

Executive Summary

Table of Contents

ES.1	What is an IRWMP?	ES-4
ES.2	Purpose of the Imperial IRWMP.....	ES-4
ES.3	Imperial Water Forum	ES-5
ES.4	Imperial Region Overview.....	ES-7
ES.5	Imperial IRWMP Goals and Objectives	ES-7
ES.6	Key Regional Water Resources Challenges	ES-10
ES.7	How Imperial IRWMP Meets Statewide Priorities for an IRWMP	ES-14
ES.7.1	IRWMP Priority Project List	ES-16
ES.8	Imperial IRWMP Implementation	ES-18
ES.8.1	Project Development	ES-19
ES.9	Implementation Structure	ES-20
ES.10	Imperial IRWMP Organization	ES-20

Table of Figures

Figure ES-1. Imperial Region Locations	ES-8
Figure ES-2. Existing and Future Water Demands.....	ES-12
Figure ES-3. Illustrative Example of Monthly Demands and SDI Cutbacks for Urban and Agriculture.....	ES-14
Figure ES-4. Relationship of IRWMP with Outside Planning Elements	ES-19
Figure ES-5. Project Development Process	ES-20

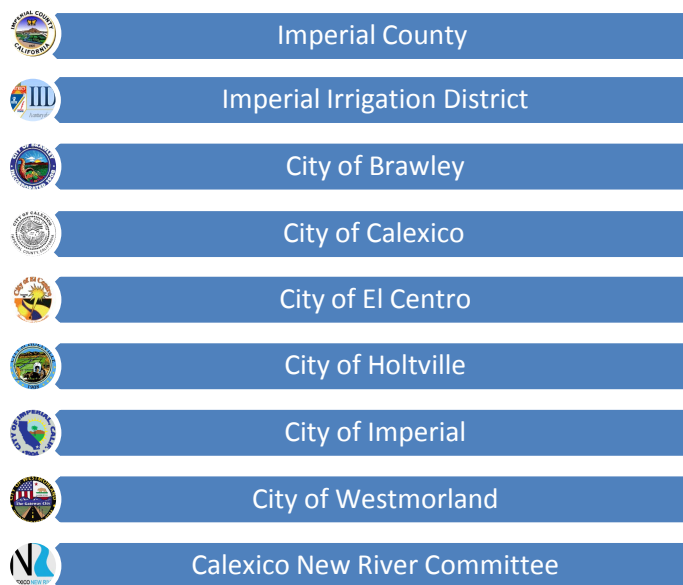
Tables

Table ES-1. Water Forum Members.....	ES-6
Table ES-2. Resource Management Strategies as Applied and Grouped for the Imperial Region	ES-15
Table ES-3. Imperial IRWMP 2012 Project List.....	ES-17

Executive Summary

Challenges presented by new water demands and land use changes are intensified by the annual cap on Imperial Region's Colorado River water supply and the uncertainty associated with varying annual demands and competing uses within the Imperial Region. The Imperial Integrated Regional Water Management Plan (IRWMP) is the result of stakeholders, who represent a wide array of interests, working together to formulate and support implementation of long-term water management solutions. Regional planning does not replace or supersede local water supply or land use planning, nor usurp any water district, city, or county authorities. At its best, regional planning incorporates local planning elements, prioritizes regional needs, focuses resources, and utilizes the range of authorities within the region to improve overall water resources management.

A resolution supporting preparation of an IRWMP; accepting and endorsing the IRWMP mission, goals and objectives, and the Imperial IRWMP Water Forum and RWMG Charter; and designating a representative to the Water Forum was prepared for stakeholders to take to their respective agencies and organizations for adoption.¹ The resolution has been adopted by the agencies listed below; adopted resolutions are in Appendix A of the Imperial IRWMP.



¹ Resolution to Support Goals. Imperial Water Forum. September 9, 2010.
<http://imperialirwmp.org/Resolution%20G&OParticipationAdoption_FNL.pdf>

The Imperial IRWMP, once adopted by responsible agencies, will provide guidance for future water management and land use plans for their jurisdictions. Local water supply and land use planning efforts remain the responsibility of the local agencies, and their future update will in turn influence IRWMP updates.

ES.1 WHAT IS AN IRWMP?

An IRWMP is a comprehensive planning document prepared on a region-wide scale that plans for and enables implementation of stakeholders' priority water resources projects and programs. An IRWMP relies upon specific and focused local and sub-regional planning efforts for its foundation. Unlike traditional water resources planning documents, an IRWMP does not focus on just one – or even just a few – facets of water resources planning. Rather, an IRWMP investigates a broad spectrum of water resources objectives including water supply, water quality, environmental restoration, and flood management based on stakeholder involvement, environmental justice concerns, and far-reaching community, statewide and federal interests. A key difference in IRWMPs (as compared to typical planning documents) is that IRWMPs are governed by local agencies that integrate multiple localized water management strategies to solve priority challenges.



ES.2 PURPOSE OF THE IMPERIAL IRWMP

There are specific technical IRWMP requirements which this plan meets and exceeds. Further, the Imperial Region Integrated Regional Water Management Plan (Imperial IRWMP) represents the collective vision and wisdom of region stakeholders and will provide an important addition to Southern California's water resources planning toolkit.

As such, the purpose of the Imperial IRWMP is to define a portfolio of cost-effective water supply management strategies that support economic development and provide a reliable water supply for new municipal, commercial, and industrial (MCI) demands without negatively impacting existing MCI and agricultural water users, or existing agreements and contracts. To meet the Imperial Region's water management goals (see Section ES.5), the IRWMP is to guide action on resource management strategies and projects to be implemented by participating agencies and stakeholder groups.

The IRWMP is also a resource the Imperial Region can use to define its long-term needs and priorities for water infrastructure, and match these needs to available state and federal funding. In the near-term, the purpose of the IRWMP is to ensure that the Imperial Region qualifies for funding available from the State of California by meeting IRWMP standards established by the State Legislature and managed by the California Department of Water Resources (CDWR).

Imperial Irrigation District (IID) holds the rights to and is responsible for delivering untreated Colorado River water to users in its water service area (Imperial Valley). Imperial County (County) is responsible for land use planning in the unincorporated areas of Imperial County and for groundwater management. Broad policy concepts were developed by IID and County staff and then presented to the IID/County Water Planning Group.² In April 2010, overarching direction on IRWMP development was provided by the Water Planning Group, as follows:

- Annual apportionment to water users: The IID Board should make a yearly determination of forecasted water use – among all categories of users – and apportion supplies in a manner that is consistent with IID’s Equitable Distribution Plan.³
- Joint land-use conversion policy: Imperial County, as the land-use planning entity, and IID, as the purveyor of water to the region, should agree to the establishment of designated corridors that would facilitate the conversion of agricultural lands to the development of renewable energy production.⁴
- Joint groundwater study: Imperial County and IID should conduct a joint feasibility study to ascertain the availability and accessibility of groundwater resources throughout the region.
- Fallowing for in-valley water use: IID will consider rotational fallowing of IID-owned land and/or private land to generate or reallocate water for MCI purposes.
- Water storage and banking: IID will pursue storage projects it has identified within its service area and banking opportunities in the Coachella Valley IRWM Region. While projects to augment the Colorado River water supply are generally more expensive to build and operate than policy options, IID recognizes that storage is vital to the long-term management of its water supply and provides the most durable and defensible means of addressing fluctuations in usage from year to year.

Commitment to a regional planning model: In concert, Imperial County and IID will develop a regional water plan that actively solicits and relies on stakeholder advice and consent to balance the needs of diverse interests. Plan development will be guided by the goals of multiple use and sustained yield.

ES.3 IMPERIAL WATER FORUM

The Imperial Water Forum (Water Forum) was convened in June 2010 by IID and the County. The IID Board of Directors and the County Board of Supervisors recognized that all stakeholders in the region, whether representing public or private agencies, have unique perspectives and that all of the individual interests need to be recognized if the Imperial IRWMP is to be successful. The Water Forum adopted the following mission statement:

² The Water Planning Group is composed of two members of IID Board of Directors and two members of Imperial County Board of Supervisors.

³ 2009 Regulations for Equitable Distribution Plan. IID website. <<http://www.iid.com/index.aspx?page=141>>

⁴ In 2012, the County adopted a conditional use permit procedure for such land use conversion; and IID adopted a temporary land conversion fallowing policy. These are presented in Chapter 12.

The mission of Imperial Water Forum is to preserve and enhance the economic and environmental health and well-being for the Imperial Region through the regional stewardship and comprehensive management of water resources in a practical, cost effective, and responsible manner.⁵

The intent of the Water Forum is to provide the mechanism for Imperial Region stakeholders to communicate, collaborate, and cooperate when addressing water issues and developing regional solutions. The Water Forum, which consists of members and interested parties, provided oversight and management structure for institutional, public, and stakeholder group involvement and multi-stakeholder participation. All meetings were noticed and open to the public. Water Forum members and participants are listed in Table ES-1.

Participating entities recognize that regional integration can enhance their ability to manage individual agency operations and the available regional water supply; and that, to a large degree, the success of the Imperial IRWMP depends on participation of agencies that have jurisdictional authority to implement the IRWMP; however, participation by agricultural, renewable energy, business and civic stakeholders was also important.

In addition, agencies are assured that participation in an integrated regional water management program and adoption of the IRWMP will not in any way diminish their control of their own future or compromise their autonomy. Regional integration in no way seeks to weaken an agency's decision-making power or authority. Rather, the IRWMP process is designed to enhance the collective power of local entities, support economic development and environmental well being, increase the ability to obtain state and federal funding, and protect the Region's Colorado River water supply.

The IRWMP is intended to support and complement water management and land use plans that are based on the statutory authorities of IID, the County, and Imperial Region Cities (Cities). By involving stakeholders and agencies with diverse interests and authorities, the IRWM planning process has opened the doors for partnerships, funding, operational connectivity, increased awareness of related planning efforts, and regional project opportunities.

The Water Forum united local expertise and information and, thereby, facilitated communication concerning complex and controversial topics. The Water Forum recognizes that implementation of the

Table ES-1. Water Forum Members

- Imperial Irrigation District
- County of Imperial
- Imperial County Farm Bureau
- Imperial Valley Vegetable Growers Association
- IID Water Conservation Advisory Board
- City of Brawley
- City of Calexico
- City of El Centro
- City of Holtville
- City of Imperial
- City of Westmorland
- Heber Public Utility District
- Niland Sanitary District
- Geothermal Energy Stakeholder Group
- Comité Cívico Del Valle Inc in Brawley
- Institute for Socioeconomic Justice
- Brawley Chamber of Commerce
- El Centro Chamber of Commerce & Visitors Bureau
- Imperial Valley Economic Development Corporation
- New River Improvement Project
- Sierra Club, CA- NV Regional Conservation Committee
- USFWS Sonny Bono Salton Sea National Wildlife Refuge

⁵ Imperial IRWMP website: Imperial IRWMP Mission, Goals and Objectives. June 2011.
<http://imperialirwmp.org/20100824%20WF%20GoalsObjectives_rev_16June2011.pdf>

Imperial IRWMP cannot succeed without continuous review and updates to meet unanticipated challenges. Therefore, the Water Forum plans to continue to function as a mechanism for identifying common problems; finding solutions and resolving conflicts; and promoting consultation and collaboration among groups with differing missions, agendas, and interests.

ES.4 IMPERIAL REGION OVERVIEW

The Imperial Region is located in the southeast corner of Imperial County – bordered to the east by the crest of the Chocolate Mountains (which lie west of the Colorado River), to the west by San Diego County, to the north by the Coachella Valley IRWM boundary, the Salton Sea and Riverside County, and to the south by the U.S./Mexico international border. Figure ES-1 shows the location of the Imperial Region, the region boundary, major IID water delivery infrastructure, and other geographical features.

The basis for selection of the region boundary is described in Chapter 2. The area, having annual average rainfall of less than three inches a year, relies almost exclusively on imported Colorado River water. Groundwater development has occurred to a very limited degree in areas outside of the IID water service area. Coachella Valley is to the north and Mexicali Valley (Baja California, Mexico) to the south, while Imperial Valley is central to the Imperial Region; and all three lie within the Salton Sea watershed. The region, which abuts the Coachella Valley IRWM and Anza Borrego IRWM regions, is nestled among surrounding mountain ranges, and lies entirely within the state's Colorado River Hydrologic Region. The major population centers are located along California State Route (SR) 86 and SR 111 in the Imperial Valley.

ES.5 IMPERIAL IRWMP GOALS AND OBJECTIVES

The Water Forum with the participation of region stakeholders and agency representatives adopted water resources management goals and objectives, prioritized as follows:

Water Supply: Diversify the regional water supply portfolio to ensure a long-term, verifiable, reliable, and sustainable supply to meet current and future agricultural, municipal, commercial, industrial, and environmental demands.

Objectives

1. Meet 100% of future demands without adverse impact to existing users that are not mitigated.
2. Implement projects or programs that will provide a firm, verifiable, and sustainable supply of 50 to 100 thousand acre-feet per year (KAFY) for municipal, commercial or industrial demands by 2025.
3. Ensure equitable and appropriate cost sharing among water users who would receive benefits from any proposed water management project.
4. Protect surface water rights.

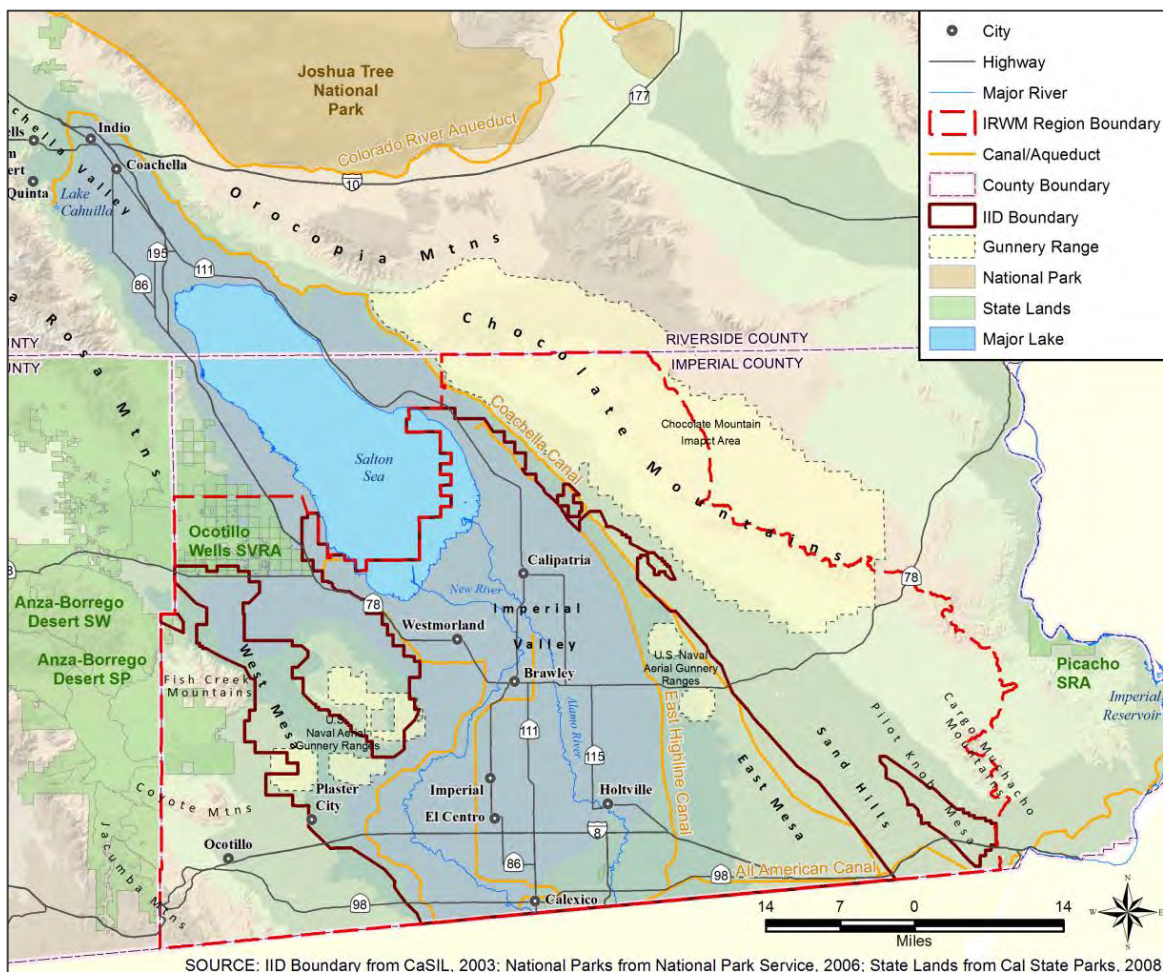


Figure ES-1. Imperial Region Locations

- a. Optimize and sustain use of Colorado River entitlements through development of groundwater banking and storage projects.
 - b. Implement water conservation measures that demonstrate reasonable beneficial use of the available supplies and are consistent with established industry standards⁶, and state and federal requirements.
5. Integrate resources management strategies that diversify the regional water supply portfolio through projects such as desalination of brackish groundwater or drain water, reclaimed waste water, and stormwater reuse; or through coordinated land use and water management policies.
6. Promote economic development that is consistent with existing agreements on use and management of the Colorado River water supply and is consistent with County and Cities general plans and other local ordinances and regulations.

⁶ Water conservation measures include Efficient Water Management Practices recognized by the Agricultural Water Conservation Council; and Demand Management Measures and Best Management Practices as defined by the California Urban Water Conservation Council; or those related actions defined by federal or state law.

7. Protect correlative groundwater rights and currently designated sole source aquifers from further overdraft, and optimize the use of other groundwater where feasible.

Water Quality Goal: Protect water quality for beneficial uses consistent with regional community interests and the Colorado River Regional Water Quality Control Board (RWQCB) Basin Plan through cooperation with stakeholders and local and state agencies.

Objectives

1. Maintain or improve the quality of incoming Colorado River water.
2. Support disadvantaged and other communities in meeting wastewater disposal and permit requirements.
 - a. Define local and regional opportunities, evaluate economies of scale and where cost effective, develop capital facilities for wastewater reuse/reclamation.
 - b. Match water quality to appropriate uses and supply treated wastewater to extend use of Colorado River supplies.
3. Support disadvantaged and other communities in meeting drinking water standards.
 - a. Define local and regional opportunities, evaluate economies of scale and where cost effective, develop capital facilities.
4. Comply with Total Maximum Daily Loads (TMDLs) established by the Colorado River Regional Water Quality Control Board (Region 7) for the Imperial Region, and implement established Best Management Practices or other measures to minimize water quality impacts from stormwater.
5. Preserve and, where and when technology allows, improve quality of groundwater resources in Imperial Region.

Environmental Protection and Enhancement Goal: Protect and enhance aquatic ecosystems and wildlife habitat consistent with municipal, commercial, industrial, and agricultural land uses.

Objectives

1. Recognize and mitigate impacts to IID drains, small natural floodways, and the New or Alamo rivers that could result from reduced flows as a result of development or reclaimed water use
2. Investigate and develop regional mitigation banking program to provide cost-effective environmental mitigation for proposed projects that reduce IID drain flow or have other adverse impacts.
3. Identify opportunities for open spaces, trails, parks and other recreational projects in the Imperial Region that can be incorporated with water supply, water quality or flood protection projects, consistent with public use and property rights.

Flood Protection and Stormwater Management Goal: Protect life and property from flooding and develop regional and local flood protection and stormwater management strategies.

Objectives

1. Assess regional flood control and local storm water management needs through a collaborative effort to develop policies and cost effective physical solutions.
 - a. Address vector control and safety concerns related to overflow ponds.
 - b. Encourage local agencies to maintain and enforce FEMA floodway and flood plain maps and regulations adopted by Imperial County in 1984 so Imperial Region communities are eligible for federal flood insurance.
2. Document and define technical and policy approaches for flood and storm water management that can be integrated with other water management actions to meet multiple objectives and provide multiple benefits.
3. Evaluate and define local and regional projects that prevent or minimize flooding and damage to public and private facilities and property.

And a fifth, non-prioritized goal that supports the four prioritized goals:

Develop Regional Policies Goal: Develop regional policies, in accordance with and respecting the individual agencies' jurisdiction and authorities, by engaging the water and land use agencies and other interested parties in a cooperative, regional approach.

Objectives

1. Streamline permitting process and integrate land use and water supply planning requirements where appropriate.
2. Define cost-effective projects and equitable cost sharing agreements with those entities that would receive benefits from proposed water management projects of all types.
3. Develop consistent policy across all water and land use agencies: Imperial County, Cities, IID, federal lands.

ES.6 KEY REGIONAL WATER RESOURCES CHALLENGES

The Imperial Region is faced with significant water resources challenges, most of which relate to the availability of imported water from the Colorado River. California's share of the Colorado River is fixed at 4.4 million acre-feet (MAF) per year plus 50 percent of any declared surplus. The seniority of the IID water right is confirmed in the Quantification Settlement Agreement and Related Agreements (QSA/Transfer Agreements) and is effectively capped at 3.1 MAF per year.⁷ Further, by 2026 and for the term of the QSA (2037 or 2047), the QSA/Transfer Agreements require that IID take actions to reduce net annual consumptive use of Colorado River water by 408,000 acre-feet, with the conserved water transferred out of the Imperial Region. The result is to reduce IID net consumptive use to just over 2.6 MAF per year.⁷ System and on-farm efficiency conservation measures have been formulated to enable IID to meet the reduction along with a schedule for their implementation. These measures are designed

⁷ Consumptive use volume at Imperial Dam, reported in USBR Lower Colorado Region Decree Accounting Reports.
<<http://www.usbr.gov/lc/region/g4000/wtracct.html>>

to maintain historic levels of agricultural productivity and MCI water supplies. The 2.6 MAF per year supply is considered to be stable and reliable due to IID's senior water rights. However, when forecasted renewable energy and other MCI demands are added to the future demand, this amount is no longer expected to be sufficient.

Agricultural demand can vary significantly from year to year due mainly to fluctuations in markets and to some extent rainfall, further complicating IID's operational flexibility. In some years IID's total annual consumptive use may exceed its Colorado River entitlement, resulting in inadvertent overruns (annual use that exceeds the capped amount), which IID must pay back in subsequent years from extraordinary conservation practices.⁸ Forecasted increases in MCI demand are expected to exacerbate this condition.

Figure ES-2 illustrates IID's maximum 3.1 MAF per year threshold. Any time annual consumptive use exceeds the threshold, an inadvertent overrun is charged to IID. In the case of underruns (annual consumptive use is less than capped amount) shown prior to 2012 in Figure ES-2, IID could have taken the underrun had storage been available to IID. Beyond 2011, the underrun potential decreases and overrun potential increases each year that water demand for renewable energy rises and MCI growth occurs on non-irrigated agriculture lands.

To reduce the likelihood of an overrun in any given year, the IID Board approved the 2009 Regulations for Equitable Distribution Plan (EDP) that define how IID will apportion water to its customers should demand be anticipated to exceed available supply.⁹ When this is projected to occur, the IID Board may declare a Supply/Demand Imbalance (SDI). For agricultural water users, implementation of the EDP will cap their annual water apportionments and call into effect measures that require additional planning and water management actions, with resulting higher costs.

⁸ Per terms of the USBR Inadvertent Overrun and Payback Policy

⁹ EDP, IID 2009. <<http://www.iid.com/index.aspx?page=144>>

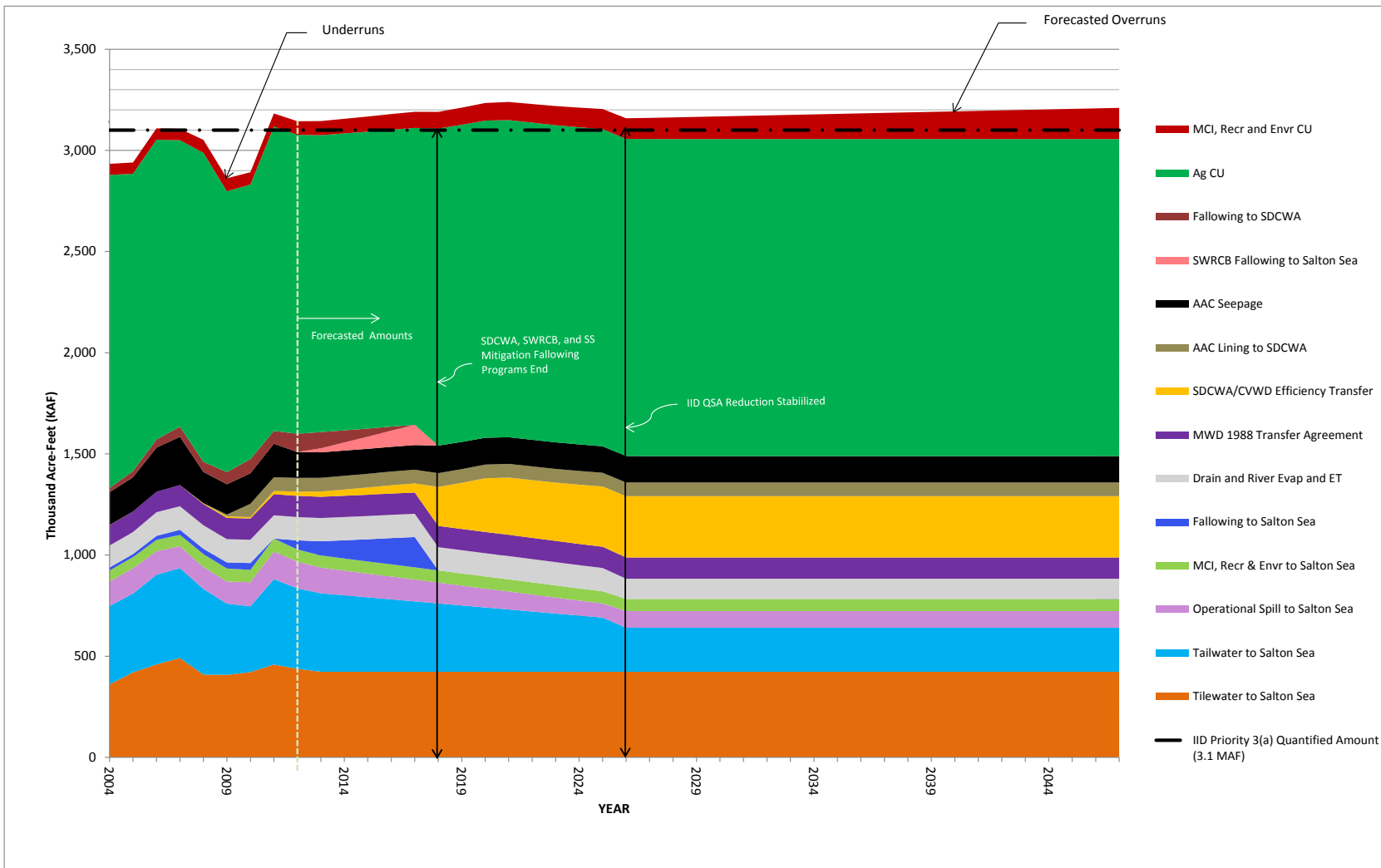


Figure ES-2. Existing and Future Water Demands

Figure Notes:

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|-----------------------|--|
| October 2012 | <ol style="list-style-type: none"> 1. MCI, Recreational, and Environmental CU – Untreated water delivered to retail suppliers for treatment for potable domestic, commercial and urban use and irrigation of urban and recreation areas; untreated water for other recreational uses and for environmental use for QSA/Transfer Agreements mitigation. 2. Agricultural CU – Irrigation water consumed to meet crop evapotranspiration requirements. 3. Following to SDCWA – See 18 below, <i>SDCWA, SWRCB, and SS Mitigation Following Programs End</i>. 4. SWRCB Following to Salton Sea – See 18 below, <i>SDCWA, SWRCB, and SS Mitigation Following Programs End</i>. 5. AAC Seepage – Amount seeping from All American Canal due to flow for IID flow in the canal. 6. AAC Lining to SDCWA – Water conserved from lining a portion of the All American Canal for delivery to SDCWA. 7. SDCWA/CVWD Efficiency Transfer –Water from IID system and on-farm efficiency conservation for delivery to SDCWA and to CVWD, respectively. |
| ES-13 | <ol style="list-style-type: none"> 8. MWD 1988 Transfer Agreement – Water conserved from IID system efficiency conservation for delivery to MWD (projects completed Sept 1998). 9. Drain and River Evap and ET – Water that evaporates from IID’s open channel system and rivers or that is used by plant life along the conveyance pathways. 10. Following to Salton Sea – See 18 below, <i>SDCWA, SWRCB, and SS Mitigation Following Programs End</i>. 11. MCI, Recr & Envr to Salton Sea – Return flow from non-agricultural uses to the Salton Sea (e.g., treated wastewater and non-ag irrigation/environmental runoff). 12. Operational Spill to Salton Sea – IID discharge from main canals and laterals which flows via drainage system to rivers to Salton Sea; or via drainage system to Salton Sea. 13. Tilewater to Salton Sea – Agricultural irrigation (leaching) water captured by tile drains underlying irrigated farmed land that is discharged to IID drainage system to rivers to Salton Sea; or via drainage system to Salton Sea. 14. Tailwater to Salton Sea – Agricultural irrigation surface runoff from the ends (tails) of fields that discharges to IID drainage system to rivers to Salton; or via drainage system to Salton Sea. |
| GEI Consultants, Inc. | <ol style="list-style-type: none"> 15. IID Priority 3(a) Quantified Amount (3.1 MAF) – Annual (calendar year) cap on IID consumptive use, under terms of QSA/Transfer Agreements, volume at Imperial Dam. 16. Underruns/ Overruns – IID Net Consumptive Use, volume at Imperial Dam (USBR Decree Accounting Report)¹⁰ in a calendar year is less than (underrun) or exceeds (overrun) the IID Priority 3(a) Quantified Amount of 3.1 MAF. IID Net Consumptive Use equals Colorado River water diverted to IID less IID return flow credit, accounted as volume to IID water service area plus transfers out of region (including AAC Lining to SDCWA) plus AAC seepage accounted to IID plus other water (e.g., Intentionally Created Surplus, Inadvertent Overrun Payback, Lower Colorado River Water Supply Project well field pumpage). 17. Forecasted Amounts – Quantified amounts (2012-2047) closely tied to CRWDA Appendix B; others, such as MCI, Recr and Envr CU, based on IRWMP forecasting.¹¹ 18. SDCWA, SWRCB, and SS Mitigation Following Programs End – Water conserved by following agricultural lands to provide flows to the Salton Sea to meet State Water Resource Control Board (SWRCB) Salton Sea mitigation requirements (2003-2017), and for delivery to SDCWA (2003-2016). 19. IID QSA Reduction Stabilized – Under the QSA/Transfer Agreements, IID agreed to 45 years of water transfers to urban areas outside of the Imperial Region; for years 2026-2047, that amount remains constant; for 2012-2047, volumes shown for Imperial Region and transfers are based on quantified amounts tied to CRWDA Appendix B. |

¹⁰ USBR website: Lower Colorado River Accounting. <<http://www.usbr.gov/lc/region/g4000/wtracct.html>>

¹¹ USBR website: Colorado River Water Delivery Agreement: Federal QSA. 10 Oct 2003. <<http://www.usbr.gov/lc/region/g4000/QSA/crwda.pdf>>

Urban (domestic, commercial and urban industrial) and environmental uses are not required to cut back as much as agriculture (if at all) during an SDI year. The higher degree of reliability and change in the timing of deliveries granted to non-agricultural users in the IID water service area can limit and/or reduce the supply available to agricultural water users in any year that SDI is in effect – especially if new developments, with their associated water supply requirements, are approved. Figure ES-3 illustrates the difference in delivery patterns. With MCI development increasing water demand and the higher reliability granted MCI users, agriculture will take the brunt of SDI cutbacks (dashed lines) during the peak season. *The dashed lines for each curve reflect a 20 percent overall cutback in IID deliveries with a maximum eight percent reduction for MCI demands¹² with agriculture taking up the difference to minimize an overrun.*

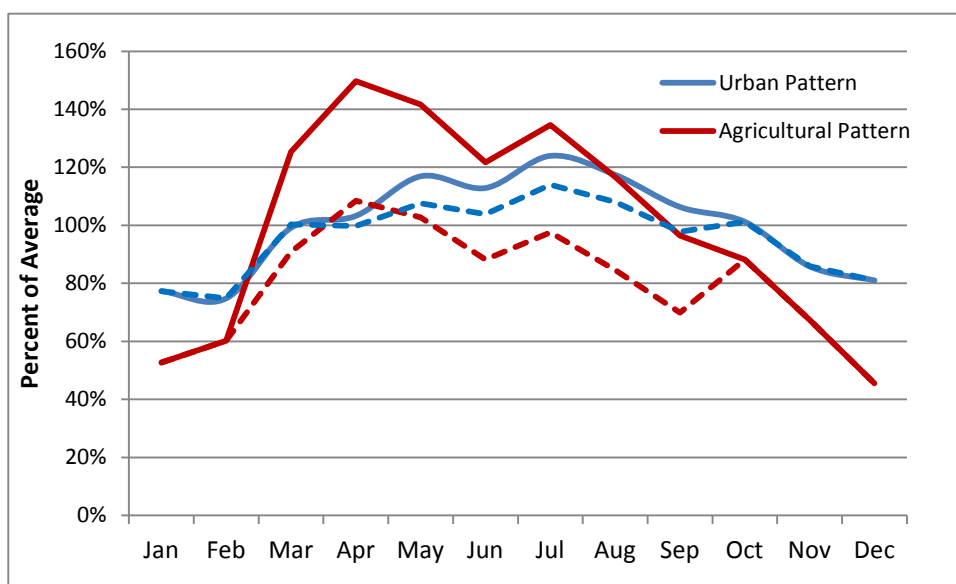


Figure ES-3. Illustrative Example of Monthly Demands and SDI Cutbacks for Urban and Agriculture

ES.7 HOW IMPERIAL IRWMP MEETS STATEWIDE PRIORITIES FOR AN IRWMP

A resource management strategy (RMS) is defined by CDWR as a project, program, or policy that helps local agencies manage water and related resources to meet integrated plan objectives. The RMS can be interrelated and linked to other activities in the Imperial Region, such as land use planning and beneficial drainage to the Salton Sea. Table ES-2 lists the CDWR management objectives and associated RMS elements. California Water Plan Update 2009 defines seven objectives and 27 strategies.¹³ The

¹² The expected maximum MCI reduced apportionment after meeting water conservation reductions per SBX7-7, the Water Conservation Act of 2009.

¹³ CDWR website: "CWP Update 2009: Volume 2 - Resource Management Strategies"
<<http://www.waterplan.water.ca.gov/cwpu2009/index.cfm>>

table provides a summary of how CDWR strategies were subdivided and adapted to the Imperial Region. It also shows where strategies were regrouped and integrated into Imperial Management Objectives to better reflect Imperial Region circumstances.

Table ES-2. Resource Management Strategies as Applied and Grouped for the Imperial Region

CDWR Management Objective	CDWR RMS	Imperial RMS	Imperial Management Objective
Reduce Water Demand	Agricultural Water Use Efficiency	Agricultural Water Use Efficiency	Reduce Water Demand (Chapter 8)
	Urban Water Use Efficiency	Urban Water Use Efficiency	
		Renewable Energy Sector Water Use Efficiency	
Improve Operational Efficiency and Transfers	System Reoperation	System Reoperation – Regional, Interregional	(Table 6-3)
	Water Transfers	Transfers – Into and Out of Region	Increase Water Supply (Chapter 7)
	Conveyance – Delta (Table 6-3)		
	Conveyance – Regional/Local	Conveyance – Regional, Interregional (Table 6-3)	
		Conveyance – Local, Planned	
		Conveyance – Municipal Systems Interconnections	
Increase Water Supply	Conjunctive Management and Groundwater Storage	Groundwater Development, Storage, Banking and Conjunctive Management	
	Desalination		
	Recycled Municipal Water		
	Surface Storage – Regional/Local	Surface Storage – Local	
		Surface Storage – Regional (Table 6-3)	
	Surface Storage – CALFED (Table 6-3)		
	Precipitation Enhancement (Table 6-3)		
Improve Water Quality	Matching Water Quality to Use		Improve Water Quality (Chapter 10)
	Drinking Water Treatment and Distribution		
	Pollution Prevention (Table 6-3)		
	Salt and Salinity Management (Table 6-3)		
	Groundwater and Aquifer Remediation (Table 6-3)		Improve Flood Management (Chapter 9)
	Urban Runoff Management		
Improve Flood Management	Flood Risk Management	Regional Flood Control	

Table ES-2. Resource Management Strategies as Applied and Grouped for the Imperial Region, Continued

CDWR Management Objective	CDWR RMS	Imperial RMS	Imperial Management Objectives
Practice Resources Stewardship	Agricultural Lands Stewardship		Practice Resources Stewardship and Other Strategies (Chapter 11)
	Economic Incentives (Loans, Grants and Water Pricing)		
	Ecosystem Restoration		
	Forest Management (Table 6-3)		
	Land Use Planning and Management ¹		
	Recharge Area Protection (Table 6-2)		
	Water-Dependent Recreation (Table 6-2)		
	Watershed Management ² (Table 6-3)		
Other Strategies	Crop Idling for Water Transfers (Table 6-3)		(Table 6-3)
	Irrigated Land Retirement	Irrigated Land Retirement for Local Apportionment	
	Dewvaporation or Atmospheric Pressure Desalination		
	Fog Collection		
	Rainfed Agriculture		
	Waterbag Transport, Storage Technology		

¹Land Use Planning and Management: Imperial County Use Permits for Solar Development IID Temporary Land Conversion Following

²Crop Idling for Water Transfers: IID Equitable Distribution Plan, Temporary Land Conversion Following Policy, and proposed following for In-lieu MCI Exchange (Table 6-3 & Recycled Water RMS &)

ES.7.1 IRWMP Priority Project List

The Imperial IRWMP is intended to support and complement existing water management and land use plans. The existing plans are based on the statutory authorities of IID, the County, and the Cities that are involved. By working together as a region, the Imperial IRWMP planning process provides regional project opportunities. Agencies and stakeholders in the Imperial Region participating in this IRWMP have developed a suite of significant projects, programs and policies to meet their water resource objectives. These projects, programs and policies address the sustainability of existing and future surface water supplies and the potential for groundwater development to meet the region's needs for planned growth and for environmental protection and enhancement.

Through stakeholder meetings and smaller meetings among individual agencies, staff, and their consultants, a list of specific implementable projects was developed. Each project was prioritized within the context of this Imperial IRWMP and the CDWR management objectives. The projects that are incorporated in the Imperial IRWMP are described with the sponsor for each project and the tentative completion date shown in Table ES-3.

Table ES-3. Imperial IRWMP 2012 Project List

Rank	Projects and Programs	Project Type	Sponsor	Cost	Status	Project Start (years)	Project Complete	Management Objectives Addressed
1	Keystone Water Reclamation Facility	Reclaim WW	City of Imperial	\$65,000,000	Final Design	< 1	2016	Water Supply
2	Keystone Desalination with IID Drainwater/Alamo River Source (50 KAFY)	Desalination	Imperial Irrigation District	\$147,440,000	Planning	3 - 6	2022	Water Supply
3	East Brawley 25 KAFY Desalination with Well Field and Groundwater Recharge	Desalination	Imperial Irrigation District	\$101,000,000	Planning	3 - 6	2021	Water Quality
4	Large-Scale Microalgal Cultivation on Recently-Exposed Playa Lands for Improving Salton Sea Water Quality and Regional Air Quality	Pilot Project, Algae	Scripps Institution of Oceanography (SIO), University of California San Diego (UCSD)	\$5,620,000	Project Planning and Feasibility Study	< 1	2017	Environmental Protection, Regional Policies/Goals, Water Quality
5	City of Brawley Reclaim Water Project	Reclaim WW	City of Brawley	\$12,500,000	Preliminary Design	< 1	2015	Water Supply, Environmental Protection, Regional Policies/Goals,
6	City of Brawley Water Meter Project	Metering, Conservation	City of Brawley	\$4,000,000	Preliminary Design	< 1	2016	Water Supply, Environmental Protection, Regional
7	City of Brawley Raw Water Storage Project	Storage, Reliability	City of Brawley	\$4,000,000	Project Planning and	1 - 3	2018	Water Supply
8	Holtville Wastewater Treatment Plant Improvement Project	WWTP Upgrade	City of Holtville	\$6,149,000	Preliminary Design	< 1	2016	Water Quality
9	Spearheading with Spirulina: An Sustainable Approach to Desert Aquaculture	Pilot Project	Southern Low Desert Resource Conservation and Development Council	\$350,000	Ready to Construct	< 1	2014	Regional Policies/Goals
10	Drainage Improvements in the Township of Seeley; County Project No. 5363	Stormwater	Imperial County Public Works	\$1,916,794	Project Planning and Feasibility	1 - 3	2017	Flood Protection and Stormwater Management
11	HPUD WWTP Upgrade to Tertiary Treatment	Reclaim WW	Heber Public Utility District	\$12,500,000	Preliminary Design	1 - 3	2017	Water Supply
12	New River Bioremediation and Wildlife Habitat Restoration and Process Evaluation Project	Habitat Restoration, Invasive Species Control, Conservation	San Diego State University Research Foundation	\$600,000	Preliminary Design	< 1	2014	Water Quality
12	Holtville Wastewater Collection System Project	Fix wastewater outfall pipeline	City of Holtville	\$4,100,000	Final Design	< 1	2014	Water Quality
14	Water distribution storage tanks, 2 each SMG	Storage, Reliability	City of El Centro	\$10,000,000	Preliminary Design	1 - 3	2016	Water Supply, Regional Policies/Goals, Water Quality
15	Holtville Water Distribution System Project	Pipeline Connector (WS), Reliability	City of Holtville	\$3,040,000	Preliminary Design	< 1	2016	Water Quality
16	Holtville Stormwater Conveyance System and Detention Basin Project	City Stormwater	City of Holtville	\$7,095,000	Project Concept	< 1	2016	Flood Protection and Stormwater Management

Table ES-3. Imperial IRWMP 2012 Project List, Continued

Rank	Projects and Programs	Project Type	Sponsor	Cost	Status	Project Start (years)	Project Complete	Management Objectives Addressed
17	Interconnection projects between City of El Centro, City of Imperial and the Heber Utility District	Inter-connection, Reliability	City of El Centro	\$1,400,000	Project Concept	3 - 6	2021	Water Supply, Regional Policies/Goals, Water Quality
18	Holtville UV Transmittance Water Treatment System Project	Drinking Water	City of Holtville	\$540,000	Project Concept	< 1	2014	Water Quality
19	Holtville Stormwater Master Plan Project	Stormwater plan	City of Holtville	\$60,000	Project Concept	< 1	2014	Flood Protection and Stormwater Management
20	Holtville Sewer Master Plan/Map Update Project	WWT System Upgrade	City of Holtville	\$84,000	Project Concept	< 1	2014	Water Quality

ES.8 IMPERIAL IRWMP IMPLEMENTATION

Participation in IRWMP implementation will require local agencies to take ownership in the IRWMP projects and initiate the project funding process through state or federal grant programs such as California's Proposition 84. To be included in the IRWMP list for funding under Proposition 84, the sponsoring agency was required to submit a cost estimate based on best engineering practices. In some cases the estimate is based on an 80 percent or higher level of design. Where there is little project definition, or where the project fits into a much larger program, the cost is reflective of the estimated expense over the next five years. Projects listed in Table ES-3 are ranked based on their score using ranking and evaluation criteria that included project purpose, regional and/or state benefits, level of design, cost estimate, and region-wide support for application towards the Proposition 84 grant. If grant monies are awarded for the identified projects, local monies could either be re-budgeted or expected fee and rate increases could be deferred.

Proposition 84, the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Act was passed by California voters in November 2006. Administered by CDWR, Proposition 84 includes funding for the IRWM Grant Program. This bond act provides \$5.4 billion for water related purposes and \$1 billion for IRWM planning efforts. The IRWMP funding is allocated by region with \$36 million for the Colorado River Region and \$100 million for inter-regional projects.

Changes to land use and water management plans are the responsibility of the lead agencies participating in the IRWMP, and updates to existing plans may influence IRWMP updates. The County, Cities, and IID remain responsible for activities in their jurisdictional areas consistent with their authorities. The interrelationship of the IRWMP and Imperial Region planning and policy efforts is represented in Figure ES-4, where the IRWMP is built on existing planning efforts and policy guidelines, and then updated over time as local planning and policy updates occur.

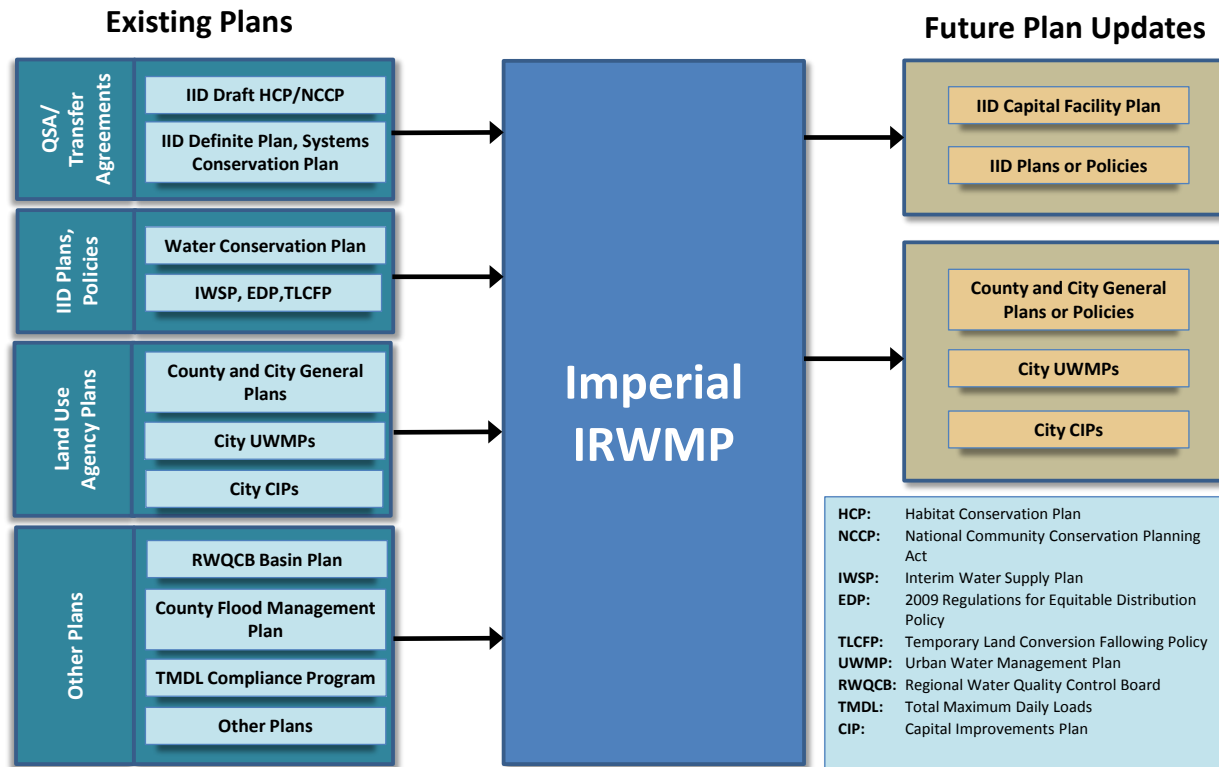


Figure ES-4. Relationship of IRWMP with Outside Planning Elements

Responsibility for complying with CEQA and other environmental laws rests with the lead public agency that proposes implementation of a listed project. The information compiled and analysis conducted for the Imperial IRWMP have resulted in materials that can be incorporated by reference into project level CEQA analysis. The information will support preparation of an initial study, development of the public Notice of Preparation (NOP) that initiates environmental review and public involvement, and in preparing the needed CEQA documents. Individual projects must be certified through Negative Declaration, Mitigated Negative Declaration or a full Environmental Impact Report (EIR). During project planning, collected environmental data was factored into the development and application of the ranking and screening criteria, and CEQA clearance was one of the readiness-to-proceed criteria used by the Water Forum to set project priorities.

ES.8.1 Project Development

Knowing where a project is in the project development process (Figure ES-5) will help the Water Forum integrate projects over time, and support local stakeholders to set priorities and match projects to potential funding sources. For example, if a project requires a further feasibility study prior to moving into the design phase, this activity may be able to be funded through grant funds intended for this purpose. Alternatively, if a project is "shovel ready," it may be qualified to receive state or federal grant funds for construction and implementation. Shovel-ready projects are those with final design, environmental clearances and permits, and identified sources of financing.

For projects to be included in grant applications and to insure the success of the project, each project development step will have to be clearly outlined – from planning to long term operation and maintenance. Each project will be tracked to provide accurate reporting on the status of the project and monitored level of performance. Data collection, management and reporting are critical aspects of measuring the success of the Imperial IRWMP over its constantly moving planning horizon.



Figure ES-5. Project Development Process

ES.9 IMPLEMENTATION STRUCTURE

Individual agencies or organizations, or combinations thereof, will be responsible for implementing identified projects, programs and policies, and reporting back to the Water Forum on monitoring measurements and performance results. The Water Forum will meet annually, or as-needed, to respond to changes, additions, or removal of IRWMP projects and/or in response to grant application preparations and submittals by the City of Imperial on behalf of Imperial IRWMP project proponents. This implementation structure will guarantee success by providing a coordinated regional, single-point-of-contact responsiveness while maintaining and preserving local business and policy decision making authority in the Imperial Region.

ES.10 IMPERIAL IRWMP ORGANIZATION

This IRWMP describes water resources challenges facing the state and Imperial Region, and a set of available strategies for addressing those challenges with projects, programs and policies that will help the region meet statewide priorities and regional needs. The IRWMP also describes potential impacts and benefits of the projects, programs and policies, and how they will be financed and monitored to ensure the intended objectives are met.

The document is divided into four sections that address specific requirements in the Integrated Regional Water Management Grant Program Guidelines (CDWR and SWRCB, 2004), as follows:

Imperial IRWMP Organization

Chapter 1. Introduction

Part I: PLANNING ENVIRONMENT

Chapter 2. Imperial Region Planning Environment

Chapter 3. Governance, Stakeholder Involvement, and Outreach

Part II: REGION DESCRIPTION

Chapter 4. Region Description and Baseline Conditions

Chapter 5. Supply, Demand, and Water Budget

Part III: RESOURCE MANAGEMENT STRATEGIES

Chapter 6. Review of Resource Management Strategies

Chapter 7. Increase Water Supply

Chapter 8. Reduce Water Demand – Increase Water Use Efficiency

Chapter 9. Improve Flood Management

Chapter 10. Improve Water Quality

Chapter 11. Practice Resources Stewardship and Other Strategies

Part IV: IMPLEMENTATION PLAN

Chapter 12. Review of Project, Program/Policy and Funding Alternatives

Chapter 13. Implementation Plan

Chapter 14. Measuring Plan Performance and Data Management

