

# REAL TIME DATA AND FORECASTING





# Rich's Trite and Toxic Word List

- Collaboration
- Conundrum
- Consortium
- Epiphany
- Nexus
- Win-Win Situation
- Watershed moment



# Purposes for Water Quality Monitoring Data

- Regulatory Compliance
- Research
- Baseline or Historical Record
- Source Water Protection
- Determine Sources and Loads



# Value of Sources and Loads

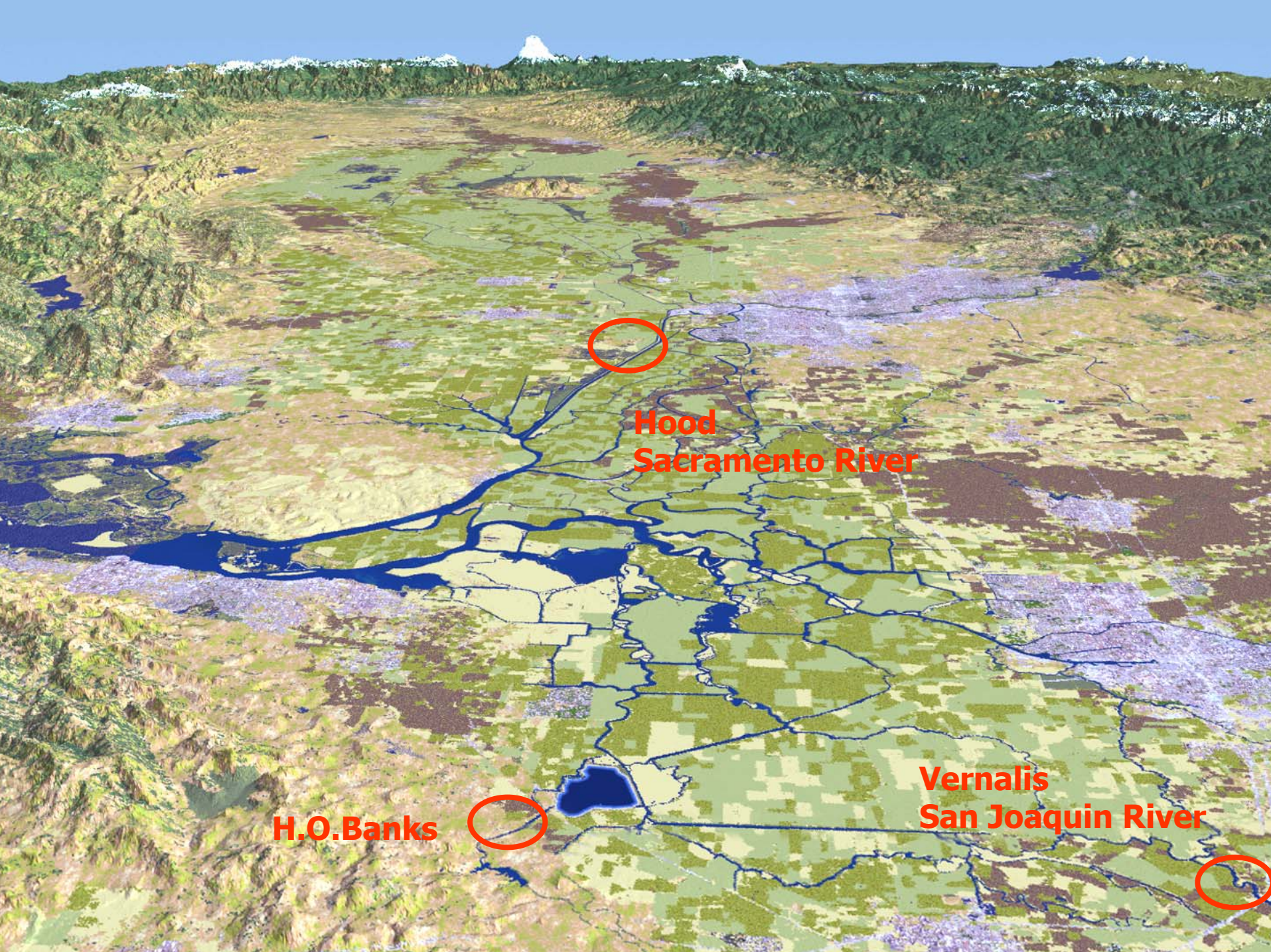
- Concentration Provides Limited Value
- Integration of Hydrology
- True Measure of Contribution/Mass Balance
- Track Long Term Trends



# Real Time Data and Forecasting

- Evolution of Analytical Equipment
- Value
- Challenges
- Modeling and Forecasting





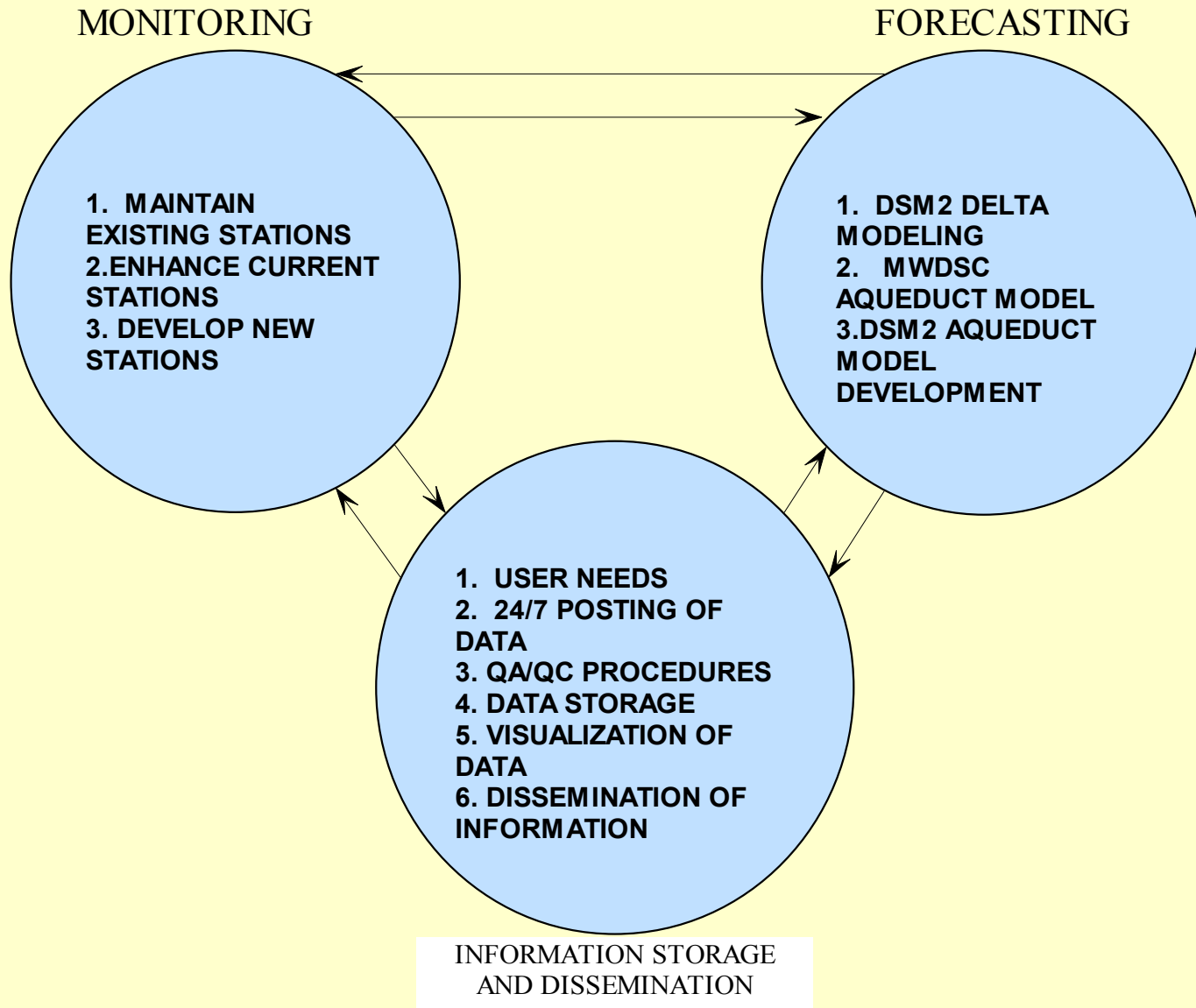
**Hood  
Sacramento River**

**Vernalis  
San Joaquin River**

**H.O. Banks**



# RTDF-Three Work Groups



# How to Serve it Up- Real Time Data and Forecasting Project

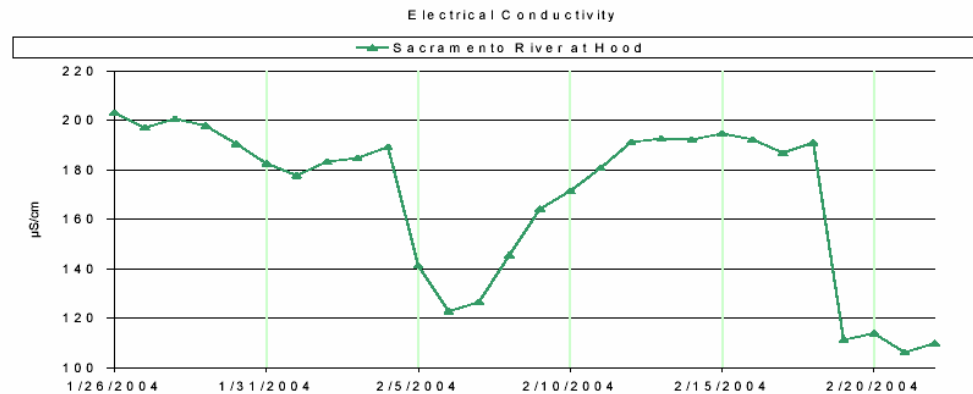
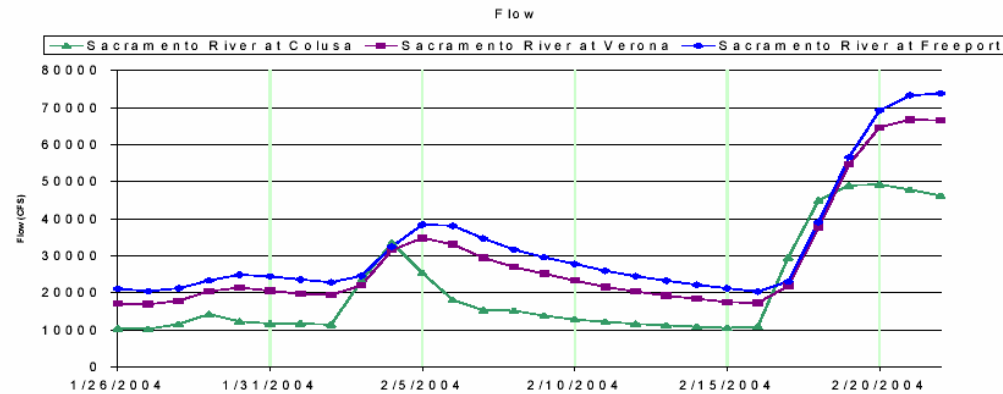
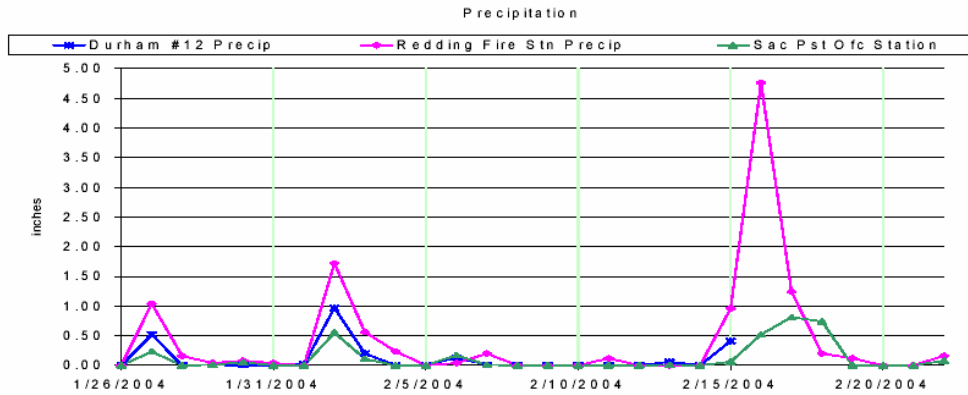


- Define Customer Needs
- Develop Tools and Processes
- Valuable Products=Resources
- Feedback Process



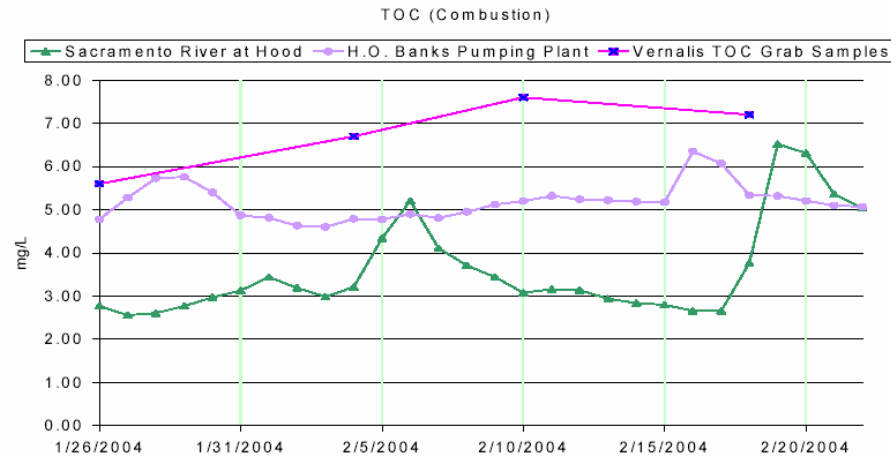
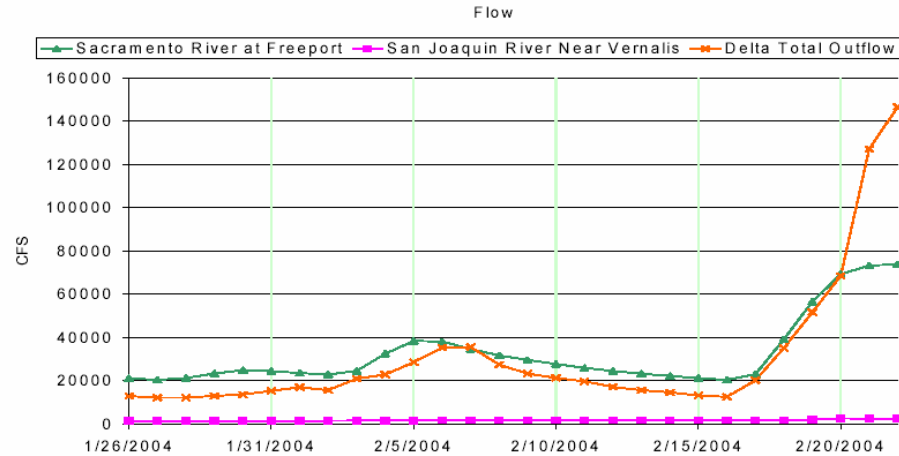
# 1. Sacramento River Precipitation, Flow and EC

## Precipitation Versus Flow



#### 4. Flow and Total Organic Carbon - Delta

## Precipitation Versus Flow

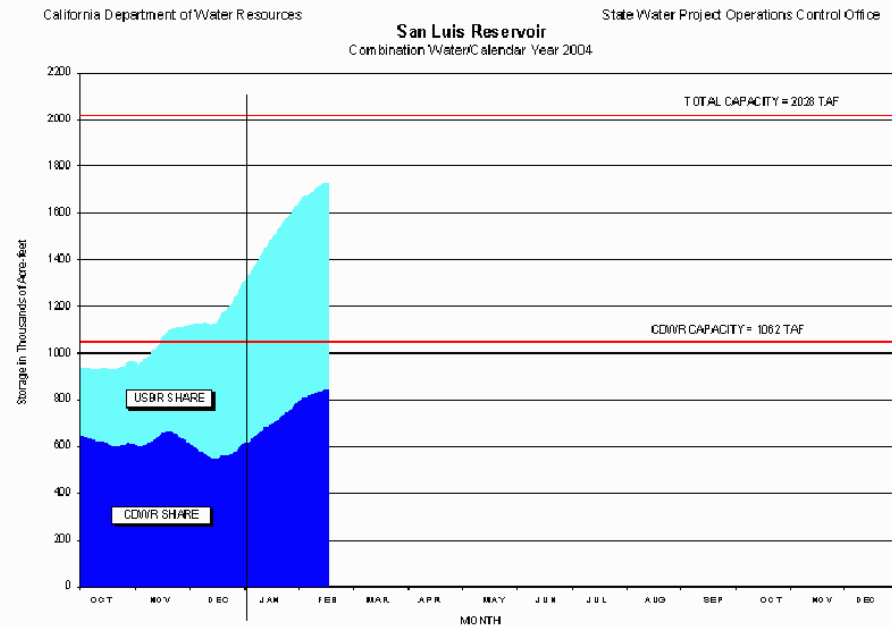


Delta Flow and Total Organic Carbon 1/26/2004-2/22/2004

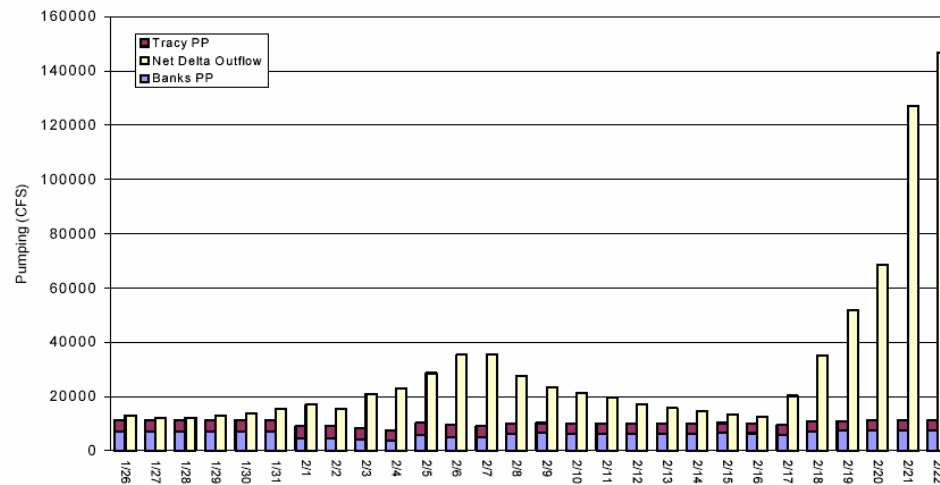
As mentioned last week the winds on 2/16/04 caused a sudden increase in TOC at the H.O. Banks pumping plant with several of the individual analyses going above 7.5 mg/L; however, the levels dropped the next afternoon and daily averages for the two days were only 6.35 and 6.07 mg/L. The range for the last few days was 5.34 to 5.07 mg/L. The recent high flows in the Sacramento River have resulted in higher TOC values at Hood with values going from less than 3.0 mg/L to 6.52 mg/L on 2/19/04 and 5.04 mg/L on 2/22/04.



## 7. San Luis Reservoir, Delta Pumping and Delta Total Outflow

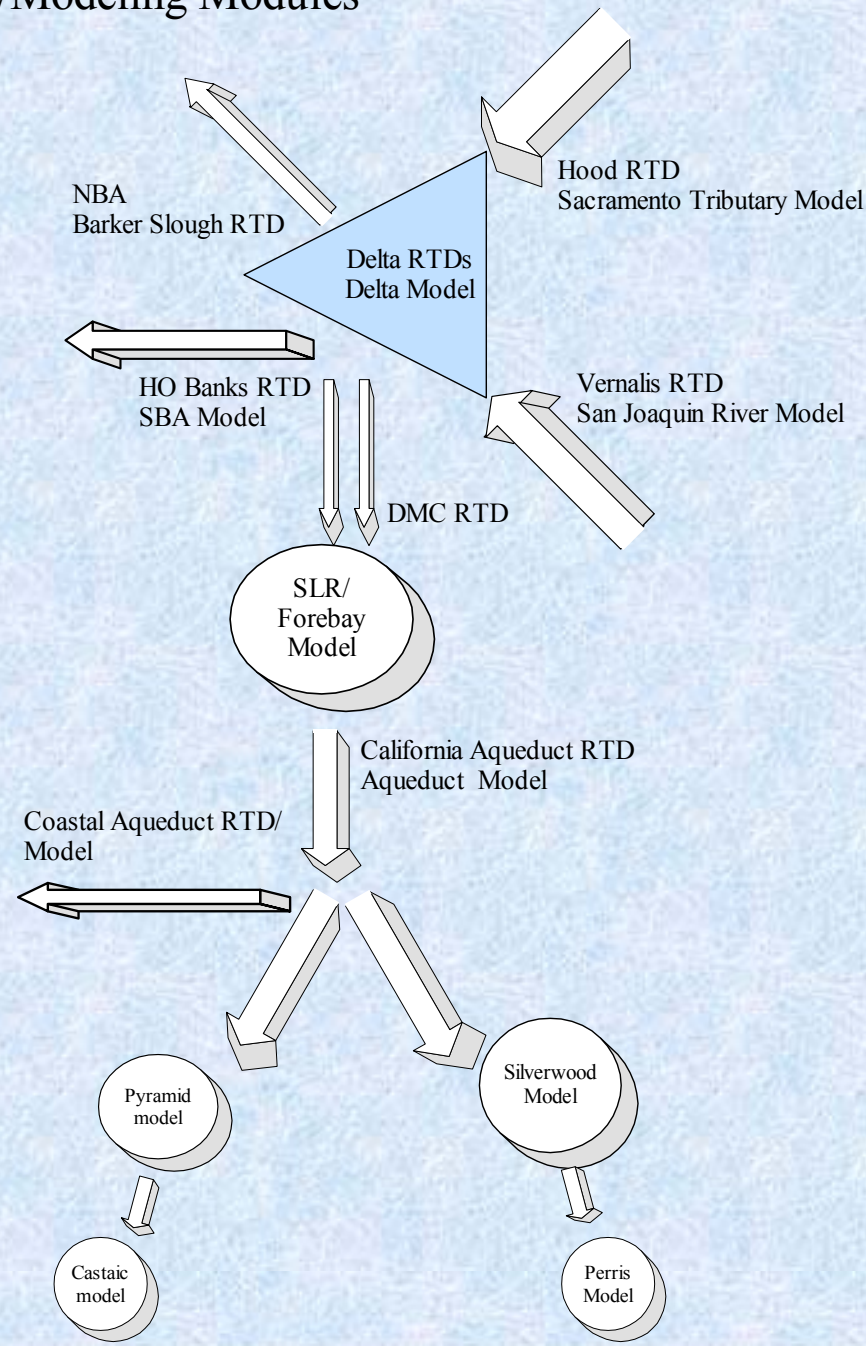


H.O. Banks and Tracy Pumping plus Delta Outflow



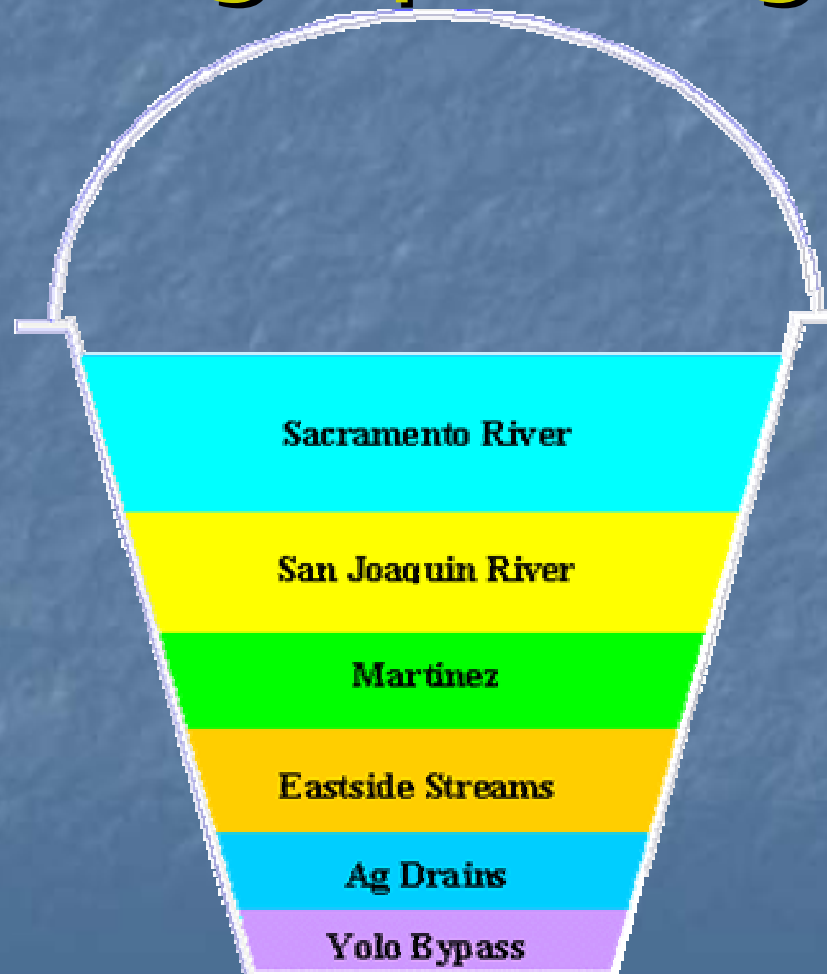
# RTDF Development Process

## Forecasting/Modeling Modules





# Source Tracking or “Fingerprinting”

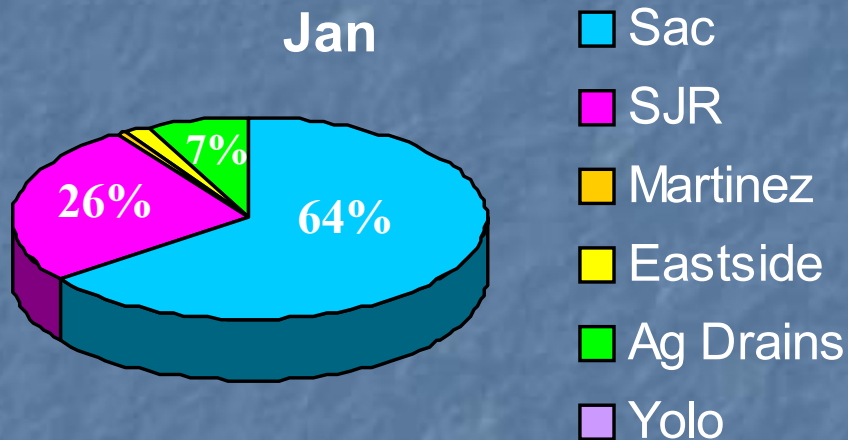


# Flow Contributions at Clifton Court



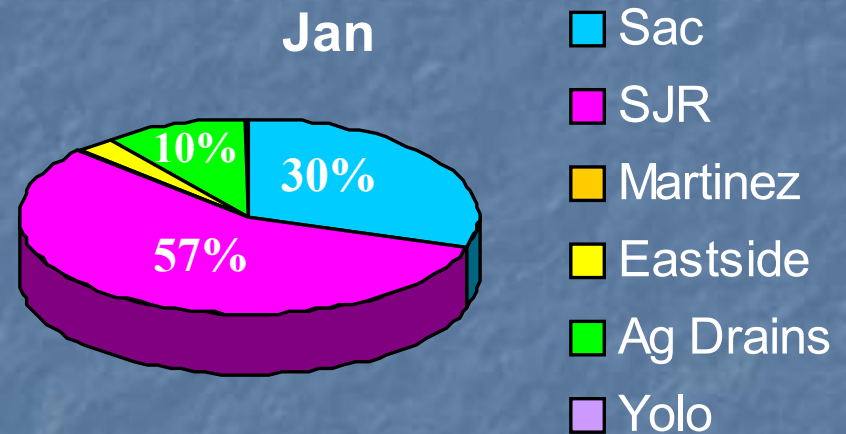
## Critical Years

Jan



## Wet Years

Jan





# Take Home Messages

- Define Purpose for Monitoring
- Determine Customer Needs
- Develop Program to Fit Needs
- Revisit Product

