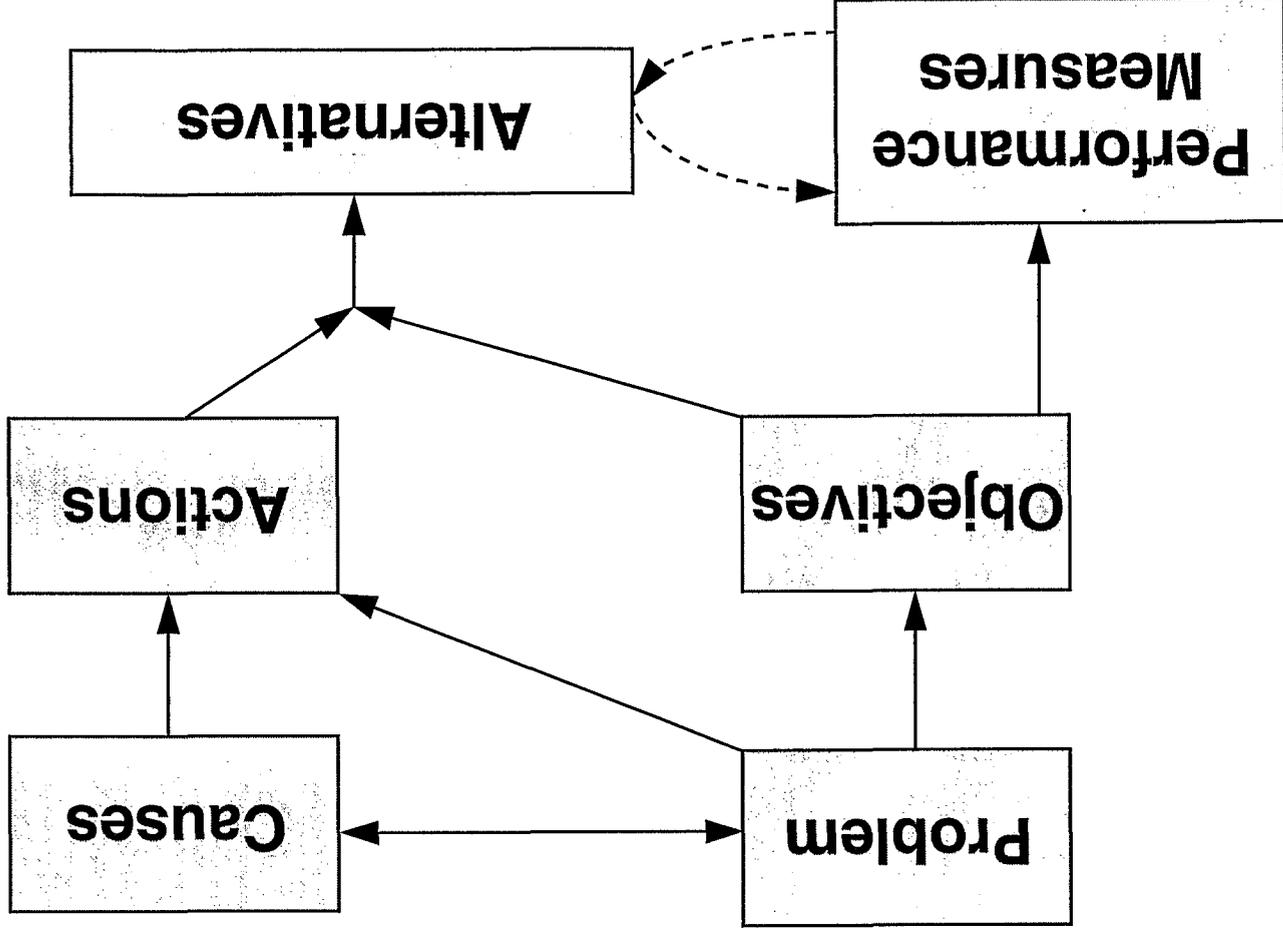


CALFED BAY-DELTA
PROGRAM
Establishing Objectives for Bay-
Delta Solutions
September 14, 1995

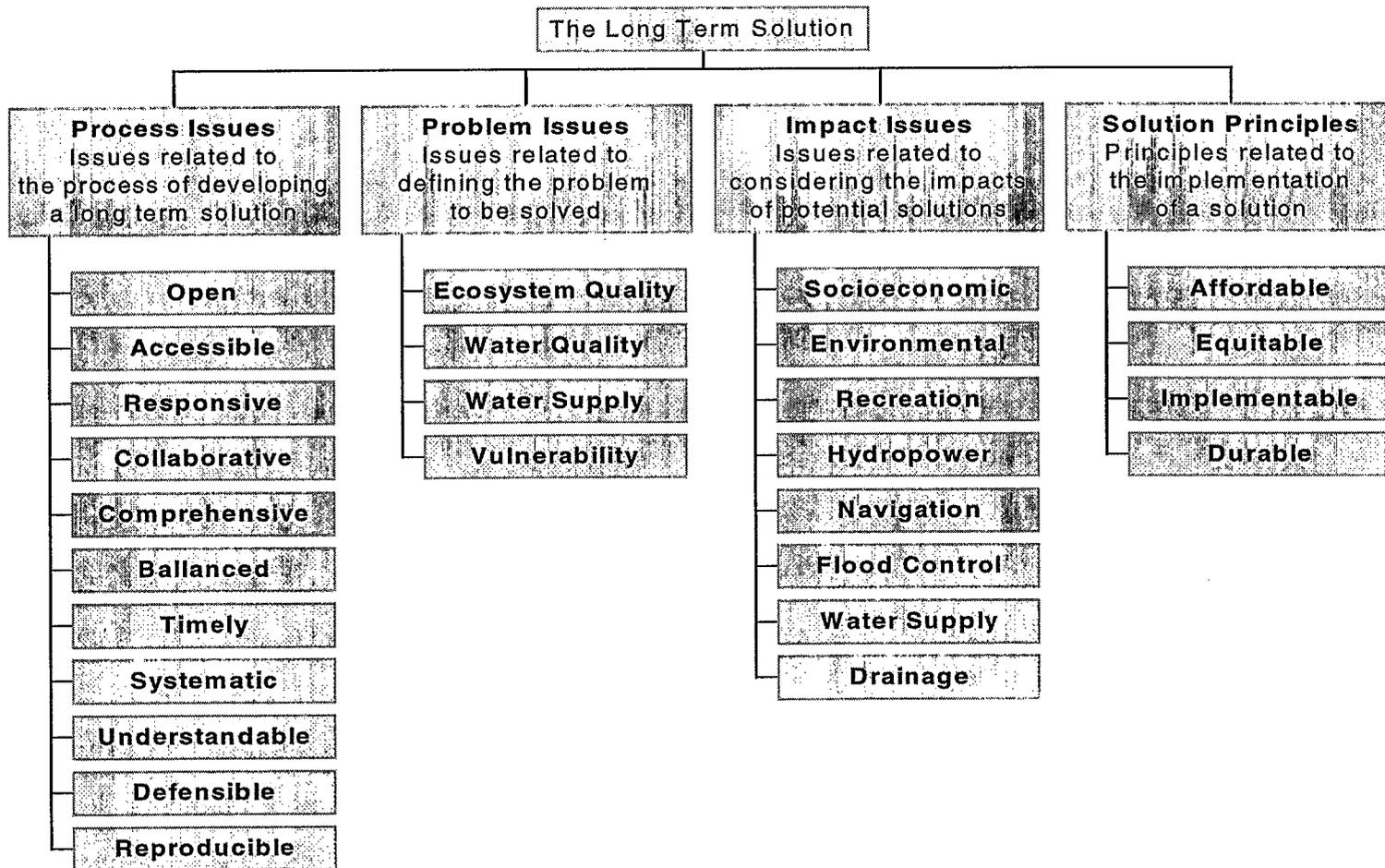
Simplified Process Schematic



Overview

- Review Draft Problem Statements
- Review Draft Mission Statement
- Review Draft Objective Statements
- Present Preview of Categories/Actions and Performance Measures

Issues and Principles for Developing a Set of Alternatives



PROBLEM TO ACTIONS WORKSHEET

DEFINITIONS

<p>PROBLEM:</p> <p>A condition, occurrence, or potential consequence that a stakeholder feels should be examined, addressed, or mitigated. A problem statement includes specific identification of conditions that are of concern.</p>	<p>OBJECTIVE:</p> <p>A condition or occurrence to be achieved or to strive for, or an aspect of performance with a threshold that must be exceeded in order to fulfill the objective. Objectives describe what a stakeholder really cares about, reflecting underlying values.</p>
<p>CAUSES:</p> <p>A manageable force or factor that contributes to the existence of a problem.</p>	<p>ACTIONS:</p> <p>A specific activity designed to contribute to meeting an objective. An action could be restoration, a policy, an operational change, or a facility.</p>

WATER SUPPLY PROBLEM TO ACTIONS WORKSHEET

<p>PROBLEM:</p> <p>A.2. Bay-Delta system export water supply quantities and timing do not meet short- and long-term needs and the opportunities for transferring water across the Delta are limited.</p>	<p>OBJECTIVE:</p> <p>A.2. Improve Bay-Delta system export water supply quantities and timing to help meet reasonable short- and long-term needs.</p>
<p>CAUSES:</p> <ul style="list-style-type: none"> • Lack of understanding of system yield and needs • Competition for water when users at peak demand • Lack of upstream and downstream storage • • 	<p>ACTIONS:</p>

VULNERABILITY OF DELTA FUNCTIONS PROBLEM TO ACTIONS WORKSHEET

<p>PROBLEM:</p> <p>A. Existing agricultural land use and economic activities in the Delta are at risk from catastrophic inundation of Delta islands.</p>	<p>OBJECTIVE:</p> <p>A. Reduce the risk to existing land use and associated economic activities from catastrophic inundation of Delta islands.</p>
<p>CAUSES:</p> <ul style="list-style-type: none"> • Dredging reduces stability of levees • Boat traffic (waves) erodes unarmored levee surfaces • Institutional fragmentation contributes to ineffective levee maintenance • 	<p>ACTIONS:</p>

ECOSYSTEM QUALITY PROBLEM TO ACTIONS WORKSHEET

<p>PROBLEM:</p> <p>A.2. Lack of shaded riverine aquatic habitat limits growth and survival of estuarine resident and anadromous fish in the estuary.</p>	<p>OBJECTIVE:</p> <p>A.2. Increase amount of high quality shaded riverine habitat to allow the growth and survival of sustainable populations of estuarine resident and anadromous fish in the estuary.</p>
<p>CAUSES:</p> <ul style="list-style-type: none"> • Changes in land use and land management • Design of Delta channels affects riparian habitat • Changes in water flow and timing • 	<p>ACTIONS:</p>

WATER QUALITY PROBLEM TO ACTIONS WORKSHEET

PROBLEM: C. Delta water quality is often inadequate for some industrial needs.	OBJECTIVE: C. Provide adequate water quality for industrial use.
CAUSES: <ul style="list-style-type: none">• Outboard motor effluent causes hydrocarbon discharge• Natural runoff and wastewater contribute pollutants• Salinity intrusion•	ACTIONS:

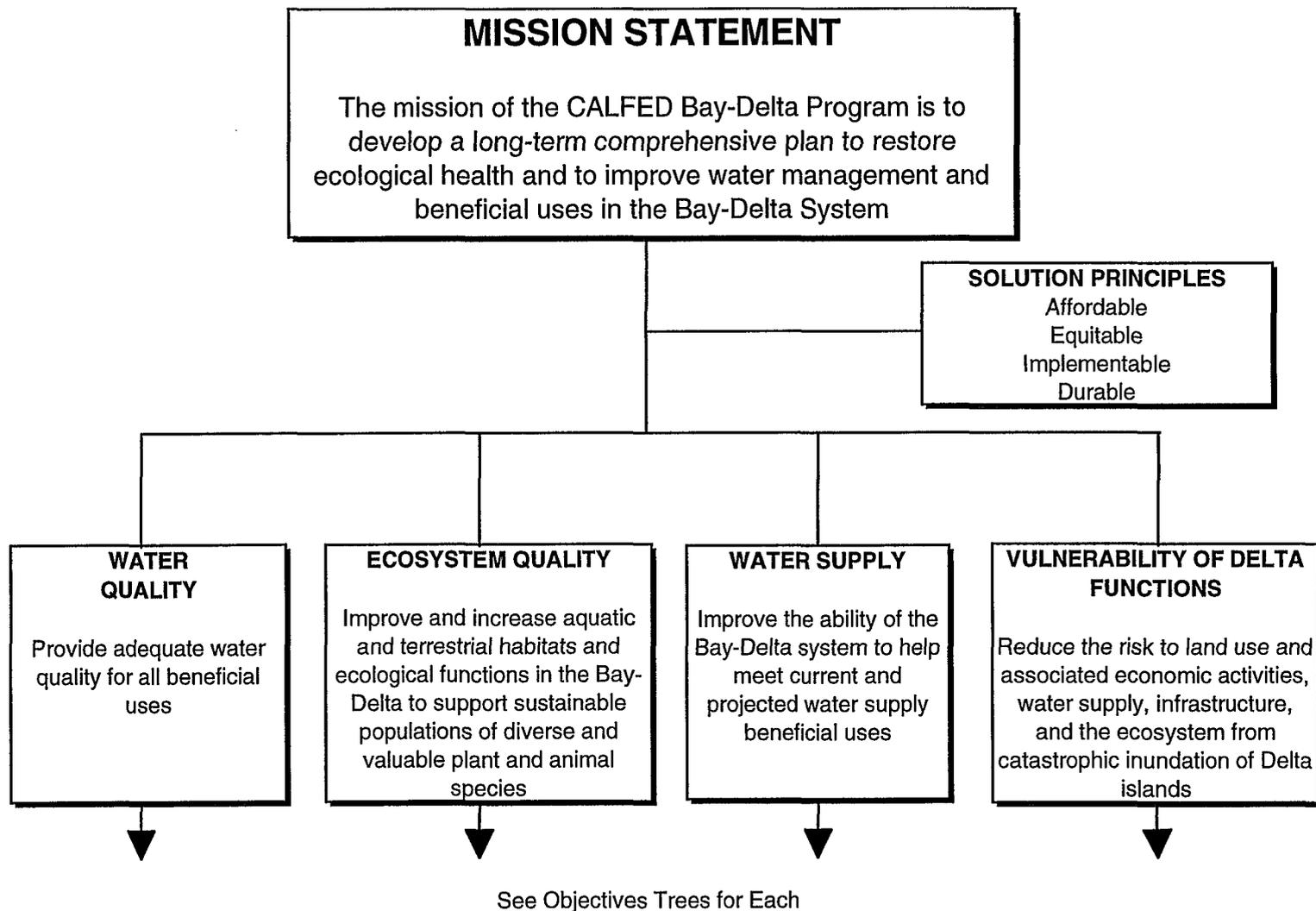
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CALFED BAY-DELTA PROGRAM

MISSION STATEMENT

The mission of the CALFED Bay-Delta Program is to develop a long-term comprehensive plan to restore ecological health and to improve water management and beneficial uses in the Bay-Delta System

CALFED BAY-DELTA PROGRAM



CALFED BAY-DELTA PROGRAM

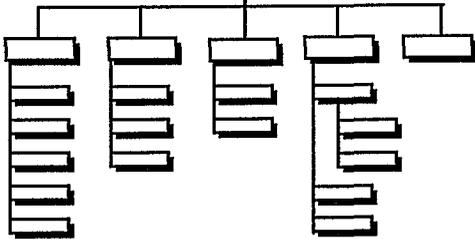
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SOLUTION PRINCIPLES

- Affordable
- Equitable
- Implementable
- Durable

WATER QUALITY



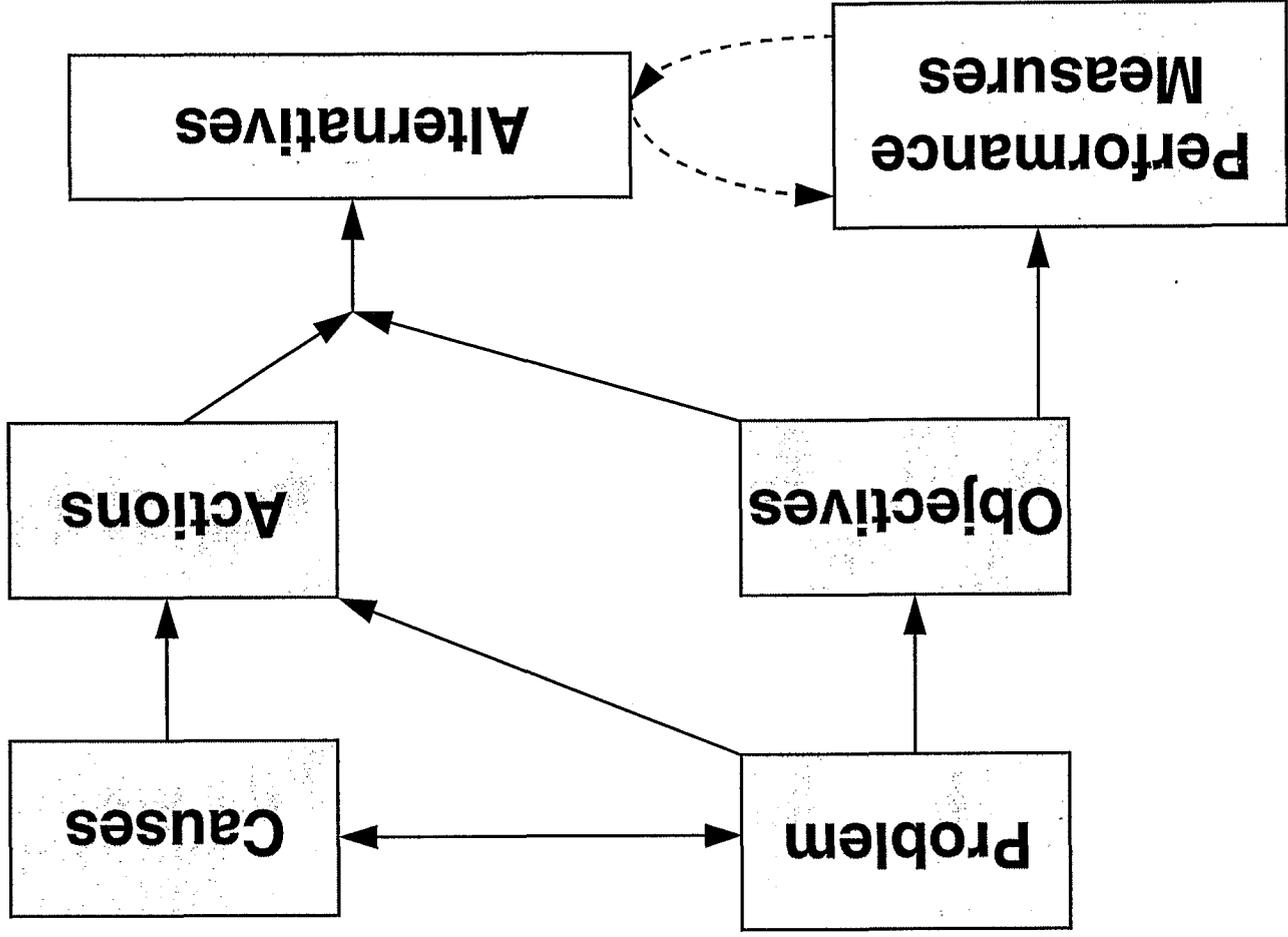
ECOSYSTEM QUALITY

WATER SUPPLY

VULNERABILITY OF DELTA FUNCTIONS

See Objectives Trees for Each

Simplified Process Schematic



Process Example

Ecosystem Quality

<p>PROBLEM:</p> <p>A. Aquatic Habitats (inadequate)</p> <p>A.5 Transport Flows (reduced, altered)</p> <p>A.5.b Young Fish through Delta (reduced transport)</p>	<p>OBJECTIVE:</p> <p>A.5.b Increase transport of Young Fish through the Delta</p>
<p>CAUSES:</p>	<p>ACTIONS:</p>

Process Example

Young Fish through Delta

CAUSES:

- Entrainment (as function of pumps)
- Reduced Inflow to Delta
- Lack of Cover (increased predation reduces fish for transport)

Example Process Young Fish Through Delta

CATEGORIES OF ACTIONS:

• Habitat Restoration/Enhancement

1.

2.

3.

• Fish Barriers

1.

2.

3.

• Modified Project Operations

1.

2.

3.

4.

• Modified Pump Intake

1.

2.

Process Example Young Fish Through Delta

PORTION OF ALTERNATIVES:

Categories of Actions	
Alternative No. 1	Alternative No. 2
1, 3	2, 3
3	1, 2
2, 3	2, 4
1	2
•Habitat	
•Fish Barriers	
•Project Operations	
•Modified Pump Intake	

Process Example Young Fish Through Delta

PERFORMANCE MEASURES:

- Feet/Second Velocity Towards Pumps
- Acres Escape Habitat
- Acres Rearing Habitat
- X2

Proxies for:

% Survival
Nos. Fish Counted
Average Size/Age of Fish

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What's Next?

- Finalize Problem Statements
- Revise Objective Statements
- Prepare Draft Categories/Actions and Performance Measures
- Workshop 3 (October 12, 1995)