



New Bullard's Bar Reservoir Re-operation



Gary W. Rose



Yuba County Water Agency Mission

- Flood Management
- Water Supply
- Power Generation
- Recreation
- Environment

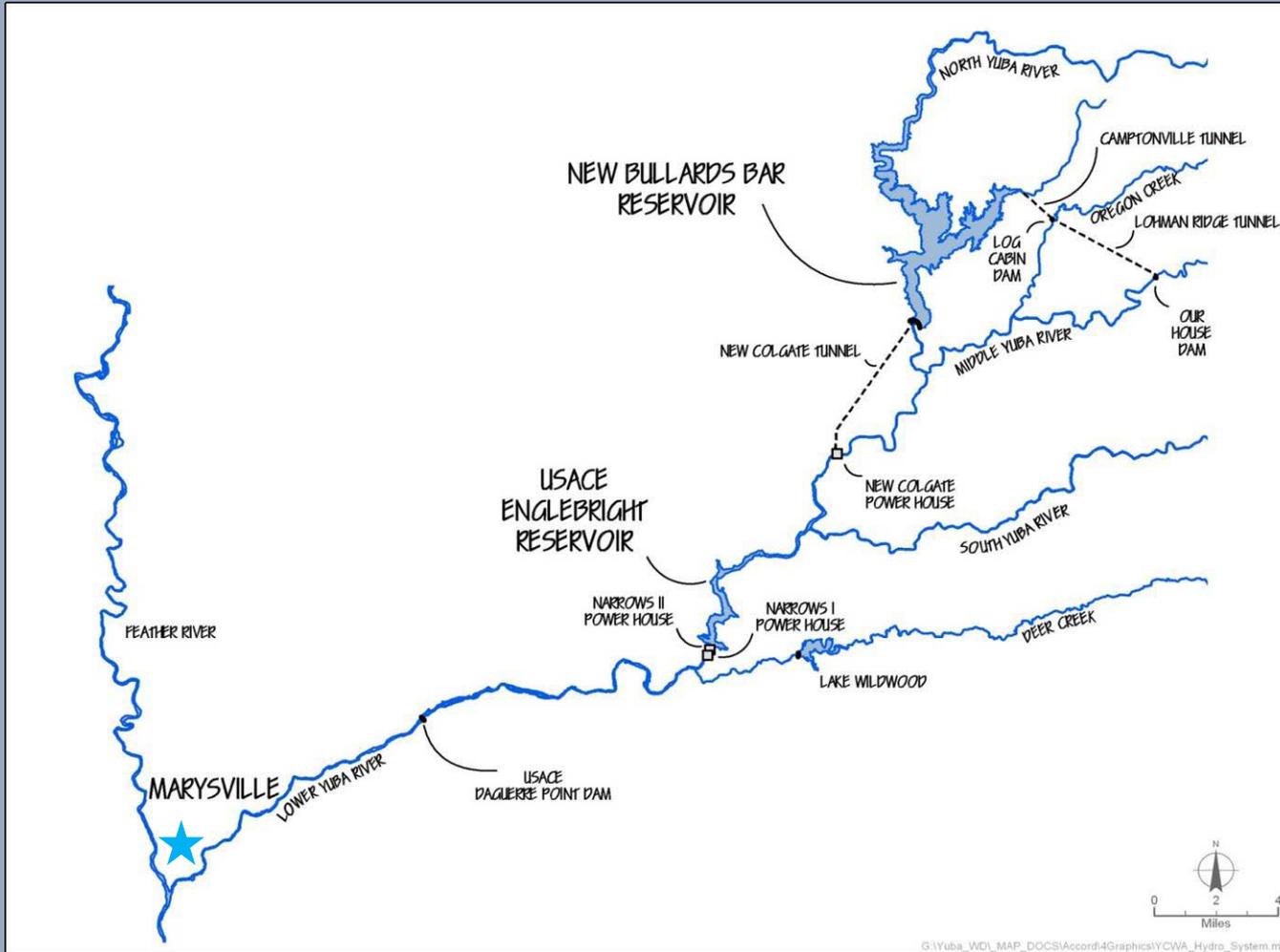


Dale Kolke, DWR

The Yuba Accord



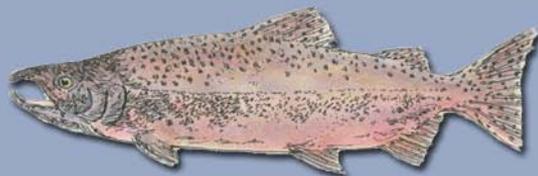
Yuba River Watershed



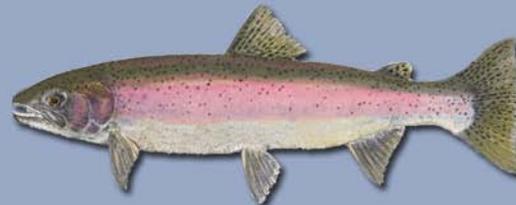


Re-operation initiated by instream flow disputes

- A push for higher instream flows for salmon and steelhead
- Water supply reliability
- Continued transfer revenue for flood protection projects
- Preserve power generation value



CHINOOK SALMON •King•
Oncorhynchus Tshawytscha



STEELHEAD
Oncorhynchus Mykiss



The Lower Yuba River Accord (Yuba Accord)

A new era of consensus on the lower Yuba River

- Higher flows for salmon & steelhead
- Dry-year water supplies for farms and cities
- A long-term water supply for CALFED's Environmental Water Account or a successor program
- Water reliability for local farmers & new flood protection for Yuba County



Keys to Re-operations

- Characterization of available water and indexing
- Robust, reliable conjunctive use program
- Multiple uses of available water
- Collaboration



Available Water - Indexing

- Relationship of amount and timing of water to need must be accurate, predictable and reliable (minimize the risk of miss-alignment)

Old System Yuba River Index

.5 x April to July Unimpaired Flow
+
.3 x Nov to March Unimpaired Flow
+
.2 x Previous Years Index

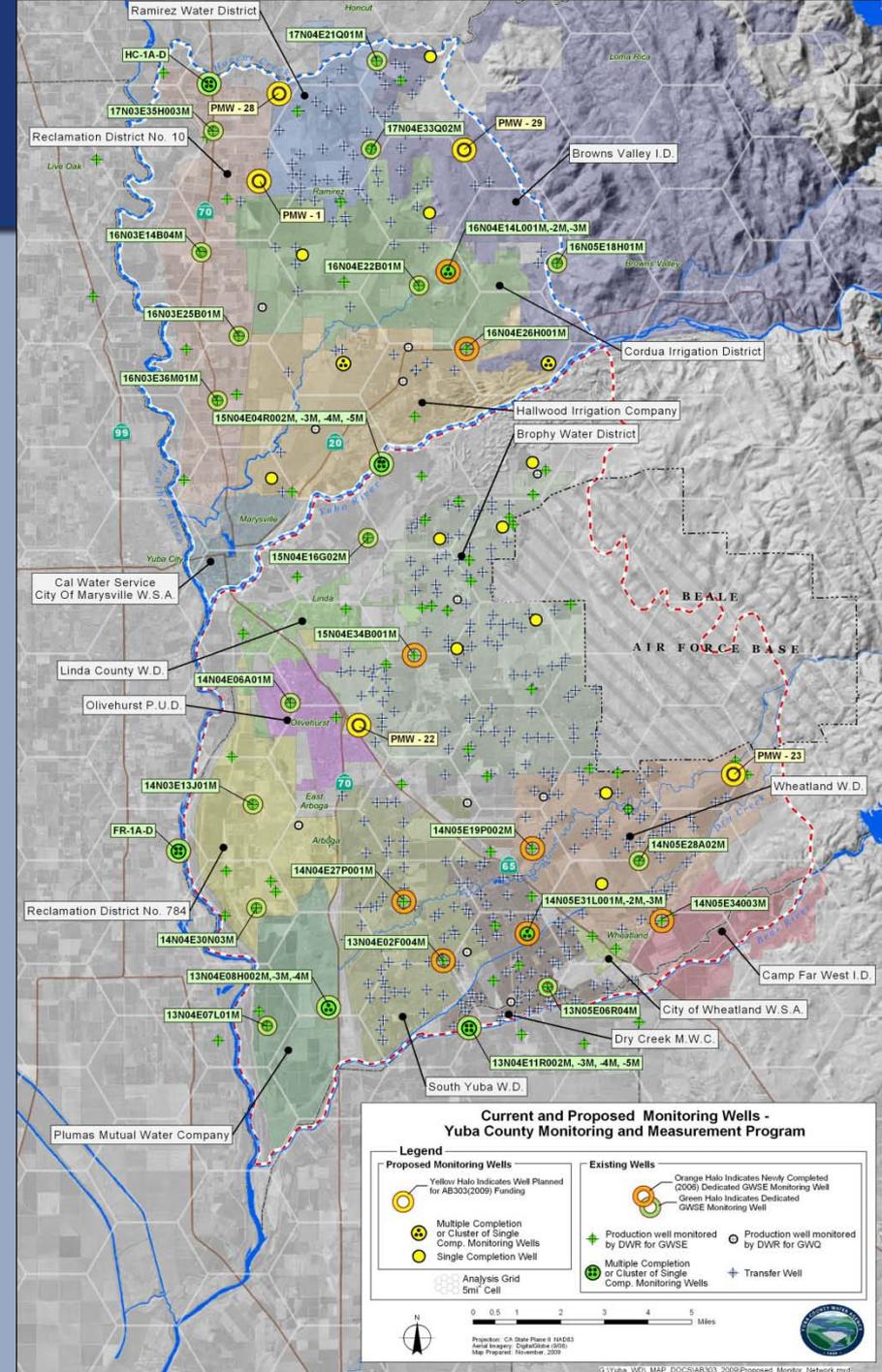
New System North Yuba Index

Active Storage in NBB at Start of Year
+
Inflow to NBB for Current Year
(actual to date + forecast)



Conjunctive Use + Monitoring

- Extensive network of dedicated monitoring wells
- Monthly monitoring
- Detailed monitoring of production wells during and after GW pumping for transfer
 - Metering
 - Water Quality
 - Water levels
- Cooperative well and groundwater investigations with DWR
- Extensive/Intensive Third Party response plan and outreach





Conjunctive Use Agreements

- Comprehensive groundwater program between YCWA & 7 districts
- \$1 million (funded by contractors) to replace up to 75 diesel groundwater engines with electric motors
 - Fossil fuel reductions - up to 600,000 gallons annually
 - Greenhouse gas emission reductions - up to 7,000 tons annually



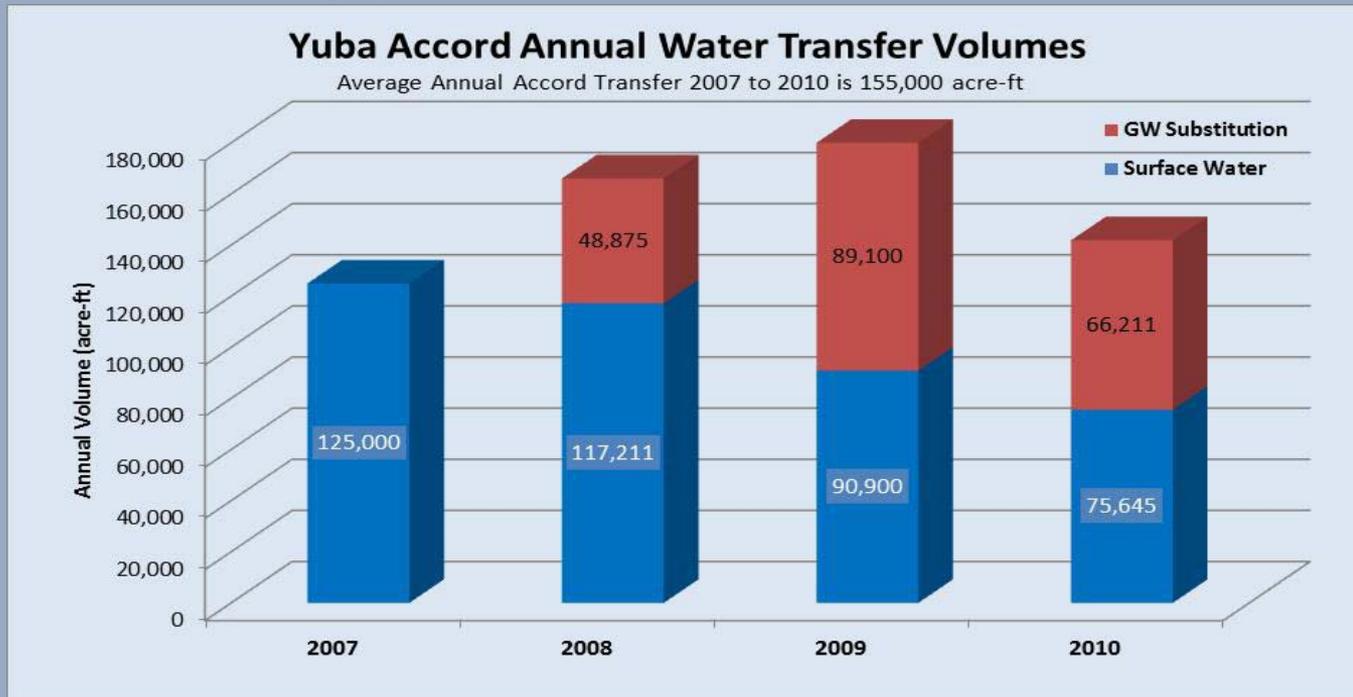
Multiple Uses of Water

- Instream flows + Transfers
 - Increased instream flow above a baseline flow is transferable (developed through collaboration with DWR and USBR)
 - Extensive accounting and monitoring/coordination
- Conjunctive use + Transfer + Instream Flows
 - Schedule 6 years – groundwater substitution pumping of 30TAF of water, with like amount released for lower summer temperatures and transfer



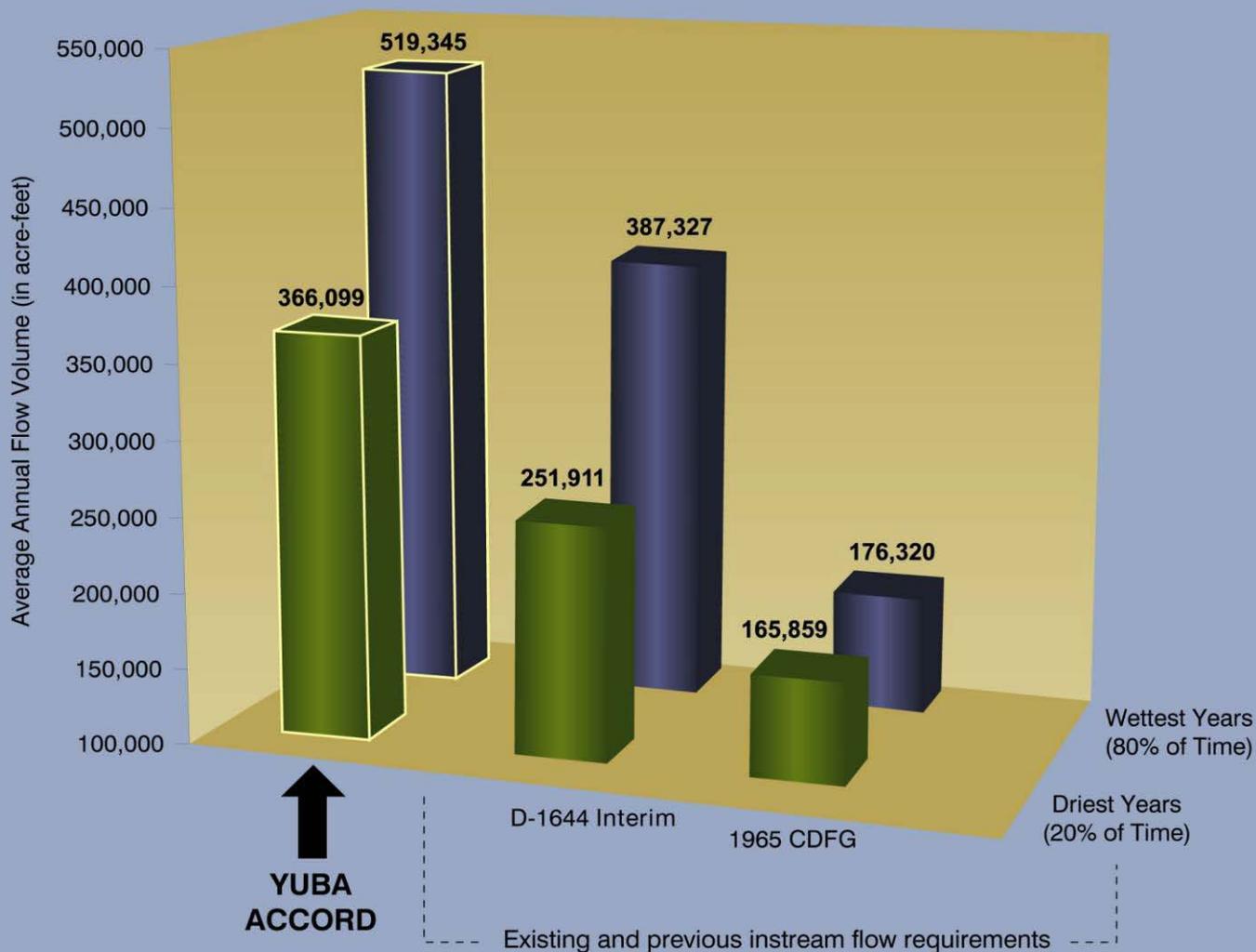
Yuba Accord – A Productive Re-operation

- Outpaces other transfer programs, and in line with major California water supply projects
- Raise Shasta – 91,000 to 133,000 acre-ft (6.5 to 18.5 ft raise drought year supply benefit)
- Temperance Flat – up to 180,000 acre-ft annual increase in deliveries (1.26 maf storage)





Higher instream flow for salmon and steelhead





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