

# Water Management Strategy Evaluation Framework

Bay-Delta Advisory Council  
February 17, 2000

# Purpose of Presentation

- ◆ Update BDAC on status of evaluation of WMS alternatives
- ◆ Provide overview of the “competing” strategies currently under analysis
- ◆ Review assumptions established as “ground rules” for comparisons
- ◆ Preview “scorecard” of comparative performance measures

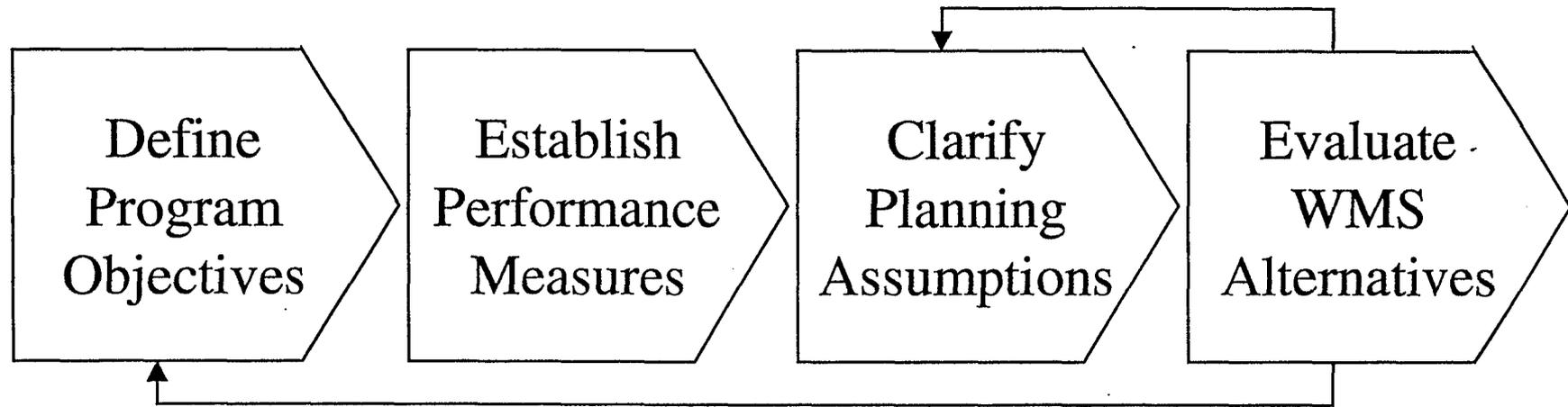
# WMS Framework Mission

- ◆ Document a comprehensive hierarchy of objectives for the CALFED Program
- ◆ Establish well-defined measures of performance associated with the achievement of objectives
- ◆ Provide the framework for comparison of alternative long-term water management strategies

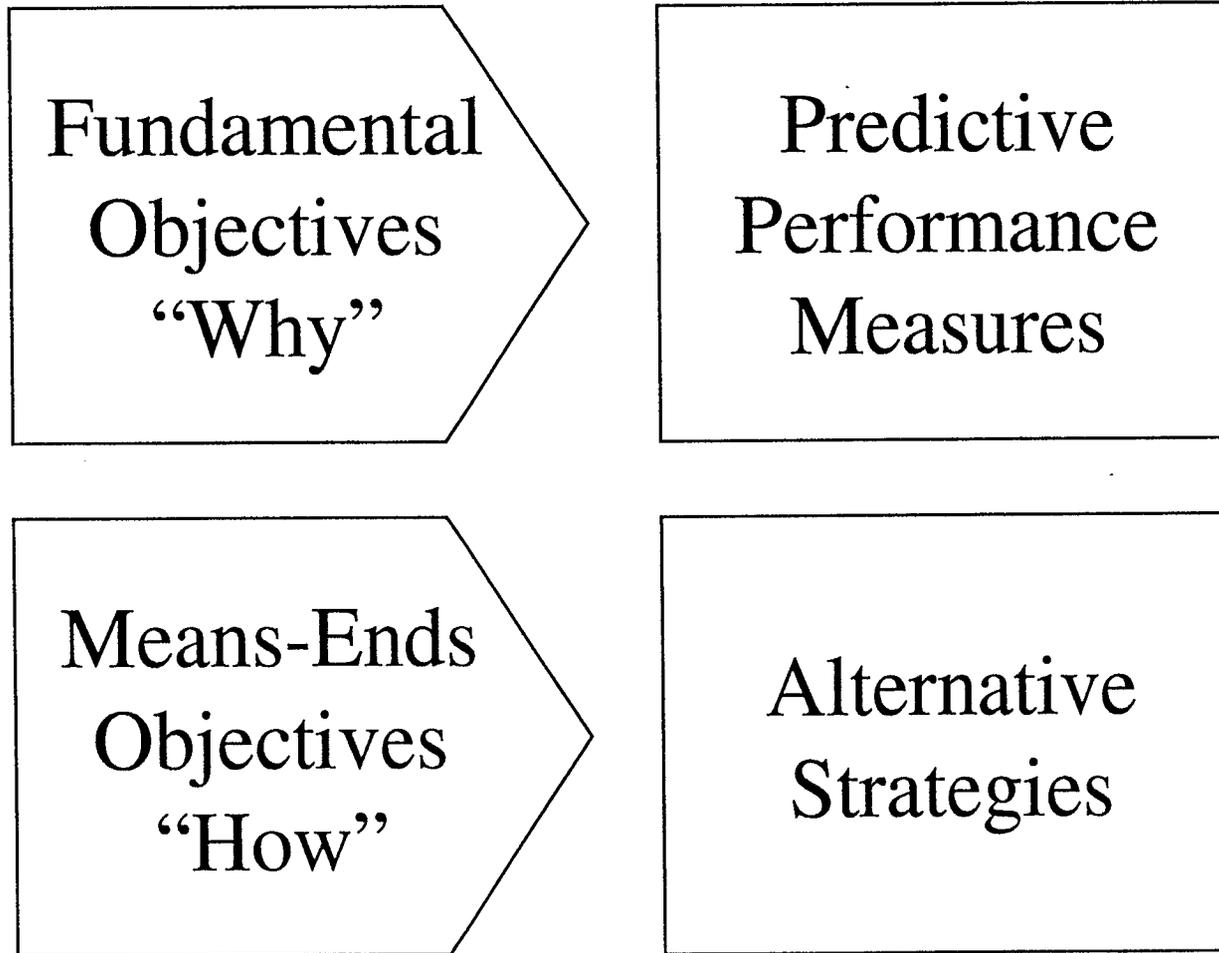
# Activities Since Last Meeting

- ◆ Completing model runs
- ◆ Held small group meeting with stakeholders to review performance measures associated with solution principles
- ◆ Reviewed methodology associated with cost, benefit, and pricing

# Conceptual Approach



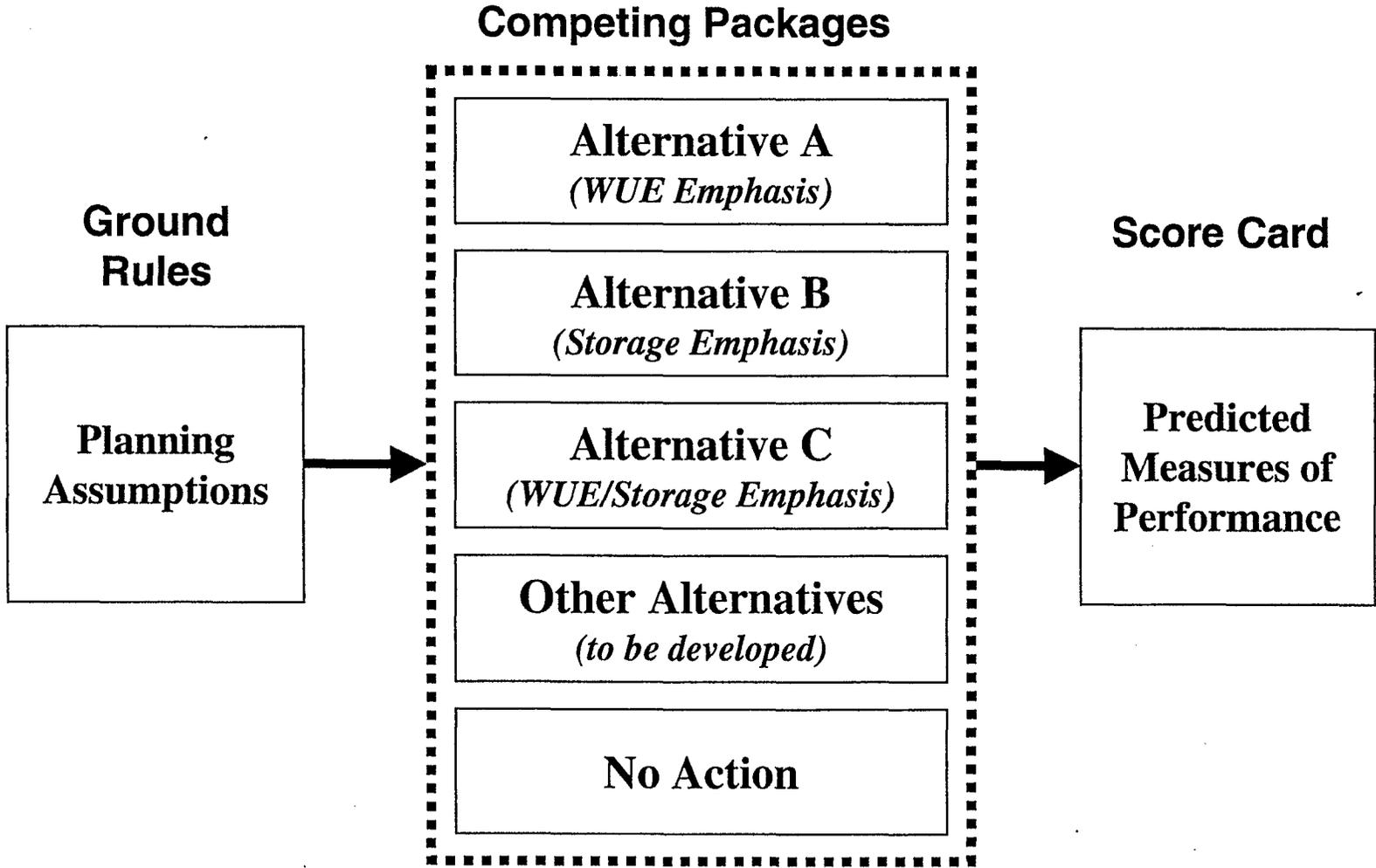
# From Objectives to Evaluation



# Current Objectives and Measures

Element or Principle	Fundamental Objectives	Means-Ends Objectives	Performance Measures
Restore Ecosystem	Many	Many	Few Predictive
Water Quality	Many	Many	Many
Water Supply	Many	Many	Many
Levee Protection	Few	Many	Few Predictive
Reduced Conflict	Very Few	Very Few	Very Few
Equitable	Very Few	Very Few	Very Few
Affordable	Very Few	Very Few	Many
Durable	Very Few	Very Few	Some
Implementable	Very Few	Very Few	Very Few
Redirected Impacts	Very Few	Very Few	Some

# Evaluating Alternative Strategies



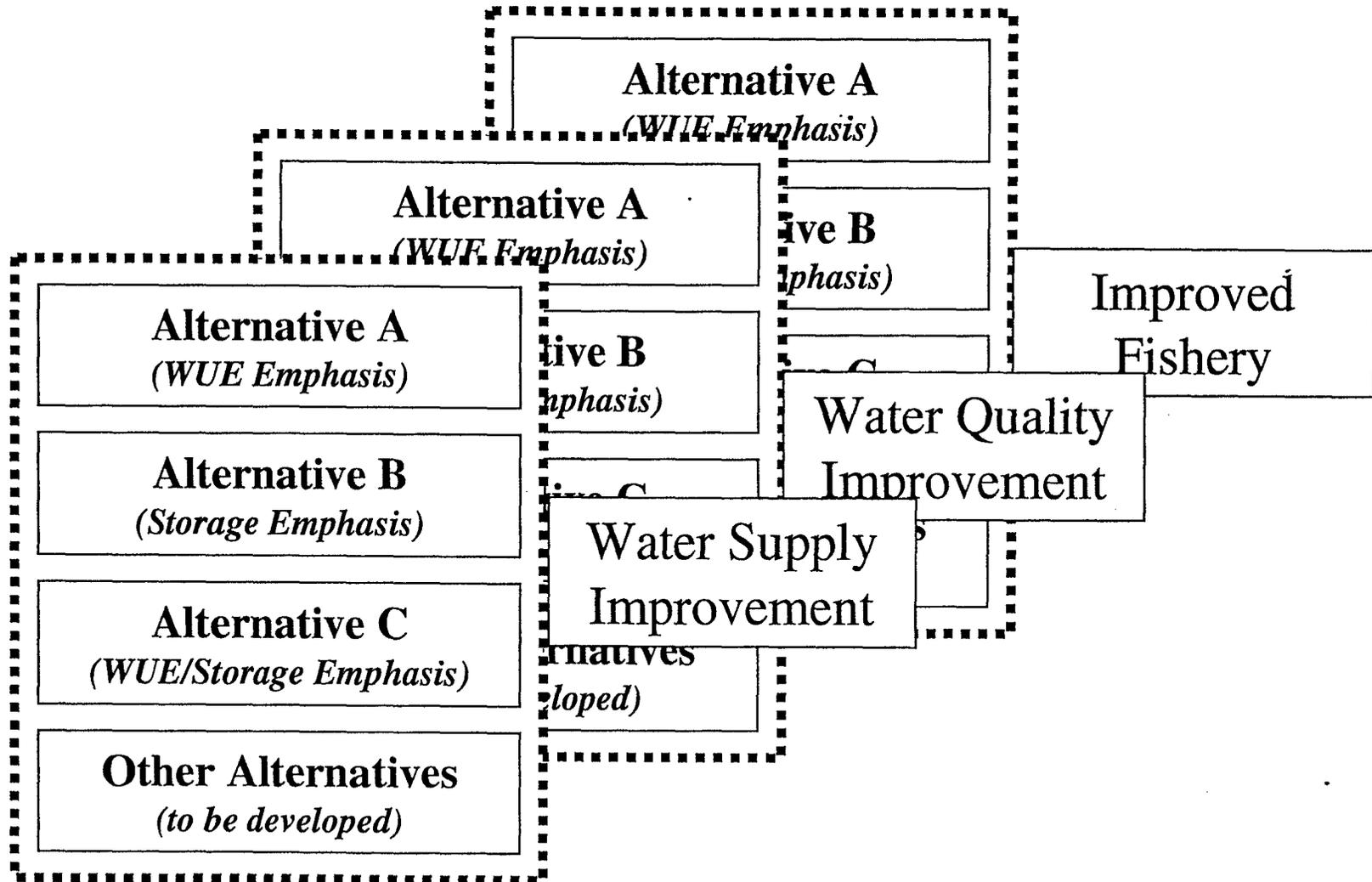
# Ground Rules

- ◆ 2020-Level Demands Upstream of the Delta
- ◆ 3.6-4.2 MAF Variable SWP Demand
- ◆ 3.5 MAF w/Level II Refuge CVP Demand
- ◆ Delta Standards
  - May 1995 WQCP
  - CVPIA (b)(2)
- ◆ 48 days of Discretionary Export Reductions
- ◆ 367-815 TAF Trinity In-stream Requirement

# Description of Alternatives

	North				South		Alloc
	Surface Storage	GW Storage	Env Transfers	Urban Transfers	GW Storage	Transfers	
A	None	500 TAF	500 TAF	100 TAF	1.8 MAF	500 TAF	Urban then Ag
B	Shasta Sites	500 TAF	500 TAF	300 TAF	1.8 MAF	500 TAF	Urban then Ag
C	Shasta Sites	250 TAF	500 TAF	100 TAF	1.8 MAF	200 TAF	Existing Project

# Operational Priorities



# Be Affordable

<i>Objectives</i>	<i>Performance Measure</i>	<i>Level of Confidence</i>	<i>Alternative</i>		
			A	B	C
<b><i>Be Affordable</i></b>	Total and Annualized Costs	High	\$ & \$/year	\$ & \$/year	\$ & \$/year
	Allocation of Costs and Benefits by Sector	Medium	\$	\$	\$
	Increments of Capital Investment	High	\$	\$	\$
	Transfer Market Price	Low	\$/AF	\$/AF	\$/AF
	Cost of Water Treatment	Medium	\$/AF	\$/AF	\$/AF

# Costs Included in Evaluation

## ◆ CALFED Programs Included in WMS Costs

- Storage
- Conveyance
- Water Transfers
- Water Use Efficiency
- Water Quality (Part)

## ◆ CALFED Programs Not Included in WMS Costs

- Ecosystem Restoration
- Watershed  
Management
- Levee System Integrity
- Water Quality (Part)

# Be Equitable

<i>Objectives</i>	<i>Performance Measure</i>	<i>Level of Confidence</i>	<i>Alternative</i>		
			A	B	C
<b><i>Be Equitable</i></b>	Allocation of Costs for Actions Taken	Medium	\$/year	\$/year	\$/year
	Allocation of Benefits	Medium	\$/year	\$/year	\$/year

# Be Durable

<i>Objectives</i>	<i>Performance Measure</i>	<i>Level of Confidence</i>	<i>Alternative</i>		
			A	B	C
<b><i>Be Durable</i></b>	Long-term Average	High	TAF	TAF	TAF
	Ease of Modifying Strategy Based on New Information	Low	Qualitative Ranking	Qualitative Ranking	Qualitative Ranking

# Reduce Conflicts in the System

- ◆ Performance Measures
  - Stakeholders suggested further development focused on quantifying level of conflicts

# What's Next?

- ◆ Prepare comprehensive document of scorecard results and tradeoffs
- ◆ Summarize conclusions regarding overall performance of alternatives
- ◆ Provide continued analysis in support of arriving at an agreed-upon Water Management Strategy