



# Lower Yuba River Accord Overview & Update



GOLD COUNTRY FLYFISHERS

February 2, 2010

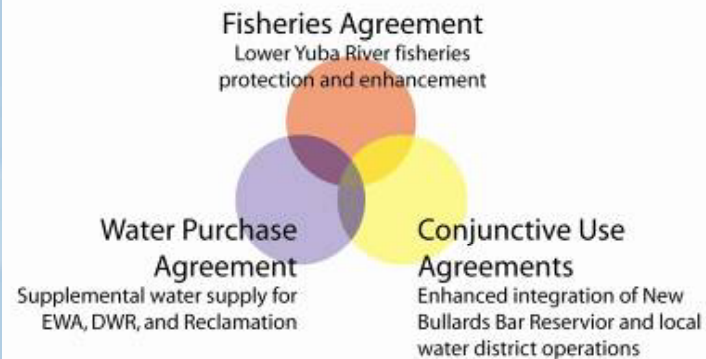
# A New Paradigm

## *The Lower Yuba River Accord:*

- *Established a new operational program*
- *Increased instream flows along 24 miles of the lower Yuba River for Chinook salmon, steelhead & aquatic habitat*
- *Preserved YCWA's ability to meet all of its responsibilities for flood control, water delivery with transfers, hydropower & recreation*

## The Lower Yuba River Accord

Three Distinct, but Inseparable Agreements



# Milestones to Success

Defining Interests & Applying Science: Development of the Accord Concepts & Flow Schedules	2002 - 2003
Crafting the Accord Agreements	2004
From Controversy to Consensus: Signing Ceremony	April 2005
Pilot Program Accord Flows, River Management Team & EIR/EIS Process	2005-2007
Accord Approved by SWRCB, Final Execution	March 2008
Accord Flows, Monitoring & Evaluation Plan, RMT Studies Program, Operations Consulting	Ongoing



# Lower Yuba Accord - Background

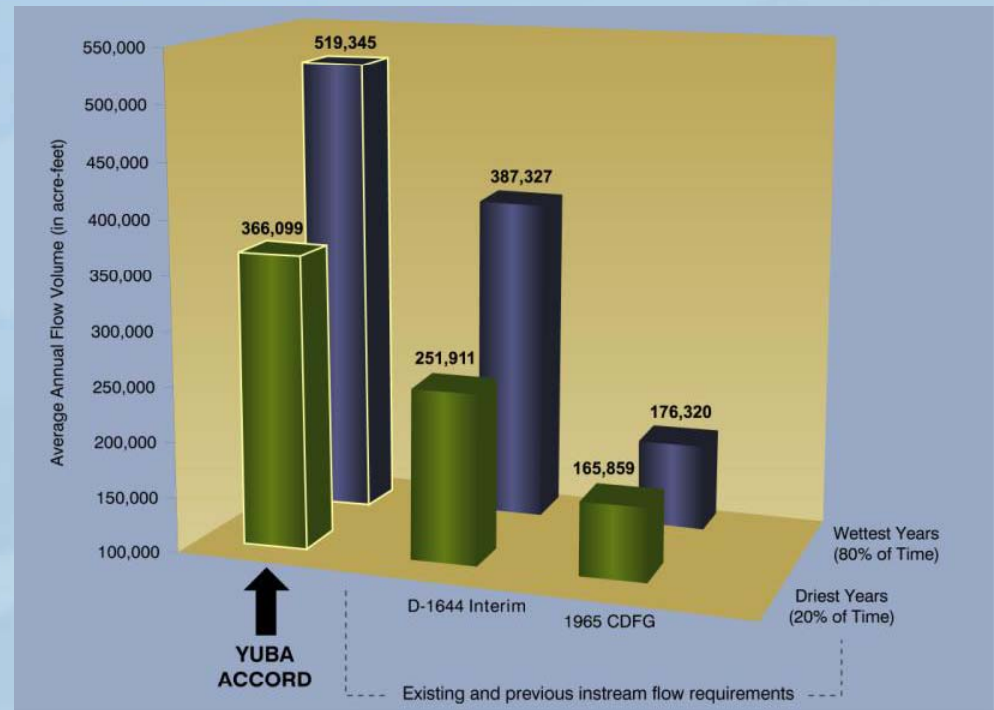
- Englebright Dam to Feather River Confluence
- Developed to meet multiple interests:
  - Local water supply reliability
  - In-river habitat
  - Conjunctive use to enhance supply
  - EWA water supply
  - Funding for Monitoring & Evaluation Program
  - Funding for flood control & water supplies



# Accord Cornerstone: Increased Flows

The Yuba River Accord increases annual use of available water supply:

- Accord Flow Schedules & Index Structure = Higher Flow Requirements
  - Better match of minimum streamflow to available water
- Lower End-of-September Storage Target
  - Implements increased releases from storage in relatively wet years
- Groundwater Supply Available as Backup
  - Local agricultural irrigators agree to pump groundwater to make surface water available to Yuba River



# Flow Schedules & Evaluation Work

- River Management Team (RMT) study & evaluation work to verify efficacy of Yuba Accord flow schedules
- 10-year, fully-funded program implemented on the Yuba River, applicable to other Central Valley Rivers
- FY 2008-09:
  - \$1.1M study work underway
  - 10 FTE employees through PSMFC
  - Monitoring & Evaluation Program developed
  - Results available on web site: [www.yubaaccordrmt.com](http://www.yubaaccordrmt.com)



# Yuba Accord River Management Team

- Functional & efficient working group
- An effective forum for discussion and input into Lower Yuba River management & operations
- Implementation of M&E Plan drives studies, budget, planning
  - Input to YCWA on:
    - Seasonal Operations
    - Real-time Flow Management
    - Response to Unforeseen Circumstances
    - Regulatory Compliance



# Focus of River Management Team Science

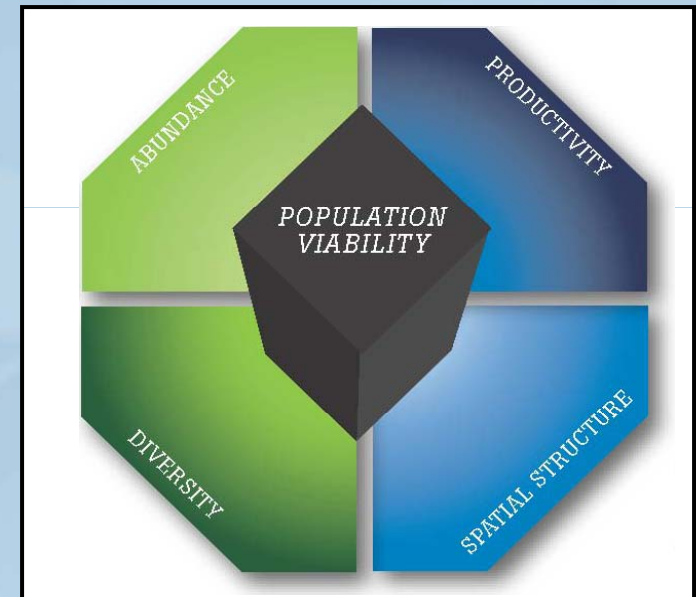
- Evaluate whether the implementation of the Yuba Accord accomplishes its biological objectives
  - Maximize occurrence of appropriate holding, spawning, incubation, rearing, and emigration flows
  - Provide suitable water temperatures
    - Adult salmonid immigration, holding, and spawning
    - Juvenile salmonid rearing and emigration
  - Promote a dynamic, resilient, and diverse fish assemblage
  - Minimize potential stressors to fish species and life stages
  - Provide guidance regarding management and restoration activities





# Yuba Accord M&E Program

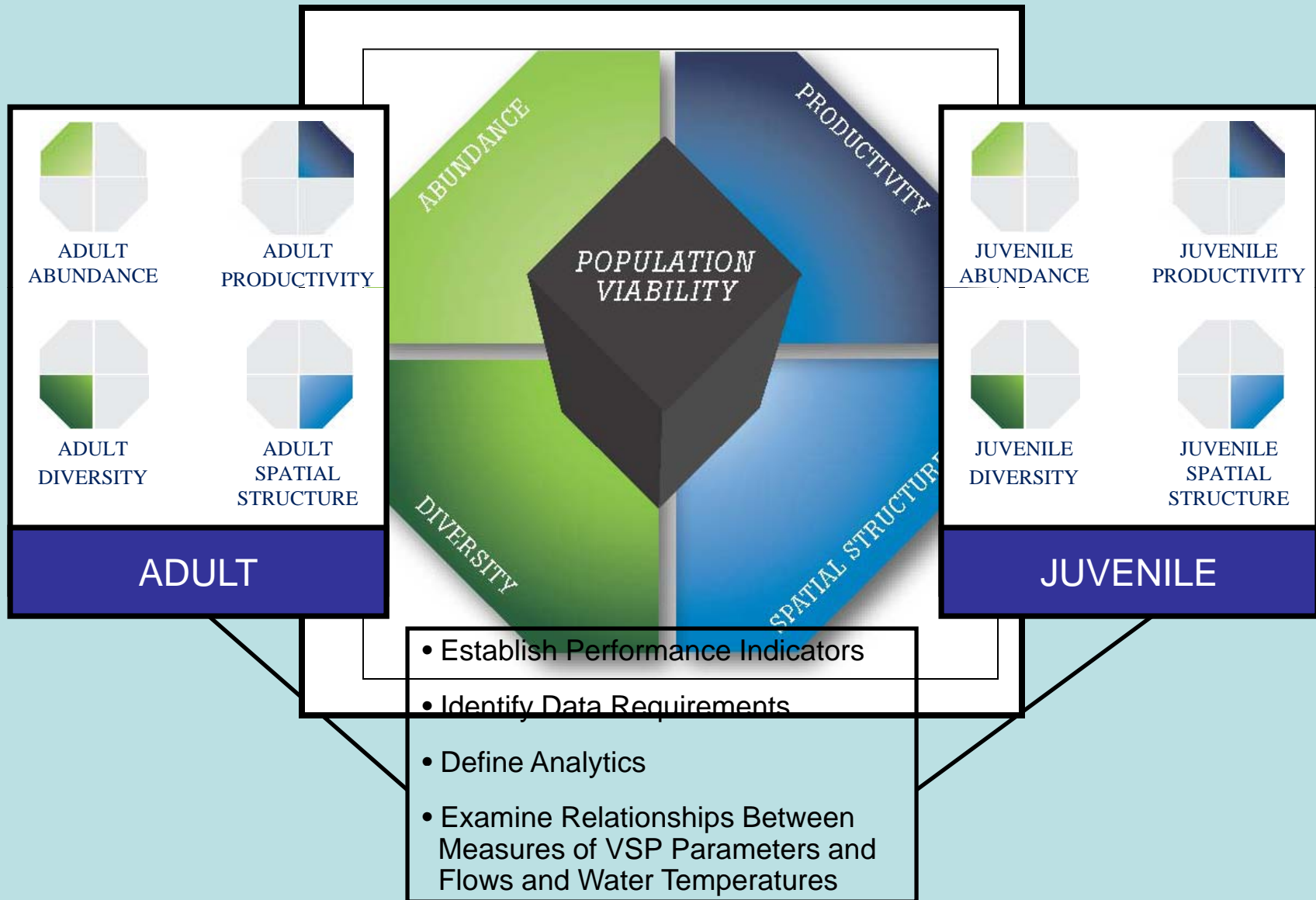
- The RMT developed a Rigorous Scientific Program to Conduct Studies, Analyses, and Reporting of Results – the Yuba Accord M&E Program
  - Maintain Fish in Good Condition
    - California Fish & Game Code § 5937
  - Promote Viable Salmonid Populations
    - VSP and Recovery Metrics
  - Flow and Water Temperature Relationships
    - Fish Populations
    - Aquatic Habitat Attributes



McElhany *et al.* 2000



# Viable Salmonid Populations



# Yuba Accord M&E Program State-of-the-Art

Multi-Agency/Party  
Consensus-Based

10-Year Program

Dependable Funding  
(~\$5.5 million)

Clear Framework (VSP)

Applied Regulatory  
Concepts

Specific Goals & Objectives

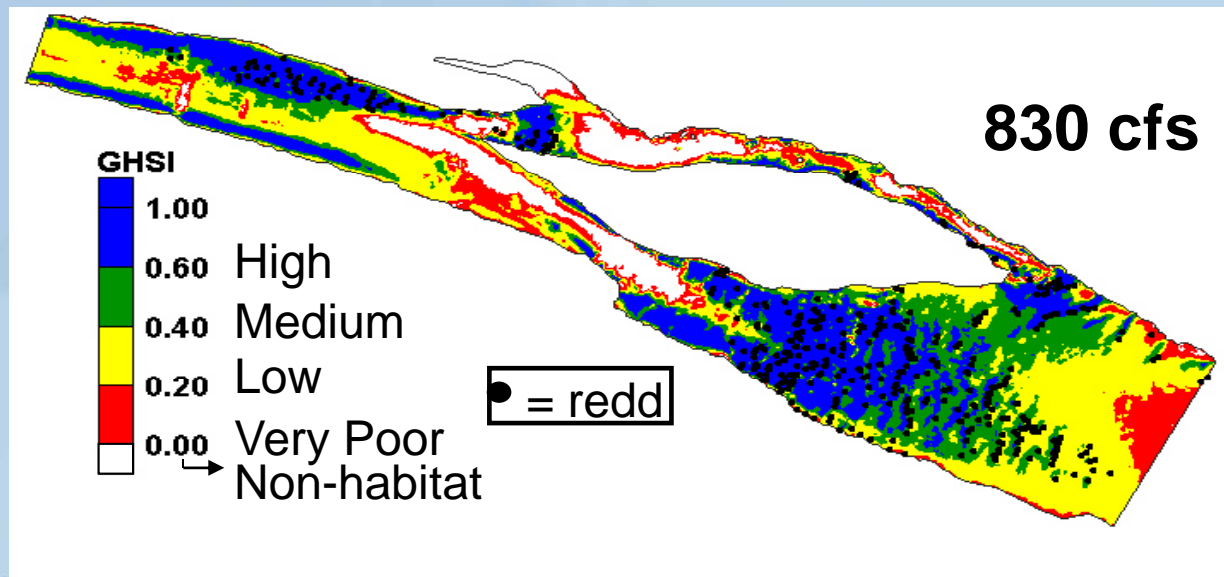
Performance Indicators

Quantitative Metrics

Specific Sampling  
Protocols & Procedures

Integrated Data Analyses

Coordinated with CVP-wide  
Programs



# M&E Program Framework

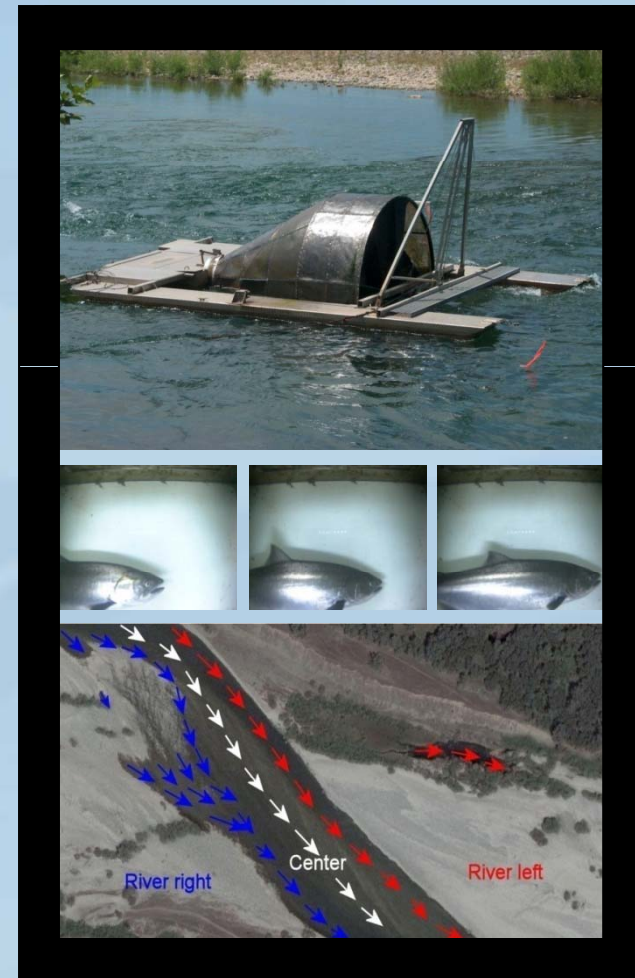
- Obtain data necessary to conduct the **analytics associated with each performance indicator** of the M&E Program
- Survey and sampling specific **protocols & procedures** developed for each monitoring & study activity
- Individual protocols & procedures are **coordinated with non-RMT funded monitoring & study activities**
  - CVPIA Comprehensive Assessment Monitoring Program
  - CDFG Angler Survey Program
  - CDFG Heritage and Wild Trout Program
  - UC Davis California Fish Tracking Consortium



# Yuba Accord M&E Program

## STUDY PLANS – DATA COLLECTION PROTOCOLS & PROCEDURES

- Flow & Water Temperature Monitoring
- Morphological Unit & Mesohabitat Classification
- Digital Elevation Model
- 2-D Hydraulic Modeling
- Substrate & Cover Classification & Mapping
- Acoustic Tracking
- Genetic Analyses
- Vaki Riverwatcher System Monitoring
- Chinook Salmon Carcass Surveys
  - Otoliths, Scales, Tissue, CWT Sampling
- Redd Surveys
  - Superimposition
- Juvenile Snorkel Surveys
- Rotary Screw Trapping
- Riparian Vegetation Mapping



# Other Accord Benefits



## Funding for Flood Control & Water Supply

- Feather River Setback Levee
- Wheatland Canal Project



# Awards & Recognition



2009 Governor's Environmental and Economic Leadership Award for the Lower Yuba River Accord

2009 National Hydropower Association Award for Outstanding Stewards of America's Waters

2008 ACWA Theodore Roosevelt Environmental Award for Excellence in Conservation and Natural Resources Management

