Bureau of Reclamation
Mid-Pacific Region

California Department
of Water Resources

Upper San Joaquin River Basin Storage Investigation

Restoration Flow Workshop

September 4, 2002

Workshop Purpose and Objectives

- Review Investigation Evaluation Approach
- Develop Common Understanding of Restoration Sub-group Purpose
- Review and Discuss Initial Information Needs for Modeling San Joaquin River Restoration Flows
- Identify Additional Sources of Information to Review and Refine Information

Workshop Agenda

- Study Purpose and Process -- 30 minutes
- Restoration Focus and Sub-Group Purpose -- 30 minutes
- Initial Modeling Approach for Restoration -- 60 minutes
- Information Sources and Next Steps -- 15 minutes

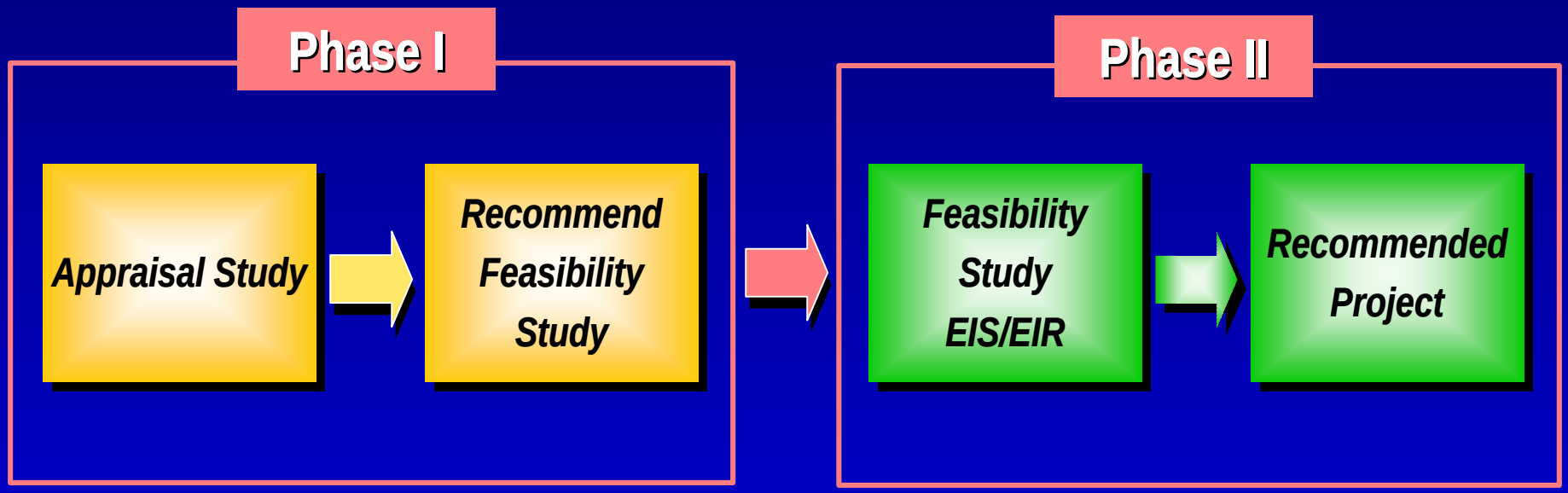
Participation Principles

- Participate -- Attend the workshops
- Learn -- Learn about resources, people, roles, and process
- Represent -- Bring issues and interests forward from others whose interests you share
- Cooperate -- Work with others in the workshops to share information and consider options
- Educate -- Report back to others who share your interests

Workshop Ground Rules

- Commit to Being Fully Present
  - No cell phones, pagers, voicemail, etc.
  - Ask for what you need from the meeting process and participants
- Honor Our Time Limits
  - Keep comments and discussion concise
  - Stay focused on the topic – Use the parking lot for other issues
- Respect Each Other
  - Listen carefully to other participants
  - Respond to ideas and issues, not individuals
- Support Constructive Discussion
  - Suggest improvements and solutions
  - Build on others' ideas – Use "and" instead of "but"

UPPER SAN JOAQUIN RIVER BASIN STORAGE INVESTIGATION – A Two-Phase Investigation Approach



Investigation Goals and Phase 1 Purpose Statement

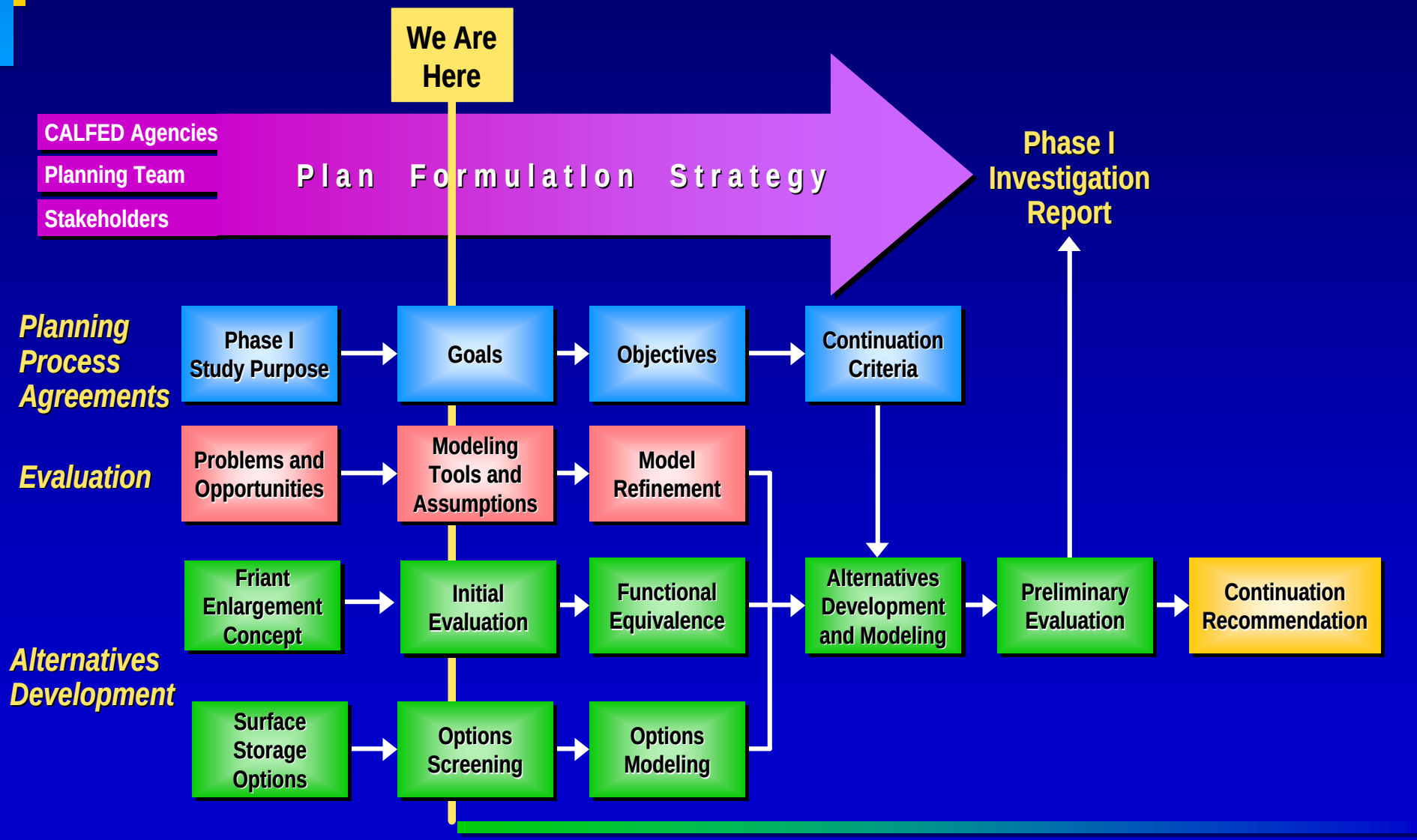
- **CALFED Goals for Upper San Joaquin River Basin Storage**
  - **Contribute to restoration of San Joaquin River**
  - **Improve water quality in San Joaquin River**
  - **Improve water quality of urban deliveries**
    - Facilitate conjunctive water management and water exchanges
- **Phase 1 Study Purpose Statement**

  "Determine if CALFED agencies should pursue a water storage feasibility study that could meet the CALFED goals for Upper San Joaquin River Basin Storage and assist in solving other regional problems."

PLANNING APPROACH
Focus of the Phase I Investigation

- Consider increasing water supplies through the enlargement of Millerton Lake or a functionally equivalent storage program
- Coordinate with other Federal, State, and Regional programs and projects
- Recommend continued study
  - If a Potential Plan appears viable
  - With Federal and State interests
  - With identified potential project partners
- Define scope of feasibility study and impact analysis

Phase 1 Planning Approach



Initial Evaluation Approach

- **Friant Enlargement Concept**
  - **Evaluation scenario only - not an alternative**
    - Increase Millerton Lake by 700 TAF in CALSIM 2 Model
    - Simulate operations with additional storage
    - Identify how problems and opportunities could be addressed
    - Use to guide definition of “Functional Equivalence”
- **Initial Modeling Assumptions**
  - **Based on existing conditions and honoring current laws, rules, and regulations**

Initial Evaluation Approach

- How much water could enlarged Friant provide for each CALFED goal?
- Begin with single purpose scenario for each goal
  - Operate to address one goal
  - Identify range of potential accomplishments relative to the goal
  - Identify potential accomplishments relative to other problems and opportunities
- Will ultimately use results to help define objectives for Phase 2 study

Initial Analysis Example -- Water Quality

- Use new storage for water quality
- Identify how Friant Enlargement concept could help address water quality problems
- Identify how other problems and opportunities could be affected
  - River Restoration
  - Water Supply Reliability
  - Flood Control
  - Hydropower
  - Delta Inflow

San Joaquin River Restoration Programs and Activities

- San Joaquin River Riparian Habitat Restoration Program
- Friant/NRDC Process
  - Restoration Plan
  - Water Supply Plan
- San Joaquin River Management Program
- CALFED Ecosystem Restoration Program

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Investigation Role in Restoration

- Restoration Focus
  - Investigation is examining how additional storage could provide additional flows in the San Joaquin River to support restoration
  - Identifying potentially available water volumes and patterns
- Other programs and processes are considering the physical conditions of the river below Friant

Initial Restoration Modeling Challenge

- **Initial Assumptions**
  - **Enlarged Friant**
  - **Maintaining long-term average surface water deliveries**
  - **Honor current laws, rules and regulations**
- **Initial Needs**
  - **Restoration demand patterns for the model**
    - A single restoration objective has not been established
    - If all new water from new storage were made available for restoration, how might it be managed?

Important Restoration Topics for the Investigation

- Restoration Flows and Patterns
  - Initial assumptions
  - Modifications based on initial results
- Restoration Objectives for Phase 2
- Coordination with Other Programs

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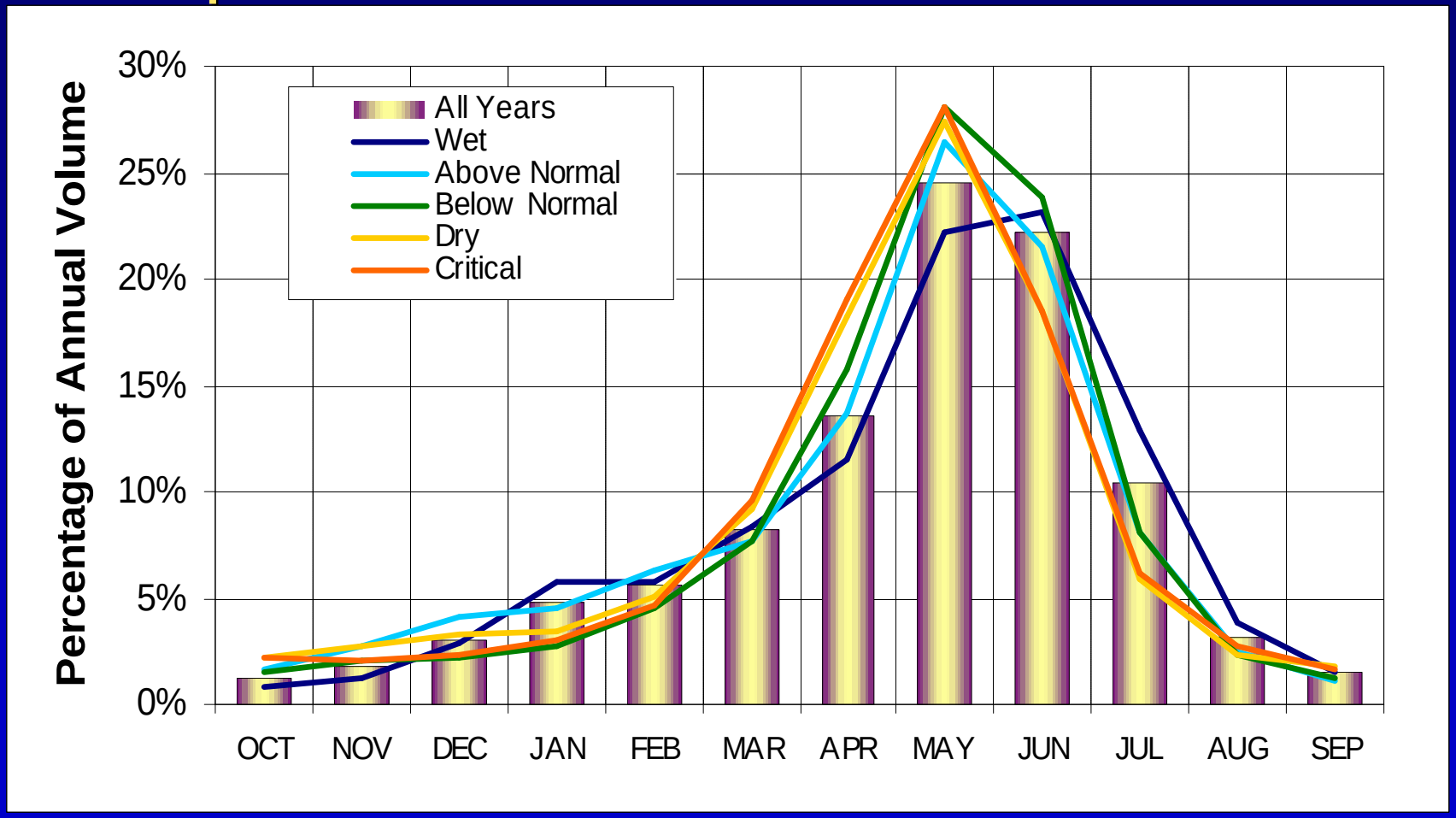
Initial Modeling Approach for Restoration

- **Initial modeling will examine the potential water available for restoration from a Friant Enlargement Concept**
  - **Define flow management patterns for restoration**
    - Month-to-month
    - Year-to-year
  - **Report results back to stakeholder group**

Month-to-Month Distribution of Unimpaired Flow

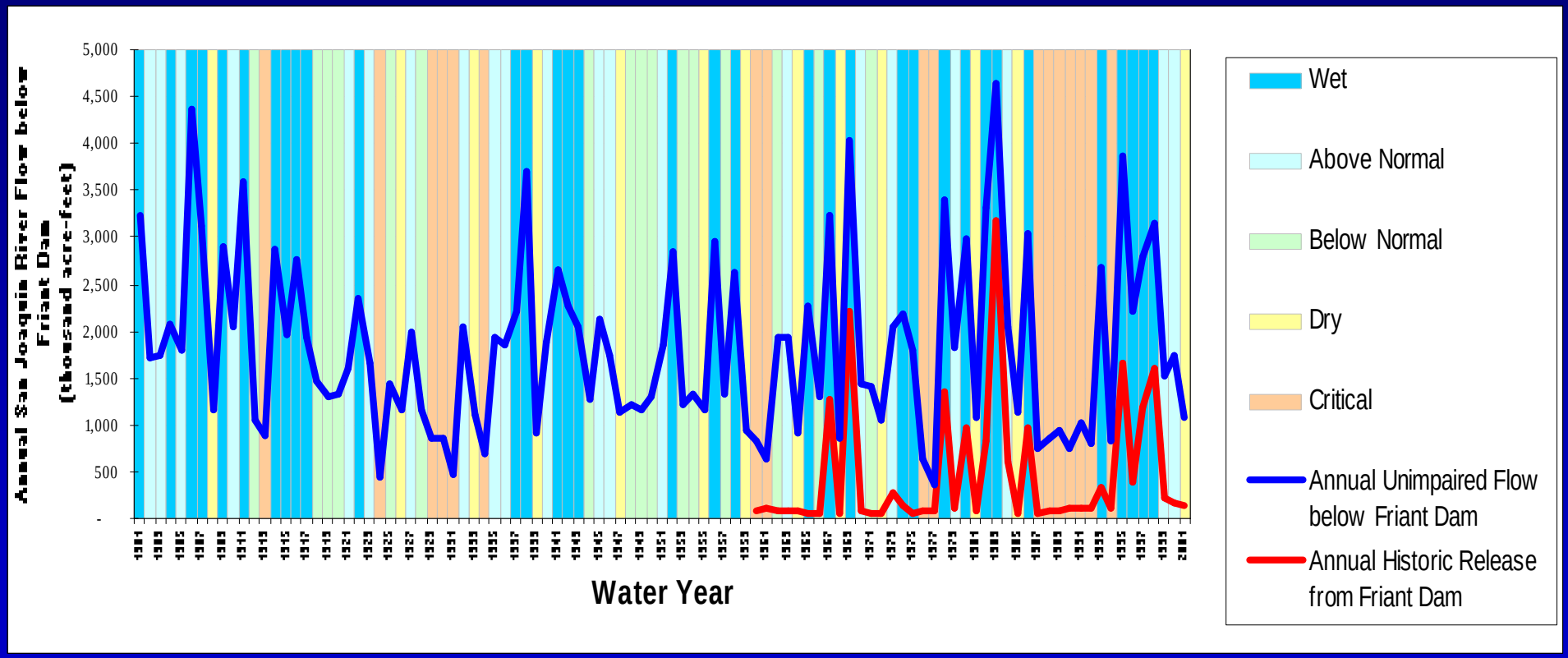
San Joaquin River below Friant Dam



Ref: CDEC Record October 1900 - September 2001, Based on San Joaquin River Index

Annual Variation in Historical Flow

San Joaquin River below Friant Dam



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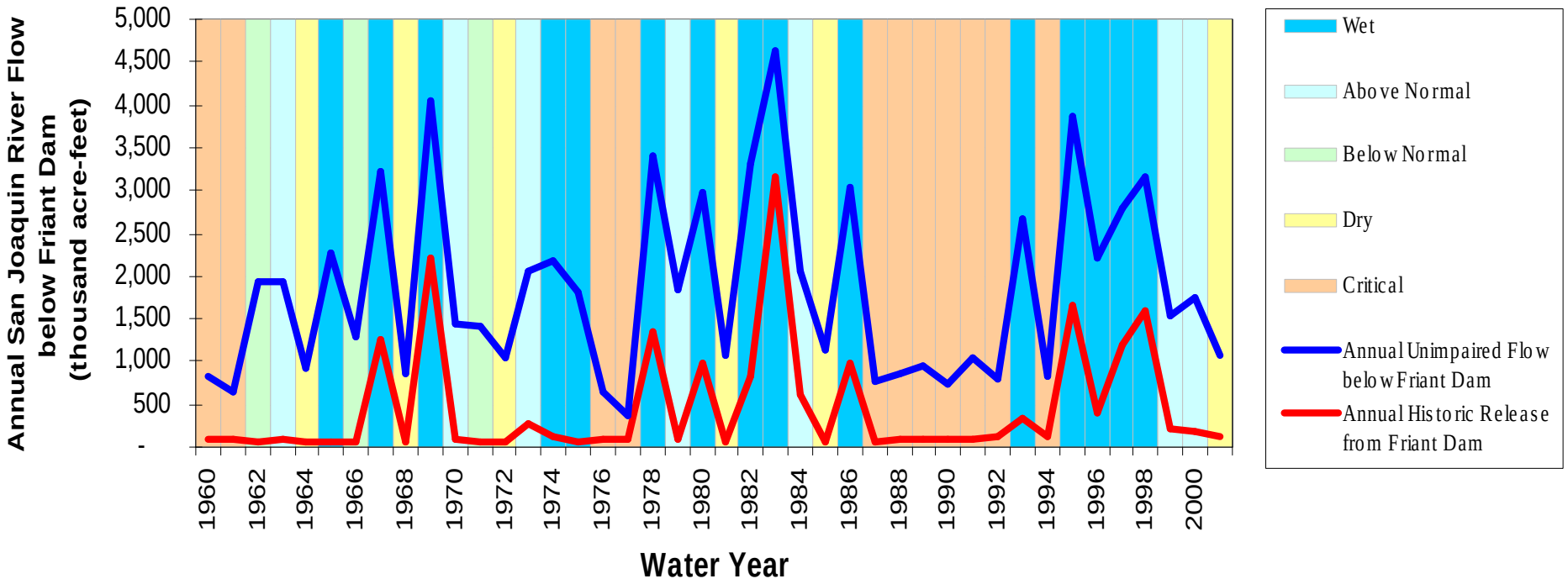

Ref: CDEC Record October 1960 - September 2001, Based on San Joaquin River Index

Questions and Discussion on Initial Restoration Modeling Approach

- Does this approach make sense?
- What other considerations should be included in the initial analysis?

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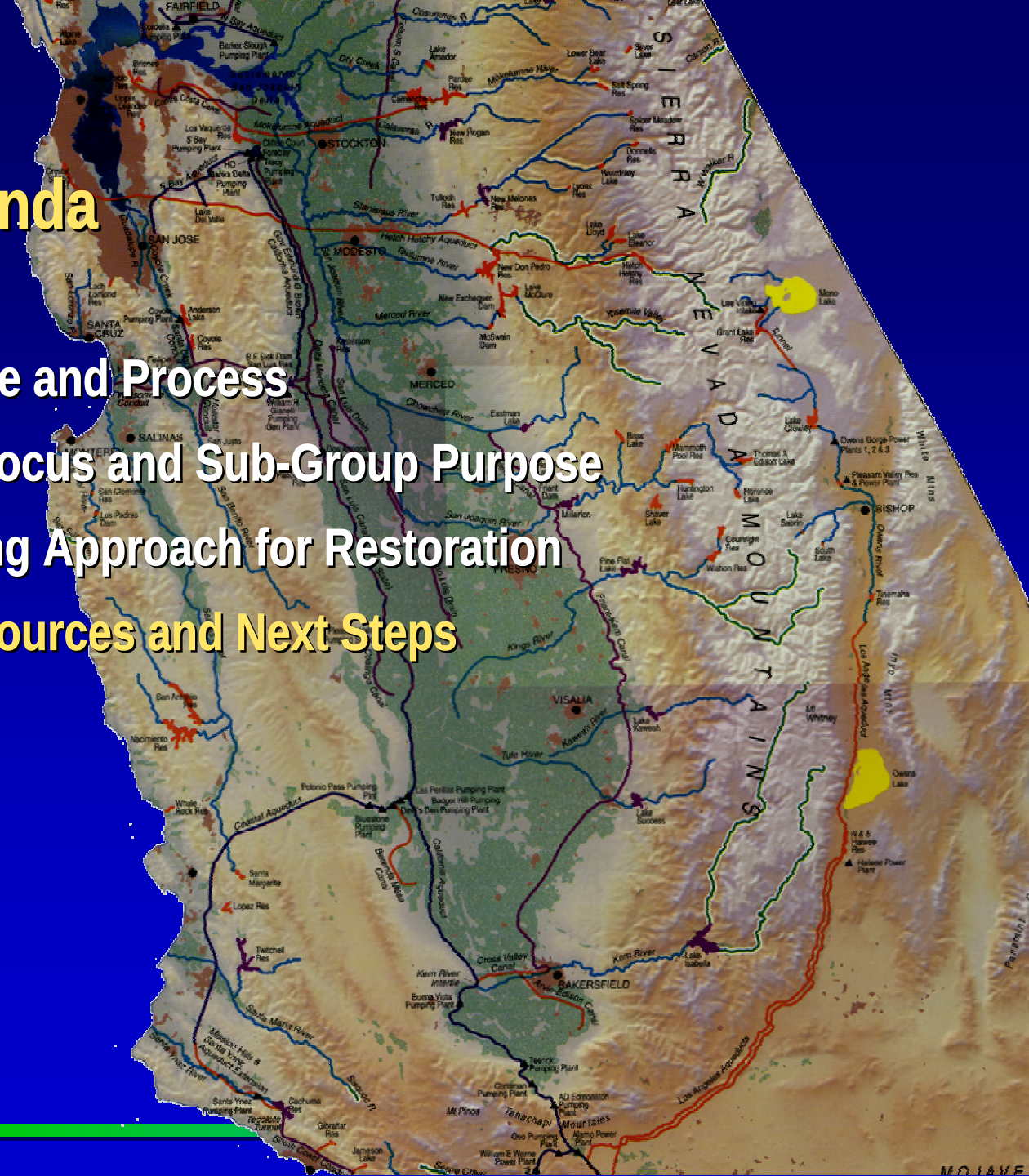

Information Sources

- **There are numerous programs grappling with restoration issues on the San Joaquin River and other rivers**
  - The Investigation can apply new information as it becomes available
  - Who are the key people and organizations to keep involved?

Next Steps

- Incorporate information into initial modeling effort
- Review results from initial modeling efforts
- Present initial results at October 18 Workshop (#3)