SRFB/Forum Monitoring Review

- Is the funding allocation among programs correct?
  - Status and trends
    - SRFB contributes a small amount to fish-in / fish-out
    - Need support for watershed-scale remote sensing
    - Need to make Ecology's database and "tool-kit" easily available to local partners
  - Nearshore monitoring
    - Awaiting proposal
  - Data management
    - Don't over-reach on statewide strategy
    - Effectiveness monitoring data mgt improvements (proposed)
    - Address next steps: adult salmonid data exchange

# SRFB/Forum Monitoring Review

- Have we learned enough to revise or update technical design, sampling details, or general program details? **Yes**
  - Technical and design recommendations for project effectiveness
  - Policy & coordination recommendations for IMWs
  - “Tool kit” recommendations for status & trends
  - Coordinate and align sampling frames, protocols, metrics, data mgt systems, and reporting across all monitoring programs

# SRFB/Forum Monitoring Review

- Can we improve the timing of funding cycles, avoid last-minute requests, and improve stability of long-term programs? **Yes**
  - Annual contracts should extend out 18 months or more to allow for start-up, field prep, sampling, data evaluation, and reporting
  - 2010 field sampling contract timeframe: Oct 2009 – April 2011
  - Timing of monitoring programs vs PCSRF awards is an issue



## Budget overview

# Budget Allocation

	2008 Allocation	2009			2010 Projected need <sup>2</sup>
		May Approval	October Request	December Request	
<b>Existing Monitoring Programs</b>					
Implementation Monitoring	\$75,000		\$75,000		\$75,000
Effectiveness Monitoring	\$550,000	\$360,000			\$450,000
Eff. Monitoring Bridge (April - Aug) <sup>1</sup>			\$200,000		
Intensively Monitored Watersheds	\$1,467,000	\$1,467,000			\$1,467,000
Fish-in/Fish-out Monitoring	\$208,000		\$208,000		\$208,000
Nearshore Monitoring	\$50,000				
<b>Subtotal, Existing</b>	<b>\$2,350,000</b>	<b>\$1,827,000</b>	<b>\$483,000</b>	<b>\$0</b>	<b>\$2,200,000</b>
<b>Proposed Additions for Action in October</b>					
<i>Eff. monitoring web reports and data migration</i>			\$35,000		
<i>Statewide strategy for effectiveness monitoring</i>			\$50,000		
<i>IMW workshop</i>			No Cost		
<b>Proposed Additions for Action at a Future Meeting</b>					
<i>Habitat remote sensing</i>				\$115,000	
<i>Web access for Habitat Status &amp; Trends database</i>				\$140,000	
<i>Add adult salmon to smolt data exchange</i>					\$100,000
<b>Subtotal, New</b>	<b>\$0</b>	<b>\$0</b>	<b>\$85,000</b>	<b>\$255,000</b>	<b>\$100,000</b>
<b>SUBTOTALS</b>	<b>\$2,350,000</b>	<b>\$1,827,000</b>	<b>\$568,000</b>	<b>\$255,000</b>	<b>\$2,300,000</b>
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## SRFB Contract Decisions

# SRFB Contract Decisions Today

## Current contracts to extend and amend:

1. Project effectiveness monitoring contract
  - Provide a funding bridge to 2010 PCSRF grant due to timing issues
  - Update scope to include technical recommendations
  - Include web-based reports
  - Include database migration scoping
  
2. WDFW fish-in/fish-out monitoring

## New contract for consideration and decision:

3. Effectiveness monitoring statewide strategy - consulting help for Forum staff

# Project Effectiveness Monitoring

## Staff Recommendation for Contract Action

### Extend current contract:

- Add \$200,000 and extend time from April 30, 2010 to August 30, 2010 to provide a funding bridge to the 2010 PCSRF award.
- Add additional \$21,000 for web-based reports
- Add additional \$14,000 to scope database migration

**\* Total = \$235,000**

Will request next contract renewal in Spring of 2010 (after 2010 PCSRF grant is approved)

## Forum Recommendation

- Complete the original project monitoring schedule (tapers off through 2017)
- Revise scope to include technical recommendations
- Fund 2010 field season, including data assessment & reporting
- Add web-based reports; scope data migration

## Proposed Motion Language

Move to approve \$235,000 to extend the current contract with Tetra Tech through August 30, 2010 and amend scope per staff recommendations.

# Fish-in / Fish-out Monitoring

## Staff Recommendation for Contract Action

### Extend current contract:

- Add \$208,000 and extend time from August 30, 2010 – August 30, 2011

Will seek next contract renewal for 2011 in October 2010

## Forum Recommendation

- Maintain SRFB contribution to Fish-in / Fish-out monitoring
- Support 2010 field sampling including data assessment & reporting

## Proposed Motion Language

Move to approve \$208,000 to extend the current contract for fish-in/fish-out monitoring with WDFW through August 30, 2011.

# New Contract: Effectiveness Monitoring Statewide Strategy

## Staff Recommendation for Contract Action

- Approve a new, one-time contract to hire a consultant to assist staff with information collection needed to scope a multi-agency, statewide approach to effectiveness monitoring
- New contract: December 2009 – December 2010
- Cost = Not to exceed \$50,000

## Forum Recommendation

Forum should scope a statewide (multi-agency) approach to effectiveness monitoring

## Proposed Motion Language

Move to approve \$50,000 for a competitively-bid contract between RCO and a consultant to assist with information gathering and data compilation to scope a multi-agency, statewide approach to effectiveness monitoring.

# SRFB Contract Decisions in December

## Projects for consideration in December 2009 (following additional scoping)

- Nearshore Monitoring – Will issue RFP and have costs by Dec
  - \$50K approved from 2008
- Landscape remote sensing substantive demo project
  - Estimating ~ \$115K
- Ecology habitat Status & Trends database web application
  - Estimating \$140K

# Looking Ahead: Upcoming Decisions for 2010 PCSRF grant (Spring 2010 ??)

Implementation Monitoring	\$75,000
Effectiveness Monitoring	\$450,000
IMW extension	\$1,467,000
Fish-in/Fish-out	\$208,000
Add adult salmon to smolt data exchange	<u>\$100,000</u>
■ Total	\$2,300,000

# SRFB – Requests to Monitoring Forum

## SRFB consider requesting assistance from Forum

- Forum to host a state-wide IMW workshop
  - Evaluate coordination opportunities
  - Address IMW implementation issues
  - Evaluate IMW funding needs
  
- Forum to review and confirm remaining recommended projects following additional scoping (by December)
  - Landscape remote sensing substantive demo
  - Ecology habitat Status & Trends database web application