

# Establishing Plan Objectives

## Antelope Valley Integrated Regional Water Management Plan

### Published State Requirements for IRWM Plan<sup>1</sup>

#### **Objectives**

Identify IRWM Plan objectives and the manner in which they were determined. The Plan must address major water related objectives and conflicts within the region, including, at a minimum, water supply, groundwater management, ecosystem restoration, and water quality.

If the Plan includes a water quality component, include a discussion of the integration of data into the SWRCB's Surface Water Ambient Monitoring Program and Groundwater Ambient Monitoring and Assessment Program.

#### **Water Management Strategies**

Document the range of water management strategies considered to meet the objectives. Strategies to be considered may include but are not limited to:

Table A-1 – Water Management Strategies

Required*	Optional
<ul style="list-style-type: none"><li>• Ecosystem restoration</li><li>• Environmental and habitat protection and improvement</li><li>• Water supply reliability</li><li>• Flood management</li><li>• Groundwater management</li><li>• Recreation and public access</li><li>• Storm water capture and management</li><li>• Water conservation</li><li>• Water quality protection and improvement</li><li>• Water recycling</li><li>• Wetlands enhancement and creation</li></ul>	<ul style="list-style-type: none"><li>• Conjunctive use</li><li>• Desalination</li><li>• Imported water</li><li>• Land use planning</li><li>• NPS pollution control</li><li>• Surface storage</li><li>• Watershed planning</li><li>• Water and wastewater treatment</li><li>• Water transfers</li></ul>

\* Pursuant to CWC §§ 79562.5 and 79564, these water management strategies must be considered to meet the minimum IRWM Plan Standards.

<sup>1</sup> *Integrated Regional Water Management Grant Program Guidelines*, Department of Water Resources, November 2004.

# **Information Generated during IRWM Plan Stakeholder Meetings**

Brainstorming sessions were conducted with attendees of IRWM Plan stakeholder meetings on May 31, 2006 and November 1, 2006. The information gathered during those sessions can be organized into three sections: issues, objectives, and management strategies.

## ***Issues***

### **Flood Protection / Storm Water Runoff**

- Flood control efforts are not well coordinated throughout Valley
- Poor water quality of runoff
- Sediments
- Nuisance water and dry weather runoff

### **Habitat Protection / Recreation**

- Growing public demand for recreational opportunities
- Endangered species (desert tortoise, Mojave ground squirrel, burrowing owl)
- Need to preserve open space
- Conflict between industry, growth, and preserving open space

### **Land Use and Watershed Planning**

- Tremendous pressure for growth in region
- Local culture and values could be lost

### **Drinking Water Supply and Quality**

- Groundwater use is not managed
- Rely heavily on imported water
- Reliability of imported water is variable
- Concerned about meeting water quality regulations for groundwater recharge

### **Wastewater / Recycled Water**

- Closed basin / no outfall for discharge
- Must provide wastewater treatment for growing population
- Emerging contaminants
- Meeting evolving regulations

## ***Objectives***

When setting objectives, we want to get to fundamental objectives, or the “motivation that is prompting action”. People often confuse an action (that could satisfy what is motivating them to act) with their objective. For instance, I could think that “I want a sandwich” and conclude that obtaining a sandwich is my objective. This may indeed be my objective, but it more likely is one possible action to satisfy my motivator that “I am

hungry”. If my fundamental objective is to satisfy my hunger, then I recognize I have many more options than a sandwich to satisfy my objective. This is relevant in water management planning because we want to keep a broad view and open mind when considering possible management actions that could meet our fundamental water management objectives.

In order to get to fundamental objectives, we evaluate each potential objective by asking “why”? By asking why, we are inquiring to determine if there is a more basic motivator prompting an action that could potentially be met by other actions.

The following information provides a starting place to help arrive at fundamental objectives.

### **Water Supply (Required)**

- Provide reliable water supply to meet the Valley’s expected 2030 demand (define reliable and demand)
- Diversify water supply portfolio (Is this an objective or management action?)
- Reduce dependence on imported water
- Prepare for drought or unexpected disruption of imported supply
- Keep local supplies in the Valley
- Decrease average per capita water use in the Valley by 10% from what it is in 2006 by 2010 (Is this an objective or management action?)

### **Groundwater Management (Required)**

- Minimize subsidence
- Minimize liquefaction
- Prevent contamination
- Stabilize groundwater levels
- Recharge to reach historic levels

### **Ecosystem Restoration (Required)**

- Preserve open space
- Protect endangered species through habitat protection

### **Water Quality (Required)**

- Provide drinking water that meets or exceeds Federal and State standards
- Minimize septic contamination of groundwater
- Reduce contamination resulting from poor water quality of storm water runoff
- Provide adequate wastewater treatment with seasonal surge capacity

### **Recreation**

- Provide additional recreational opportunities within Valley

## **Flood Protection**

- Control / curb nuisance water and dry weather runoff
- Manage sediment migration

## **Land Use**

- Preserve local culture and community values
- Preserve farm land

## **Other**

- Improve public awareness of water related issues in Valley
- Increase public participation in land use and water related planning activities
- Provide a fail safe back up use for recycled water
- Reduce carbon impacts related to global warming (May want to consider)

## ***Potential Management Actions***

Many of the items produced during discussions on May 31, 2006 and November 1, 2006 can be described as potential management actions that apply to one or more Water Management Strategies. These are actions that could be taken to help meet fundamental objectives. The following list includes suggestions recorded during the two brainstorming sessions:

- Improve coordination of flood protection and storm water runoff throughout the Valley
- Create a flood control district in the Valley
- Remove sediments from storm water runoff
- Promote low-impact development
- Create a comprehensive maintenance plan for flood control infrastructure
- Create regional design guidelines and best management practices for flood protection and storm water runoff
- Install stream gages and establish a monitoring program
- Consider asset management and maintenance needs when addressing flood control and storm water runoff
- Support conjunctive use
- Use blended or diluent water for recharge of groundwater
- Conduct public outreach and education regarding water quality of storm water and urban runoff
- Support projects that provide habitat protection, open space and enhancement of recreation opportunities
- Require environmental mitigation as part of building projects
- Recognize contributions of farming to preserve open space, utilize wastewater sludge and recycled water
- Develop guidelines for low impact development
- Promote low impact development
- Create land use plans that reflect the broad interest of the current community

- Create land use plans that consider a broader time horizon than 20 years
- Zone municipal, industrial, agricultural and natural resource management areas
- Develop a willing buyer / willing seller effort to protect open space
- Preserve at least 10,000 acres for groundwater banking
- Mitigate for potential of liquefaction from recharge
- Plan areas for farmland
- Plan areas for nature preservation
- Recognize that new development should not be solely responsible for funding the protection of open space when it will benefit existing communities
- Require developers to pay for open or protected space
- Involve the Sierra Club
- Identify people who could donate land for open spaces and preserves
- Publicly recognize individuals who donate land for open space
- Adjudicate the groundwater basin
- Increase imported water supply
- Revise landscape ordinances
- Coordinate conservation efforts through AV Water Conservation Coalition
- Take advantage of new state transfer guidelines
- Decrease demand / increase water use efficiency
- Use groundwater basin capacity for storage
- Use groundwater basin for treatment
- Increase imported water treatment plant capacity
- Participate in a desalination project outside the Valley in exchange for an imported water transfer
- Construct a desalination facility in the valley for groundwater with high TDS
- Provide seasonal surge capacity (for what?)
- Identify more recycled water users
- Prioritize beneficial reuse alternatives when available
- Provide full tertiary treatment (nitrification / denitrification)
- Storage reservoirs
- Use agriculture as fail-safe use
- Participate in groundwater recharge / reuse efforts
- Create (improve) recycled water backbone system
- Eastside and Westside groundwater recharge projects
- Laterals from the backbone system for distribution
- Acquire 10,000 acres for groundwater banking
- Acquire surface water rights to prevent septic tank pollution and possible liquefaction in target groundwater recharge sites near Rosamond
- Maximize use of reclaimed water for M&I
- Potentially expand Piute Ponds on Edwards AFB using recycled water from District 14
- Make full use (100%) of available SWP allocation and other imported surplus water

- Use tertiary treated purple pipe reclaimed water for landscape irrigation, industrial and construction uses and groundwater recharge
- Require all new development to use only reclaimed water for construction and irrigation
- Establish an appropriate per-capita water use for a Valley resident and ensure actual use equals appropriate use by 2030

## Recommended Plan Objectives

Objective	Planning Targets
<b>Water Supply</b>	
Provide reliable water supply to meet the Valley's expected demand between now and 203 <del>50</del>	Reduce expected (X and Y acre-feet/year) mismatch of <u>expected</u> supply and demand <u>in average years</u> by providing new water supply and reducing demand <del>through</del> <u>conservation</u>  <u>Provide adequate reserves (X and Y) to supplement average condition supply to meet demands during dry and multi-dry year conditions</u>
Establish <del>emergency management contingency</del> plan to provide water supply needs of region during <del>a X-month-a plausible outage-of</del> <u>disruption of</u> SWP water <u>deliveries</u>	Demonstrate ability to meet <del>90%-of</del> regional water <del>supply needs demands</del> without receiving SWP water for <del>6X</del> months <u>over the summer</u>
<b>Groundwater Management</b>	
Stabilize groundwater levels to <del>2005</del> <u>current</u> conditions	Manage groundwater levels throughout basin such that 10 year moving average of change in observed groundwater levels $\geq 0$
<b>Ecosystem Restoration</b>	
Preserve X% of open space <u>currently</u> within <u>the</u> region <del>during 2005</del>	Preserve X,000 acres of open space <u>and</u> <u>specify type and location</u>
Protect endangered species through habitat protection	Identify critical habitat and preserve <del>100%</del>
<b>Water Quality</b>	
Provide drinking water that meets <del>all</del> <u>Federal and State standards</u> <del>customer</del>	<u>Meet Federal and State standards and taste and aesthetic</u>

expectations

Protect aquifer from contamination

Prevent unacceptable degradation of aquifer

Identify contaminated portions of aquifer and prevent migration of contaminant  
~~of contaminant~~  
~~further contamination~~

~~Isolate or treat portions of aquifer that contain groundwater that do not meet federal and state drinking water standards~~  
Map contaminated sites and monitor contaminant movement

~~Provide X%~~ Maximize beneficial reuse of wastewater by 2035

Increase infrastructure and policies to use X,000 acre feet by 2035

### **Land Use**

Maintain X% of current agricultural acreage within the region ~~in 2005~~

Preserve X,000 acres of active farmland through 2035

Meet growing demand for recreational space

Increase public parks and recreational amenities by X%

### **Flood Protection**

Reduce negative impacts of flood water and urban runoff  
~~Establish a regional flood protection plan and policy mechanism to curb nuisance water runoff and manage sediment transport by 2010~~

Establish a regional flood protection plan and policy mechanism to reduce flood damage, curb nuisance water runoff and manage sediment transport by 2010