Analytical Tools and Data
Phase 2 - Water Plan Update 2004

Advisory Committee Meeting
January 20, 2005
Objectives for Presentation

- Review
- Accomplishments
- Upcoming work
Review
 Goals for Analytical Tools and Data

- Describe expectations for evaluation.
- Inventory and document data and tools consistently.
- Apply existing data and tools for Update 2008.
- Develop a long term plan for improvement.
- Coordinate with CALFED Program.
Desired End-Product

- Evaluate multiple future conditions (Scenarios)
- Explore wide range of benefits and costs (Evaluation Criteria)
- Support integrated regional planning
Accomplishments
Recent Progress

- Initial quantification of 2030 water demands
- Held workshop with Modeling Work Group
- Outlined ideas for quantifying scenarios
- Submitted coordinated funding proposals to CBDA Science Program
- Documenting existing tools
- Participating in CALSIM model improvements

http://www.waterplan.water.ca.gov/b160/workgroups/modelinggroup.htm
Conceptual Framework

- Can be applied at different spatial scales
- Describes complex system using simple categories
- Illustrates inputs, outputs, and relationships
- Draft HTML version available on CD
Upcoming Work
Work with Analytical Tools

Work Group to:

- Prioritize key components of flow diagram
- Define / refine key theoretical relationships
- Quantify detailed scenario factors
- Develop evaluation criteria details
- Develop response package details
Conceptual Framework for Assessing Water Resources and Management

- Demand Drivers
- Human and Environmental Water Demands
- Geophysical Parameters
- Evaluation Criteria (Economic, Management, Societal)
- Water Management Objectives
- Management Strategies

Overview
Organization
Definitions
Need to Represent the Water Management System at Different Spatial Scales From Statewide …
…To Hydrologic Region or Planning Area
Using the Flow Diagram ...
EVAPORATION AND EVAPOTRANSPARATION OF APPLIED WATER, PRECIPITATION AND CONVEYANCE LOSSES:
Insufficient Data

CONVEYANCE LOSS TO E & ET:
- URBAN: 0.4
- AG: 0.8
- WETLANDS: 0.0

CONVEYANCE LOSSES:
- URBAN: 0.4
- AG: 1.1
- WETLANDS: 0.0

CONVEYANCE LOSS TO RETURN FLOWS:
- URBAN: 0
- AG: 0.0453
- WETLANDS: 0

CONVEYANCE LOSS TO SEEPAGE:
- URBAN: 0.0
- AG: 0.3
- WETLANDS: 0.0
- MEXICO: 0.0

FACIAL WATER: 27.6
ROUNDWATER: 17.0
CYL & DESAL: 0.0
TRANSFERS: Not applicable

WATER USE (APPLIED):
- AGRICULTURAL: 31.5
- WETLANDS: 1.3
- URBAN: 8.4
- TOTAL: 41.1

INCIDENTAL E & ET AG RETURN FLOWS: 0.3

Return Flow within:
- Service Area: 5.1
- MEXICO: 0.0

AG & WETLANDS RETURN FLOWS: 13.1

39 to 43
Using an Analytical Environment

- Staff is developing pilot of flow diagram using EXTEND software package
- Features
  - Explore different possible outcomes
  - Include relationships from best current knowledge
  - Transparent and relatively easy for others to review and use
  - Can use in “real-time” interactions with stakeholders
Using the Best Available Analytical Tools and Data to Quantify Flow Diagram

- Published data and surveys
- Estimates derived from simple relationships
- Estimates derived from models
Next Steps - for Update 2008

- Develop a short-term workplan with Analytical Tools Work Group by June 2005 (for Update 2008)
- Continue documenting existing tools
- Continue developing pilot project using EXTEND software
- Improve ways to manage and share Water Plan data
Next Steps - Beyond Update 2008

- Develop long-term plan to improve existing tools
- Fill data gaps
- Develop Water Plan Information Exchange (Water PIE)
Summary

- We are working to accomplish specific goals for data and tools
- Good progress has been made
- Much more to be done
- Need to meet soon and often with Analytical Tools Work Group