IMPERIAL IRWMP

INTEGRATED REGIONAL WATER MANAGEMENT PLAN

Chapter 2

Imperial Region Planning Environment

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Chapter 2. Imperial Region Planning Environment

2.1 Basis for Imperial Region Boundary

The Imperial Region boundaries were selected for the following reasons:

- Imperial Water Forum members have experience working together to address complex issues, so they will be well equipped to develop an IRWMP.
- Urban and rural development of the Imperial Valley tie together IID, the County, and the Cities that are working together to better integrate land use and water supply plans and the planning process.
- Primary conflicts within the region related to new water demands and future land use changes are intensified by issues surrounding the cap on Colorado River supplies, the approach to apportioning water supplies, and competing uses within the Imperial Valley.
- The Imperial Region presents opportunities for recycled and reclaimed water use because of the geographic proximity of its users.
- The Imperial Region has opportunities to help the state meet its renewable energy goals by developing geothermal and solar generating facilities.

In developing the proposed IRWMP boundary, a number of meetings and conference calls were held between IID and the County to evaluate both physical and institutional features. The proposed Imperial Region boundary encompasses the service areas of multiple local agencies and maximizes opportunities to integrate water management objectives related to natural and man-made water systems, including water supply reliability, water quality, land use planning, environmental stewardship and flood management. The Region is within Imperial County, which serves to expedite integration of land use and water planning. The boundaries were established to be inclusive of a larger area where practical. In the Imperial Region there are no overlapping areas or areas not covered (voids).

The area selected for the Imperial Region lies completely within CDWR's Colorado River Hydrologic Region. It is also entirely within the State Water Resources Control Board Region 7, Colorado River Basin Region.

Figure 2-1 presents the County boundaries, location of developed areas, water district boundaries, IID delivery system, and federal lands. IID is responsible for delivery of untreated Colorado River water.

The Urban Area designation on the County's Land Use Plan includes areas surrounding the six incorporated cities: Imperial, Brawley, El Centro, Westmorland, Holtville, and Calexico. These Cities and the County have authority over land use, authority to adopt General Plans and zoning to guide land use, prepare Urban Water Management Plans to guide use of their available water supplies where required to do so, and to act as lead agency pursuant to the California Environmental Quality Act (CEQA). The

Imperial Region includes six unincorporated communities: Calipatria and Niland to the north; Heber, Seeley, and the El Centro Naval Air Facility in the center; and Ocotillo/Nomirage in the West Mesa area.

The Imperial IRWM boundary is shown on Figure 2-1 and Figure 2-2. To the south, the boundary is the international border with Mexico. To the west, the boundary follows the Imperial County line from Mexico to the point where it meets with the Coachella Valley Water District (CVWD) boundary; thence, it follows the southern CVWD boundary east to the point where it abuts the northern IID boundary. The Imperial Region boundary then continues to follow the IID boundary east below the Salton Sea to where the IID boundary again abuts the CVWD boundary. It then follows the CVWD boundary north to a point where a line was extended north to the Imperial County line, whence it was extended east along the county line until it reaches the eastern boundary of the East Salton Sea Basin. The eastern boundaries of the East Salton Sea Basin, Amos Valley Basin, and Ogilby Valley Basin watersheds form the remainder of the Imperial Region boundary to the east, following the Ogilby Valley Basin watershed divide south to where it meets the Yuma Valley Basin. The Yuma Valley Basin boundary is then followed down to the Mexican Border. Much of the land within the Imperial Region is under federal control, and these lands are managed under existing plans prepared pursuant to federal laws.

Figure 2-2 presents the key hydrologic features showing the watershed boundaries, groundwater basin boundaries, and IID facilities used to manage Colorado River supplies.

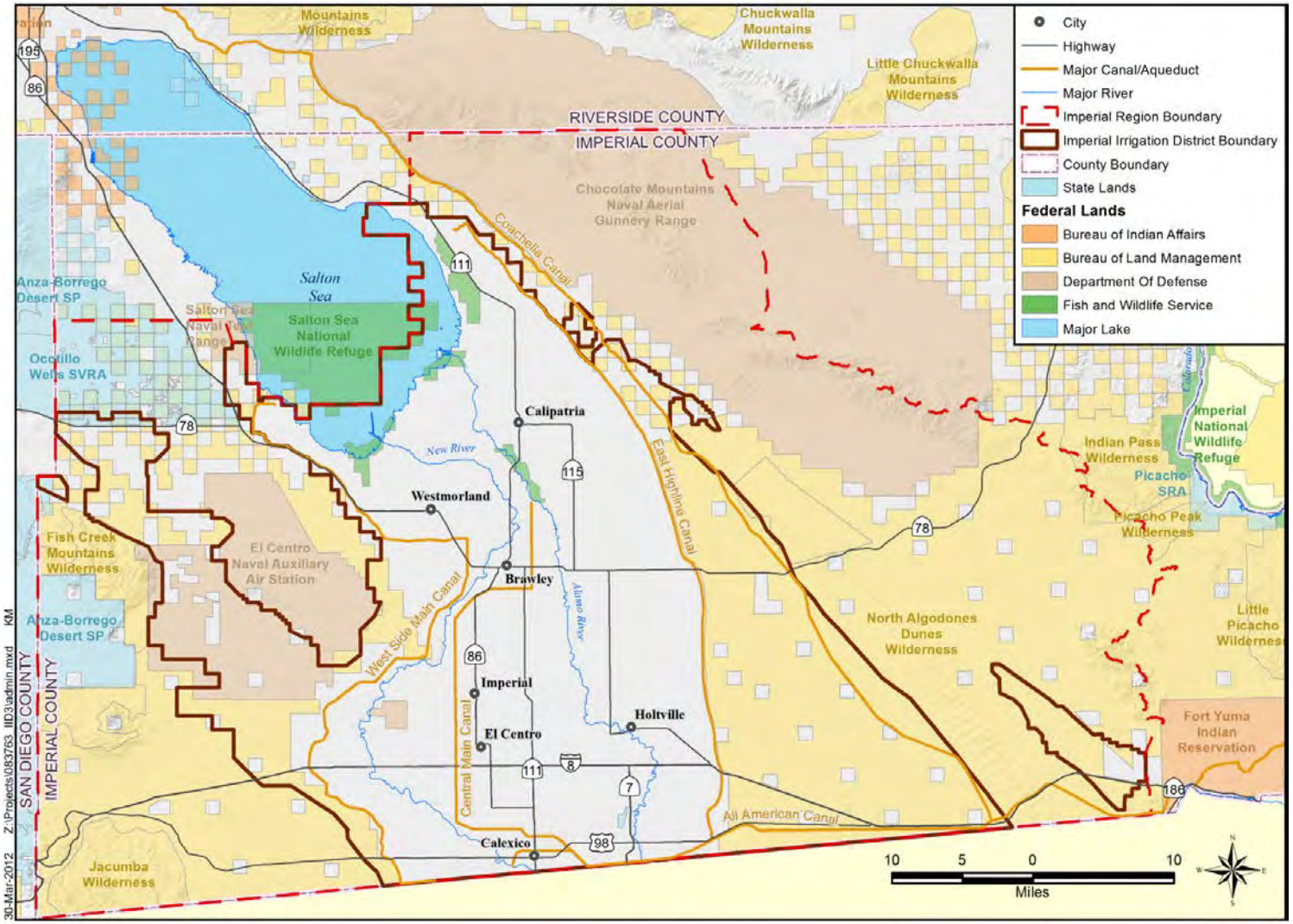

Figure 2-1. Imperial Region and other Jurisdictional Administrative Boundaries

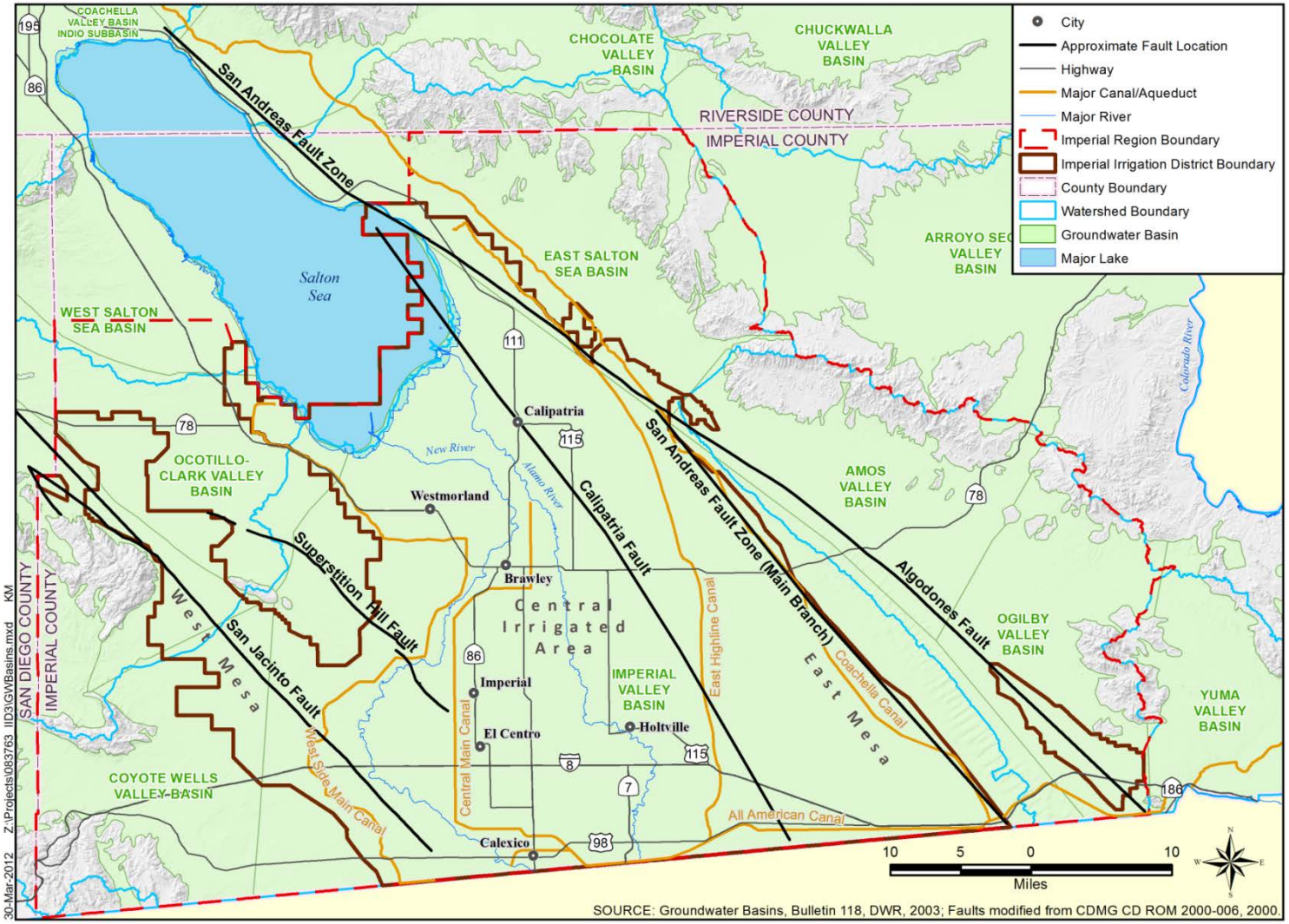

Figure 2-2. Hydrologic Regions

2.2 Planning Horizon

The IRWMP has a 40-year planning horizon from 2010 to 2050. The Quantification Settlement Agreement and Related Agreements (QSA/Transfer Agreements) extend through 2047.

2.3 Planning Process

The IRWMP was developed through a number of sequential steps shown in Figure 2-3. The Water Forum used a multi-step planning process. The first step was to convene the Water Forum and identify the issues and concerns by reviewing existing plans and conducting stakeholder assessments and outreach to the Cities. The outreach to the Cities was important because, with the exception of the City of Imperial, all are characterized as disadvantaged communities (DACs) using the CDWR definition. The issues and conflicts provided the basis for developing goals and measureable objectives.

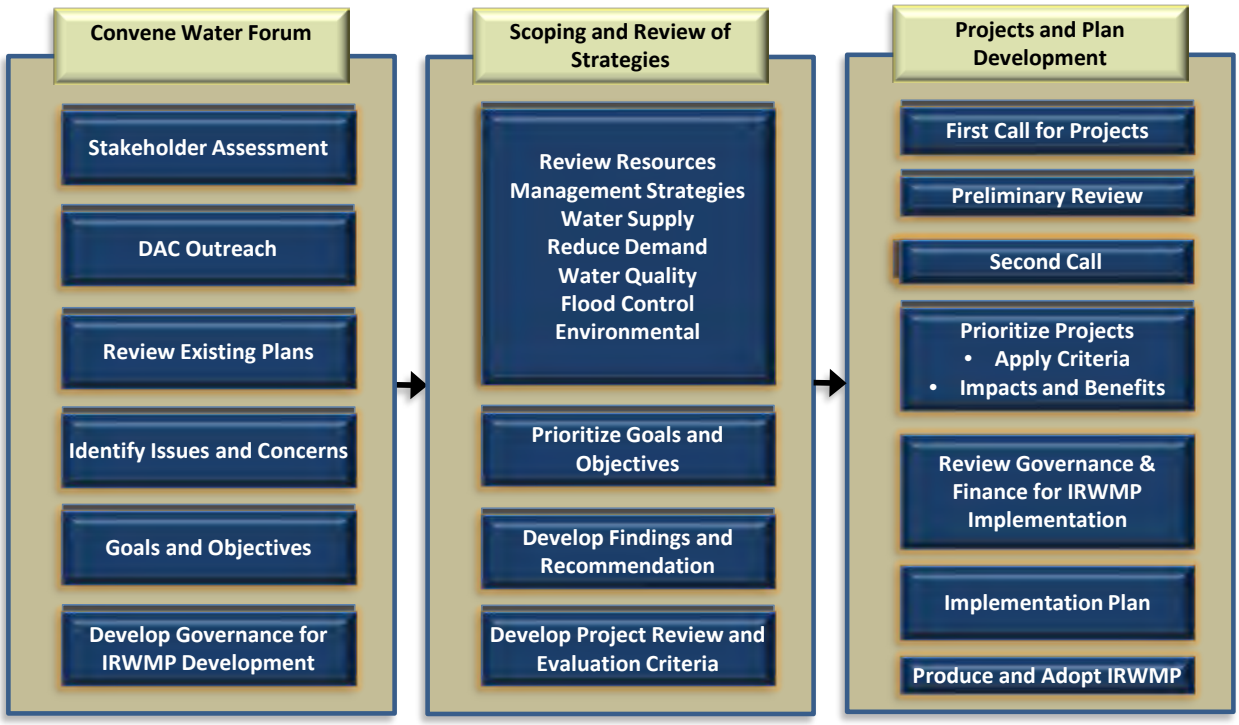

Figure 2-3. Planning Process

Next, the Water Forum reviewed the CDWR resource management strategies in order to:

- Document existing conditions in the Region where the strategies are already applied
- Identify opportunities and constraints
- Evaluate the relationship between strategies
- Consider how the strategies would help the Region mitigate or adapt to climate change, and

- Make findings regarding which strategies should be applied and how they could be adapted to local conditions, and/or integrated to meet the goals and objectives.

Water Forum Findings on the resource management strategies helped define the scope of the IRWMP. The Water Forum also decided which strategies were not applicable to the Region because they were not feasible, were impractical, or did not meet the objectives. Review of the resource management strategies helped the Water Forum revisit and prioritize the goals and objectives, and develop the project review and evaluation criteria used to prioritize projects.

The resources management strategies that were carried forward by the Water Forum were integrated and used to formulate project, program, and policy alternatives. The stakeholders worked to formulate their projects or bring projects to the IRWMP that would help to meet the goals and objectives and apply the resource management strategies. The project alternatives were then evaluated and compared using a ranking and evaluation to prioritize the projects for the IRWMP. The prioritized list will be the basis for developing grant applications.

2.4 INTEGRATION APPROACHES

The IRWMP is a long-term proposition requiring integration and adaptive management to respond to changing circumstances. The IRWMP provides the opportunity for stakeholders to work together throughout the planning horizon. However, regional planning does not replace or supersede local water supply or land use planning, nor usurp water district, City, or County authorities. At its best, regional planning incorporates local planning elements[1] and utilizes the range of authorities within the region to improve overall water resources management.

The Imperial IRWMP proposes how to integrate:

- Imported regional surface water (Colorado River) and local water (groundwater) supplies
- Demand management measures
- Existing local plans and policies
- Local agency efforts to meet state regulatory requirements
- Capital projects and timing
- Local, state, and federal funding
- Powers and authorities of the local agencies

Integrating regional and local supplies includes development of capital facilities to extend the Colorado River supply through groundwater storage, wastewater recycling, and/or desalination of drain water or brackish groundwater.

[1] California Water Code (CWC) §10540(b)(1)-(7)

Integrating demand management measures involves conserving water to meet future demands, so that all users and use types (agriculture, renewable energy, MCI, and environmental) are working to cost-

Integrating existing local plans and policies ensures the IRWMP is consistent with, and complements, existing land use and water management plans. The relationship between existing plans and the IRWMP is represented conceptually in Figure 2-4.

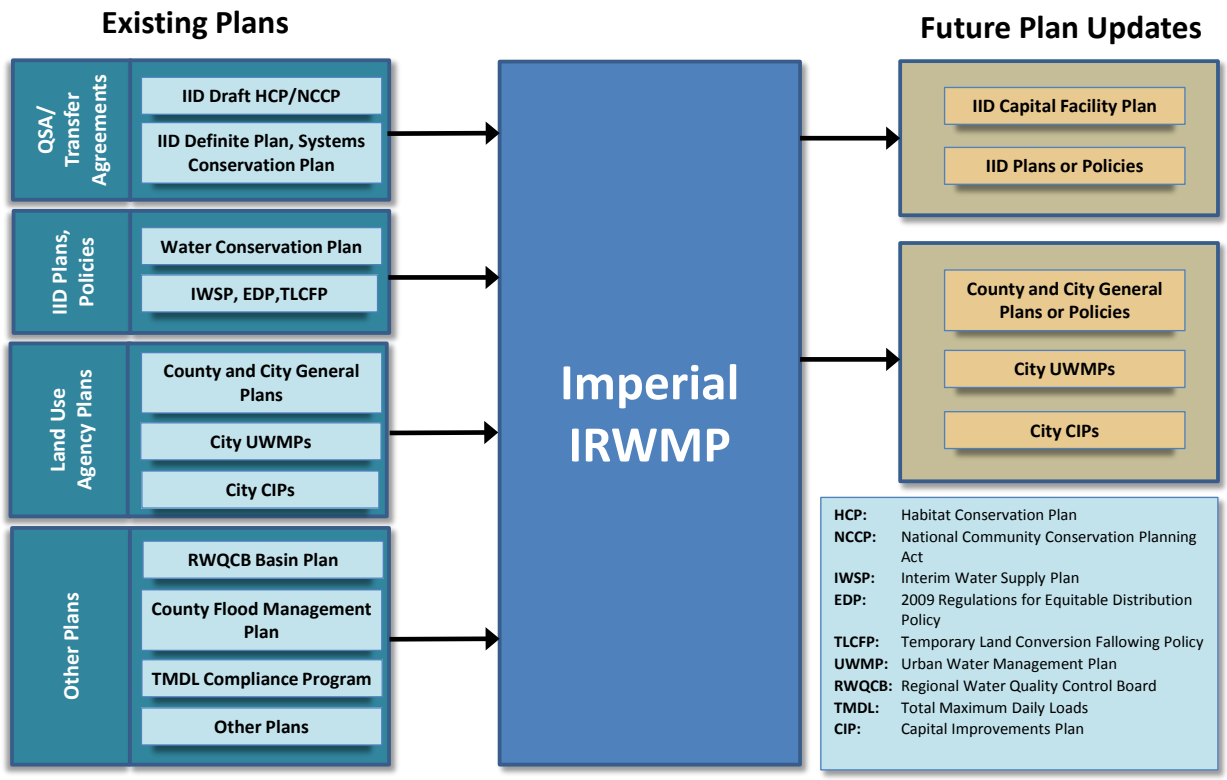

Figure 2-4. Relationship between Existing Plans and the IRWMP

The CDWR Guidelines include two IRWMP standards that seek to improve coordination between land use and water management plans and agencies. The standards require the Imperial IRWMP to define:

- The relation to local water planning
- The relation to local land use planning

The intent and requirements for each standard is to integrate land use and water supply planning where this is appropriate within the region and supports the IRWMP goals and objectives. To meet CDWR standards and meld the relationship between local plans and the IRWMP, the Water Forum:

- Sought to be consistent with other local plans
- Included IID, the County and the Cities, and coordinated with their representatives to develop IRWMP content, identify issues, and shape the goals and objectives

- Used the most current local plans to incorporate relevant and accurate information
- Integrated existing water management tools, strategies, and criteria contained in local plans, where deemed appropriate

The approach was to review existing water management and land use plans, thus laying a foundation to formulate the IRWMP and for upgrading future plans. CDWR resource management strategies being applied in local plans were identified. Land use designations in the general plans were used to forecast future demand and identify potential gaps between demand and supply. The demand forecasts in the IRWMP were provided to the Cities for the use in updating their 2010 Urban Water Management Plans (UWMPs).

The Imperial IRWMP can be used by lead agencies for subsequent updates of water management and land use plans for their jurisdictional area. Future changes to land use or water management plans are the responsibility of the lead agencies participating in the IRWMP, and future updates to land or water plans will influence any IRWMP updates.

Integrating local plans and agency efforts to meet state regulatory requirements helps agencies to economically meet state and federal mandates. For example, urban water suppliers with 3,000 service connections or more are required to prepare Urban Water Management Plans (UWMPs) and update the plans every five years. Urban suppliers could work together to fund a regional UWMP and cost-share efforts to implement state mandated programs. Proposition 84 grant funding for groundwater projects, such as those envisioned in Section 7.1 Groundwater Development, Storage, and Conjunctive Management, is contingent on the County having a Groundwater Management Plan (GMP) that is consistent with state requirements.

Integrating capital projects and their timing serves to make projects more cost-effective and competitive for state and federal funding (e.g., development of multi-participant regional wastewater or drinking water treatment plants). The IRWMP seeks to integrate projects over the planning horizon based on a project's progress in the project development process (Figure 2-5). Categorizing the project development process will help the Water Forum stakeholders integrate projects over time, and help support local stakeholders' set priorities and match projects to potential funding sources.

Figure 2-5. Project Development Process

Program and Policy Integration supports partnering, co-funding, and implementing shared projects. The IRWMP includes instances of this occurring in the Region, such as the County and IID policies for solar development (see Chapter 12).

Integrating local, state, and federal funding serves to reduce local costs, minimize the effects to local rate payers, and qualify the Region for state funding.

Integration of local agency powers and authorities can help expedite project review, streamline land and water management decisions, and establish a unified front when dealing with other regions and governing bodies. This could also include use of joint powers authorities to finance and build projects.

2.5 RELATIONSHIP TO OTHER HYDROLOGIC REGIONS AND IRWM REGIONS

The Colorado River Hydrologic Region and the boundaries of the other approved IRWM regions are shown in Figure 2-6. South Lahontan Hydrologic Region is to the north and South Coast Hydrologic Region lies to the west. Within the Colorado River Hydrologic Region are three other IRWM regions, Coachella Valley, Anza Borrego Desert, and Mojave. The relationship among the Hydrologic Regions and the IRWM regions is influenced by the sources of water supply, existing agreements, and agency authorities involved in planning.

2.5.1 Relationship within the Colorado River Hydrologic Region

Coachella Valley IRWM Region. The boundary with Coachella Valley Water District (CVWD) was used in defining the Imperial Region since CVWD along with other water districts, Riverside County, the Cities, and stakeholders is preparing the Coachella Valley IRWMP. The Coachella Valley Region is unique and distinctly different from the Imperial Region. However, the portion of CVWD abutting the Imperial Region is not part of the Coachella Valley Region. The Coachella Valley Region has its own water distribution facilities, Colorado River apportionment, and State Water Project (SWP) allocation. The region is more reliant on groundwater and has overdrafted groundwater in some areas. There is more urban area as compared to the Imperial Region. Within CVWD, the crop mix and delivery system are different from those of IID. Coordinating with the adjacent Coachella Region is particularly important because of the mutual reliance on Colorado River supplies, linkages through the QSA/Transfer Agreements, and the geographic relationship to the Salton Sea which is impacted by the QSA/Transfer Agreements

Anza Borrego Desert IRWM Region. The Anza Borrego Desert Region is located in San Diego County and has its own unique water resource, economic, political, social, and technical issues. The Region is reliant on groundwater, lies outside of the authorized place of use for Colorado River water, and has no Colorado River water rights or entitlements. The area is covered under the San Diego County General Plan, and San Diego County has land use planning authority.

Mojave IRWM Region. The Mojave Region overlaps the Colorado Hydrologic and South Lahontan Hydrologic regions. The region is reliant on imported SWP and local surface water and groundwater resources, and water is managed through conjunctive use. SWP water supplies help to recharge the groundwater basin in the Mojave River Valley and Morongo Basin.

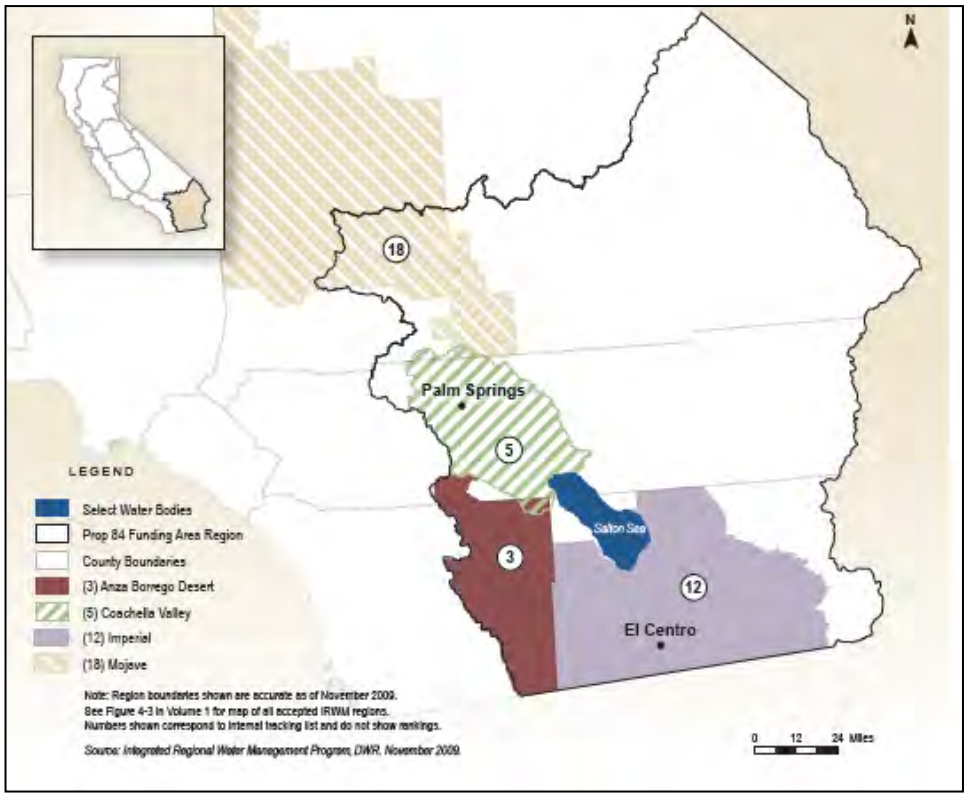

Figure 2-6.Colorado River Hydrologic Region and IRWM Regions

2.5.2 Coordination between Hydrologic Regions

Colorado River Hydrologic Region Coordination. California Water Plan Update 2009 references the QSA/Transfer Agreements as the integrated regional planning effort across hydrologic regions in Southern California. By virtue of the QSA/Transfer Agreements and reliance on Colorado River water, the Imperial Region, which is in the state's Colorado Hydrologic Region, is interrelated with the South Coast Hydrologic Region, which includes the Metropolitan Water District of Southern California (MWD) and San Diego County Water Authority (SDCWA), two principal partners in the QSA/Transfer Agreements. The QSA/Transfer Agreements benefit California, since they provide the mechanism to stay within its 4.4 million acre-feet (MAF) a year Colorado River water apportionment consistent with the Law of the River. The U.S. Department of the Interior, through the U.S. Bureau of Reclamation (USBR), acts as water master for the Colorado River. Interstate and interregional coordination are through existing management structures including the Colorado River Board of California, the Colorado River Water Users Association, and the USBR.

It is anticipated that interregional competition for Colorado River supplies will continue to influence water planning and management in both the South Coast and Colorado River Hydrologic Regions. Water used for agriculture in the Colorado River Hydrologic Region, within both the Imperial and Coachella IRWM planning regions, is identified as a potential source of future supply for expanding urban demands in the South Coast.

Salton Sea Coordination. Interregional cooperation on the Salton Sea Restoration Plan is through the Salton Sea Authority.[2] A restoration plan is beyond the scope of the Imperial IRWMP. The Salton Sea Restoration Plan is a separate and far more extensive planning effort than the Imperial IRWMP, involving a much larger geographic area that includes a large number of stakeholders. The Imperial Region and Water Forum remain committed to the development of a Salton Sea Restoration Plan by the Salton Sea Authority. Where practical and cost effective, the Water Forum and local stakeholders will support developing and testing pilot projects that could be included in the Imperial IRWMP; support the broader restoration planning effort.

2.6 PLANNING BASELINE AND EXISTING PLANS

Existing plans and policies define the baseline conditions and define the present-day planning environment. This includes IID's existing water management policies and plans, and the land use plans, policies goals, and objectives of the Cities and County. Plan and policy baselines are discussed in more detail in Chapters 5 and 6 and include:

- Law of the River, which is the body of compacts, state and federal law, court decisions and decrees, contracts and regulatory guidelines that govern Colorado River water rights[3]
- QSA/Transfer Agreements[4]
- IID Water Conservation and Transfer Project Habitat Conservation Plan/National Community Conservation Planning Act, HCP/NCCP <http://www.iid.com/index.aspx?page=235>
- IID Efficiency Conservation Definite Plan (IID, 2007, Definite Plan,<http://www.iid.com/index.aspx?page=203>
- IID System Conservation Plan
- IID 2007 Water Conservation Plan (IID, 2008, <http://www.iid.com/index.aspx?page=186>)
- IID 2009 Regulations for Equitable Distribution Plan (EDP)
- IID Temporary Land Conversion Fallowing Program (TLCFP) <http://www.iid.com/Modules/ShowDocument.aspx?documentid=5646>
- IID Interim Water Supply Policy (IWSP)
- Existing IID policies, standards, and guidelines

Imperial County General Plan, Area Plans, and Community Plans Elements with greatest relevance include:

- Geothermal/Alternative Energy and Transmission Element (2006 update)

[2] <http://www.saltonsea.ca.gov>
[3] The Colorado River is managed and operated under numerous compacts, federal laws, court decisions and decrees, contracts, and regulatory guidelines collectively known as the "Law of the River." <http://www.usbr.gov/lc/region/pao/lawofrvr.html>
[4] See Chapter 5. Also see the QSA Annual Implementation Report covering specific details about water conservation and the transfer project: <http://www.iid.com/index.aspx?page=381>. For QSA-related documents and general information: <http://www.iid.com/index.aspx?page=122>

- Water Element (2002)
- Imperial County Groundwater Management Ordinance, Title 9 – Land Use Code, Division 22 – Groundwater Management
- General Plans for each of the Cities
- Adopted 2010 Urban Water Management Plans (Cities of Calexico, El Centro, Imperial and Brawley)

IMPERIAL IRWMP

INTEGRATED REGIONAL WATER MANAGEMENT PLAN

GEI Consultants