#### **ASSIGNMENTS FOR THE WATERMASTER PARTIES**

#### 2020 OBMP UPDATE - LISTENING SESSION #1

Listening Session #1 for the 2020 OBMP Update will include a discussion on the current "Drivers, Trends, and Implications" that underscore the need to update the OBMP and the current "Issues, Needs, and Wants" of the Parties for future basin management. Watermaster staff requests that the Parties come to Listening Session #1 prepared to discuss the "Drivers, Trends, and Implications" and the Party's specific "Issues, Needs, and Wants." The assignments are described below in more detail:

#### **Drivers, Trends, and Implications**

The White Paper – 2020 Update to the Chino Basin OBMP describes several drivers and trends that are external forces that will cause changes in the Chino Basin water space. These drivers and trends will have certain implications that may challenge the individual and collective interests of the Parties and their water-supply reliability. There may be additional drivers/trends/implications that are not described in the White Paper.

**Assignment #1**: Please review the White Paper and come ready to Listening Session #1 with comments and suggested revisions/additions to the Drivers, Trends, and Implications described in the White Paper. After the session, you may submit written comments and suggested revisions/additions to the Drivers, Trends, and Implications to Edgar Tellez-Foster at <u>etellezfoster@cbwm.org</u>.

#### **Issues, Needs, and Wants**

**Issue**: A concern (*e.g.* changing water-quality regulations are constraining the use of groundwater)

Need: A requirement (e.g. a reliable water supply through emergency shutdown of Rialto pipeline)

Want: A desire (e.g. higher groundwater levels in my service area to increase production capacity)

As part of the OBMP scoping process in 1999, Issues, Needs and Wants were solicited from the Parties over several public scoping meetings. The Issues, Needs and Wants were used to focus problem identification, OBMP goals, and the resulting OBMP scope of work. The Issues, Needs and Wants were summarized in Section 3 of the OBMP report (see attached) as classes that included:

- · safe yield
- native and imported water recharge
- quality and quantity
- · reclaimed water
- · conjunctive-use storage
- · costs
- human resources and administration

**Assignment #2**: The Issues, Needs, and Wants of the individual Parties, the collective, and the Basin are different today than they were in 1999. Your assignment is to review Section 3 of the OBMP report and come ready to Listening Session #1 with updated proposals for current Issues, Needs, and Wants (individually and/or collectively). After the session, you may submit written descriptions of current Issues, Needs, and Wants to Edgar Tellez-Foster at <a href="mailto:etellezfoster@cbwm.org">etellezfoster@cbwm.org</a>.

## Section 3 Goals of the OBMP

This section presents the mission statement for the OBMP, the issues, needs and interests that were articulated by the stakeholders, and the goals of the OBMP. Each of these items was developed as part of the institutional process. These items were discussed in numerous public meetings and their final form is based on the consensus of those stakeholders that participated in the process.

#### MISSION STATEMENT

The stakeholders have met twice per month since the February 19, 1998 ruling by Judge Gunn, to develop the OBMP. As part of this process, the stakeholders defined a new paradigm from which they view their stewardship responsibilities, current and anticipated problems in the Basin, and the solution approaches to those problems. This new paradigm is described in the following mission statement and core values developed by the stakeholders:

The purpose of the Optimum Basin Management Program is to develop a groundwater management program that enhances the safe yield and the water quality of the Basin, enabling all groundwater users to produce water from the Basin in a cost-effective manner.

The stakeholders have adopted the following core values associated with the mission statement.

Water Quality. All producers desire to produce water of a quality that is safe and suitable for the intended beneficial use.

**Long View**. All producers desire a long term, stable planning environment to develop local water resources management projects. The producers, independently and through Watermaster, will strive to take the long view in their planning assumptions and decisions to ensure a stable and robust management program.

**Increased Local Supplies.** All producers will, for an undetermined time into the future, be dependent on high quality imported water for direct uses and for groundwater replenishment. Because high quality imported supplies may not be available, the producers will strive to minimize their dependency on imported water and to increase their dependency on local supplies when economically justified.

**Groundwater Storage**. Unused groundwater storage capacity in the Chino Basin is a precious natural resource. The producers will manage the unused storage capacity to maximize the water quality and reliability and minimize the cost of water supply for all producers. The program will encourage the development of regional conjunctive use programs.

**Storm Water Recharge**. The producers will strive to increase storm water recharge and thereby maintain and enhance the safe yield and water quality.

**Reclaimed Water Recharge**. The safe yield of the Chino Basin will be enhanced through the recharge of reclaimed water. The producers will strive to maximize the recharge of reclaimed water to enhance the safe yield and water quality.

**Cost of Groundwater Supplies**. The producers are committed to finding ways to subsidize the cost of using poor quality groundwater in a cost-effective and efficient manner.

#### MANAGEMENT ISSUES, NEEDS, AND INTERESTS

As part of the OBMP scoping process, issues, needs and interest were solicited from the stakeholders in the Basin. These issues, needs and interests have been summarized in a tabular form in Tables 3-1 through 3-7, where each table refers to a class of issues, needs and interests that include:

- safe yield
- native and imported water recharge
- quality and quantity
- reclaimed water
- conjunctive-use storage
- costs
- human resources and administration

Attribution for the source of each issue, need, and interest is listed in these tables. In some cases, a specific issue, need and interest may show up in more than one class. These needs and interests were discussed at several scoping meetings and were used to focus problem identification, OBMP goals, and the resulting OBMP scope of work.

#### MANAGEMENT GOALS OF THE OBMP

In June 1998, the stakeholders began the process of developing management goals for the OBMP that address the issues, needs, and interests of the producers. The process involved the proposal of an initial set of goals followed by discussion and group editing at the bi-monthly meetings. The initial set of goals of the OBMP is listed below.

**Goal No. 1 – Enhance Basin Water Supplies**. This goal applies not only to local groundwater, but also to all sources of water available for the enhancement of the Chino Groundwater Basin. The following activities enhance basin water supplies:

- *Enhance recharge of storm water runoff.* Increasing the recharge of storm water in the Basin will increase the water supplies in the Chino Basin. The relatively low TDS and nitrate concentrations of storm flow will improve groundwater quality.
- *Increase the recharge of recycled water*. The recharge of recycled water above that required for replenishment obligations can be used for safe yield augmentation and/or conjunctive use.
- Develop new sources of supplemental water. New sources of supplemental water, including surface and groundwater from other basins, can be used to meet Chino Basin area demands, reduce dependency on Metropolitan supplies, and improve drought reliability.
- *Promote the direct use of recycled water*. Promoting the direct use of recycled water for non-potable uses will make more native groundwater available for higher-priority beneficial uses.
- *Promote the treatment and use of contaminated groundwater*. Groundwater in some parts of the Basin is not produced because of groundwater contamination problems and thus the yield of the Basin may be reduced. The yield of the Basin can be maintained and enhanced by the production and treatment of these contaminated waters.

- *Reduce groundwater outflow.* Increasing groundwater production near the Santa Ana River will increase the streambed percolation of the Santa Ana River into the groundwater basin, and reduce groundwater outflow from the Basin and thereby increase the supply of groundwater in the Basin.
- *Re-determine safe yield.* Recent studies suggest that the safe yield may be greater than the 140,000 acre-ft as stated in the Judgment. The activities listed above will cause the yield to increase further. Continuing to operate the Basin at 140,000 acre-ft/yr will cause groundwater in the Basin to be lost to the Santa Ana River. The safe yield will be re-determined on an as needed basis to maximize the current yield and to cause future increases in yield

**Goal No. 2 – Protect and Enhance Water Quality**. This goal will be accomplished by implementing activities that capture and dispose of contaminated groundwater, treat contaminated groundwater for direct high-priority beneficial uses, and encourage better management of waste discharges that impact groundwater. The following activities will protect and enhance water quality:

- *Treat contaminated groundwater to meet beneficial uses.* Groundwater in some parts of the basins is not produced because of groundwater contamination problems. Groundwater quality can be protected by intercepting contaminants before they spread. Intercepted groundwater could be treated and used directly for high priority beneficial uses or injected back to the aquifer.
- *Monitor and manage the Basin to reduce contaminants and to improve water quality.* Actively assisting and coordinating with the Regional Board, the EPA, and other regulatory agencies in water quality management activities would help improve water quality in the Basin.
- Manage salt accumulation through dilution or blending, and the export of salt.
- Address problems posed by specific contaminants.

**Goal No. 3** – **Enhance Management of the Basin**. This goal will be accomplished by implementing activities that will lead to optimal management of the Chino Basin. The following activities will protect and enhance management of the Basin:

- Develop policies and procedures that will encourage stable, creative and fair water resources management in the Basin.
- Optimize the use of local groundwater storage. Policies and procedures for local storage, cyclic storage and other types of storage accounts will be created to maximize drought protection and improve water quality, and to create an efficient system to transfer water from producers with surplus water to producers that need water.
- Develop and/or encourage production patterns, well fields, treatment and water transmission facilities and alternative water supply sources to ensure maximum and equitable availability of groundwater and to minimize land subsidence.
- Develop conjunctive-use programs with others to optimize the use of the Chino Basin for in-basin producers and the people of California.

#### Goal No. 4 – Equitably Finance the OBMP. This goal is based on the following principles:

• The primary source of revenue to finance the implementation will be the consumers of the Chino Basin groundwater.

- The consumers in the Chino Basin must be treated equitably by passing the cost of the OBMP on a per acre-foot basis or by other methods, based on formulas to be determined.
- Financial incentives and disincentives will be established to assure that existing groundwater is pumped out of the Basin and a higher quality of water is used to replenish the Basin.
- Opportunities for creativity will be provided to the producers so that they are motivated to use their assets and abilities in the implementation of the OBMP.
- Recover value from utilization of storage of supplemental water and from rising water outflow.

The Special Referee and her engineer reviewed these goals and provided direction to the stakeholders. In particular, the Special Referee suggested that the goals and action items were too vague. The goals and action items were refined and produced in a tabular format. The goals setting process concluded on November 26, 1998. The final set of goals is listed in Table 3-8. Table 3-8 lists each goal, the impediments to each goal, action items to surmount each impediment and achieve the goal, and the implication of the individual action items. The stakeholders were asked to review the final set of goals and action items listed in Table 3-8 to make sure that their individual issues, needs, and interests were addressed by the management goals. The stakeholders concluded that the set of goals listed in Table 3-8 addressed their needs and interests.

# Table 3-1Safe Yield Needs and Interests

	Respondent
Ideas	CBMWD CCWD Chino CIM FUWC FWC FWC JSCD Metropolitan MVWD Ontario TVMWD Upland Vanden Heuvel MVIC CBWCD Pomona
Maintain Existing Supply/Transfer/Over-Production Methodology	
Flexible Supply/Transfer/Over-Production Methodology	
Increase Safe Yield Based on Past Engineering Studies	
Promote Production in South to Protect And Enhance Safe Yield and Minimize Losses	
Coordinate/Reduce/Relocate Production to Ensure Safe Yield is Produced	
Dedicate Increases in Safe Yield to Agencies for Specific Basin Management Projects         Examples:       Reduce/Relocate Agency Pumping         Production In Poor Quality Areas         Treatment Of Poor Water Quality         New Production In Areas Where Basin Losses Occur         Other	
Develop Knowledge to Ensure Water Production is Reliable	
Need to Continue to Rely on Stable Safe Yield, Including Reallocation in Accordance with Original Adjudication	
Accelerate Transfer of Un-Produced Ag and Overlying Non-Ag Water	
Do Not Include Original Safe Yield & Methods Of Reallocation in the OBMP	
Assure Complete and Accurate Reporting Of Water Use in Basin	
Maximize the Use of Reclaimed Water	

### Table 3-1 (Continued) Safe Yield Needs and Interests

	Respondent		
Ideas	CBMWD CCWD Chino CIM FLUWC FWC JSCD Metropolitan MVWD Metropolitan MVWD Ontario TVMWD Upland Upland Upland CBWCD Pomona		
Monitor Fluctuations in Basin and Changes in Production Patterns to Identify Basin Issues			
Explore Impacts to Safe Yield From the Development of the Basin			
Allow Parties to Use Basin in Their Best Interest and Mitigate Impacts			
Determine and Assess Storage Losses in the Basin			
Develop a Plan to Maximize Yield During MWD Shortages, Shutdowns, and Peak Use Periods			
Increase Safe Yield by Installing Desalters to: Examples: Capture Rising Groundwater Induce Recharge From Santa Ana River Increase Groundwater Gradient			
Coordinate/Reduce/Relocate Production to Reduce Subsidence			
Accelerate Land-Use Conversions			
Retain Production Rights to Satisfy Demands			
Evaluate Impacts from Increased Northern Production and Provide Credits for Increased Southern Production			
Increase Water Conservation Within the Basin			
Increase Operating Safe Yield and Reallocation of Production Rights			
Evaluate Impacts of Desalter Operations on Safe Yield			

Table 3-2Native and imported Water Recharge Needs and Interests

	Respondent
Ideas	CBMWD CCWD Chino Chino CIM FUWC FWC JSCD JSCD Metropolitan Metropolitan MVWD Ontario TVMWD Upland Upland Vanden Heuvel MVIC CBWCD Pomona
Support Sole and/or Cooperative Efforts to Develop Additional Economically Feasible Recharge Facilities for Both Native and Imported Water	
Develop Program to Increase Recharge of Native Runoff and Create a Mechanism to Pledge the Value of the Increase in Safe Yield from These "New Water" Sources to Help Pay for the Construction of These Facilities	
Develop Alternative and/or Less Expensive Imported Water Options	
Establish Water Quality Subsidy to Encourage Replenishment Of High Quality Imported Water	
Maximize Use of Existing Recharge Facilities	
Recharge High Quality Runoff and Reclaimed Water as Hydrologically High as Possible in the Basin	

# Table 3-6Cost Needs and Interests

	Respondent		
Ideas	CBMWD CCWD CLhino CIM FLUWC FUWC FWC JSCD Metropolitan Metropolitan Metropolitan Metropolitan Metropolitan Metropolitan Metropolitan Metropolitan Metropolitan Metropolitan Metropolitan Contario TVMWD Upland Vanden Heuvel MVIC CBWCD Pomona		
All Assessments Borne by All Parties (Including Clean-Up Costs)			
Assessments Attributable to Benefiting/Responsible Parties (Including Clean-Up Costs)			
Seek Financial Aid to Meet Management Goals (Includes Grants and Loans For Ag., Flood Control, etc.)			
Develop Incentives to Encourage Basin Management ObjectivesExamples:Reduce/Relocate Agency PumpingProvide Grant Funding Allocations for Treated GroundwaterWaive Fees For Pumping in Poor Quality AreasCorrective Activities/AgreementsBonuses to Reduce Water Costs Back Down to MWD RatesCredit Ag Pool for Overproduction of Poor WaterOthers			
Develop Equity and the Perception of Equity in the Operation of the Basin (Including Clean-Up Costs)			
Establish Funding Mechanisms to Improve Water Quality			

Table 3-3Quality and Quantity Needs and Interests

		Respondent											
Ideas		CBMWD	CCWD	Chino	FUWC	FWC	Metropolitan	MVWD	Ontario TVMWD	Upland Vanden Heuvel	MVIC	Pomona	Geomatrix
Determine Responsib	ility and/or Accountability for Existing Water Quality and Quantity Issues												
Support and/or Encou Examples:	urage the Construction of Treatment Processes to Clean-Up Non-Potable Groundwater for Use Well Head Treatment Wetlands To Denitrify Dairy Wastes In-Situ Technologies Desalters Dilution												
Encourage Basin Act Examples:	ivities to Protect Quality/Quantity Protect/Manage Watershed Removal Of Unused Manure And Contaminants Regulations To Eliminate Nitrate And Contaminant Usage Dairy Sewer Connections Accelerate On-Going Activities Dilute Basin With SWP Water											TT	ב
Develop Sellable and During Drought and/	/or Exportable Water Insurance Rights to Replenish Overproduction or Encourage Basin Clean-Up										Π		
Develop a Means to I	Export Water to Encourage Basin Clean-Up												
Identify and Regulate	e Sources of Contamination												

### Table 3-3 (Continued) Quality and Quantity Needs and Interests

	Respondent			
Ideas	CBMWD CCWD CLhino CIM FUWC FUWC FWC JSCD Metropolitan Contario Contario Contario CBWCD Pomona			
Develop "Credit Type Program to Encourage Development and Implementation of Water Quality Improvement and Conservation Programs				
Assess the Impacts of Groundwater Production and Recharge on Water Quality of Down Gradient Producers				
Incorporate Existing Remediation Projects Into Basin Water Quality Management Program				
Increase Conservation and Develop New Sources of Water (e.g. Bunker Hill, Santa Ana River, Recycled,)				
Pump Non-Potable Water for Irrigation Uses				
Manage Basin to Maintain/Improve Water Quality of Water Supply Sources to Meet Discharge Standards				
Assure Water Level and Quality in Aquifer is Maintained Examples: Reduce/Relocate Agency Pumping Production In Poor Quality Areas Poor Water Quality Treatment Increased Imported Water Other				
Re-Examine Basin Water Quality Objectives and Establish Naturally-Occurring Limits				
Map Areas with Active Septic Tanks to Identify Issues				
Produce Maps Showing Problem Areas and Projected Problem Areas				

# Table 3-4Reclaimed Water Needs and Interests

	Respondent			
Ideas	CBMWD CCWD Chino CIM FUWC FWC JSCD Metropolitan Metropolitan Metropolitan Metropolitan Metropolitan Metropolitan Metropolitan Metropolitan Metropolitan Metropolitan Metropolitan Metropolitan Metropolitan Metropolitan Metropolitan Metropolitan Metropolitan Metropolitan Metropolitan Detector Metropolitan Metropolitan Detector Metropolitan Metropolitan Detector Metropolitan Detector Detecto			
Develop Reuse and Recharge Projects to Maximize Use				
Develop Regional Transmission Systems for Reclaimed Projects				
Expand CIM WWTP to Allow Crop Irrigation				
Provide Incentives for the Development of Reclaimed Projects				
Expedite Nitrogen/TDS Study to Determine What are the True Assimilative Capacities				
Establish Agreement with RWQCB on Mitigation Credits for Additional Water Pumped in the South to Allow Increased Use of Reclaimed Water for Recharge				
Allow Parties to Use Basin in Their Best Interest and Mitigate Impacts				
Modify Basin Water Quality Objectives to Increase Levels of Water Recycling				
Coordinate Basin Water Quality Plans to Permit Increased Levels of Recycling				
Use Reclaimed Water to Flush Lower Basin				

Table 3-5Conjunctive Use-Storage Needs and Interests

	Respondent			
Ideas	CBMWD CCWD Chino CIM FUWC FUWC FWC JSCD Metropolitan Metropolitan MVWD Ontario TVMWD Upland Vanden Heuvel MVIC CBWCD Kaiser Pomona			
Support Economical Programs That Mitigate Water Quality Issues				
Develop Ability to Market Basin Losses Basis: Monitoring Groundwater Level Amount In Storage				
Allow Parties to Use Basin in Their Best Interest and Mitigate Impacts				
Encourage Storage and Underproduction in North to Flush Out the South End of the Basin				
Determine and Allocate Storage Capacity Based on Technical Data and Basin Management Goals				
Provide Transfer Mechanisms Between Pools to Ensure Beneficial Use of Water				
Develop a Means to Export Water (Rights and/or Storage)				
Determine and Assess Storage Losses				
Develop Economical Programs to Store Additional MWD Water and Reduce Pumping Costs in the North				
Allow Transferability of Stored Overlying Non-Agricultural Water				
Develop Programs to Construct Facilities and Deliver Water Between Agencies During Periods of Shortage				
Retain Existing Cyclic Storage Program for Droughts				
Allow Storage Accounts for Ag Pool				

### Table 3-6 (Continued) Costs Needs and Interests

	Respondent
Ideas	CBMWD CCWD Chino CIM ELUWC FWC JSCD Metropolitan MVWD MVWD Ontario TVMWD Upland Upland Vanden Heuvel MVIC CBWCD Pomona
Sell Surplus Ag Water to Fund Clean-Up	
Establish Special Assessments/Taxes to Encourage Basin Management Objectives Basis: Historic Versus Current Production Historic Versus Current Land Uses Need Parcel Tax Other	
Phase Out 85/15 Rule	
Identify Realistic and Economically Feasible Long-Term Goals	
Develop Reliable and Economic Sources to Stabilize Rates	
Credit Producers That Import Water to the Basin	
Allow Parties to Use Basin in Their Best Interest and Mitigate Impacts	
Actively Seek to Partner with Other Parties Who Are Interested in Solving Our Problems	
Replenishment Via MWD and Unproduced Water Purchases	

Table 3-7Human Resources And Administration Needs and Interests

	Respondent
Ideas	CBMWD CCWD Chino Chino ClM FUWC FWC JSCD JSCD JSCD JSCD JSCD Metropolitan Metropolitan MVWD Ontario TVMWD Upland Upland Upland CBWCD CBWCD Pomona
Reduce Administrative Costs         Examples:       Synthesize Key Issues To Reduce Paper Waste         Contract Data Management	
Minimize Unproductive Meeting Time	
Assign Responsible Parties and Committees to Specific Basin Issues	
Establish Accountability Measures for Parties and Committees	
Enhance And Maintain Ongoing Data Development for Basin Examples: Well and Production Data Monitoring Well System Basin Models and Backup Files Standardize Reporting Establish Data Exchange Process Establish Reporting and Update Schedules	
Actively Seek to Partner with Other Parties Who Are Interested in Solving Our Problems	
Coordinate with On-Going Efforts of Other Agencies in the Basin	
Instill Regional Prosperity and Good Relations Via CBWM Programs	
Develop Rules Intended to Prevent Agency Impacts and Avoid Litigious Situations	
Allow Parties to Act Without Developing Stifling Bureaucracies	

Impediments to the Goal	Action Items to Implement Goal	Implications	Program Elements to be Implemented in the OBMP
			El. No./ Element Description
Goal 1 Enhance Basin Water Supplies			
1 Unless certain actions are taken the safe yield of the basin will be reduced.			
1a Basin yield is lost due to groundwater outflow from the southern part of basin.	Maintain or increase groundwater production in southern part of the basin; treat and serve contaminated groundwater from southern third of the basin.	This action will maintain and possibly increase safe yield; reducing production to levels below 1965-74 will result in a loss of safe yield.	<b>3</b> Develop and implement a comprehensive water supply plan for existing and future impaired areas
		This action will result in improved water quality in the Santa Ana River.	
	Locate new recharge facilities in the upper half of the basin.	Recharge in the upper half of the basin ensures that the water recharged can be recovered and put to beneficial use; recharge in the lower half of the basin may be lost to the Santa Ana River.	2 Develop and implement a comprehensive recharge program.
	Locate new recharge facilities in the lower half of the basin when recovery of recharged water can be ensured.	This action will result in localized water quality and supply improvements in the lower half of the basin.	2 Develop and implement a comprehensive recharge program.
	Develop and implement a comprehensive basin-wide ground level, groundwater level, quality, and production monitoring program.	This action will provide Watermaster with the information necessary to determine outflow to the river, actual production, and to design groundwater treatment facilities. This action is necessary to maintain yield.	1 Develop and implement a comprehensive basin-wide ground level, groundwater level, quality, and production monitoring program.
1b The basin is not using as much high quality stormwater as it could for recharge.	Develop and implement a comprehensive plan of stormwater recharge.	This action will result in a list of feasible recharge projects that when implemented will maintain/increase basin yield, improve surface water and groundwater quality, and reduce the cost of flood control projects.	2 Develop and implement a comprehensive recharge program.
	Develop a comprehensive stormwater flow and quality monitoring program in partnership with other agencies charged with flow and quality monitoring.	This action will provide data that can be used to quantify the increase in yield through stormwater recharge and will provide water quality benefits.	2 Develop and implement a comprehensive recharge program.
		This action will quantify offset credits for recycled water recharge.	
	Develop new stormwater recharge projects at existing and future flood control facilities.	This action will maintain/increase yield and improve groundwater quality.	2 Develop and implement a comprehensive recharge program.

Impediments to the Goal	Action Items to Implement Goal	Implications	Program Elements to be Implemented in the OBMP
			El. No./ Element Description
	Maximize recharge capacity at existing recharge facilities through improved maintenance.	This action will maintain/increase yield and improve groundwater quality.	2 Develop and implement a comprehensive recharge program.
<ol> <li>The current manner Watermaster manages cyclic and local storage accounts will cause overdraft.</li> </ol>	Develop methods to account for losses from cyclic and local storage accounts; and set limits on storage.	This action will help maintain the safe yield and ensure that basin water is put to maximum beneficial use.	8 Develop and implement a storage management program.
2 Unless certain actions are taken, groundwater levels in Management Zone (MZ) 1 will continue to decline adding to the potential for additional subsidence and fissures, lost production capability, and water quality problems.	Develop comprehensive ground level, groundwater level and quality monitoring program in MZ 1.	This action will provide engineering and scientific information that can be used to accurately assess groundwater conditions and manage MZ 1.	4 Develop comprehensive ground level, groundwater level and quality monitoring program in MZ 1.
	Develop groundwater management program for MZ 1 consisting of: This action will result in a plan that will reduce potential future subsidence and occurrence of ground fissures, maintain minimum levels of production, and improve water quality.		4 Develop and implement a groundwater management program for MZ 1.
	Increase recharge of stormwater and supplemental water in MZ 1.	This action will help maintain or increase groundwater levels and reduce the potential for subsidence and ground fissures.	
	Manage groundwater production in MZ 1 to a sustainable level to minimize subsidence.	This action will help maintain or increase groundwater levels and reduce the potential for subsidence and ground fissures.	
	Increase direct use of supplemental water in MZ 1 (including in lieu deliveries).	This action will help maintain or increase groundwater levels and reduce the potential for subsidence and ground fissures.	
3 Because there is limited assimilative capacity for total dissolved solids (TDS) and nitrogen in the basin, there are economic limitations on the recharge of recycled water.	Create new assimilative capacity through the development of offset programs and through other mitigation programs.	This action will result in increased use of reclaimed water and will decrease the dependence on expensive and less reliable imported sources.	5 Develop and Implement Regional Supplemental Water Master Plan
4 Because future demands are increasing and there are limitations on basin and traditional supplemental supplies, new sources of	Maximize the direct use of recycled water.	This action will reduce the dependence on expensive and less reliable imported sources.	5 Develop and Implement Regional Supplemental Water Master Plan
supplemental water need to be developed.	Develop new sources of supplemental water from the Bunker Hill Basin, the Santa Ana River and other outside basin sources.	This action will ensure that there will be adequate supplies of high quality water to meet future demands.	5 Develop and Implement Regional Supplemental Water Master Plan

Impediments to the Goal	Action Items to Implement Goal	Implications	Program Elements to be Implemented in the OBMP
			El. No./ Element Description
Goal 2 Protect and Enhance Water Quality			
1 Watermaster lacks comprehensive, long term information on groundwater quality.	Develop and implement a comprehensive groundwater quality monitoring program.	This action will provide a comprehensive assessment of current and future water quality problems and solutions in the basin. This action will contribute to the the least-cost and most expedient plans to protect, enhance and use groundwater to the maximum extent passible	1 Develop and implement a comprehensive basin-wide ground level, groundwater level, quality, and production monitoring program.
2 Watermaster does not have sufficient information to determine whether point and non-point sources are being adequately addressed in the basin.		possible.	
2a RWQCB may not have adequate resources to address all the water quality problems within its jurisdiction in the Chino Basin.	Coordinate with regulatory agencies to share monitoring and other information to detect and define water quality problems.	This action will result in more efficient use of Watermaster, producer and regulatory agency resources.	6 Develop a cooperative program with the regulatory agencies where Watermaster and producer resources can be used to improve regulatory agency effectiveness.
	Take coordinated action regarding Watermaster priorities of mutual interest.	This action will improve timeliness and success in preventing water quality degradation and in cleaning up existing degradation; may include Watermaster entering litigation to assist in clean up.	6 Develop cooperative programs where Watermaster and producer resources can be used to improve basin management.
	Participate in projects of mutual interest including the RWQCB Wastershed management efforts in the Chino Basin	This action will result in more efficient use of resources of Watermaster, producers, and dischargers.	6 Develop and implement programs to address problems as identified and determined beneficial.
2b A comprehensive approach to addressing point and non-point source problems does not exist.	Develop and implement programs to address problems posed by specific contaminants such as TDS, nitrate, methyl ter -butyl ether (MTBE), perchlorate and others.	This action will improve timeliness and success in preventing water quality degradation and in cleaning up existing degradation.	6 Develop and implement programs to address problems posed by specific contaminants.
2c There is ongoing salt and nitrogen loading from dairies. Source water quality available to the dairies is often too degraded to be discharged.	Export manure.	This action will reduce TDS and nitrogen degradation of surface water and groundwater at less cost than treatment of receiving waters.	7 Develop and implement programs that result in maximum animal waste export
	Treat dairy sewage and eliminate discharge to groundwater, or export dairy sewage.	This action will reduce TDS and nitrogen degradation of surface water and groundwater at less cost than treatment of receiving waters.	7 Develop and implement programs that result in maximum animal waste export

Impediments to the Goal	Action Items to Implement Goal	Implications	Program Elements to be Implemented in the OBMP
			El. No./ Element Description
3 There is ongoing and legacy contamination in vadose zone with TDS and nitrogen from historic dairy and other irrigated agricultural practices.	Develop regional and local groundwater treatment systems to treat groundwater for direct beneficial use.	This action will improve groundwater quality, maintain/increase safe yield, and maximize beneficial use of basin water.	3 Develop and implement a comprehensive water supply plan for existing and future impaired areas

Impediments to the Goal	Action Items to Implement Goal	Implications	Program Elements to be Implemented in the OBMP
			El. No./ Element Description
4 Poor ambient groundwater quality limits direct use of groundwater and can lead to loss of basin yield.	Develop programs (regional treatment, incentives, etc) to pump and treat degraded groundwater and to put the treated water to direct use.	This action will speed up the cleanup of degraded water, stop the spreading of degradation and maintain/increase safe yield.	3 Develop and implement a comprehensive water supply plan for existing and future impaired areas
5 The basin is not using as much high quality stormwater as it could for recharge.	Develop and implement a comprehensive plan of recharge for stormwater.	This action will result in a list of feasible recharge projects that when implemented will maintain/increase basin yield, improve surface water and groundwater quality, and reduce the cost of flood control projects.	2 Develop and implement a comprehensive recharge program.
	Develop a comprehensive stormwater flow and quality monitoring program in partnership with other agencies charged with flow and quality monitoring.	This action will provide data that can be used to quantify the increase in yield through stormwater recharge and will provide water quality benefits.	1 Develop a comprehensive stormwater flow and quality monitoring program in partnership with other agencies charged with flow and quality monitoring.
		This action will quantify offset credits for recycled water recharge.	
	Develop new stormwater recharge projects at existing and future flood control facilities.	This action will maintain/increase yield and improve groundwater quality.	2 Develop and implement a comprehensive recharge program.
	Maximize recharge capacity at existing recharge facilities through improved maintenance.	This action will maintain/increase yield and improve groundwater quality.	2 Develop and implement a comprehensive recharge program.
6 The basin is hydrologically closed.			
6a The southern part of the basin will accumulate TDS and nitrogen if yield is maintained or increased.	Periodically assess the salt balance of the basin.	This action will provide one of a group of metrics from which the success of the water quality component of the OBMP will be assessed. A declining salt balance will indicate an improvement in	1 Develop and implement a comprehensive basin-wide ground level, groundwater level, quality, and production monitoring program.
		water quality.	6 Develop new tools to compute salt balance
<b>6</b> b There is a lack of cost-effective groundwater salt export facilities.	Develop new TDS export facilities and/or find means of using Non Reclaimable Waste Line and the Santa Ana Regional Interceptor with less cost.	This action will result in TDS and and nitrogen removal, improvement in groundwater quality, will maintain/increase basin yield, and improve Santa Ana River quality.	3 Develop and implement a comprehensive water supply plan for existing and future impaired areas
	Establish financial incentives to ensure that existing groundwater is pumped and that high quality water is used to replenish the basin.	This action will result in more TDS and and nitrogen removal, improvement in groundwater quality, will maintain/increase basin yield, and improve Santa Ana River quality.	3 Develop and implement a comprehensive water supply plan for existing and future impaired areas

 Table 3-8

 Summary Matrix of OBMP Goals, Impediments, Action Items, Implications, and Implementation Elements

Impediments to the Goal	Action Items to Implement Goal	Implications	Program Elements to be Implemented in the OBMP
			El. No./ Element Description
6c Existing production patterns in the basin cause salt and nitrate to accumulate in the southern end of the basin.	Increase recharge without an increase in production to cause an increase in rising water	This action will result in a gradual improvement in groundwater quality in the southern part of the basin and an increase in TDS and nitrogen degradation in the Santa Ana River.	<b>3</b> Develop and implement a comprehensive water supply plan for existing and future impaired areas
7 Pesticide and chemical use, and petroleum product disposal habits	Public education.	Members of the public will be encouraged to become individually involved in protecting both surface and groundwater quality	6 Develop and implement programs to address problems posed by specific contaminants.
Goal 3 Enhance Management of the Basin			
1 The way Watermaster manages cyclic and local storage accounts will cause overdraft.	Develop methods to account for losses from cyclic and local storage accounts; set limits on storage.	This action will help maintain the safe yield and ensure that basin water is put to maximum beneficial use.	8 Develop and implement a storage management program.
2 Existing production patterns are not balanced, cause losses, can cause local subsidence, and water quality problems.	Develop and implement a comprehensive basin-wide ground level, groundwater level, quality, and production monitoring program.	This action will provide information that can be used to understand the groundwater flow system and quality conditions.	1 Develop and implement a comprehensive basin-wide ground level, groundwater level, quality, and production monitoring program.
	Develop new production patterns that maximize yield and beneficial use; and develop incentive programs and policies that encourage (or rules that enforce)	This action will maximize yield and beneficial use of basin water; improve basin water quality, and improve Santa Ana River quality.	3 Develop and implement a comprehensive water supply plan for existing and future impaired areas
	new production patterns.		1 - 9 Develop basin-wide groundwater management program
	Develop programs (regional treatment, incentives, etc) to pump and treat degraded groundwater and to put the treated water to direct use.	This action will maximize yield and beneficial use of basin water; improve basin water quality, and improve Santa Ana River quality.	3 Develop and implement a comprehensive water supply plan for existing and future impaired areas
3 About 500,000 to 1,000,000 acre-ft of storage in the Chino Basin cannot be used due to water quality and institutional issues.	Develop conjunctive use programs that take into account water quantity and quality	This action will result in lower water supply costs to basin producers.	9 Develop conjunctive use programs that take into account water quantity and quality
4 Poor ambient groundwater quality limits direct use of groundwater and can lead to loss of basin yield.	Develop programs (regional treatment, incentives, etc) to pump and treat degraded groundwater and to put the treated water to direct use.	This action will speed up the cleanup of degraded water, stop the spreading of degradation and maintain/increase safe yield.	3 Develop and implement a comprehensive water supply plan for existing and future impaired areas

Impediments to the Goal	Action Items to Implement Goal	Implications	Program Elements to be Implemented in the OBMP
			El. No./ Element Description
Goal 4 Equitably Finance the OBMP			
1 The equitable distribution of cost associated with the OBMP is not defined.	Identify an equitable approach to spread the cost of OBMP implementation either on a per acre-ft basis or some other equitable means.	This action will improve the likelihood that the OBMP will be implemented.	Develop and implement a financial plan to implement the OBMP
	Identify ways to recover value from utilizing basin assets including storage and rising water leaving the basin.	This action will lower the cost of the OBMP to producers and improve the likelihood that OBMP will be implemented.	Develop and implement a financial plan to implement the OBMP
2 Limited resources restrict potential water resources improvements of the OBMP.	Evaluate project and management components and rank components with equal consideration given to water quantity, water quality and cost.	This action will result in the optimum set of project and management components of the OBMP being implemented.	