

ANTELOPE VALLEY IRWM PLAN

15th Stakeholder Meeting

June 13, 2007

MEETING OBJECTIVES

- ✓ Provide Update on Prop 50 Round 2 Grant Program Guidelines and PSPs
- ✓ Public Outreach Update
- ✓ Preview Draft IRWM Plan

PROP 50 IRWM

ROUND 2 GUIDELINES & PSPs

- ✓ DWR and the State Water Resources Control Board approved the final Guidelines and PSPs
- ✓ Schedule
 - July 12 at 1 pm: Applicant Workshop
California Towers Building
3737 Main Street
Riverside, CA 92501
 - August 1: Step 1 Applications Due

DHS FUNDS



- ✓ CDHS announced the release of a new “Universal” Pre-Application for all drinking water program loans and grants
- ✓ Funds available
 - Safe Drinking Water State Revolving Fund: \$80 million annually
 - Prop 50: \$185 million
 - Prop 84: \$240 million
- ✓ Pre-Applications due July 31, 2007 and every spring starting in 2008

PUBLIC OUTREACH



- ✓ Community Meetings
- ✓ Distribution of Public Draft
 - Highlights Document
- ✓ Public Comment Meetings
 - Palmdale July 10, 7 pm
 - Rosamond July 18, 7 pm
- ✓ Written description of DAC Outreach

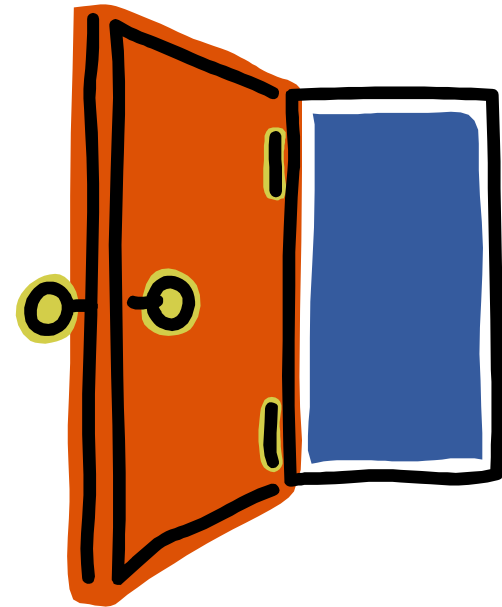
STEPS TO COLLABORATION

1. Adopt **SMART** goals for the process
2. Create a **safe** space for interaction
3. Establish a **clear** course of action
4. Demonstrate tangible **progress**
5. Iterate until group is satisfied



CODE OF CONDUCT

- ✓ **Be willing**
 - Participate fully
- ✓ **Be kind**
 - Treat others with dignity and respect
- ✓ **Be open**
 - Consider new ideas and perspectives
- ✓ **Be truthful**
 - Share accurate facts about my situation



CHECK IN

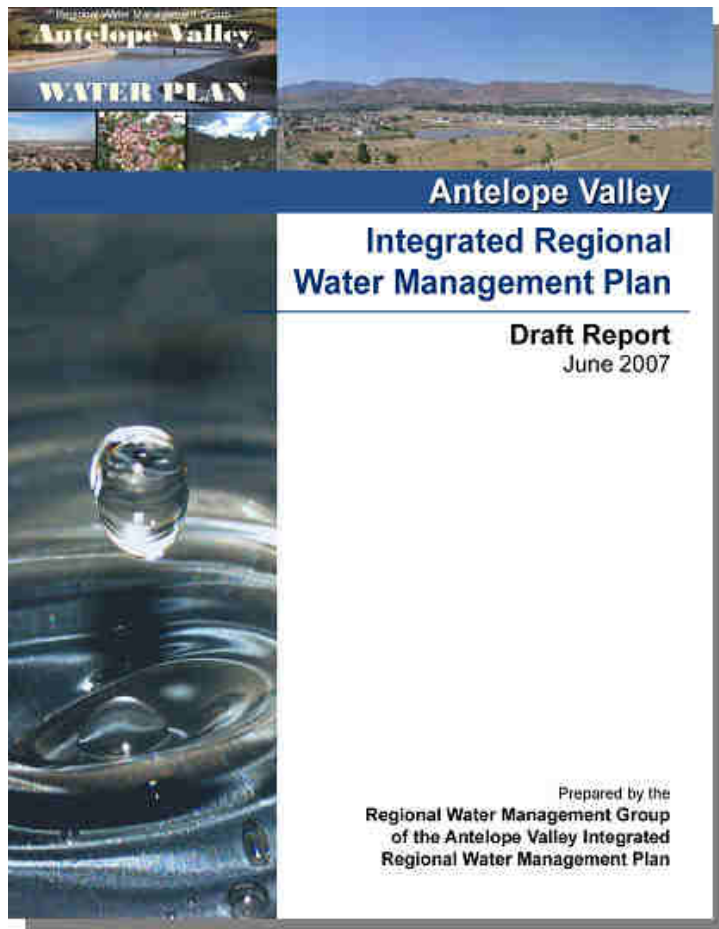
Are there questions from last meeting?



MEETING OBJECTIVES

- ✓ Provide Update on Prop 50 Round 2 Grant Program Guidelines and PSPs
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DRAFT PLAN

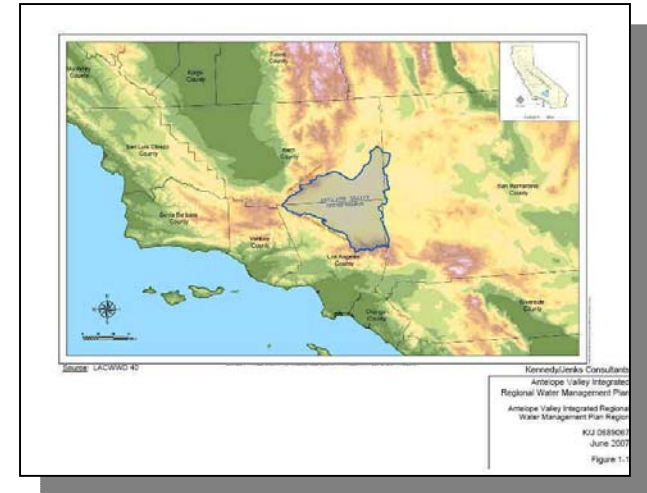


- ✓ Introduction
- ✓ Region Description
- ✓ Issues and Needs
- ✓ Objectives
- ✓ Water Management Strategies
- ✓ Project Integration and Objectives Assessment
- ✓ Projects Evaluation and Prioritization
- ✓ Framework for Implementation
- ✓ References
- ✓ Glossary

SECTION 1

INTRODUCTION

- ✓ Background
- ✓ Participants
- ✓ Community Involvement
- ✓ Plan Development
 - Goals for Planning Group
 - Planning Process



GOALS



Primary objective is to develop a broadly supported water resource management plan that defines a meaningful course of action to meet the expected demands for water and other resources within the entire Region between now and 2035

GOALS

This IRWM Plan will address:

- How M&I purveyors can reliably provide the quantity and quality of water that will be demanded by a growing population
- Options to satisfy agricultural users' demand for reliable supplies of reasonable cost irrigation water
- Opportunities to protect and enhance the current water resources (including groundwater) and the environmental resources within the Region

GOALS

1. Develop an Integrated Regional Water Management Plan for a planning period between 2005 and 2035 by October 31, 2007 that
 - a. is written to be useful to a broad range of organizations within our region
 - b. describes reasonably foreseeable water demands for our region during the planning period
 - c. characterizes the available water supplies for our region during the planning period
 - d. describes and evaluates potential management actions that we can take to meet the expected water demand of everyone within the region during the planning period
 - e. sets workable planning targets to be accomplished by specified future dates within the planning period
 - f. identifies potential and promising sources of money to pay to implement this IRWM Plan

GOALS

1. Develop an Integrated Regional Water Management Plan for a planning period between 2005 and 2035 by October 31, 2007 that:
 - g. sets priorities for implementation
 - h. is flexible and responsive to changing conditions
 - i. satisfies the guidelines published by DWR for IRWM Plans
 - j. satisfies the requirements published by DWR for AB 3030 groundwater management plans
 - k. qualifies entities within our region to apply for water related grant funds from State sources such as Proposition 50, and Proposition 84, and Proposition 1E

GOALS

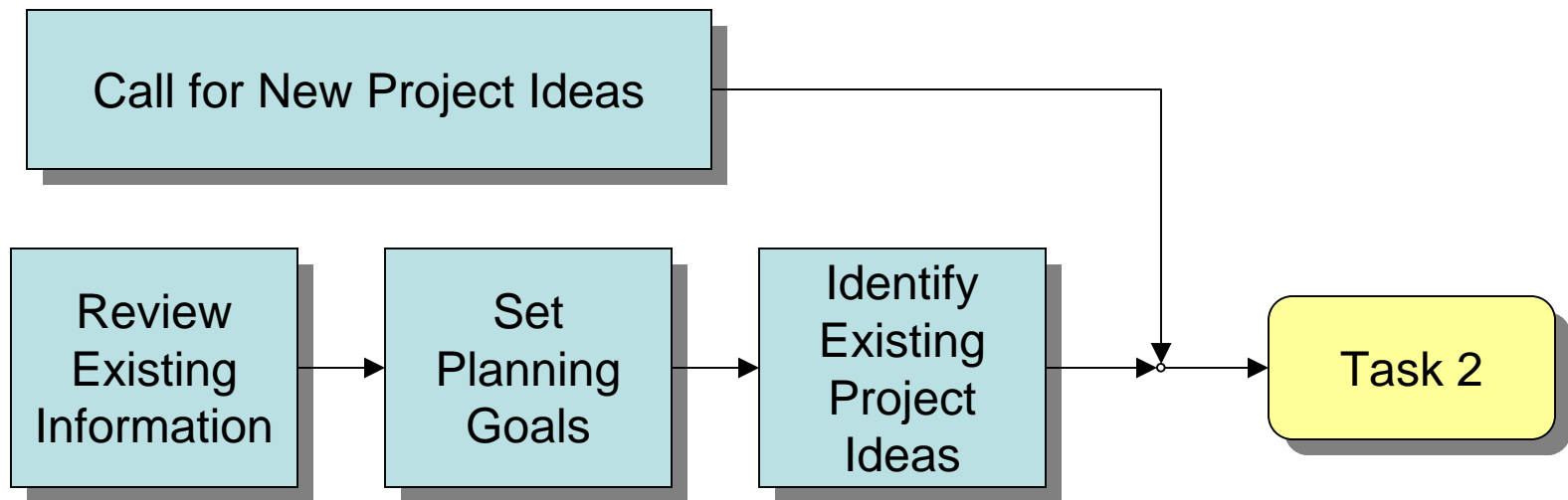
2. Discuss and describe how all broad-based regional planning efforts are related and how they will be coordinated
 - a. IRWM Plan
 - b. Adjudication
 - c. Water Storage District Proposal
 - d. Water Banking JPA
 - e. Others
3. Establish cooperative relationships and new partnerships to create a useful regional plan.

GOALS

4. Each member of the RWMG will take ownership in this IRWM Plan and collaborate to produce a widely accepted plan.
5. Conduct strategic education and outreach to the public informing the target audiences of the following:
 - a. the need for regional planning
 - b. benefits of a cooperative approach
 - c. the priorities for implementation
 - d. how the public can participate
 - e. Others?
6. Identify a back-up plan for meeting grant application deadlines.

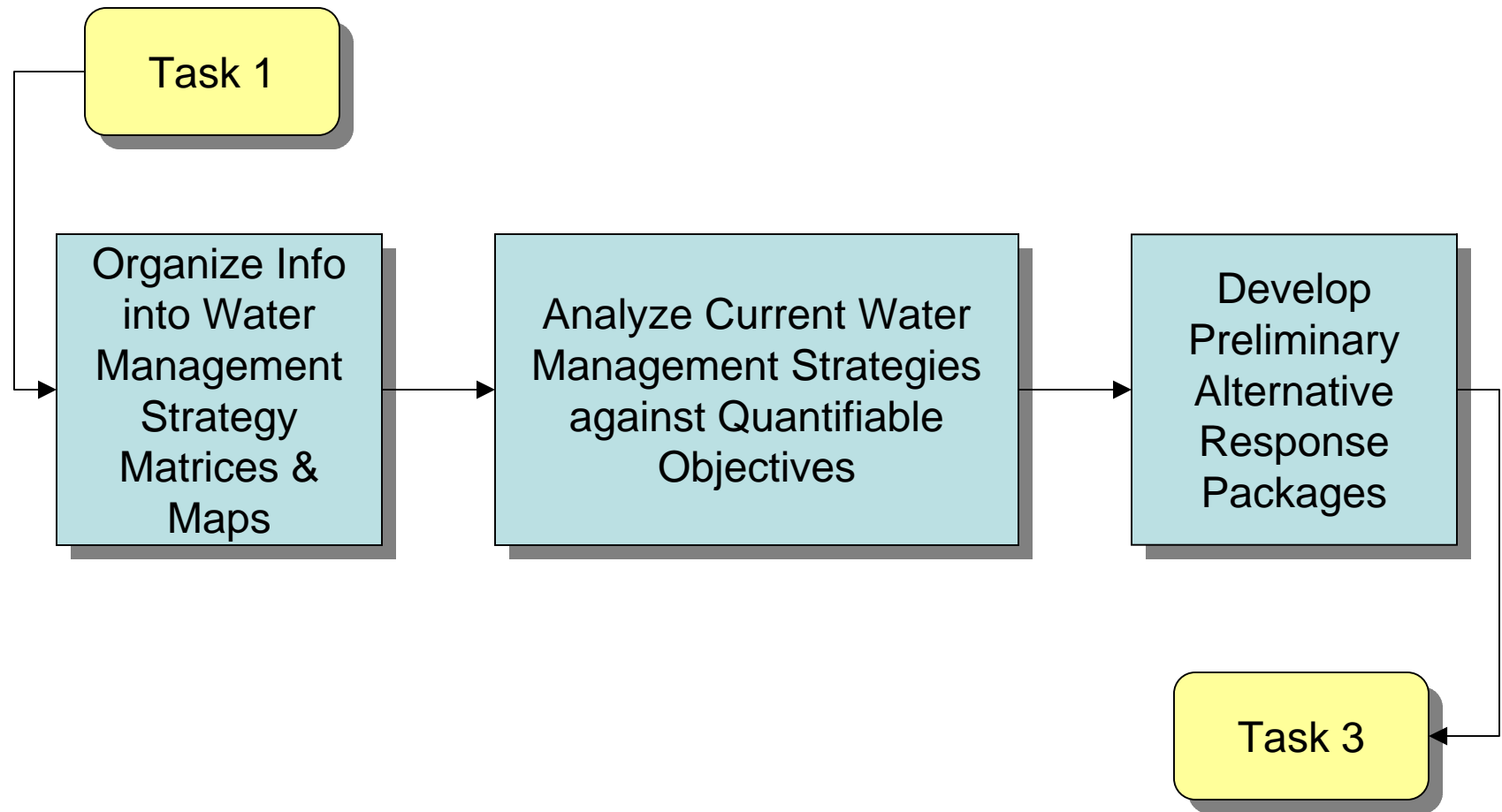
PLANNING PROCESS

TASK 1



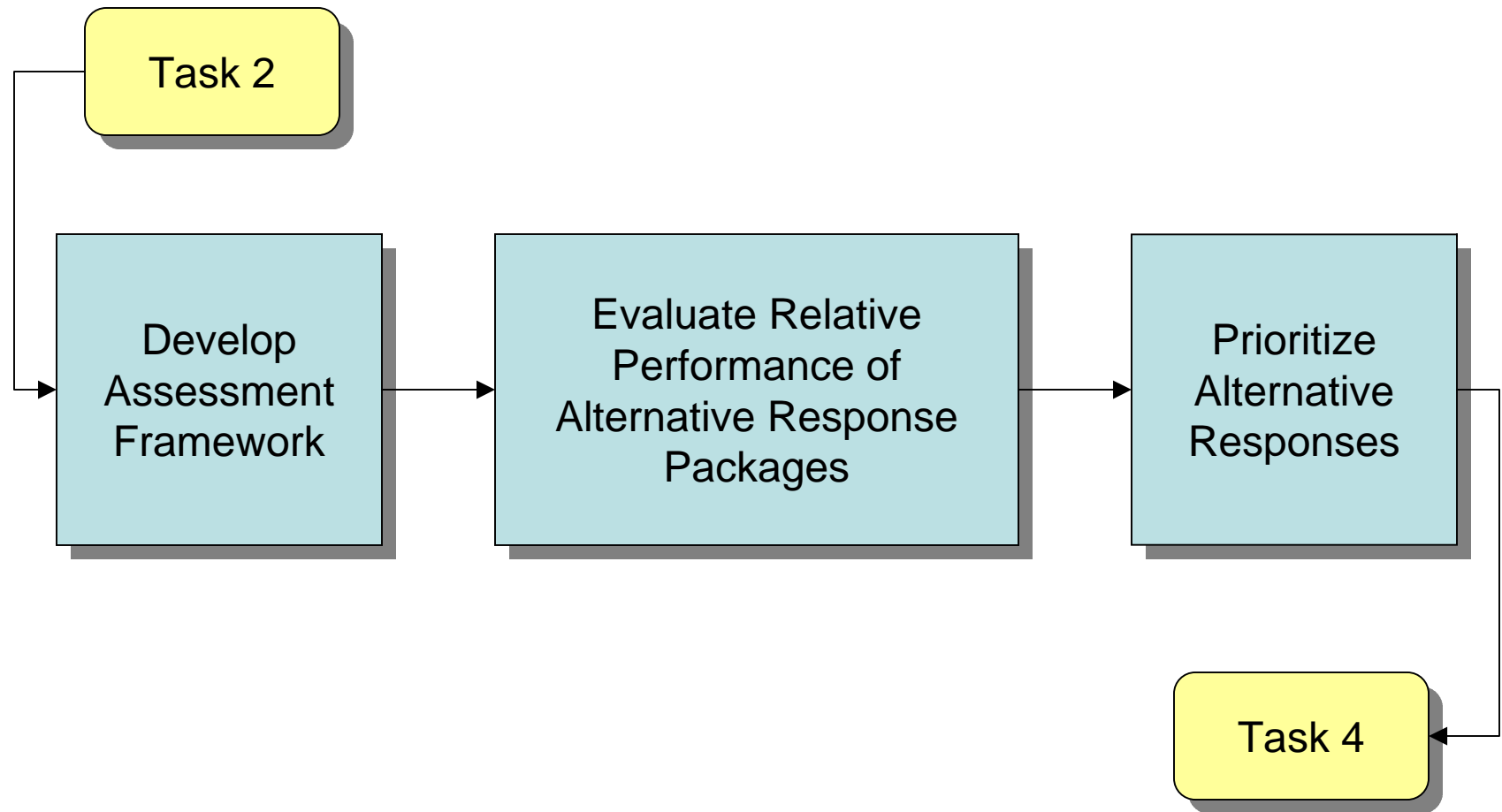
PLANNING PROCESS

TASK 2



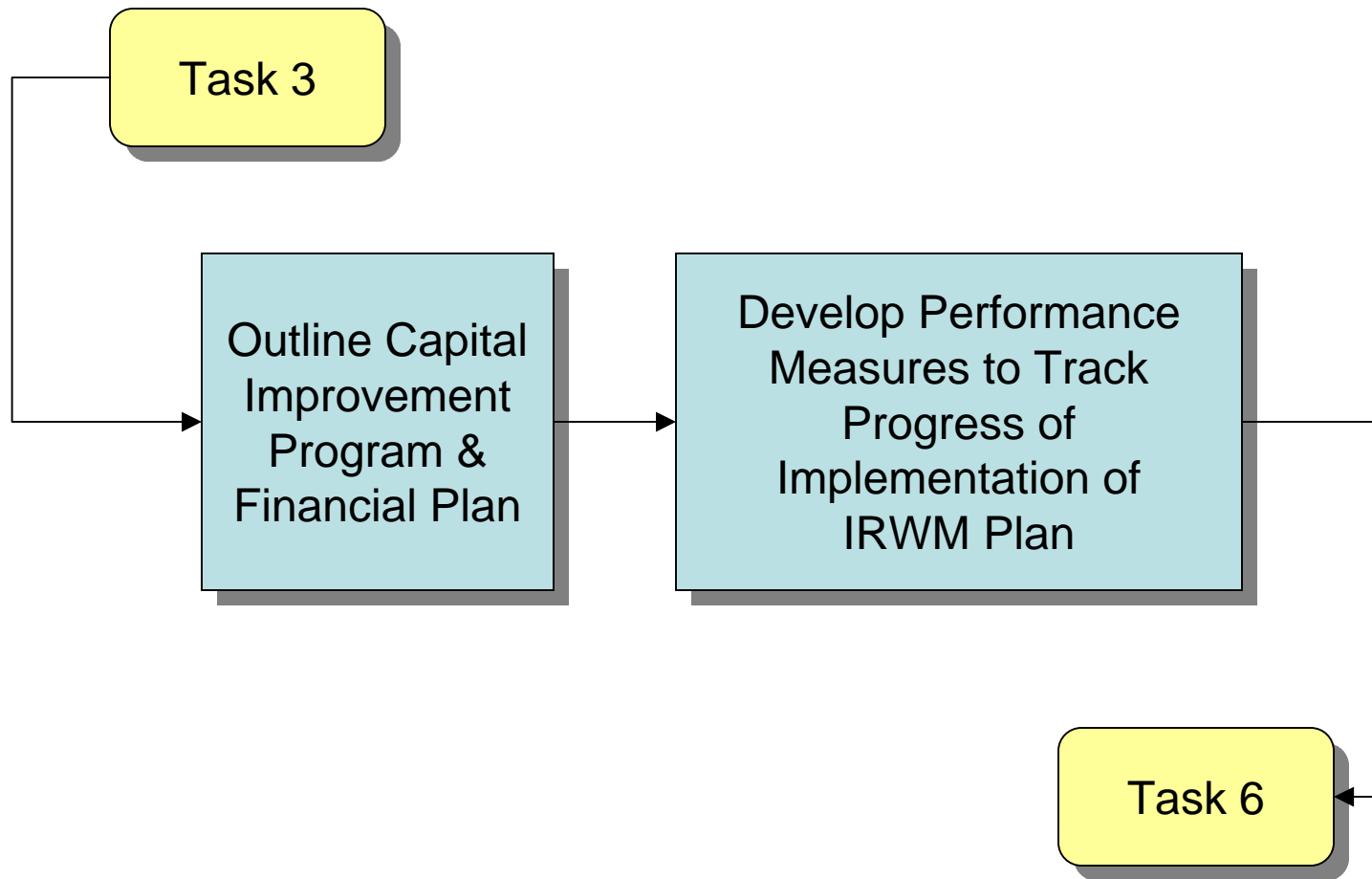
PLANNING PROCESS

TASK 3



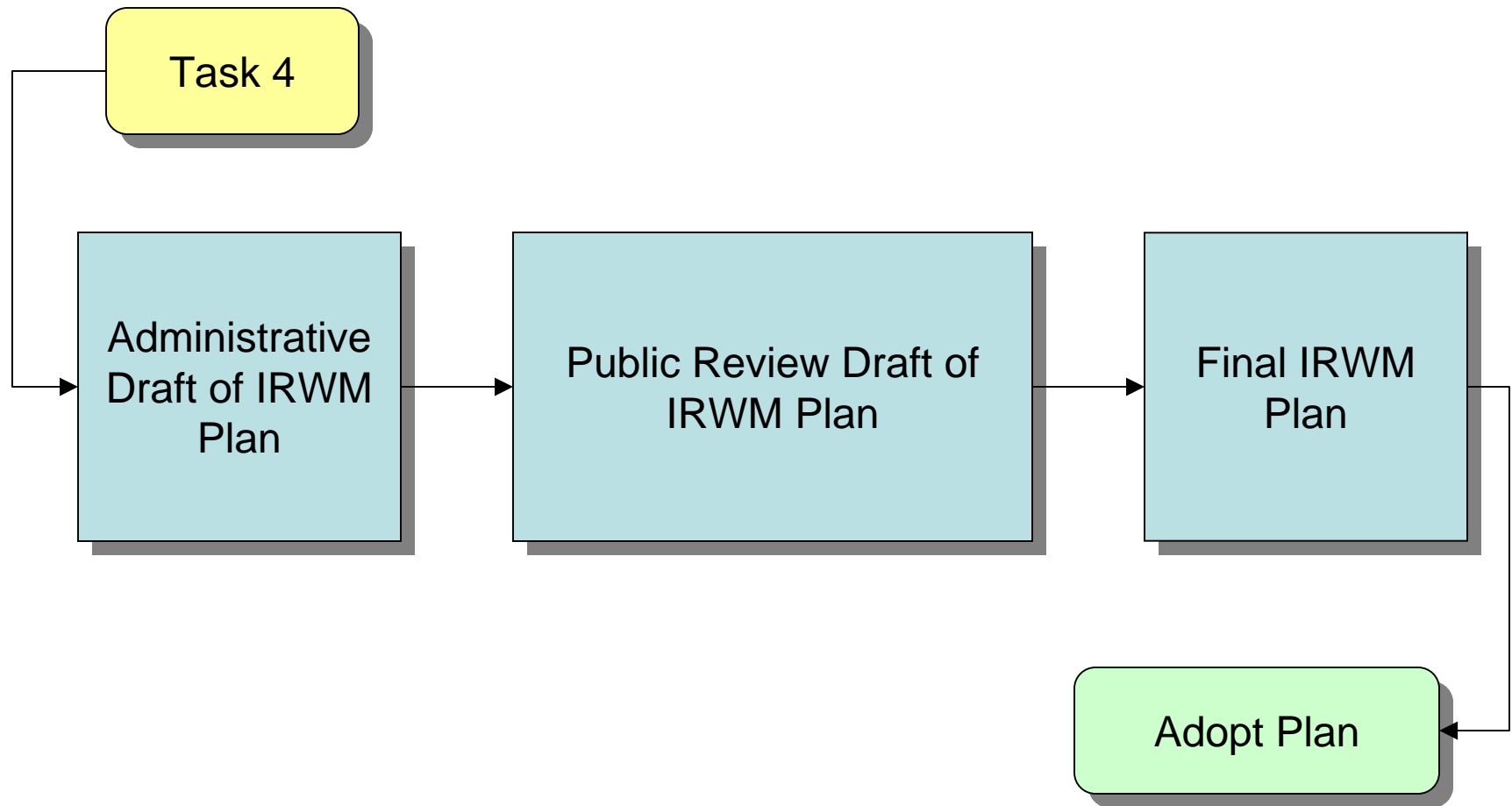
PLANNING PROCESS

TASK 4



PLANNING PROCESS

TASK 6



PRESENTING CONTENT

- ✓ Transmit new **draft** one week before meeting
- ✓ Present highlights and **gauge agreement on major items** at meeting
- ✓ Receive written **comments** one week after meeting
- ✓ **Revise** draft materials and distribute them one week before next meeting
- ✓ Discuss comments received and **changes** at next meeting
- ✓ **Repeat** until sufficient agreement
- ✓ Agree to include content in **final** report unless reason to revisit emerges later

COMMUNITY INVOLVEMENT

- ✓ Conducted significant outreach to identify disadvantaged communities and social justice concerns
- ✓ Met with many small communities and rural town councils
- ✓ Historically smaller communities not included in planning activities within region
- ✓ Discovered significant variation in local concerns
- ✓ Provided assistance for participation

ACTION

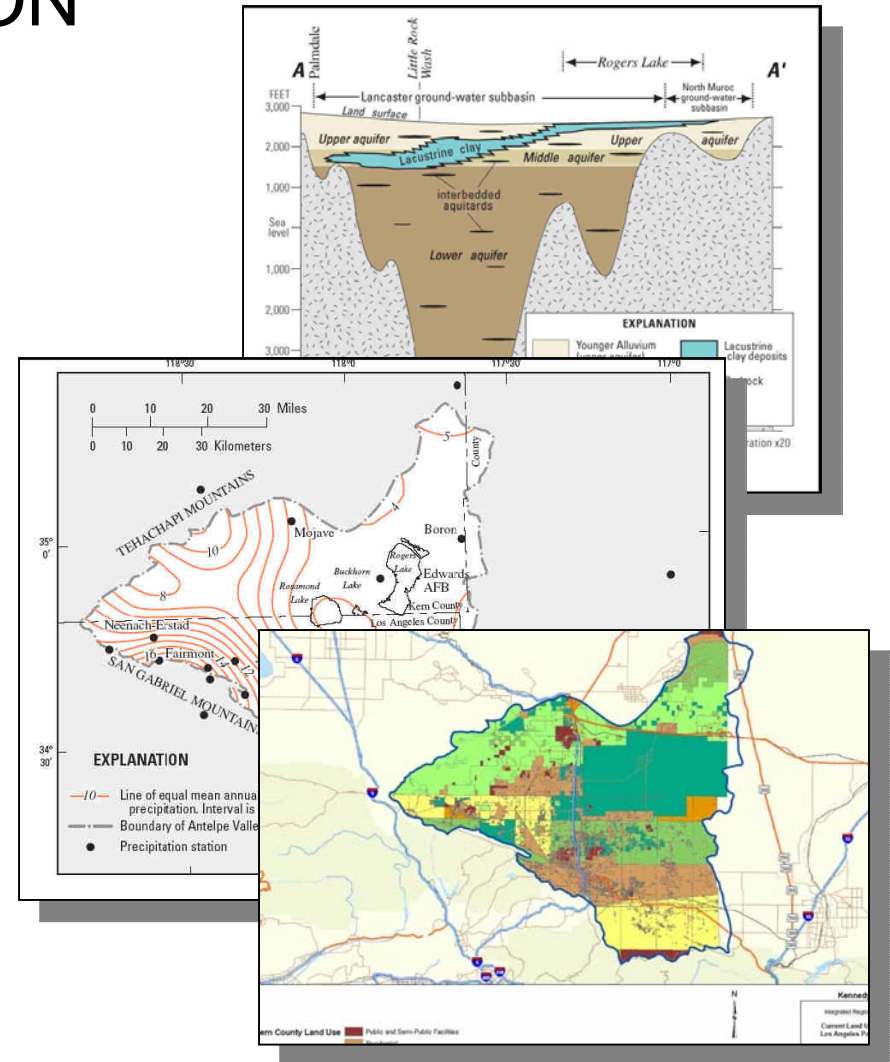
- ✓ Want to create an IRWMP that promotes and guides meaningful action over next 20 years
- ✓ The way we **interact to create** the plan will serve as a good indicator of how we will **interact to implement** it



SECTION 2

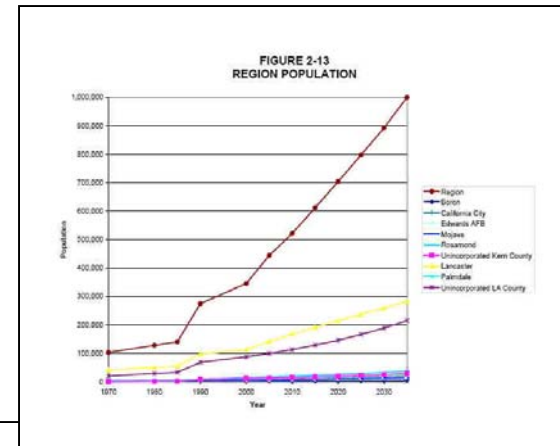
REGION DESCRIPTION

- ✓ Overview
- ✓ Location
- ✓ Climate
- ✓ Hydrologic Features
- ✓ Land Use
- ✓ Population



POPULATION

- ✓ 1970: 103,000
- ✓ 2005: 444,000
- ✓ 2035: 1,000,000



**TABLE 2-3
POPULATION PROJECTIONS**

	1970 ^(a)	1980 ^(a)	1985 ^(b)	1990 ^(a)	2000 ^(a)	2005	2015	2035
Boron ^(d)	3,000	3,000	3,000	3,000	2,000	2,000	3,000	5,000
California City ^(d)	2,000	3,000	4,000	6,000	8,000	9,000	12,000	20,000
Edwards AFB ^(d)	10,000	9,000	8,000	7,000	7,000	7,000	10,000	16,000
Mojave ^(a)	4,000	5,000	5,000	7,000	6,000	7,000	9,000	14,000
Rosamond ^(d)	4,000	5,000	6,000	9,000	15,000	17,000	22,000	38,000
Unincorporated Kern County ^(d)	1,000	2,000	3,000	8,000	12,000	13,000	17,000	28,000
Lancaster ^(c)	41,000	51,000	55,000	98,000	113,000	142,000	192,000	283,000
Palmdale ^(c)	17,000	22,000	24,000	67,000	96,000	146,000	218,000	380,000
Unincorporated Los Angeles County ^(d)	20,000	29,000	33,000	69,000	88,000	100,000	129,000	215,000
Region	103,000	128,000	140,000	275,000	346,000	444,000	612,000	1,000,000

Notes: Projections Rounded to the nearest 1,000 people.

(a) Based on Geolytics Normalization of Past U.S. Census Tract Data to 2000 Census Tract Boundaries.

(b) Based on an Interpolation of the 1980 and 1990 U.S. Census Data.

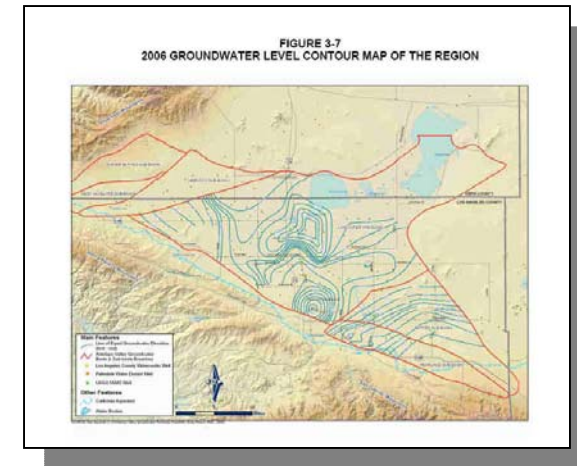
(c) SCAG projections for North Los Angeles County Subregion. 2035 Estimates assume same growth rate as in 2030.

(d) Projections assume the SCAG Growth Rate of 4.2 percent for the Region.

SECTION 3

ISSUES AND NEEDS

- ✓ Water Supply
- ✓ Water Quality
- ✓ Flood
- ✓ Environmental Resources
- ✓ Land Use



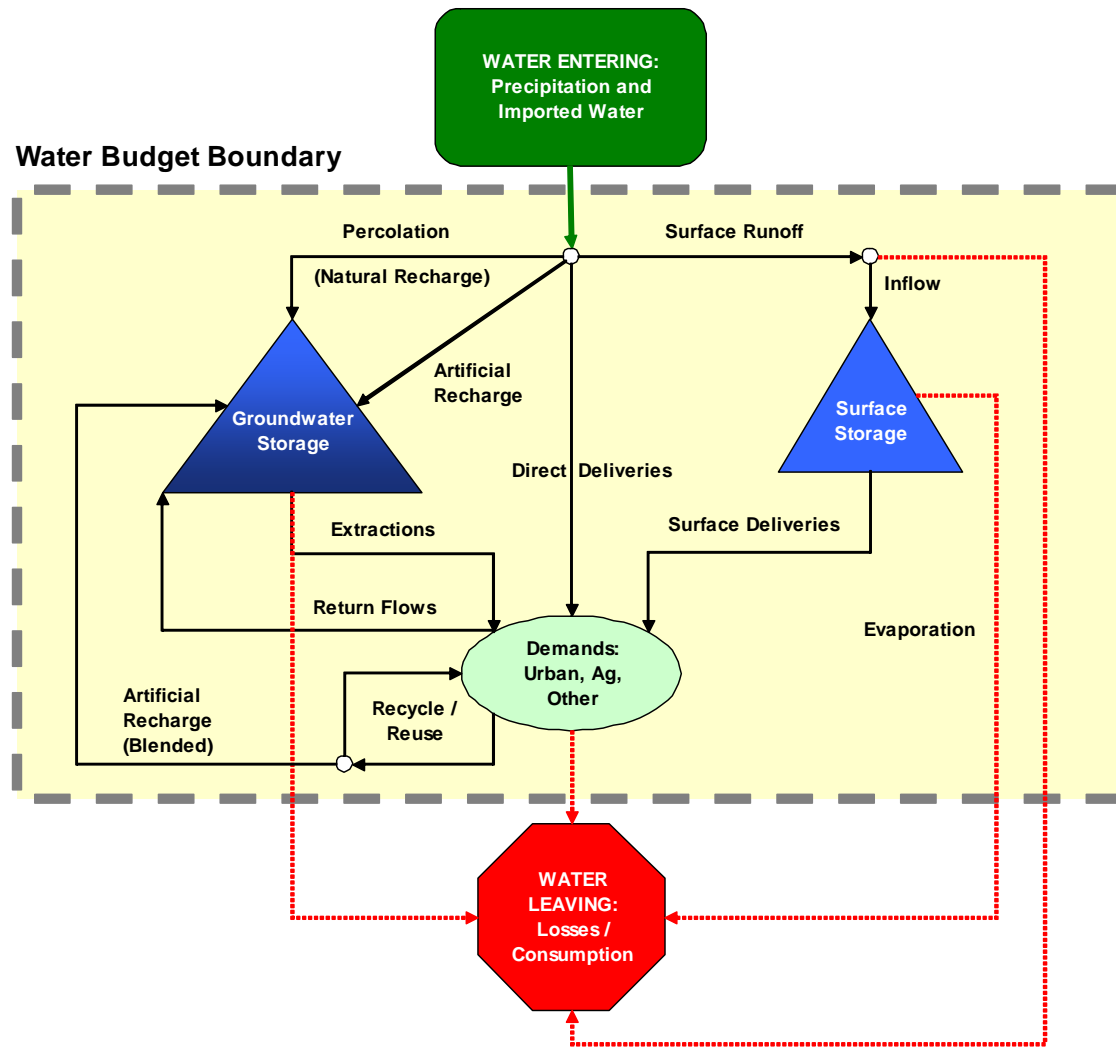
WATER SUPPLY

MANAGEMENT ISSUES AND NEEDS



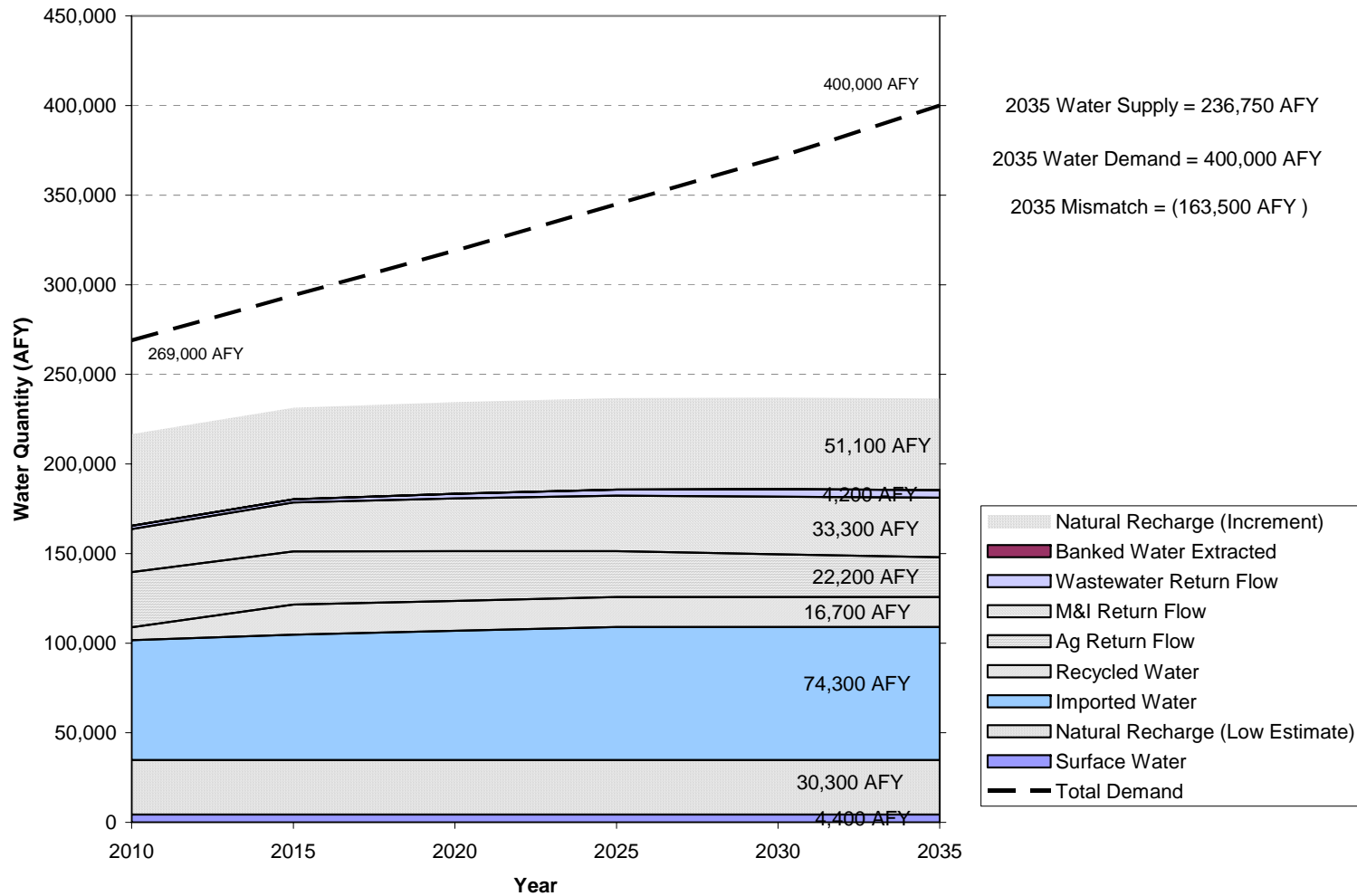
- ✓ Reliance on and reliability of imported water
- ✓ Groundwater use not managed
- ✓ Existing facilities have limitations
- ✓ Global warming effects
- ✓ Forecast significant deficit

WATER BUDGET



WATER BALANCE

AVERAGE WATER YEAR



WATER QUALITY

MANAGEMENT ISSUES AND NEEDS

- ✓ Meeting water quality regulations
- ✓ Closed basin with no outfall for discharge
- ✓ Must provide wastewater treatment for growing population
- ✓ Emerging contaminants



FLOOD

MANAGEMENT ISSUES AND NEEDS

- ✓ Lack of coordination throughout Valley
- ✓ Poor water quality of runoff
- ✓ Nuisance water and dry weather runoff
- ✓ Difficulty providing flood control w/o interfering w/ groundwater recharge
- ✓ Continue sediment deposition for Edwards AFB dry lakes to maintain operations

ENVIRONMENTAL

MANAGEMENT ISSUES AND NEEDS



- ✓ Growing demand for recreational opportunities
- ✓ Conflict between industry, growth, and preserving open space
- ✓ Desire to preserve open space
- ✓ Protect endangered species

LAND USE

MANAGEMENT ISSUES AND NEEDS

- ✓ Rapid growth in the Valley
- ✓ Maintain local culture and values
- ✓ Changes in land uses affecting agriculture



SECTION 4

REGIONAL OBJECTIVES

- ✓ The objectives in this section describe the intended outcomes from implementing the Plan
- ✓ The Planning Targets are designed to allow the RWMG to track progress over time

SECTION 4

WATER SUPPLY OBJECTIVES

Objectives	Planning Targets
Water Supply Management	
Provide reliable water supply to meet the Region's expected demand between now (2010) and 2035.	Reduce (52,400 to 163,500 AFY) mismatch of expected supply and demand in average years by providing new water supply and reducing demand, starting 2009.
	Provide adequate reserves (60,300 to 70,100 AFY) to supplement average condition supply to meet demands during single-dry year conditions, starting 2009 ^[1] .
	Provide adequate reserves (51,800 to 108,400 AF/ 4-year period) to supplement average condition supply to meet demands during multi-dry year conditions, starting 2009 ^[2] .
Establish a contingency plan to meet water supply needs of the Region during a plausible disruption of SWP water deliveries.	Demonstrate ability to meet regional water demands without receiving SWP water for 6 months over the summer, by June 2010.
Stabilize groundwater levels at current conditions.	Manage groundwater levels throughout the basin such that a 10-year moving average of change in observed groundwater levels is greater than or equal to 0, starting January 2010.

SECTION 4

WATER QUALITY OBJECTIVES

Water Quality Management	
Provide drinking water that meets customer expectations.	Continue to meet Federal and State water quality standards as well as customer standards for taste and aesthetics throughout the planning period.
Protect aquifer from contamination.	Prevent unacceptable degradation of aquifer according to the Basin Plan throughout the planning period.
	Map contaminated sites and monitor contaminant movement, by December 2008.
	Identify contaminated portions of aquifer and prevent migration of contaminants, by June 2009.
Protect natural streams and Recharge areas from contamination.	Prevent unacceptable degradation of natural streams and recharge areas according to the Basin Plan throughout the planning period.
Maximize beneficial reuse of wastewater.	Increase infrastructure and establish policies to use 33% of recycled water by 2015, 66% by 2025, and 100% by 2035.

SECTION 4

FLOOD MANAGEMENT OBJECTIVES

Flood Management	
Reduce negative impacts of stormwater, urban runoff, and nuisance water.	Coordinate a regional flood management plan and policy mechanism by the year 2010.

SECTION 4

ENVIRONMENTAL RESOURCE OBJECTIVES

Environmental Resource Management	
Preserve open space and natural habitats that protect and enhance water resources and species in the Region.	Contribute to the preservation of an additional 2,000 acres of open space and natural habitat, to integrate and maximize surface water and groundwater management by 2015.

SECTION 4

LAND USE PLANNING OBJECTIVES

Land Use Planning/Management	
Maintain agricultural land use within the Region.	Preserve 100,000 acres of farmland in rotation through 2035.
Meet growing demand for recreational space.	Contribute to local and regional General Planning documents to provide 5,000 ^[1] acres of recreational space by 2035.
Improve integrated land use planning to support water management.	Coordinate a regional land use management plan by the year 2010.

SECTION 5

WATER MANAGEMENT STRATEGIES

- ✓ Describes many categories of management actions that could help meet regional objectives

**TABLE 5-1
STRATEGY MATRIX**

	California Water Plan Strategies																								
	Agricultural lands stewardship	Agricultural water use efficiency	Conjunctive management and groundwater storage	Conveyance	Desalination	Drinking Water Treatment and Distribution	Economic Incentives	Ecosystem restoration	Floodplain management	GW/aquifer remediation	Matching water quality to water use	Pollution prevention	Precipitation enhancement	Recharge areas protection	Recycled municipal water	Surface storage – CALFED	Surface storage – regional/focal	System reoperation	Urban land use management	Urban runoff management	Urban water use efficiency	Water transfers	Water-dependent recreation	Watershed management	
Proposition 50 IRWMP Strategies <small>(** denotes those strategies that must be considered to meet the minimum IRWM Plan Standards)</small>																									
Water Supply Management																									
Water supply reliability**	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Groundwater management**		•	•						•	•	•								•	•	•	•	•	•	•
Water conservation**		•						•																	
Water recycling**																									
Conjunctive use			•							•	•														
Surface storage																									
Water transfers			•	•						•															
Desalination					•																				
Imported water						•																			
Water Quality Management																									
Water quality protection & improvement**						•	•			•	•	•	•	•	•	•	•			•	•				•
Water and wastewater treatment						•	•			•	•	•	•	•	•	•	•								•
Non-point source pollution control										•	•	•	•	•	•	•	•								•
Flood Management																									
Flood management**										•					•					•	•				•
Storm water capture & management**										•					•					•	•				•
Ecosystem restoration**										•					•										•
Env. & habitat protection & improvement**										•					•										•
Recreation & public access**																									•
Wetlands enhancement and creation**										•	•	•			•										•
Land Use Management																									
Land use planning	•	•	•	•					•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•
Watershed planning	•	•	•	•		•			•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•

Draft Report - Antelope Valley IRWM Plan

Page 5-2

SECTION 5

WATER MANAGEMENT STRATEGIES

- ✓ Call for projects
- ✓ Consultant team met with participants to discuss project ideas and potential management actions that could help meet regional objectives
- ✓ Created a list of current project ideas and potential management actions with brief descriptions

SECTION 6

PROJECT INTEGRATION AND OBJECTIVES ASSESSMENT

- ✓ Integration within a Water Management Strategy Area (WMSA)
- ✓ Integration across WMSA's
- ✓ Geographical Integration
- ✓ Comparison to IRWM Guideline Strategies, AB 3030 objectives, IRWM Program Preferences, and Statewide Priorities

SECTION 6

PROJECT INTEGRATION AND OBJECTIVES ASSESSMENT

- ✓ How well do the projects meet the objectives?
- ✓ Potential actions to fill the gaps

SECTION 6

Water Supply Management Strategy

- ✓ Many conjunctive use projects submitted
- ✓ Difficult to assess without quantifiable benefits

Additional efforts and actions to fill the gaps

- ✓ Aggressive conservation
- ✓ Further conjunctive use management
- ✓ Participate in water banks outside of the Antelope Valley
- ✓ Create regional database for groundwater pumping
- ✓ Use alternative sources of water
- ✓ Make further use of recycled water
- ✓ Inability to approve further development

SECTION 6

Water Quality Management Strategy

- ✓ Many projects submitted contribute to meeting state and federal standards and maximizing beneficial use
- ✓ Protecting the groundwater aquifer from contamination falls short

Additional efforts and actions to fill the gaps

- ✓ Identify contaminated portions of the aquifer
- ✓ Map contaminated portions of aquifer by December 2008
- ✓ Establish a well abandonment ordinance
- ✓ Develop and implement a regional Groundwater Wellhead Protection Program
- ✓ Develop management program for nitrate and TDS
- ✓ Expand the water quality monitoring program

SECTION 6

Flood Management Strategy

- ✓ Proposed projects include recharge, retention, and detention basins to control storm water flows, and new storm drains to route storm flows and flood flows to such basins.
- ✓ Need to coordinate these actions

Additional efforts and actions to fill the gaps

- ✓ Coordinate a flood management plan by 2010
- ✓ Storm water capture/recovery feasibility study
- ✓ Increase small-scale flood management projects
- ✓ Encourage Low Impact Development

SECTION 6

Environmental Management Strategy

- ✓ Two projects submitted for inclusion in the IRWM Plan had environmental resource management as their main benefit
- ✓ Some projects that propose groundwater recharge areas designated such areas as open space (approximately 2,500 acres), which would help to meet the objectives for this strategy

Additional efforts and actions to fill the gaps

- ✓ Preserve 2,000 acres of open space and natural habitat
- ✓ Develop a HCP for the Antelope Valley
- ✓ Promote Land Conservation Projects that Enhance Flood Control, Aquifer Recharge, and Watershed and Open Space Preservation

SECTION 6

Land Use Management Strategy

- ✓ Two projects submitted for inclusion in the IRWM Plan had land use management as their main benefit
- ✓ A number of the projects identify agricultural lands for effluent management, and agricultural and recreational lands are likely to be addressed through the update of local general planning documents

Additional efforts and actions to fill the gaps

- ✓ Preserve farmland
- ✓ Build public parks and recreational amenities
- ✓ Create a Watershed Management Plan
- ✓ Create Incentives for Landowners to Protect/Restore/Preserve Open Space
- ✓ Coordinate a Regional Land Use Management Plan by the Year 2010

SECTION 7

PROJECT EVALUATION AND PRIORITIZATION

- ✓ Compares proposed projects and management actions according to several criteria
- ✓ Describes what objectives will be addressed by each project and management action
- ✓ Groups potential projects and management actions into 3 different priorities; low, medium, high

PRIORITY ACTIONS

Priority	Project	
WATER SUPPLY GROUNDWATER RECHARGE/BANKING INFRASTRUCTURE PROJECTS		
High	Upper Amargosa Creek Recharge, Flood Control & Riparian Habitat Restoration Project – California Aqueduct to east of 20 th St. West	(Palmdale, AVEK)
	Water Supply Stabilization Project – Westside	(AVEK/AVSWCA/ LACWWD 40)
	Aquifer Storage and Recovery Project - Injection Well Development	(LACWWD 40)
	Antelope Valley Water Bank	(WDS/LACWWD 40)
Medium	Lower Amargosa Creek Recharge & Flood Control Project – Ave. O to Ave. M	(J. Goit / Palmdale)
	Aquifer Storage and Recovery Project: Additional Storage Capacity	(LACWWD 40)
	Water Supply Stabilization Project – Eastside Project	(AVEK)

PRIORITY ACTIONS

WATER INFRASTRUCTURE PROJECTS		
High	Avenue K Transmission Main, Phases I-IV	(LACWWD 40)
	Littlerock Dam Sediment Removal Project	(PWD)
	Waste Water Pipeline	(RCSD)
Low	Avenue M and 60th Street West Tanks	(LACWWD 40)
	Place Valves and Turnouts on Reclaimed Water Pipeline	(RCSD)

PRIORITY ACTIONS

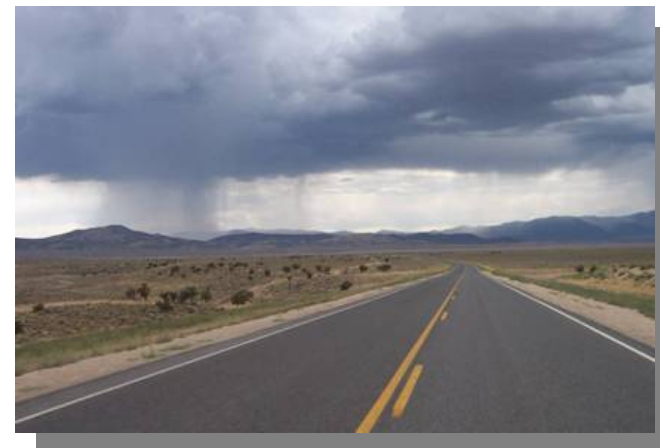
RECYCLED WATER PROJECTS		
High	Antelope Valley Recycled Water Project Phase 2 – Division St./Ave. K/Sierra Hwy./Ave. M/50 th St. E.	(LACWWD 40/Palmdale/LACSD)
	Groundwater Recharge Using Recycled Water (GWR-RW) Project	(Lancaster)
Medium	Groundwater Recharge – Recycled Water Project	(PWD)
	KC & LAC Interconnection Pipeline	(RCSD)
	Regional Recycled Water Project Phase 3	(LACWWD 40/Palmdale/LACSD)
	Tertiary Treated Water Conveyance & Incidental Groundwater Recharge of Amargosa Creek Avenue M to Avenue H	(Lancaster)
Low	Regional Recycled Water Project Phase 4	(LACWWD 40/Palmdale/LACSD)
WATER CONSERVATION/WATER USE EFFICIENCY		
High	Comprehensive Water Conservation/Efficient Water Use Program	(AVWCC)

PRIORITY ACTIONS

WATER QUALITY PROJECTS		
High	Lancaster WRP Stage V	(LACSD)
	Palmdale WRP Existing Effluent Management Sites	(LACSD)
	Palmdale WRP Stage V	(LACSD)
	Partial Well Abandonment of Groundwater Wells for Arsenic Mitigation	(LACWWD)
Medium	Lancaster WRP Stage VI	(LACSD)
	Lancaster WRP Proposed Effluent Management Sites	(LACSD)
	Palmdale WRP Stage VI	(LACSD)
	Palmdale WRP Proposed Effluent Management Sites	(LACSD)
	PWD New Treatment Plant	(PWD)
Low	42 nd Street East, Sewer Installation	(Palmdale)

PRIORITY ACTIONS

FLOOD MANAGEMENT PROJECTS		
High	Development of Coordinated Antelope Valley Flood Control Plan	Cities of Lancaster, Palmdale, LADPW, Kern County
Medium	Quartz Hill Storm Drain	(LADPW)
	Anaverde Detention Basin, Dam & Spillway at Pelona Vista Park	(Palmdale)
	Barrel Springs Detention Basin and Wetlands	(Palmdale)
	Hunt Canyon Groundwater Recharge and Flood Control Basin	(Palmdale)
Low	45 th Street East Flood Control Basin (Q-East Basin)	(Palmdale)
	Avenue Q and 20 th Street East Basin (Q-West Basin)	(Palmdale)
	Storm water Harvesting	(Leona Valley)



PRIORITY ACTIONS

ENVIRONMENTAL RESOURCE MANAGEMENT PROJECTS		
High	Ecosystem & Riparian Habitat Restoration of Amargosa Creek; Ave J to Ave H	(Lancaster)
Medium	Tropico Park Pipeline Project	(RCSD)
LAND USE MANAGEMENT PROJECTS		
High	Development of a Coordinated Land Use Management Plan	(Cities of Lancaster, Palmdale, LADPW, Kern County /Antelope Valley Conservancy)
	Amargosa Creek Pathways Project	(Lancaster)



SECTION 8

FRAMEWORK FOR IMPLEMENTATION

- ✓ Relationship of IRWM Plan to other planning in region
- ✓ Governance structure
- ✓ Finance
- ✓ Data and data management
- ✓ Performance tracking
- ✓ Plan updates



MESSAGES

What does the Plan say?

- Complex region with growing challenges
- Much uncertainty in water supply
- Clear regional objectives
- Growing population will require significant increase in water supply and reduction in demand
- Immediate need for action
- Management agencies can work together

NEXT STEPS

- ✓ Stakeholder group review and provide comments on administrative review draft by Wednesday, June 20
- ✓ Incorporate comments and distribute public review draft on July 2
- ✓ Conduct two public meetings
 - Palmdale, July 10 at 7:00 p.m.
 - Rosamond, July 18 at 7:00 p.m.
- ✓ Public comments due on July 31

NEXT AGENDA

- ✓ Preview and discuss early draft of Proposition 50 Step 1 application



ANYTHING ELSE?

