IMPERIAL IRWMP
INTEGRATED REGIONAL WATER MANAGEMENT PLAN

Chapter 11

Practice Resources Stewardship and Other Strategies

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11.1 Practice Resources Stewardship and Other Strategies Management Objectives

CDWR Practice Resources Stewardship and Other Strategies management objectives are discussed in this chapter. After preliminary review, the Water Forum made findings on four of the strategies:

- Crop Idling (fallowing) for Water Transfers and Irrigated Land Retirement (see 11.2.1)
- Land Use Planning and Management (see 11.2.2),
- Economic Incentives (loans, grants, and water pricing) (see 11.2.2), and
- Ecosystem Restoration (see 11.7.1).

The Water Forum also considered:

- Water-Dependent Recreation, and
- Recharge Area Protection

Regarding the Land Use Planning and Management resource management strategy, IRWM Draft Guidelines (CDWR, July 2012) require that "*IRWMP Plans must contain processes that foster communication between land use managers and RWMGs [Regional Water Management Groups] with the intent of effectively integrating water management and land use planning*." Further, "*IRWM Plans must document:*

- "*Current relationship between local land use planning, regional water issues, and water management objectives.*
- *"Future plans to further a collaborative, proactive relationship between land use planners and water managers.*" (CDWR 2012, IRWMP Guidelines, p 21)

The following resource management strategies were considered by the Water Forum which determined they are adequately addressed by existing programs or are not applicable in the Imperial Region:

- Agricultural lands stewardship (existing programs)
- Forest management (no forests in Imperial region)
- Watershed management (coordinate with state and federal agency activities)
- Dewvaporation or atmospheric pressure distillation (not applicable)
- Fog collection (not applicable)
- Rainfed agriculture (not applicable, average rainfall of less than there inches a year
- Waterbag transport /storage technology (not applicable, no connection to ocean)

11.2 FINDINGS

11.2.1 Crop Idling (Fallowing) for Water Transfers & Irrigated Land Retirement

- After preliminary review, the Water Forum eliminated from further consideration fallowing for transfer out of the IID area.
- In 2005, the IID Board of Directors voted unanimously to strongly confirm its commitment to prohibition of fallowing for any out-of-valley transfers in Resolution 25-2005,[1] which in part states that IID fully intends to move away from fallowing as a means of developing conserved water for temporary transfer to others outside of the Imperial Valley and instead intends to utilize efficiency conservation measures so as to allow for the farming of the same amount of land with less water.

11.2.2 Land Use Planning and Management and Economic Incentives

- No action has been taken regarding a proposed MCI Exchange, which would includes possible crop idling, fallowing, irrigated land retirement, capital projects, economic incentives (grants, loans, water pricing, etc.) and other measures. Depending on developments within the Imperial Region, this could be a topic for a future Imperial IRWMP update.

11.3 CROP IDLING FOR WATER TRANSFERS AND IRRIGATED LAND RETIREMENT

California Water Plan Update 2009 identifies Crop Idling for Water Transfers as a resource management strategy. In the Imperial Region, crop idling is called fallowing. Fallowing can be temporary (as in the QSA Fallowing Program) or long-term (as for solar energy development). In either case, the land is expected to return to agricultural use once fallowing is terminated. The Water Forum addressed fallowing and irrigated land retirement.

11.3.1 Fallowing for Water Transfers

To be consistent with IID policy and County policy, early in the IRWMP process the Water Forum eliminated from further development the Transfers – Out of basin resource management strategy (See Chapter 6). However, temporary or long-term fallowing may prove a viable strategy to make water available for use within the Imperial Valley or to meet some QSA/Transfer Agreements obligations.

IID's SDCWA Transfer and Salton Sea Mitigation Fallowing Program

In cooperation with land owners and growers, IID manages a voluntary Fallowing Program that eliminates agricultural water consumptive use, tailwater and tilewater from participating fields. The conserved water is used for environmental (Salton Sea) mitigation and the SDCWA transfer (see Chapter

[1] IID Res.25-2005. IID's Commitment to Implement QSA Programs and Opposing Forbearance of Any IID Water. <http://www.iid.com/Modules/ShowDocument.aspx?documentid=3891>

5). The program was instituted in 2003, and subsequent Fallowing Programs were undertaken through 2012-2013. The Fallowing Program is anticipated to last through 2017; however, this is under review, see below. The decision to fallow land is voluntary, made by the landowner or by the tenant with landowner approval – this policy is also under review.

IID's website describes the IID/SDCWA Fallowing Program:

> *While fundamentally opposed to fallowing during the QSA negotiations, IID ultimately agreed to a 15 year fallowing program in order to eliminate potential effects to the Salton Sea resulting from the transfer of water out of the Imperial Valley. Water conserved from the fallowing program and transferred to SDCWA ramps up for the first 10 years and then decreases for the next five years as efficiency conservation projects are developed and implemented. Efficiency conservation replaces all fallowing by 2018.*
>
> *The purpose of the Fallowing Program is that willing land owners and/or lessees will contract with the Imperial Irrigation District to fallow fields to meet the transfer and Salton Sea mitigation water needs for the first 15 years of the IID/SDCWA and QSA Compromise Delivery Schedule. Each year the price for the water to be conserved from fallowing is set by IID and solicitations are sent out asking for voluntary participation to fallow a field in return for payment of the conserved water. Fields are then contracted based on a random selection to meet the amount of conserved water needed each year. Each field's participation in the fallowing program is limited to two out of every four years.*
>
> *The Fallowing Program for 2012-2013 consists of a voluntary proposal process designed to yield the annual fallowed water requirements outlined in the QSA water delivery schedule. This program will consist of a contract between IID and participating landowners and/or tenants for a one-year fallowing period and may allow for an early or delayed start (with an associated payment modification based on the actual fallowed period and conservation yield calculation), during which time no water can be delivered to the contracted field.*
>
> *For this solicitation, fallowing participants will be paid a set rate of $125 per acre-foot of a field's baseline water use history, although this payment may be affected by IID's trending analysis and 6 af/ac payment cap.*[2]

During the first seven Fallowing Programs, enrollment increased from nearly 6,000 acres to over 16, 500 acres, conserving from 38,641 acre-feet to 90,981 acre-feet, respectively. Payment to program participants has ranged from $1.8 million ($47 per acre-foot) to $6.9 million ($100 per acre-foot) in 2010; and the 2012-2013 program payment is set at $125 per acre-foot. (See Figure 11-1

[2] Source: IID website. 4 Jul 2012. <http://www.iid.com/index.aspx?page=190>

Payment per acre-foot is expected to increase as the volume of water needed from fallowing increases to 150,000 acre-feet per year for 2013-2017. Variance in payment is anticipated due to fluctuation in agricultural commodity prices and corresponding intensification or weakening in Imperial Valley agricultural activity.

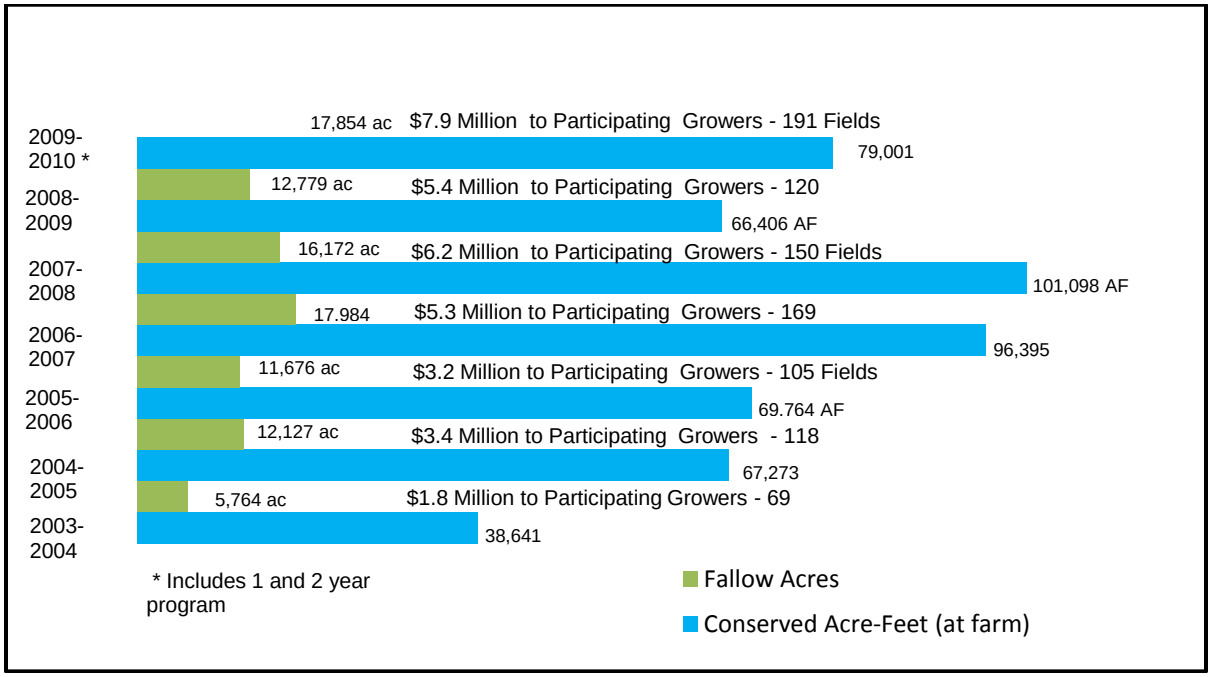

Figure 11-1. History of QSA Fallowing Program, for SDCWA Transfer and Salton Sea Mitigation

Source: IID 2010 Annual Water Report

As noted above, the future of the Fallowing Program is under review. As reported in The Bulletin: Board Meeting Highlights for Employees:

> *On September 13, 2011, the IID board approved a resolution presented by General Manager Kevin Kelley to petition the State Water Resources Control Board to amend its 2002 water order regarding mitigation water for the Salton Sea from 2014-2017.[3] The resolution states that if the state has not settled on a preferred plan for restoration of the Salton Sea and appropriated funding for its implementation by Dec. 31, 2013, IID should not be bound by the original water order in the last four years (2014-2017) of what was to have been a 15 year period of the state to meet its restoration responsibility under the Quantification Settlement Agreement. Instead, that volume of water, a total of 480,000 acre-feet, would be sold ideally to the Metropolitan Water District of Southern California. The proceeds would be redirected to the QSA joint powers authority to pay for durable and lasting mitigation measures for the sea in an effort to reduce air*

[3] IID Board of Directors. "Resolution 27-2011 Petition to Amend SWRCB Revised Order WRO 2002-13." 31 Sep 2011. <http://www.iid.com/Modules/ShowDocument.aspx?documentid=4994>

emissions, preserve habitat and allow for the development of geothermal and other renewable energy.[4]

In 2001, an Amended Joint Petition of the Imperial Irrigation District and the San Diego Water Authority was filed with the State Water Resources Control Board[5] *for approval of a long-term transfer of conserved water pursuant to an agreement between IID and SDCWA, as well as a petition by IID to change the purpose and place of use and the point of diversion under Permit No. 7643 (Application 7482). Additional details can be accessed from the SWRCB project archives website.*[6]

In October 2011, IID and the San Diego County Water Authority filed a joint petition[7] *requesting changes to the State Water Resources Control Board's Revised Order WRO 2002-0013. These changes would allow for an early-start approach to ecosystem enhancement and preservation while assisting in the ongoing efforts to mitigate impacts on the Salton Sea from the 2003 Quantification Settlement Agreement.*

For FAQs and other details visit IID's website.[8]

Other Fallowing

Fallowing may be permanent or temporary, but must be consistent with IID board policies, state and federal laws, the QSA/Transfer Agreements, and County land use plans and policies.

Under the terms of the QSA/Transfer Agreements, future land fallowing for environmental mitigation or transfer would require development of a land fallowing conservation plan, and consultation with the Board of Supervisors to identify adequate mitigation measures to avoid or mitigate unreasonable economic or environmental impacts.[9]

Landowners can make decisions to fallow agriculturally zoned lands and dedicate the land to some other purpose (e.g., solar photovoltaic development). The landowner's decision is subject to review by the County Planning Commission and/or Board of Supervisors. A Conditional Use Permit would be required for such long-term fallowing. The Conditional Use Permit preserves the agricultural zoning and the presumption that the land would return to agricultural production. Long-term fallowing decision by the

[4] Source: The Bulletin - Board Meeting of September 13, 2011. IID Internal Communication. Email 14 Sep 2012.
[5] <http://www.waterboards.ca.gov/>
[6] <http://www.waterboards.ca.gov/waterrights/water_issues/programs/hearings/iid_sdcwa/>
[7] < http://www.iid.com/Modules/ShowDocument.aspx?documentid=5071>
[8] IID website: "State Water Resources Control Board" 7 Jul 2012. <http://www.iid.com/index.aspx?page=212>
[9] California Water Code δ 1013. <http://law.onecle.com/california/water/1013.html>

landowner and County would make water available for IID to allocate to other beneficial uses, and the IID board has adopted a Temporary Land Conversion Fallowing Policy to deal with such projects.[10]

11.3.2 Irrigated Land Retirement

In a desert environment, irrigated land retirement involves permanent removal of land from agricultural production and a change of land use. Irrigated land retirement can occur as a result of planned changes in land use including, but not necessarily limited to:

- Decisions by individual private property owners to permanently change land use (e.g., conservation easement)
- Annexation of land to a city consistent with the city general plan, zoning and state law[11]
- Rezoning of agricultural lands for other uses in unincorporated areas by the County Board of Supervisors[12]
- Permanent changes in land use from agriculture to other uses consistent with the existing zoning, County General Plan, specific plan, or community plan zoning12

Permanent land retirement as a result of land use changes that are consistent with private property rights and the prevailing land use plans and city or County policies could make water available for alternative uses within the Imperial Region. IID is responsible for managing and allocating to other beneficial uses any water that might be so conserved.

Permanent land retirement for the purpose of transferring water out of the Imperial Region is contrary to IID water policies, County land use policies, and adopted land use plans. Permanent irrigated land retirement would reduce the volume of water discharged to the IID drains and to the Salton Sea. Proposals to permanently retire land for transfer out of the Imperial Region are not in the scope or purview of the Water Forum and not proposed as part of the Imperial IRWMP.

11.3.3 Opportunities

Owners of private property and the Cities and County can and may make land decisions that permanently retire agricultural land, or result in long-term or temporary fallowing that reduces water demand and makes water available for other uses.

On May 8, 2012, the IID board acted to adopt the IID Temporary Land Conversion Fallowing Program under Water Code Section 1013 for QSA.[13] IID policy sets forth how IID will manage water made

[10] IID Temporary Land Conversion Fallowing Policy. 8 May 2012. <http://www.iid.com/Modules/ShowDocument.aspx?documentid=5646>

[11] Subject to environmental review under the California Environmental Quality Act and California Water Code, and to review by the Local Agency Formation Commissions.

[12] Subject to environmental review under the California Environmental Quality Act and California Water Code.

available as a result of land use decisions by private property owners and/or the Cities and County. This policy was developed mainly in response to the County decision to grant conditional use permits for solar development projects.

IID Resolution 17-2012 Recital K stipulates that "land being utilized for the temporary land conversion fallowing policy be required to return to farmland within the term of the QSA so as to best protect the Colorado River water rights held by IID under state and federal law; and to have a mechanism by which to enforce that obligation."[9] The board resolution requires consultation between the County and IID as part of CEQA review and other procedures, and sets for how IID for will determine the amount conserved:

> *The water conserved from such temporary removal of such land from agricultural production shall be determined by IID staff based on the conserved water yield outlined in Recital M [of the board resolution], and] shall be available for transfer or other use under the QSA and its related agreements, or otherwise as allowed by law.* [14]

The Water Forum may provide a venue for collaboration and input regarding how the unique land use authorities of the Cities and County, and the separate water management powers and authority of IID can be applied to make best use of the available water resources and support economic growth and development consistent with private property rights and in partnership with business and the community. Results of such communication and collaboration would be included in future IRWMP updates as part of the region's adaptive management strategy.

11.3.4 Constraints

There have been past conflicts and litigation over water, and challenges remain. Although decision-makers with authority to negotiate and commit their agencies to alternative courses of action have not been fully engaged in the IRWM process, the Water Forum has demonstrated a new approach, and has taken very positive steps toward addressing the complex legal, social, political, and economic issues facing the region.

11.3.5 Links to Other Strategies

- **Increase Water Supply** —Temporary and/or permanent land retirement could reduce total water use, make water available for other planned uses, and meet future demands identified in the Imperial IRWMP consistent with adopted land use plans.
- **Land Use Planning and Management** - The Cities and County are required to make findings that water supply is sufficient to satisfy the demands of proposed development projects.

[13] IID Temporary Land Conversion Fallowing Program. 18 May 2012. <http://www.iid.com/Modules/ShowDocument.aspx?documentid=5646>
[14] IID Resolution 17-2012. <http://www.iid.com/Modules/ShowDocument.aspx?documentid=5630>

11.3.6 Support for Mitigating or Adapting to Climate Change

Changes to land use from crop idling or permanent land retirement could increase or decrease the emission of greenhouse gases and the associated effects of climate change. Such land use changes is project-specific, and effects need to be evaluated pursuant to CEQA. Also, if conserved water from fallowing or changes in land use is dedicated to renewable energy, this could have a net positive effect on greenhouse gas emissions. The existing Equitable Distribution Plan provides a mechanism to respond to supply/demand imbalances.

11.4 LAND USE PLANNING AND MANAGEMENT

As noted in Chapter 11, the Cities and County have authorities for land use planning and management. The larger cities in the region and the County have general plans. These have been considered in the IRWMP to analyze future MCI demand as presented in Chapter 5 and Appendix D. Information in the general plans, including interest in renewable energy development, are the foundation for the Water Forum's number one and two Water Supply objectives:

1. Meet 100 percent 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.

IIID, the County and a member of the consulting team met to discuss how to ease the process of assuring a water supply for project proponents. In addition, IID worked with the consulting team to develop "Supporting Guidelines for the Determination of Wholesale Water Sustainability" (Appendix J) for a water supply applicant to follow. The preparer of a WSA is requested to use the guidelines in Appendix J verbatim where factual data is needed regarding the sustainability of wholesale water from IID. IID will update time-series data on an annual basis by March of each year for IID data and by June of each year for Colorado River Decree Accounting record.

11.4.1 Opportunities

As of July 2012, Imperial County Planning Department is working on a Solar Ordinance, which will involve conditional use permits for such projects. Until the Ordinance is in effect, applications for a conditional use permit for solar projects are being handled on a case by case basis. This has resulted in IID's Temporary Land Conversion Fallowing Policy. If developed, solar projects would reduce agricultural consumptive use and runoff, which can be used to meet some QSA/Transfer Agreements obligations and also be made available for other beneficial uses.

The four larger cities in the region have prepared their 2010 UWMPS and are following the state's guidelines for reduction in water use (20 x 2020) and other measures.

11.4.2 Constraints

The Imperial Region consists largely of land owned and managed by federal and state agencies. Within the Imperial Valley, the preponderance of land is under irrigated agriculture. Some of that land is being considered for geothermal and solar development, which is in the purview of the County or local city or community. All parties (the County, IID and the Cities) support development of renewable energy in the region – except not in the West Mesa if it were to impact the Ocotillo –Coyote Well Groundwater Basin which is designated as a sole source aquifer.

The economic slowdown of 2008 has had an impact on housing and commercial development in the region. However, renewable energy development is still moving forward.

11.4.3 Links to Other Strategies

- **Increase Water Supply** —Land planning and management, as currently envisioned, could free up water to satisfy some QSA/Transfer obligations and for other in-valley beneficial uses.
- **Crop Idling and Irrigated Land Retirement** – Any additional land use will reduce the area of irrigated agriculture, unless it is done outside the Imperial Valley, as with groundwater development projects.
- **Flood Risk Management and Urban Runoff** – Could be impacted if land use planning locates development in New River floor.

11.4.4 Support for Mitigating or Adapting to Climate Change

Land use planning and management can have a profound impact on avoiding or mitigating impacts to climate change. Planning developments near existing towns and cities and near existing transportation and water supply infrastructure will minimize the amount of energy needed to travel for work or shopping, and minimize energy needs for pumping water and for water conveyance construction.

11.5 ECONOMIC INCENTIVES (LOANS, GRANTS, AND WATER PRICING)

The CDWR economic incentives strategy includes financial assistance, water pricing/rates, and water market policies intended to influence water management. Economic incentives can influence the amount of use, time of use, wastewater volume, and source of supply. The state provides economic incentives in the form of financial assistance through grants and low interest loans. The availability of grants often requires local match or specific conditions such as having the Imperial IRWMP to qualify, or waiving local match requirements for DACs.

Chapter 12 will discuss revenue-generating mechanisms and grant and loan alternatives for funding Imperial IRWMP projects and programs. This section will look at opportunities and constraints for use of

other economic incentives. This section talks about local considerations related to water pricing/rates and the creation of economic incentives.

11.5.1 Findings

- No action was taken by the Water Forum regarding economic incentives (loans, grants, and water pricing).

11.5.2 Imperial Region Conditions

All urban communities within the region except the City of Imperial are disadvantaged. Water rates are low (around $285/AF) and revenues are not available to fund some of the types of incentives proposed by the State (e.g., toilet or landscape rebates to conserve water). Most cities have or are moving towards inverse block rate structures where the users pay higher prices as the volume of use increases.

The IID Definite Plan provides for growers and tenants to participate in on-farm conservation efficiency programs starting in 2013. These programs are voluntary and incentive driven. Growers will receive payment for the amount of water conserved. For long-term (multi-year) contracts, payments will be quarterly based on amount expected to conserve with an annual true-up. For short-term (seasonal) contracts, payment will be made after seasonal delivery reduction verification is finalized.

IID has established the Interim Water Supply Policy (IWSP) that uses an inverse, block rate structure to encourage conservation and sets the price for water to be dedicated to new users and proposed projects. The revenue is to cover the potential future costs for development of projects that would conserve water, allow for groundwater storage and banking of Colorado River supplies, or create secondary uses of Colorado River water.

11.5.3 Opportunities

- The difference between the ability and willingness to pay in the Imperial Region compared to other regions in Southern California should be recognized. The QSA/Transfer Agreements provide a model for subsidizing local projects with external money to keep local water rates low, meet local needs, protect water rights and comply with state and federal requirements.
- Define the marginal cost of water and determine a mix of fallowing and capital projects that will provide supply for the forecasted 140,000 acre-foot per year renewable energy industry water demand and mitigation for impacts.[15]
- Evaluate the different water use sectors' ability and willingness to pay for water in the Imperial Region to assess potential revenue streams and rate structures to fund local projects (e.g., recycling, groundwater banks) and programs and equitably distribute the costs and benefits.

[15] The marginal cost of water for some projects is presented in Table 12-4 and in Appendix N for desal, blending, and groundwater storage; does not include recycling.

- Define the mix of local revenue (water sales, land assessments, etc.) and grants that provide the revenue to build projects of local benefit to support economic development in the Imperial Region.
- Conduct regional economic analyses to quantify the economic benefits and costs and produce the economic studies required to obtain federal and state grants and loans and conduct a ballot measure (Proposition 218) seeking voter approval for revised rates and assessments.
- Define stable local funding and revenues for projects and/or management programs that would support fallowing for an in-valley exchange.
- Continue with inverse block rate structures to encourage conservation and provide a local revenue stream for building projects that manage existing Colorado River supplies (groundwater banking), provide for secondary uses of Colorado River Water (desalination, recycling), or manage water made available from land use changes or fallowing water conservation activities.
- Prioritize funding and revenues to provide incentives to upgrade DAC wastewater treatment plants and for recycling municipal wastewater.

11.5.4 Constraints

There is a limited ability to pay for new projects. Affordability is a constraint to achieving public support or for obtaining a positive vote for increased assessment or higher rates when a Proposition 218 initiative is required. There is strong political resistance to higher water rates, fees or taxes. At the same time, there is resistance to water transfers out of the Imperial Region which could provide revenue to fund projects and keep local rates down.

Grants may require local matching funds that are not available, and other expensive requirements that DACs in the Imperial Region cannot afford. There are limited local resources to conduct necessary engineering studies, or to conduct economic evaluations and rate studies to quantify costs and benefits, equitably distribute costs and benefits, and prioritize different local revenue sources.

The agricultural economy and DACs in the region create limited tax and assessment capacity, resulting in competition among the Cities, County, and IID for available public revenue. Given the unit cost for raw water, agriculture cannot compete with the large urban rate base in other Southern California Regions. The major difference in ability to pay between the Imperial Region and other Southern California Regions creates competition and conflict related to public-versus-private benefits.

11.5.5 Links to Other Strategies

The right mix of economic incentives and disincentives, revenue sources, and rates is needed to create stable funding to implement all of the other strategies to manage the available water, expand the supply, and to sustain or expand the economy.

11.5.6 Support for Mitigating or Adapting to Climate Change

Energy markets create economic incentives for outside investment to flow into the region to develop renewable energy (geothermal and solar) to mitigate effects and the reduction of greenhouse gases. A

reliable, sustainable supply of water at known costs would support development of renewable energy in the Imperial Region. The Imperial Region is well positioned to support development of geothermal, solar thermal and solar photo voltaic generation and other renewable energy projects to help adapt to climate change.

11.6 Local Land Use Planning and Local Water Planning

CDWR IRWMP Proposition 84 and Proposition 1E Guidelines define the requirements for an IRWMP. The Imperial IRWMP will be reviewed and may be scored against CDWR standards, two of which are related to how well local land use plans and water plans are related to Imperial IRWMP actions, and how well the land use agencies and water agency interact and coordinate efforts.

The IRWMP is required to meet CDWR Standards (CDWR, 2012. Draft IRWMP Proposition 84 and Proposition 1E Guidelines p.21) for:

12. Relation to Local Water Planning

The IRWMP must document the local water planning documents on which it is based including:

- A list of local water plans used in the IRWMP.
- A discussion of how the IRWMP relates to planning documents and programs established by local agencies.
- A description of the dynamics between the IRWMP and local planning documents.

13. Relation to Land Use Planning

The IRWM Plan must contain processes that foster communication between land use managers and RWMGs with the intent of effectively integrating water management and land use planning. The Imperial IRWMP must document:

- Current relationship between local land use planning, regional water issues, and water management objectives.
- Future plans to further a collaborative, proactive relationship between land use planners and water managers.

11.6.1 Imperial Region Conditions

Land-use decisions by the Cities and County have an impact on IID water management, and IID water management decisions have affect potential land use, making it important for the County, IID and the Cities to coordinate and find strategies to improve collaboration.

IID is the wholesale water agency responsible for management of the Colorado River supply. IID must account for and manage changes to type of water use, the place of water use, and amount of water use. To protect its Colorado River water right, IID works to ensure reasonable and beneficial uses of the

water – that water is conserved to the degree possible. IID is the lead agency for discretionary decisions to build water supply projects, allocate water or issue a water supply contract.

The Cities and County have land use authority and are responsible for evaluating and approving land use changes. Land use decisions could result in long-term or temporary fallowing, irrigated land retirement, or reduction to total cumulative water demand. Alternately, approving projects such as a geothermal power plant could significantly increase total water demands. Land use decisions have a potential effect on the Imperial Region's water supply, environmental compliance, existing users, or other third parties. Land use changes can change the type or amount of water use, and this requires coordination with IID. The Cities and County are the lead agencies for land use decisions and CEQA compliance, and are required to consult with IID as the water supplier. The Cities or County, as the lead agencies, need to "determine, based on the entire record, whether projected water supplies will be sufficient to satisfy the demands of the project in addition to existing and planned future uses."[16]

IID is a responsible agency when the cities or county are the lead agency to conduct environmental review of a project. Pursuant to CEQA and the California Water Code, IID and the lead land use agency (city or County) must demonstrate that the projected water supply will be available for the next 20 years, and will meet the projected demand for the proposed project and all of the current water users; that there are no impact to current users; and/or there are plans to acquire, manage, or develop additional supplies.

As described in Chapter 5, an increase in total water demand as a result of changes in land use could increase the size and frequency of overruns, with potentially significant impacts. Large decreases in water demand from land-use changes such as urban or solar energy development could impact IID water management if underruns increase. Larger or more frequent underruns could impact third parties or the Colorado River supply, and IID drains and the Salton Sea by reducing the amount of water applied (in the case of solar development) and reducing tailwater, tile water and drain water runoff. On the other hand, fluctuations between overruns and underruns would increase the likelihood of IID pursuing groundwater banking, storage, and/or other capital project alternatives.

Prior to the federal government limiting California's Colorado River supply to its annual water right of 4.4 MAF plus fifty percent of declared surplus, there were not conflicts in the Imperial Region between water users, among types of water uses (agricultural, MCI, environmental), or between the Cities and County as the land-use authority and IID as the water management authority. Settlement of interstate and California conflicts over water resulted in the QSA/Transfer Agreements. Litigation and changes to state laws have required increased coordination among land use and water agencies. In the March 2012 Projects Work Group, discussion arose spontaneously regarding how agencies could work together to benefit their service areas.

[16] California Water Code Section 10911

11.6.2 Opportunities

The consulting team identified program and policy alternatives for presentation to the Water Forum. The intent is for the Water Forum to define and integrate RMS's that can be used in the Imperial Region. These can then be considered by the IID Board of Directors, County Board of Supervisors and City Councils as decision-making authorities in their jurisdictions. The following strategies were not addressed by the Water Forum, but may prove useful for future Imperial IRWMP update as part of the region's adaptive management.

- Develop an in-valley water exchange managed by IID to allocate water from water storage or conservation measures or to allocate water resulting from other land use changes.
- Develop requirements for allocation of water and issuance of a water supply contract or agreement to provide water.
- The Cities, County and IID develop consensus on consistent standards for developers that:
    - Clarify roles, responsibilities, and communication among agencies and project proponents.
    - Define what information is required at the time of application for new projects, when such information would be required by what type of project, and how the information will be reviewed and by whom.
    - Identify significant, potentially significant, and less-than-significant impacts to water supplies, users, and water rights.
    - Define mitigation measures, requirements, and costs to reduce impacts.
- Provide guidelines for developers and staff to follow to streamline the application, review, and decision making process, and expedite compliance with CEQA for land use and water supply decisions.

11.6.3 Constraints

The Cities, County, and IID are operating under changing circumstances with new data, information and practices. The region is continuously working to recognize and adapt to its changing water supply and to determine what qualifies as a need for mitigation.

11.6.4 Links to Other Strategies

The Imperial Region's water portfolio is best managed or expanded through a combination of strategies to increase water supply, reduce water demand, and practice resource stewardship.

11.6.5 Support for Mitigating or Adapting to Climate Change

Integration of land use and water management planning, the land use authority of the Cities and County, and the water management authority of IID should provide additional flexibility to respond and adapt to climate change. The Imperial IRWMP, when coordinated with land use plans, UWMPs, and Floodplain Management Plans can adapt to potential climate change effects. Integration of land use

and water management to provide a reliable supply to the renewable energy industry will support reduction in greenhouse gas emissions as compared to the same amount of water being provided to conventional generation facilities.

11.7 ECOSYSTEM RESTORATION

The focus of the Ecosystem Restoration RMS is management, creation and enhancement of ephemeral channels, aquatic, riparian, and floodplain ecosystems – the natural systems most directly affected by water and flood management actions and climate change. The Imperial IRWMP goal for ecosystem protection and enhancement is to "protect and enhance aquatic ecosystems and wildlife habitat consistent with municipal, commercial, industrial and agricultural land uses." The two objectives (Section 1.7.6) to meet the ecosystem restoration RMS goals are to:

3. Recognize, and mitigate impacts to the IID drains, small natural channels, and the New or Alamo Rivers that could result from reduced flows or water quality impairments as a result of development or reclaimed water use.

4. Investigate and develop regional mitigation programs to provide cost-effective environmental mitigation for proposed projects that reduce IID drain flow or have other impacts.

A draft ecosystem restoration strategy briefing was presented at a Water Forum workshop on June 15, 2011. The workshop participants reviewed draft materials and prepared findings and recommendations that were subsequently presented to the Water Forum on June 16, 2011. The Water Forum made revisions and requested comments from all of the stakeholders. No comments were received and the Water Forum made the findings listed below.

The Water Forum identified recycling municipal wastewater or desalinating drain water as important water supply opportunities (Chapter 7), recognizing that development of these types of facilities was constrained by potential impacts to habitat and species from the loss of flow and/or water quality impairments to IID drains, the Alamo River, New River, and the Salton Sea. The Water Forum recognized that the Salton Sea restoration was a major influence in the Imperial Region and could affect existing and proposed programs. Though the potentially significant impacts for any one project may be minimal, the cumulative impacts could be significant. Mitigation requirements could increase the costs for recycling or drain water desalination. A regional mitigation program was identified as a potential opportunity to provide a regional solution and for overcoming constraints.

11.7.1 Findings

- Restoration of the Salton Sea is beyond the scope of work of the Imperial IRWMP due to the scale and scope of the restoration effort and the limited focus of the Imperial IRWMP goals and objectives.

- The Water Forum should seek to identify opportunities for interregional coordination to address Salton Sea issues and maintain communications with agencies involved in Salton Sea restoration and mitigation.
- Stakeholders should seek to identify ecosystem restoration and enhancement opportunities that could be integrated into proposed IWRMP projects.
- While the IID Habitat Conservation Plan/Natural Communities Conservation Plan (HCP/NCCP) can be used as an example for evaluating individual and cumulative impacts of projects on drains, further development of mitigation and impact analysis criteria is needed.
- Recycled water and energy projects should not be delayed pending implementation of a mitigation program.

11.7.2 Imperial Region Conditions – QSA, Salton Sea, and the New River

This section summarizes the ecosystem management planning efforts and identifies project examples in the Imperial Region. The current planning efforts and projects could be coordinated or expanded to meet Imperial IRWMP goals and objectives.

11.7.2.1 Ecosystem Planning Efforts and Projects

There are a number of ecosystem management, enhancement and restoration activities in the region. This section discusses projects that are most relevant to the Imperial IRWMP, and includes:

- IID Draft Habitat Conservation Plan/Natural Communities Conservation Plan and related permits and documents, includes Salton Sea Habitat Conservation Strategy and QSA Legislation,
- State and Federal restoration plans for the Salton Sea,
- New River Improvement, and
- Example Projects.

11.7.2.2 IID Habitat Conservation Plan/Natural Communities Conservation Plan

IID is actively engaged in preparing a Natural Community Conservation Plan (NCCP) and Habitat Conservation Plan (HCP) in consultation with the California Department of Fish and Game (CDFG) and the United States Fish and Wildlife Service (USFWS). The IID HCP/NCCP will address the impacts and mitigation strategies of the QSA water transfer and IID's operation and maintenance activities.[17] Currently, QSA water transfer mitigation measures are being implemented through a water and regulatory agency implementation team in compliance with the In-Valley Biologic Opinion issued by USFWS; the In-Valley California Endangered Species Act (CESA) Permit issued by CDFG, the draft HCP, and related CEQA/NEPA documentation. IID will work to ensure that the required mitigation measures are implemented to minimize impacts to IID drains, drain flows, or related habitat. An implementation team has been formed to coordinate implementation with existing Salton Sea management, and assure

[17] <http://www.iid.com/index.aspx?page=235>

that implementation is consistent with the restoration and enhancement plans and projects proposed by the state and others.

11.7.2.3 Salton Sea Habitat Conservation Strategy

Water has been dedicated to the Salton Sea as part of IID Salton Sea Habitat Conservation Strategy (a component of the draft HCP and related QSA approvals) as part of QSA.[18] Under the IID Salton Sea Habitat Conservation Strategy, the amount of mitigation water provided to the Salton Sea will be substantially equivalent to the reduction of inflow to the Salton Sea attributable to the IID/SDCWA conservation and transfer program, and the plan is to deliver mitigation water to the Salton Sea through the year 2017.[19]

The rationale for the Salton Sea mitigation water recognized that Salton Sea restoration was being evaluated by the state and federal governments, and that during the 15-year period (2003 to 2017) there would either be a definitive restoration plan and program, or it would be clear that no such program was feasible. The Salton Sea mitigation water measure was designed to maintain the status quo (declining water elevation and increasing salinity) until the state restoration plan provided stable and sustainable wildlife habitat at the Salton Sea.

The QSA and related documents also establish that the participating agencies would be responsible for QSA mitigation and established a funding cap, documenting that if total costs exceeded the funding cap over the 75-year term of the project, the state would be responsible for those mitigation costs that exceeded the cap.[20]

In October 2011, IID and the San Diego County Water Authority filed a "Joint Petition for Modification of Revised Order State Water Resources Control Board Water Resource Order 2002-0013" (SWRCB, 2002) seeking to alter the schedule of mitigation water delivered to the Salton Sea and instead to implement projects at the sea that will provide higher quality, more sustainable habitat, and provide dust suppression and management. Instead of delivering 480,000 acre-feet of Colorado River water from 2014-2017 to the Salton Sea, IID would use the same water supply (not an additional transfer) to provide revenue to fund the accelerated and supplemental habitat and air quality mitigation projects. Implementation of the habitat and air quality projects would start as soon as the environmental review process was complete and the necessary state and federal permits were granted.

[18] Pursuant to SB317 which amended Section 2081.7 for the Fish and Game Code; and as defined in the Agreement between IID and DWR for Transfer of Colorado River Water Agreement-between-IID-and-DWR. Section 2081.7(c) (1) and (c) (2) define types of water committed to mitigation.

[19] Other CRWDA Exhibit B IID reductions were excluded from Salton Sea mitigation: 1988 IID/MWD Water Conservation Transfer Program had no mitigation requirement; IID/CVWD transfer has no impact on the Salton Sea, as CVWD agricultural drainage is to the sea; water recovered through AAC Lining Program did not reach IID service area nor the sea.

[20] Cal Fish & Game Code § 2931(b)

IID is in the preliminary stages of developing and evaluating a mitigation plan for the Joint Petition. Conceptually, the plan will be designed to provide habitat modeled after the state's proposed Salton Sea Species Conservation Habitat Project (a preliminary project as part of the Salton Sea Ecosystem Restoration Program, see below). Additional habitat and air quality mitigation is also included in the preliminary plan.

11.7.2.4 QSA Legislation

The California Legislature passed Senate Bill No. 482[21] in 2002 which was intended to facilitate implementation of the QSA and support restoration of the Salton Sea. Additional implementing legislation was enacted in 2003 to establish state policy for restoring the Salton Sea. The QSA Legislation[22] required the State of California to take action with respect to the restoration of the Salton Sea and coordinate aspects of the QSA implementation with the state Salton Sea restoration effort. The QSA Legislation recognized the distinction between Salton Sea Restoration and the mitigation required for effects of the QSA water transfer on the Salton Sea, acknowledging that these are independent issues that have different goals.

The QSA Legislation declared that the:

> *. . . intent of the legislature that the State of California undertakes the restoration of the Salton Sea ecosystem and the permanent protection of the fish and wildlife dependent on that ecosystem.*

The legislation also identified the state and federal efforts that were anticipated to provide for the long term restoration of the Salton Sea, if such restoration plans were to be found feasible. A separate part of the QSA Legislation[23] points out that the federal agencies failed to comply with the Salton Sea Restoration Act of 1998[24] that required federal agencies to offer alternative restoration options for the Salton Sea.

11.7.2.5 State of California Salton Sea Restoration Plan[25]

QSA Legislation gave the State of California Resources Agency the responsibility for developing an ecosystem restoration study and programmatic environmental documents for restoration of the Salton Sea ecosystem. The state evaluated alternative restoration plans, costs and feasibility, and presented the Salton Sea Ecosystem Restoration Program Preferred Alternative Report and Funding Plan (Preferred

[21] SB 482 (Kuehl); Stats. 2002, Ch. 617, δ 2
[22] SB 277, Salton Sea Restoration Act (Ducheny; Stats. 2003, Ch. 611); Sen. Bill No. 317 (Kuehl; Stats. 2003, Ch. 612); Sen. Bill No. 654 (Machado; Stats. 2003, Ch. 613), as amended by SB 1214 (Kuehl, 2004)
[23] Sen. Bill No. 654, Chapter 613, § 2(g)
[24] Public Law 105-372
[25] More information on the state's restoration effort can be found at <http://www.water.ca.gov/saltonsea/>

Alternative Report) (CRA, 2007) to the Legislature in May 2007.[26] The state report found that diminished inflows to the Salton Sea would be the result of numerous factors and the Salton Sea would no longer support existing wildlife within twenty years with or without the QSA. The Preferred Alternative Report demonstrated that the preferred restoration alternative would not be to save the Salton Sea in its present state, but to create a much reduced sea.

The Salton Sea Restoration Council[27] was created by the Resources Agency as the governing structure responsible for determining and implementing a preferred alternative for the restoration of the Salton Sea ecosystem. The Governor's 2012 budget and recent legislation have recommended eliminating the Salton Sea Restoration Council (AB 939, Perez) and transfer restoration authority to the Salton Sea Authority (SSA; see below).

A Final Programmatic EIR for the Salton Sea Ecosystem Restoration Project was completed in 2008 (CDWR, 2007) and components of a preferred alternative were identified. The Programmatic EIR identified specific activities referred to as Period I activities that could be funded and implemented prior to definition of a final preferred alternative. The Period I activities included demonstration projects; biological, water quality, air, geotechnical, and construction investigations; tribal coordination; development of agreements; and project level environmental review. Salton Sea Species Conservation Habitat Project (SCH Project), described more below, is part of the Period I activities.

The legislature requires updates on the progress and funding to support planning and restoration activities (CDWR, CDFG, 2011), this includes total and annual expenditures from the Salton Sea Restoration Fund, which includes the contributions from local agencies and from Propositions 84 and 50. To date, a total of approximately $97 million has been allocated, $32 million have been expended and $56 million remain.

11.7.2.6 Federal Salton Sea Restoration

The Salton Sea Restoration Act of 1998[28] required federal agencies to offer alternative restoration options for the Salton Sea. In December 2007 the Bureau released its final federal feasibility study report (USBR, 2007) on a preferred alternative for the Salton Sea.[29] The feasibility report identified five potential project alternatives but only partially fulfilled congressional requirements. USBR found the lack of available data, time, and funding required to analyze the Sea did not allow a full feasibility level study, but estimated costs of between $3.5 and $14 billion. Since release of the feasibility report, the federal government has not taken any steps to recommend or fund a preferred alternative to restore the sea.

[26] The QSA Legislation originally required a preferred alternative be presented to the Legislature by December 31, 2006.
[27] SB 51 Ducheny, Salton Sea Restoration Council. 2010.
[28] Public Law 105-372. Sec. 101.
[29] The federal report was originally due in December 2006.

The federal Salton Sea Restoration Project[30] is evaluating actions to stabilize the surface elevation and reduce the salinity of the Salton Sea.[31] Reclamation issued the Salton Sea Study, Status Report in 2003, which presented a summary evaluation of 14 alternatives (USBR, 2003). In addition, Reclamation released the Mid-Sea Dam and Barrier Concepts Report in 2004, which evaluated mid-Sea dam and barrier concepts for elevation and/or salinity control (USBR, 2004).

The Water Supply, Reliability, and Environmental Improvement Act of 2004, Public Law 108-361, directed the Secretary of the Interior to "complete a feasibility study on a preferred alternative for Salton Sea restoration," and Reclamation is preparing the feasibility study on behalf of the Secretary of the Interior. In January 2007, Reclamation released the Restoration of the Salton Sea Final Report and a Summary Report (USBR, 2007). The 2007 report evaluated five alternatives for restoration of the Salton Sea. No preferred alternative has been selected at the time of issuance of this supplement. One year later, in February 2008, Reclamation published a Final Report and Summary Report about the agency's study efforts to determine a preferred alternative action for restoring the Salton Sea.

11.7.2.7 Salton Sea Authority[32]

The Salton Sea Authority (SSA) is a joint powers agency chartered by the State of California by a Joint Powers Agreement on June 2, 1993 for the purpose of ensuring the beneficial uses of the Salton Sea. The SSA was formed to work with California state agencies, federal agencies, and Mexico to develop programs that would continue beneficial use of the Salton Sea. In the agreement, "beneficial use" includes the primary purpose of the sea as a depository for agricultural drainage, stormwater, and wastewater flows; for protection of endangered species, fisheries, and waterfowl; and for recreational purposes. The SSA is comprised of the Coachella Valley Water District, Imperial Irrigation District, Riverside County, Imperial County, and the Torres Martinez Desert Cahuilla Indians. A number of federal, state, and tribal agencies are ex-officio members of the Authority.

11.7.2.8 New River Improvement Project[33, 34]

The New River Improvement Project was created in 2009 by AB 1079 (V. Manuel Pérez) to "study, monitor, remediate and enhance the New River water quality in the County of Imperial to protect human health, and develop a river parkway suitable for public use and enjoyment." AB 1079 requires the California Mexico Border Relations Council (Border Council) to develop a plan to guide implementation of the New River Improvement Project. This plan must contain the following elements:

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[30] For more information on the federal effort, see <http://www.usbr.gov/lc/region/programs/saltonsea.html>
[31] Prepared pursuant to the Salton Sea Reclamation Act of 1998 (Public Law 105-372).
[32] Salton Sea Authority website: 27 April 2012. <http://www.saltonsea.ca.gov/index.html>
[33] CalEPA website: New River Technical Advisory Committee. 11 July 2012. <http://www.calepa.ca.gov/border/newriver/ >
[34] New River Improvement Project is an Imperial IRWMP stakeholder.

5. Quantification of current and projected New River water quality impairments and their threat to public health.

6. Prioritization of the actions necessary to protect public health and to meet New River water quality objectives and other environmental goals, such as improving the quality of water flows into the Salton Sea.

7. Identification of potential funds for the implementation of the project, and potential lead agencies that would be responsible for environmental review of activities related to the cleanup and restoration of the New River.

8. A plan for a river parkway.

AB 1079 also identifies the value in convening a technical advisory committee consisting of impacted cities and counties, relevant local, regional and state agencies and departments, non-governmental organizations and other stakeholders.

11.7.2.9 Calexico New River Committee[35]

The Calexico New River Committee, which is a member of the New River Improvement Project Technical Advisory Committee, was formed by the City of Calexico, local citizens, and state and federal agencies. In cooperation with the Calexico New River Committee, the California Mexico Border Relations Council developed a strategic plan to guide implementation of the New River Improvement project. The purpose of the New River Improvement Project is to provide public health and environmental improvements, including native vegetation and restored or created wetlands to mitigate adverse impacts of constructing other capital improvements which include trash collectors and box culverts. Trails and other recreational facilities are also proposed.

11.7.2.10 Example Projects

Salton Sea Species Conservation Habitat Project

The SCH Project is a Period I activity under the Salton Sea Ecosystem Restoration Plan. The project is designed to function as a sustainable fishery at the Salton Sea for piscivorous (fish eating) birds that either are transient or resident to the area. Along with immediate habitat benefits, the project will also be used to evaluate various construction, management, and enhancement techniques for additional habitat creation projects at the Salton Sea. In August 2011, the United States Army Corps of Engineers, CDWR, and CDFG released a Draft Environmental Impact Statement/Environmental Impact Report (DEIS/DEIR) to evaluate the impacts of alternative methods of implementing the SCH Project (USACE,

[35]Calexico New River Committee website 27 April 2012. <http://www.calexiconewriver.com/>

CDWR, CDFG, 2011). The SCH DEIS/DEIR was circulated for public review, and the SCH Final EIS/EIR is expected in mid 2012. The state is in the process of developing final construction plans for the SCH Projects. Depending on funding allocation, the plan is to begin construction in 2014.

U.S. Fish and Wildlife Service Sonny Bono National Refuge Habitat Project

The USFWS Sonny Bono National Wildlife Refuge, in partnership with IID, United States Geological Service, and local geothermal interests, is proposing the development of shallow wading and shore-bird habitat at Red Hill Bay. As proposed, this project will provide additional avian habitat and will provide playa dust suppression in an area that has demonstrated emissive characteristics. This project will also evaluate various habitat design and management techniques including the management of salinity and drain water to minimize selenium concentrations and potential bioaccumulation.

IID Managed Marsh

The IID Managed Marsh Complex is a three-phase project totaling approximately 959 acres of habitat as mitigation for impacts to wildlife species within the agricultural drain system. Phase I was completed in 2009, with Phases II and III to be completed in 2014 and 2019 respectively. Phase I of the Managed Marsh is approximately 365 acres of emergent wetland, riparian, and scrub-shrub habitat. Information gathered from this phase will be use to improve the design for Phases II and III.

New River Wetlands Project

River Wetlands Project is a good example of a multi-benefit project to address water quality issues on the New River and reduce pollutants carried by the New River to the Salton Sea. In early 1997, Desert Wildlife Unlimited worked with local, state, and federal agencies to obtain grant monies and permits and has constructed two wetlands. While the projects were designed primarily as water treatment wetlands, they have demonstrated value as wildlife habitat. Additional monitoring and evaluation is necessary to further understand the potential for these areas as habitat and the potential for selenium bioaccumulation by bird species using the wetlands.

11.7.3 Opportunities – Regional Mitigation, Salton Sea, Program Design

11.7.3.1 Develop an Imperial Regional Mitigation Program

Develop regional mitigation program concepts to increase the cost-effectiveness of recycled water and drain water desalination projects. This could include refining existing programs or agreements to share costs for a regional mitigation bank. Once the HCP/NCCP is finalized, mitigation costs of future projects that could impact drain and river flows will be better known and can be factored into Imperial IWRMP projects.

Similarly, projects proposed by private development interests, the Cities, or those that would be approved by Imperial County must incorporate mitigation into their projects, including anticipated mitigation costs. The HCP/NCCP and the IID Managed Marsh Project are examples of the kinds of

projects that can be used in an Imperial Region Mitigation Program to mitigate for possible impacts from recycled water, desalination projects, or other projects with potential impacts to loss of drain flow, habitat, or sensitive species.

11.7.3.2 Salton Sea Financial Assistance[36]

CDWR and CDFG released the Salton Sea Financial Assistance Program Guidelines and Application Package on October 2011 for public review and comment. The comment period closed and responses to comments are being prepared with a final proposal solicitation package. The program will be funded through the Salton Sea Restoration Fund, which was established with enactment of the Salton Sea Restoration Act (Chapter 13 of Division 3 of the Fish and Game Code commencing with Section 2930) and funded in part by Proposition 84. Approximately three million dollars will be available this funding cycle. As currently proposed, the program focuses on conservation measures necessary to protect the fish and wildlife species dependent on the Salton Sea, and the urgent need to stabilize the habitat, including activities conducted at the Salton Sea or along its tributaries. Proposed projects should contribute to meeting the conservation objectives.

11.7.3.3 Coordinate Regional and Interregional Restoration Activities

Within the Imperial Region, the Water Forum can continue to support ecosystem restoration projects and coordinate activities to meet Imperial IRWMP goals and objectives.

The Coachella Regional Water Management Group and the Imperial Water Forum are the two most likely candidates to continue to coordinate interregional ecosystems restoration activity, share information and data, and further develop interregional opportunities. The Salton Sea Authority provides the mechanism and structure for interregional cooperation on Salton Sea restoration since IID, Imperial County, CVWD, Riverside County, tribal representatives, and other local stakeholders are members of the Joint Powers Authority.

11.7.3.4 Conduct Additional Pilot Demonstration Projects and Local Salton Sea Mitigation Planning Efforts

The SCH Project and the proposed Red Hill Bay project are examples of pilot and demonstration projects to test the feasibility of Salton Sea restoration approaches, including those that would meet objectives for habitat creation, water quality improvement, and reduction in playa dust emissions. These programs are examples of local, state, and federal cooperation.

[36] 2012 Salton Sea FAP Guidelines and Proposal Solicitation Package website. 27 April 2012. <http://www.water.ca.gov/saltonsea/habitat/financial.cfm>

The IID Joint Petition could also provide funding to advance Salton Sea ecosystem enhancement efforts to provide more functional value and more sustainable wildlife habitat in a shorter period of time. This proposed mitigation plan also preserves and promotes opportunities for renewable energy development on exposed Salton Sea shoreline. The petition mitigation plan also provides for timely implementation of dust suppression and air quality mitigation on Salton Sea shoreline. Cost savings could also be realized by co-locating service and infrastructure facilities and jointly conducting operation and maintenance activities. These moves could effectively reduce the total costs of restoring the Salton Sea, and, more importantly, accelerate the schedule for habitat development.

11.7.3.5 Factor Mitigation Costs into Project Design

Future water supply or other capital projects that may be proposed as part of the Imperial IWRMP should avoid, minimize, and mitigate project impacts at the time of design to the degree that this is feasible in order to avoid costly schedule delays. It is generally recognized that avoidance of impacts is likely to be the most cost effective strategy, and as such, proposed projects will use environmental criteria to screen alternatives.

11.7.4 Constraints

There are currently no multi-use mitigation programs in the region. Mitigation requirements could increase the cost and reduce the cost-effectiveness of some recycling or drain water desalination projects.

The administrative, governance and funding mechanisms for Salton-Sea related restoration activities is uncertain; the roles of the State's Salton Sea Restoration Council and the more locally oriented SSA have not been clearly defined. There is no final integrated state and federal restoration strategy or plan, or an integrated local, state or federal plan that has been acceptable to all parties, and there is uncertainty as to the state and federal roles and commitments to the Salton Sea restoration.

Locally, there are a limited staff and financial resources to further develop ecosystem related projects and manage a mitigation bank. Local financial resources are constrained and there are many competing needs for funding. There is reluctance to further burden development projects with additional costs since this could impede economic development opportunities in the Region, and there has been limited political support and funding for additional ecosystems restoration or management actions.

11.7.5 Links to other Strategies

There may be opportunities to integrate ecosystem features into other RMS's, and the Water Forum will factor environmental criteria into project screenings to avoid, minimize, or mitigate impacts at the time of design. This includes the following water management strategies:

- Groundwater development, storage, banking and conjunctive use

- Desalination of drain water
- Matching water quality to use
- Local land use planning and management
- Pollution prevention

11.7.6 Support for Mitigating or Adapting to Climate Change

Habitat restoration or enhancement could help mitigate for loss of habitat due to other climate change impacts such as reduced rainfall and runoff, reduction in the availability of Colorado River water, or more rapid declines in the level of Salton Sea.

11.8 RECHARGE AREA PROTECTION

- Recharge areas are lands that provide the primary means of replenishing groundwater. The objective for protecting recharge is to ensure that areas suitable for recharge, whether natural or from development of groundwater storage projects, continue to be capable of adequate recharge; and to prevent pollutants from entering the groundwater to avoid expensive treatment that may be needed prior to potable, agricultural, or industrial beneficial uses. Protection of recharge areas is necessary if the quantity and quality of groundwater in the aquifer are to be maintained or improved through recharge of freshwater.

For the Imperial Region, recharge area protection is considered as part of the plan to develop groundwater storage facilities by IID; review of the County Ordinance for potential improvements; and developing groundwater management plan elements or recommended actions where gaps are identified. The County's land use planning process is important for protecting recharge areas in the unincorporated areas and for the County Groundwater Ordinance. Additional protection of recharge areas through land use plans, or through the County groundwater ordinance could be considered as part of the groundwater management plan elements of the IRWMP. Protecting groundwater recharge areas implies working with federal agencies to ensure access to federal lands within the Imperial Region.

Inter-regionally, this implies coordinating with the Coachella Valley Region to protect access to viable recharge areas and protect the region's aquifers and water quality if IID were to develop groundwater storage projects.

IMPERIAL
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INTEGRATED REGIONAL
WATER MANAGEMENT PLAN

GEI Consultants