IMPERIAL IRWMP
INTEGRATED REGIONAL WATER MANAGEMENT PLAN

Chapter 12

Review of Project, Program/Policy and Funding Alternatives

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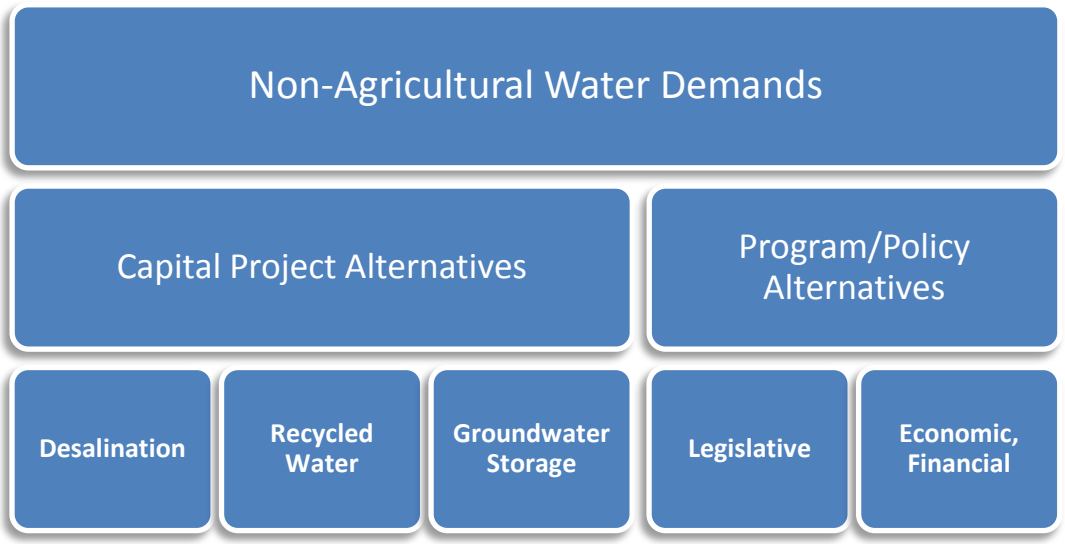
Chapter 12. Review of Project, Program/Policy and Funding Alternatives

CDWR resources management strategy findings by the Water Forum provide the basis for configuring alternatives to meet Imperial IRWMP goals and to address water management and water supply/demand issues identified in prior chapters. Strategy findings to be implemented can occur as 1) capital project alternatives to build infrastructure to develop new water supplies or extend the existing supply, and/or 2) program/policy alternatives to manage and/or apportion Imperial Region water supplies. A third element, funding, completes the picture for analysis and resolution of IRWM challenges facing the region. Project solutions would be engineered, while program/policy solutions would be legislated by the Cities, County or IID. A range of solutions can be configured through combinations of capital projects and program/policy alternatives. For example, IID and the Cities and County have authorities to manage water and land use and to expend funds for the public benefit. With these authorities, they have the capacity to act individually or collaboratively to build projects, implement programs/policies, or to implement an alternative that integrates program/policy solutions with capital projects.



Capital Project Alternatives could integrate the capital projects reviewed by the Water Forum. Capital projects that develop new municipal, commercial and/or industrial (MCI) supplies are known to be expensive and may require debt service, face a range of environmental and economic constraints, take time to implement and increase local costs.

Program or Policy Alternatives imply that IID and the Cities, as water management authorities, and the Cities and County, as the land use authorities, could coordinate implementation of non- structural resource management strategies. They could adopt policies, programs, rules, regulations, or guidelines to manage and coordinate and land and water management decision. The Program/Policy Alternatives could rely on regulatory or fiscal regulatory authorities. If the increased cost of new capital infrastructure is beyond the ability and/or willingness of the water users to pay, the only way to meet new demands would be through Program/Policy Alternatives that apportion water between uses.[1]

Section 12.1 discusses Capital Project Alternatives for IID (Appendix N) identified by the consulting team and by stakeholder projects submitted to the Water Forum for inclusion in the Imperial IRWMP. The Imperial IRWMP projects submittal and review process is described. A description of the range of capital facility alternatives identified and reviewed in the IID Draft Plan and the stakeholder projects are then presented.

Section 12.2 discusses program/policy alternatives that have been set aside for this version of the Imperial IRWMP. The final section presents funding alternatives to be considered for implementing projects, policies or programs.

Section 12.3 discusses integration of available local funding with state, federal or private funding. The challenge is to recognize the local ability and willingness to pay, and the realities of limited tax and rate base in the Imperial Region. Alternative sources of funding can be integrated and matched to alternatives.

[1] Apportionment among existing users implies moving water from agricultural uses to MCI. This is generally in conflict with the stated position of IID's Board of Directors and of IRWMP objectives, which is to have no impact on existing agricultural users. The Imperial General Plan Policies also seek to preserve and protect agriculture.

12.1 CAPITAL PROJECT ALTERNATIVES

12.1.1 Imperial IRWMP Project Submittal and Review Process

On December 9, 2010, the CDWR standards for projects review process (see Table 12-1) were introduced to the Water Forum, and the Projects Work Group began work on project submittal and review, including:

- Need for a fair, equitable and transparent process
- Schedule a preliminary call for projects
- Requirement for projects to be included in the Imperial IRWMP and to be eligible for state grant programs
- Considerations for developing the decision criteria
- Timeframe for Second Call for Projects

The first level of a two-level review process was intended to help meet Imperial IRWMP goals and objectives and define projects for inclusion in the Imperial IRWMP. The second-level review was to apply criteria to evaluate projects to be included in the Imperial IRWMP Implementation Project grant application. It was envisioned that the Preliminary Call for IRWMP Projects (Preliminary Call) would produce a list of projects, and that a Second Call for Projects (Second Call) would occur, if needed, to obtain additional detailed information and support prioritizing projects for the Imperial IRWMP and for any subsequent grant application. The Projects Work Group was tasked with developing Imperial Region Project Evaluation and Ranking Criteria (Evaluation Criteria) that would be used to evaluate projects submitted by stakeholders. The Evaluation Criteria were drafted by the Projects Work Group for Water Forum adoption, and were provided prior to the Second Call. The proposed submittal and review process in shown in Figure 12-1.

Table 12-1.CDWR IRWM Project Review Process Standards

The IRWM Plan must contain a process or processes to select projects for inclusion in the IRWM Plan. The selection process(es) must include the following components:

- Procedures for review of projects considered for inclusion into the IRWM Plan. These procedures must, at a minimum, consider the following factors:
- How the project contributes to the IRWM Plan objectives
- How the project is related to resource management strategies selected for use in the IRWM Plan
- Technical feasibility of the project
- Specific benefits to DAC water issues
- Environmental Justice (EJ) considerations
- Project costs and financing
- Economic feasibility, including water quality and water supply benefits and other expected benefits and costs
- Project status
- Strategic considerations for IRWM Plan implementation
- Contribution of the project in adapting to the effects of climate change in the region
- Contribution of the project in reducing GHG emissions as compared to project alternatives
- Whether the project proponent has adopted or will adopt the IRWM Plan
- A list of the selected projects

CDWR Standards for Project Submittal and Review

The Water Forum defined the process for:

1) **Submitting a project to be included in the IRWMP**
2) **Reviewing a submitted project**
3) **Communicating the list(s) of selected projects to stakeholders and the public**

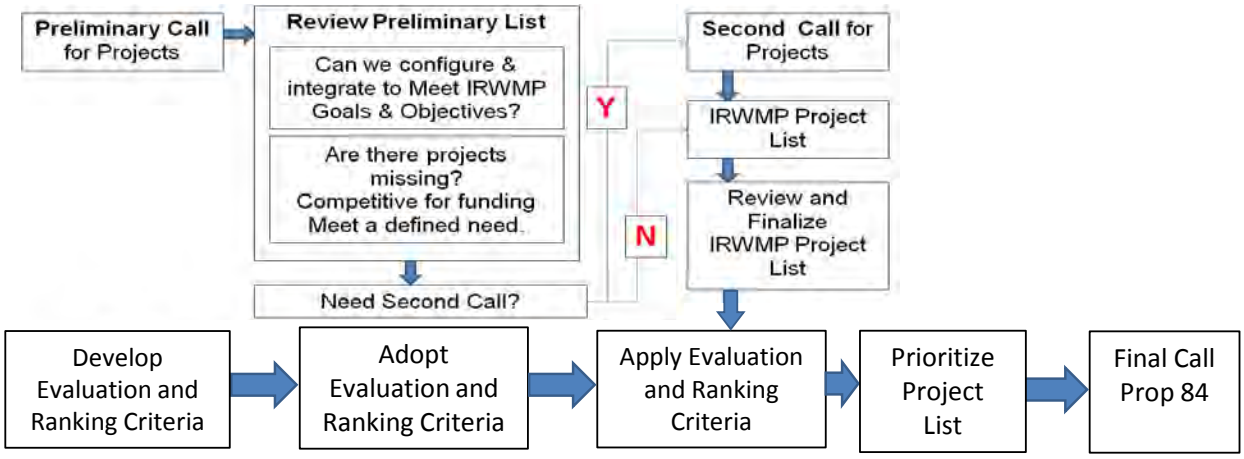


Figure 12-1. Project Information and Review Process

- The Water Forum continued discussion of project submittal at the January 2011 meeting and authorized the Preliminary Call for projects, reviewed the Project Information Form, and recommended that Project Submittal Workshops be conducted.
- The Project Management Team decided to conduct the Second Call for Projects to provide an opportunity for further outreach to the DACs and increase stakeholder participation. The Project Information Forms were updated to capture additional information needed to apply the adopted Evaluation Criteria.

12.1.1.1 IRWMP Preliminary Call for Projects

The primary purpose of the Preliminary Call is to identify potential projects that would meet Imperial Region goals and objectives.

The Preliminary Call was to identify stakeholder projects and ideas and begin evaluating how to integrate projects to meet the Imperial IRWMP goals and objectives and readiness to proceed. It was anticipated that there would be a wide variety of projects submitted at different levels of readiness to proceed. Even if not completely ready for funding, the process sought to include projects that were planned for development over the planning horizon. The long-term nature of the Imperial IRWMP was stressed. Near-term or mid-term projects are considered grant ready, near-term was defined as ready to proceed in 1 to 3 years, mid-term in 3 to 6 years and long-term was greater than 6 years.

The Preliminary Call for Imperial IRWMP projects ran from February 16, 2011 to March 16, 2011. Written announcements and letters of invitation were sent via email and regular mail, and were posted on the Imperial IRWMP website. A press release was issued and an ad announcing the workshop was

run in the local paper. Eligible project sponsors, including public agencies and nonprofit corporations, were encouraged to submit project concepts that they believed would meet the Imperial IRWMP goals and objectives. If proposed project(s) met the Imperial IRWMP goals, sponsors were encouraged to submit the projects regardless of whether the project was ready to proceed or would qualify for Proposition 84 Implementation Grant funding. The Preliminary Call project information forms are presented as Appendix K-1.

12.1.1.2 Preliminary Call for Projects Workshop

A Project Submittal Workshop was held on February 16, 2011. The purpose of the workshop was to:

- Prepare eligible project sponsors to submit projects for consideration by the Water Forum
- Provide an overview of the project review process and criteria
- Explain Imperial IRWMP requirements
- Review Proposition 84 Implementation Grant requirements
- Present and review the project information form

The target audience was members of the Water Forum, other public agencies, and nonprofit organizations that are eligible to submit proposed projects that would help meet the Imperial Region Goals and Objectives. A briefing on the Water Forum and CDWR process was prepared and presented at the workshop.

12.1.1.3 Preliminary Project List

The submitted information was used to build an unranked ***Preliminary Project List*** which was presented to the Water Forum at the April 2011 meeting. The list was provided in two parts:

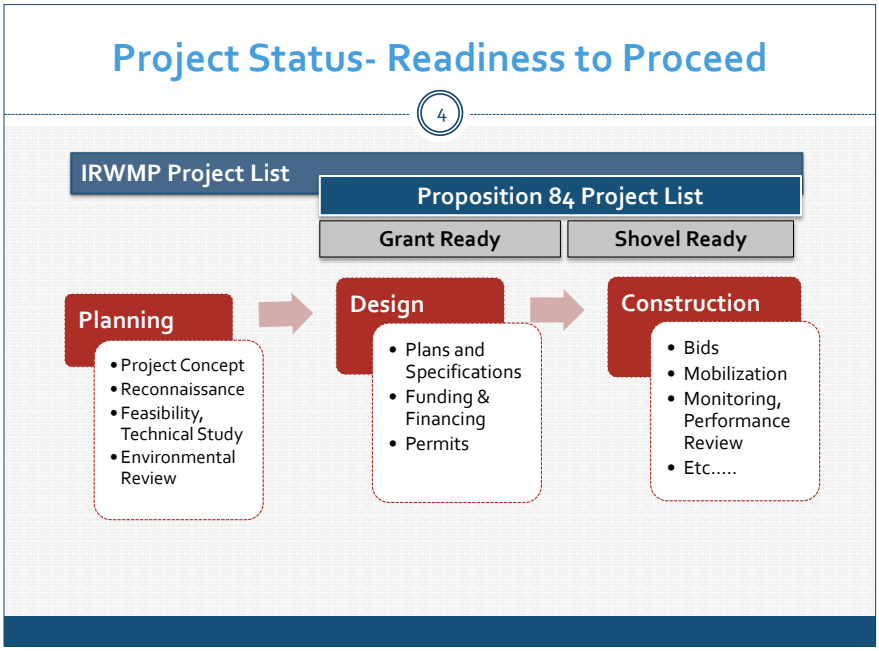
- A project list sorted by the primary projects goal, including project type (plan development, construction, feasibility study, etc.), water supply yield, total costs, and funding needed.
- A summary of readiness-to-proceed information including proposed timing for the project and the status of permitting and environmental review.

A draft Preliminary Project list was provided to the Projects Work Group and Water Forum in April 2011. Based on discussion of the list, the process was refined, and a two-tier system developed: Tier 1, grant and/or shovel ready projects that could be included in a CDWR grant application, and Tier 2, projects that should go into the Imperial IRWMP but are not yet ready to proceed. Imperial IRWMP projects, shovel ready and grant ready were defined as:

- **Imperial IRWMP projects** are those that meet the goals and objectives of the Imperial IRWMP**.** This includes project concepts that might not be ready for a number of years
- **Grant Ready Projects** are those that have completed work plan, budget, schedule and designs, and have a plan for completing funding, partnering agreements, environmental documents, and permitting prior to receiving grant money. These projects must have a complete economic

analysis consistent with CDWR requirements and be included in the Imperial IRWMP. The project sponsors must adopt the Imperial IRWMP

- **Shovel Ready Projects** are those projects ready to construct if Proposition 84 grant monies are received. This means that before CDWR would issue a contract to the Region, the projects to be funded and built would have all final funding, agreements, plans, permits, and environmental documents completed



12.1.1.4 Second Call for Projects

Based on the response to the Preliminary Call and review of the Preliminary Project List, the Projects Work Group recommended that the Water Forum conduct a Second Call, to be open from Tuesday July 11, 2011 through Friday, September 2, 2011, and sponsor a second Project Submittal Workshop in July 2011. In June 2011, the Water Forum accepted the recommendation.

The second call was needed because of limited response to the preliminary call, extent of identified DAC needs, and time needed to conduct additional outreach and promote the Imperial IRWMP. Many of the DACs do not have the time, staff, or funding to prepare project descriptions, let alone resources to conduct the required engineering and environmental review. The Water Forum wanted to ensure there was opportunity for maximum participation and that the Imperial IRWMP was being used to identify the critical water supply and water quality needs of the DACs in the Imperial Region.

The Projects Work Group recommended specific changes to the Project Information Form to support DACs in defining what level of projects support they needed to plan, design and permit a project. This included capturing information on the need for engineering design; and a work plan schedule with budget development, obtaining environmental clearance and permits, conducting economic benefit

analysis, and for local match financing. The Second Call for projects used the updated Project Information Form. The updated Project Information Form sought additional information on technical documentation (studies, feasibility report, and environmental review or design documents), funding and willingness to partner on projects.

12.1.1.5 Second Call for Projects Workshop

The second Project Submittal Work shop was held July 20, 2011. It was again widely noticed with email, press release, and advertisement in the local media. The draft Evaluation Criteria and review process were presented so that project sponsors would know how their projects would be evaluated. The revised Project Information Form was reviewed, and it was explained that project sponsors that responded to the Preliminary Call must submit the additional information and supporting documentation called for in the revised form. Workshop participants recommended further changes to the Evaluation Criteria and Project Information Form. The updated project list was provided to the Water Forum at the October 2011 meeting.

12.1.1.6 Project Evaluation Criteria

The Projects Work Group began developing the Project Review and Evaluation Criteria in January 2011. The Water Forum and Projects Work Group considered the specific CDWR Review Factors when developing the Evaluation Criteria (Table 12-22).

Table 12-2.CDWR Project Review Factors for the Imperial Evaluation Criteria

• Contributes to IRWM Plan goals and objectives • Project costs and financing • Technical feasibility of the project • Project status (design, permits, environmental review) • Strategic considerations for IRWM Plan implementation	• Benefits to DAC water issues • Economic feasibility • Reducing greenhouse gas (GHG) emissions Environmental Justice (EJ) considerations • Use of resource management strategies • Adapting to the effects of climate change

At the March 2011 Projects Work Group meeting, the draft Evaluation Criteria were presented for discussion. The Evaluation Criteria were configured to indentify projects to include in the Imperial IRWMP, and for review of the most competitive projects for CDWR's Proposition 84 grant. The proposed Evaluation Criteria were broken into four categories:

- Imperial IRWMP Goals

- Strategic Considerations for IRWM Plan implementation
- Readiness to proceed
- California DWR Statewide IRWMP Criteria, Statewide Preferences and Priorities

Specific evaluation factors and questions were identified in each criteria category. At the direction of the consulting team, the Projects Work Group developed weighting factors and performance measures for each evaluation criterion and question. The detailed list of Evaluation Criteria is presented in Appendix K. A summary of the final Evaluation Criteria is presented in Table 12-3.

It does not show the performance measures and metrics for each question, but does show the relative weight applied to each criterion.

Revisions to the draft Evaluation Criteria were made based on Projects Work Group and Water Forum comments and the prioritized goals and objectives. The second draft of the Evaluation Criteria was prepared and discussed at the June 2011 Projects Work Group and Water Forum meetings.[2] The total possible projects points and the relative percentage within the four categories is presented in Table 12-5. The table also shows the possible total points and relative percentage within the Imperial IRWMP Goals category. The ability to meet the Imperial IRWMP goals was the basis for a preliminary project list.

The final draft of the Evaluation Criteria was presented to the Water Forum in October 2011 and adopted by consensus with minor changes. The Water Forum also identified the process for project review. Based on a recommendation from the Program Management Team (PMT), the Water Forum decided that the consulting team would have GEI Consultants staff that had not been involved in the Imperial IRWMP do the review and ranking based on the adopted Evaluation Criteria; Their results would be brought back to the Projects Work Group and then to the Water Forum. All of the meetings were open to stakeholders and the public.

[2] The Water Forum determined to add 25 additional points assigned by Water Forum members to the Readiness to Proceed category, in addition to the 38 points assigned by the independent reviewers

Table 12-3. Summary of Evaluation Criteria

	Criteria	Performance Measure	Weight
IRWMP Goals	**Water Supply Goal**	1. Effect to agricultural users of water	2
		2. Improve Water Supply	3
		3. Protect Surface Water Rights, maintain Colorado River yields	4
		4. Conserves Colorado River Supplies	4
		5. Support for in-lieu uses or substitution for Colorado River Water	4
		6. Integrate Resource Management Strategies	2
		7. Plan Consistency	2
		8. Groundwater Rights	1
	Water Quality Goal	1. Match Water Quality to use	2
		2. Support DACs- Wastewater	1
		3.Support DACs- Drinking Water	4
		4. Effect on Existing Waterways	2
		5.Comply with Total Maximum Daily Loads (TMDLs)	1
		6.Preserve or Improve Groundwater Quality	2
	Environmental Protection and Enhancement Goal	1. Environmental Enhancements	3
		2. Integrated Design Elements	2
	Flood Protection and Stormwater Management Goal	1. Reduce impacts from stormwater events	2
Other Goals and Strategies	**Strategic Considerations for IRWM Plan Implementation**	1. Public Acceptance/Public Support	3
		2. Cost Effectiveness	3
		3. Equitable cost sharing	2
		4. Promote Economic Development	3
	Readiness to Proceed Category	1. Timeliness	2
		2.Technical Feasibility of Project	4
		3. Environmental Compliance	2
		4. Permitting	1
		5. Funding	5
	Other DWR Criteria	1. Provides multiple benefits	5
		2. Involves multiple participants and stakeholders	2
		3. Provides regional benefits	4
		4. State Program Preferences	2
		5. Statewide Priorities	2
		6. Climate Change Adaption	2
		7. Greenhouse Gas Emissions Contribution- Project	1
		8. Greenhouse Gas Emissions -Support to Renewable Energy	1

Table 12-4.Project Review Criteria Possible Total Points and Relative Percentage of the Score

Project Review Criteria, Distribution of Available Points	Subtotal Goals	% of Goals	Total Points	% of Total
IRWMP Goals			87	43%
1. Water Supply Goal	51	58%		
2. Water Quality Goal	24	28%		
3. Environmental Protection and Enhancement Goal	8	9%		
4. Flood Protection and Stormwater Management Goal	4	5%		
Subtotal IRWMP Goals	87	100		
Strategic Considerations for IRWM Plan Implementation			33	16%
Readiness to Proceed Category			63	31%
Other CDWR Statewide IRWMP Criteria			22	1%
Potential Total Project Score			**205**	**100%**

12.1.2 IID Capital Project Alternatives

The consulting team identified a range of capital project alternatives that IID could implement. These projects were assessed at a reconnaissance level to allow for comparison of project costs. This section summarizes the results of the evaluation undertaken to define potential mid-, near-, and long-term water supply alternatives that IID might develop for the Imperial Region. Capital facilities solutions include projects to expand the supply through groundwater development and/or desalinization, or to reduce discharge from the IID water service area to the Salton Sea. Projects were configured to provide new supplies and to meet anticipated future demands, integrating resource management strategies where it was believed that multiple benefits could be achieved. The alternatives were configured around several major themes, including:

- Desalination of brackish groundwater – East Mesa and Imperial Valley
- Desalination of drain water – from drains or after discharge to Alamo River or New River
- Groundwater banking – Coachella Valley IRWM Region
- Groundwater development and blending – East Mesa
- Recycling municipal wastewater

Consideration of recycled wastewater was deferred to the Imperial IRWMP because the Cities own and operate the wastewater facilities. Nevertheless, reconnaissance-level analysis of recycled water projects was included so that their costs could be compared with other projects by the IID Board. Design considerations varied by the type of project:

- Ability to create new water; i.e., tap unused resources, or capture water that would otherwise discharge to the Salton Sea
- Potential to capture and use underruns or prevent overruns
- Consistency with existing QSA/Transfer Agreements
- Measurable firm yield that could be committed to forecasted MCI uses
- Potential to avoid, minimize or mitigate environmental impacts as part of the design

These design considerations were also used to rank or screen the alternatives. A number of technical studies were conducted to refine the design concepts and evaluate the feasibility of potential projects.

- Drain water sources and quality were evaluated to determine if drain water could be used as make-up water for the proposed desalination plants. The amount and quality of drain water, New River water, or Alamo River water are presented in Appendix G, Drain Water (NRCE, 2009).
- Desalination/Groundwater Development Feasibility Study (GEI, 2009) is presented as Appendix B.
- Potential to for blending East Mesa groundwater is presented in Appendix M. Ambient groundwater quality has elevated levels of TDS. The potential to mix water in the All-American Canal is discussed.[3]
- Summary descriptions of IID capital project alternatives that remained after screening are presented in Appendix N.
- The basis of design for IID capital project alternatives s is presented in Appendix N.

12.1.2.1 Screening and Prioritization of IID Capital Project Alternatives

Qualitative and quantitative screening criteria and assumptions were developed in consultation with IID staff. Areas within IID's service area with physical, geographical (i.e., market demand for the water), and environmental characteristics most suited to implementing short- and long-term alternatives were identified. Technical project evaluation criteria included volumes of water that could be delivered and/or stored by each project, regulatory and permitting complexity, preliminary engineering components, land use requirements, and costs. After preliminary evaluation, a total of 27 projects were configured: 17 groundwater or drain water desalination, two (2) groundwater blending, six (6) recycled water alternatives, one (1) groundwater banking alternative, and one (1) IID system conservation project alternative.

The level of detail included in the definition of each project was intended to allow comparison of the alternatives, preliminary evaluation of project feasibility, definition of major implementation challenges, and development of approximate costs. Complete project alternative descriptions, including cost estimates, project alternative schematics/maps, and potential variations on each project are further detailed in Appendix N.

[3] This option was not favored by Water Forum agricultural stakeholders. Colorado River water is already salty and difficult to manage. Increased salt levels in the all-American Canal water, which is delivered to all users, would impact ability to grow certain crops.

Table 12-5.IID Capital Projects Alternatives and Cost

Name	Description	Capital Cost	O&M	Equivalent Annual Cost	Unit Cost ($/AF)	Yield (AF)
GW 18	Groundwater Blending- East Mesa Well Field Pumping to All-American Canal	$ 39,501,517	$ 198,000	$ 2,482,000	$ 99	25,000
GW 19	Groundwater Blending- East Mesa Well Field Pumping to All-American Canal with Percolation Ponds	$ 48,605,551	$ 243,000	$ 3,054,000	$ 122	25,000
WB 1	Coachella Valley Groundwater Storage Project	$ 92,200,000	$ 7,544,000	$ 5,736,746	$ 266	50,000
DES 8	25 KAF East Brawley Desalination with Well Field and Groundwater Recharge	$ 100,991,177	$ 6,166,000	$ 12,006,000	$ 480	25,000
AWC 1	Systems Conservation Projects (2)	$ 56,225,000	N/A	$ 4,068,000	$ 504	8,000
DES 12	East Mesa 25 KAF Desalination with Well Field and Groundwater Recharge	$ 112,318,224	$ 6,336,000	$ 12,831,000	$ 513	25,000
DES 4	50 KAF Keystone Desalination with IID Drainwater/Alamo River	$ 147,437,743	$ 15,323,901	$ 23,849,901	$ 477	50,000
DES 14	South Salton Sea 50 KAF Desalination with Alamo River Water and Industrial Distribution	$ 158,619,378	$ 15,491,901	$ 24,664,901	$ 493	50,000
DES 15	South Salton Sea 50 KAF Desalination with Alamo River Water and MCI Distribution	$ 182,975,327	$ 15,857,901	$ 26,438,901	$ 529	50,000
DES 2	50 KAF Keystone Desalination with Well Field and Groundwater Recharge	$ 282,399,468	$ 13,158,000	$ 29,489,000	$ 590	50,000
RW 5	Regional Plant Serving Tertiary Water to IID Canal	$ 20,818,710	$ 829,853	$ 2,033,801	$ 308	6,600
RW 1	Disinfected Secondary Effluent from Existing Wastewater Treatment Plants Applied to Adjacent Agriculture	$ 18,779,688	$ 486,671	$ 1,572,702	$ 118	13,300
RW 3	Upgrade Existing Plants to Tertiary and Deliver Effluent to IID Canal System	$ 90,531,216	$ 2,992,257	$ 7,498,347	$ 562	13,300
RW 6	Regional Plant Serving Tertiary Water to Local Service Area and IID Canal	$ 102,374,854	$ 2,280,145	$ 8,200,493	$ 488	16,800
DES 7	East Brawley 25 KAF Desalination with Well Field	$ 100,409,542	$ 6,157,000	$ 11,964,000	$ 479	25,000
DES 11	East Mesa 25 KAF Desalination with Well Field	$ 111,746,590	$ 6,327,000	$ 12,789,000	$ 512	25,000
DES 1	Keystone 50 KAF Desalination with Well Field	$ 281,817,834	$ 13,149,000	$ 29,447,000	$ 589	50,000
DES 10	East Brawley 5 KAF Desalination with Well Field	$ 24,751,185	$ 1,525,000	$ 2,956,000	$ 591	5,000
DES 6	Keystone 25 KAF Desalination with Well Field	$ 160,695,766	$ 7,061,000	$ 16,354,000	$ 654	25,000
DES 17	Heber 5 KAF Desalination with Well Field	$ 95,899,356	$ 2,476,000	$ 3,303,000	$ 661	5,000
DES 13	East Mesa 5 KAF Desalination with Well Field	$ 33,027,263	$ 1,648,000	$ 3,558,000	$ 712	5,000
DES 16	South Salton Sea 5 KAF East Desalination with Well Field	$ 62,177,056	$ 1,971,000	$ 5,567,000	$ 1,113	5,000
DES 3	Keystone Desalination 50 KAF with Well Field and Groundwater Recharge and MCI Distribution	$ 306,357,788	$ 13,518,000	$ 31,235,000	$ 625	50,000
DES 9	East Brawley 25 kAF Desalination with Well Field, Groundwater Recharge and MCI Distribution	$ 162,175,609	$ 7,084,000	$ 16,463,000	$ 659	25,000
RW 2	Upgrade Existing Plants to Tertiary and Deliver Effluent to a Local Market	$ 140,568,145	$ 2,597,145	$ 10,726,215	$ 919	11,700
RW 4	Regional Plant Serving Tertiary Water Locally	$ 51,323,358	$ 1,438,723	$ 4,406,758	$ 938	4,700
DES 5	Keystone 25 KAF Desalination with Well Field, Groundwater Recharge & Evaporation Ponds	$ 372,088,101	$ 10,232,000	$ 31,750,000	$ 1,270	25,000
	Project alternatives were considered to have a lower priority - Unit cost > $600/AF , and were not ranked (NR) in the overall Alternatives Ranking Criteria Matrix					
	Project Alternatives were considered to have a lower priority due to no groundwater banking/storage elements and not enough annual yield production < 5,000 AF, and were not ranked (NR) in the overall Alternatives Ranking Criteria Matrix					
	Project Alternatives were considered to have a lower priority due dependance on outside agency parternability, and were not ranked (NR) in the overall Alternatives Ranking Criteria Matrix.					
(1)	Assumed 50 year lifespan, 5% interest. Other project used 30 yrs and 4%. Costs will be normalized in final report					
(2)	System Conservation includes 24 projects, costs from $398/AF to $1169/AF, averaging $504/AF					
(3)	Source water collected from Imperial and proposed Keystone Development					
(4)	Source water collected from Imperial, Brawley, El Centro, Colexic and proposed Keystone Development					

12.1.2.2 IID Capital Project Alternatives: Analysis of Priorities and Preferences

IID staff and the Board stressed key factors identified to categorize project alternatives and establish priorities. Lower priority projects were defined as those projects that were less feasible due to technical, political, or financial constraints. Preferential criteria were those project characteristics that could increase the relative benefits of a project and grant it a higher priority. After consultation with IID staff, four criteria were selected to prioritize the IID capital projects:

- Financial Feasibility - Projects whose unit cost was more than $600/AF were eliminated from further consideration.
- Annual Yield - Project alternatives generating 5,000 acre-feet or less of total annual yield were determined not to be cost-effective and lacking necessary economies of scale.
- Groundwater Banking - Groundwater banking is recognized as a beneficial use of Colorado River water and conservation practice to capture and store under-runs and prevent loss of this water. Consequently, project alternatives without groundwater banking were given a lower priority.
- Partnering - Project alternatives in which IID was dependent on others (i.e., private and/or public agencies) for implementation were considered to have a lower priority at the time the IID Draft Plan was developed; this criterion was reserved for use in the IRWMP process where partnering is a desirable attribute.

Using these criteria, six desalination, two groundwater blending, one system conservation, and one groundwater storage project alternatives remained. These projects are displayed in the unshaded area at the top of Table 12-5. It should be noted that the recycled water projects have competitive unit costs ($/AF) and were only deferred due to the need to partner to build projects with the Cities that own and operate the facilities. Appendix N provides a summary description of the projects in Table 12-5 Imperial IRWMP Projects

From the Preliminary and Second Call for Projects, 49 proposed projects were submitted for inclusion in the Imperial IRWMP. Table 12-65 presents a summary of the submitted stakeholder sponsored projects. The projects are presented according to the Imperial IRWMP goal that each project supports, the list is not prioritized. The prioritized list, which can be found in Appendix K, will be maintained by the Water Forum as an active document and updated at least annually.

Table 12-6.Imperial IRWMP Project Submittal Summary List

Project Title	Submitting Agency/Org	Estimated Cost	IRWMP Goals Met
HPUD WWTP Upgrade to Tertiary Treatment	Heber Public Utility District	$12,500,000	Water Supply
Keystone Desalination with IID Drain Water/Alamo River Source (50 KAFY)	Imperial Irrigation District	$147,440,000	Water Supply
East Brawley 25 KAFY Desalination with Well Field and Groundwater Recharge (Desal 12)	Imperial Irrigation District	$101,000,000	Water Supply
City of Brawley Raw Water Storage Project	City of Brawley	$4,000,000	Water Supply
Keystone Water Reclamation Facility	City of Imperial	$65,000,000	Water Supply
IID System Conservation/Improvement Projects for IWSP	Imperial Irrigation District	$4,752,000	Water Supply

Table 12-6. Imperial IRWMP Project Submittal Summary List, Continued

Project Title	Submitting Agency/Org	Estimated Cost	IRWMP Goals Met
Ramer Lake Conservation Plan for Water Savings	Southern Low Desert Resource Conservation & Development Council	$280,000	Water Supply
Ave. 62, Thomas Levy Recharge Site.	Imperial Irrigation District	---	Water Supply
East Mesa Groundwater Storage Project	Imperial Irrigation District	---	Water Supply
Painted Canyon	Imperial Irrigation District	---	Water Supply
Drainage Upgrade (Holt Avenue, Imperial to 12th)	City of El Centro	$468,455	Water Supply
Drainage Upgrade (Development west of Wake Ave and 8th St: Cypress Dr: Farmer Dr: 10th St: 9th St)	City of El Centro	$1,000,848	Water Supply
Drainage Upgrade (Broadway St., No. Eighth St., Commercial Ave. from Imperial Ave to sixth street.)	City of El Centro	$5,653,723	Water Supply
Drainage Upgrade (Dogwood Rd., Ross Rd., Heil Ave., Hope Ave. between 1st and Orange)	City of El Centro	$7,371,448	Water Supply
Phased Underrun Storage and Agricultural Wastewater Reclamation Project	Imperial Irrigation District	---	Water Supply
Ave 72, Martinez Canyon Groundwater Storage Project	Imperial Irrigation District	---	Water Supply, Regional Policy Goals
Water distribution storage tanks, 2 each 5MG	City of El Centro	$10,000,000	Water Supply, Water Quality ,Regional Policy
Interconnection projects between City of El Centro, City of Imperial and Heber PUD	City of El Centro	$1,400,000	Water Supply, Water Quality, Regional Policy Goals, Water Quality
Regional Wastewater Treatment and Recycled Water Project	City of Brawley and City of Imperial	$60,000,000	Water Supply, Water Quality ,Regional Policy
City of Brawley Reclaim Water Project	City of Brawley	$12,500,000	Water Supply, Environmental Protection/ Enhancement, Regional Policy Goals, Water Quality
Imperial Valley Biogas Initiative	Southern California Gas Company	$20,000,000	Water Supply, Environmental Protection/ Enhancement, Regional Policy Goals, Water Quality
Macroalgae Solutions for the Imperial Valley and Salton Sea Region	The Gas Technology Institute (GTI)	$5,000,000	Water Supply, Environmental Protection/ Enhancement, Regional Policy Goals, Water Quality

Table 12-6. Imperial IRWMP Project Submittal Summary List, Continued

Project Title	Submitting Agency/Org	Estimated Cost	IRWMP Goals Met
City of Brawley Water Meter Project	City of Brawley	$4,000,000	Water Supply, Environmental Protection/ Enhancement, Regional Policy Goals
New River Bioremediation & Wildlife Habitat Restoration & Process Evaluation Project	SDSU Research Foundation	$600,000	Water Quality
Holtville Water Distribution System Project	City of Holtville	$3,040,000	Water Quality
Holtville Wastewater Treatment Plant Improvement Project	City of Holtville	$6,149,000	Water Quality
Holtville Wastewater Collection System Project	City of Holtville	$4,100,000	Water Quality
Holtville UV Transmittance Water Treatment System Project	City of Holtville	$540,000	Water Quality
Holtville Sewer Master Plan/Map Update Project	City of Holtville	$84,000	Water Quality
Holtville Water Master Plan/Map Update Project	City of Holtville	$75,000	Water Quality
Poe Colonia Wastewater Treatment Plant Upgrade	County of Imperial	---	Water Quality
Microalgal Cultivation for Improved Yields, Economic Value & Water Use Efficiency on Agricultural lands in Imperial Valley, CA	Scripps Institution of Oceanography (SIO), UCSD	$3,500,000	Environmental Protection/Enhancement, Regional Policy Goals, Water Quality
Large-Scale Microalgal Cultivation on Recently-Exposed Playa Lands for Improving Salton Sea Water Quality and Regional Air Quality	Scripps Institution of Oceanography (SIO), UCSD	$5,620,000	Environmental Protection/Enhancement, Regional Policy Goals, Water Quality
Integrated Microalgae Cultivation Process for Improving Water Quality in Imperial Valley Drainage Canals	Scripps Institution of Oceanography (SIO), UCSD	$3,500,000	Environmental Protection/Enhancement, Regional Policy Goals, Water Quality
Drainage Upgrade (La Brucherie Rd. to 23rd; Barbara Worth Ave. to Orange)	City of El Centro	$652,273	Flood Protection/Stormwater Management
Drainage Upgrade (8th St., Woodward to Villa)	City of El Centro	$1,080,684	Flood Protection/Stormwater Management
Drainage Upgrade (Lincoln Ave.; 6th St.)	City of El Centro	$1,570,900	Flood Protection/Stormwater Management
Drainage Upgrade (Oak St. from San Diego to Villa)	City of El Centro	$595,039	Flood Protection/Stormwater Management
Drainage Upgrade (Evan Hewes Hwy. Dogwood to Cooley)	City of El Centro	$3,633,099	Flood Protection/Stormwater Management
Drainage Upgrade (8th St. from Villa to Central Main Drain)	City of El Centro	$3,069,597	Flood Protection/Stormwater Management
Holtville Stormwater Master Plan Project	City of Holtville	$60,000	Flood Protection/Stormwater Management
Holtville Stormwater Conveyance System and Detention Basin Project	City of Holtville	$7,095,000	Flood Protection/Stormwater Management
Drainage Improvements in the Township of Seeley; County Project No. 5363	Imperial County Public Works	$1,916,794	Flood Protection/Stormwater Management
Spearheading with Spirulina: An Sustainable Approach to Desert Aquaculture	Southern Low Desert RC&D Council	$350,000	Regional Policy Goals

A report, Stakeholder Sponsored Projects (GEI, 2012) was prepared to document the proposed projects. Using the Evaluation Criteria adopted by the Water Forum, the consulting team conducted reviews and prepared a preliminary projects ranking. The ranking results were documented in a report titled Project Review, Prioritization and Ranking (GEI, 2012b). Both reports were provided to the Project Work Group and Water Forum for review and made available on the Imperial IRWMP website.[4] The Projects Work Group received presentations from project proponents in March and April 2012, and individually scored the projects based on readiness to proceed. The Projects Work Group readiness-to-proceed scores were then added to the consultant scores to establish a preliminary grant funding priority list. This grant priority list will be maintained as an active document by the Water Forum on its website. This will provide flexibility to coordinate responses to state and federal grant opportunities.

The following sections review Imperial Region programs and policies that are in place, and others that have been proposed by the consulting team.

12.1.3 Policy Environment

Early in the planning process it was determined that should there be intractable issues that could not be readily resolved, these would be put in a 'parking lot' or placed on hold so that the Water Forum could move forward without completely halting the Imperial IRWMP process. This approach worked well and there were a number of times when the Water Forum would later revisit a subject that had been put in the parking lot and where the Water Forum was able to later reach a consensus.

For example, during Water Forum review, it became clear that timing was not right to further develop and integrate some of the CDWR strategies. The Water Forum also recognized that more time would be required to integrate capital projects strategies with identified policy/program strategies. At the March 2011 Water Forum meeting, it was decided that the program/policy concepts presented in to the IID Board in 2009 were not ripe for decisions and that they should be set aside until such time as IID and County define an approach.

Addressing uncertainties and resolving outstanding as well as ongoing issues is part of the Imperial IRWMP adaptive management strategy. Some of the regional uncertainties are related to ongoing litigation, status of the QSA/Transfer Agreements and Salton Sea restoration. Once IID and the County have determined a way forward through continued discussions, additional policy/programs can be included when updating the Imperial IRWMP.

The consulting team presented a number of program/policy alternatives to the IID Board in 2009 that might provide a basis to meet future MCI demand and provide a basis for Imperial IRWMP updates. The program/policy alternatives presented to the IID board were structured to integrate long-term or temporary fallowing (crop-idling), irrigated land retirement and economic incentives, while recognizing

[4] Imperial IRWMP website: Projects & Review tab. <http://imperialirwmp.org/projects.html>

the opportunities to integrate land use and water management authorities into the project and the review process. These concepts were also presented to the Water Forum in the course of resource management strategy review.

The overall concept was to develop and assess alternatives to manage the region's Colorado River supply to meet future demands without building capital facilities. The alternatives configured included:

- No Action Alternative
- Minimalist-IID Develop Policy/Project Proponent Develop Solutions
- Full Apportionment/Fallowing/Managed Industrial Water Pool
- Full Apportionment/Fallowing/Free Market Exchange
- Land Conversion/Industrial Water Portfolio
- Options Market for Fallowing during SDI

A final alternative was not selected by the Board pending formation of the Water Forum and publication of the Imperial IRMWP. However, the IID Board did eliminate two concepts from consideration:

- Unregulated free market for exchange of water
- Fallowing for out of valley transfer beyond that currently required to meet existing commitments as expressed in Board Resolution 25-2005[5]

Since the above alternatives were considered by the IID Board, some of the circumstances have changed. Private land holders, in cooperation with solar photovoltaic companies, are proposing to locate solar photovoltaic facilities on agricultural lands. Such private property owner land use decisions are subject to County review and permitting.

The County is issuing conditional use permits (CUP) that allow solar photovoltaic facilities to be consistent with agricultural zoning. This will result in long-term, temporary fallowing for the duration of the CUP. Unused water, made available when new projects are sited on lands with historically higher water demands, is available for use by other users in that calendar year.

IID has also developed a Temporary Land Conversion Fallowing Policy which certain lower water use non-agricultural projects, such as solar photovoltaic facilities, may also be required to participate in. The conserved water attributed to this longer-term but temporary fallowing will be used by IID to meet environmental and water transfer requirements.

[5] IID Resoluton.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>

12.1.4 Imperial Region Conditions

12.1.4.1 IID/SDCWA Water Transfer Fallowing Program

IID, while fundamentally opposed to fallowing during the QSA negotiations, ultimately agreed to a 15-year (2003-2017) fallowing program 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 that is transferred to SDCWA or delivered to the Salton Sea ramps up for the first ten years, then decreases for the next five years as efficiency conservation projects are developed and implemented. Efficiency conservation replaces all fallowing by 2018.

Under the Fallowing Program, which IID initiated on December 1, 2003, and has continued on an annual/biannual basis since that time, willing land owners and/or lessee's contract with IID to fallow fields to meet the transfer and Salton Sea mitigation water needs for the first 15 years of the IID/SDCWA Water Transfer and QSA Compromise Delivery Schedule.[6] 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.

IID staff oversees administration of the Fallowing Program including distributing solicitation announcements and fallowing proposal forms, issuing contracts, locking delivery gates on fields participating in the program, insuring that the fields are not being watered and that dust mitigation is adequate, and overseeing IID's payments to participants. IID performs remote sensing to make sure crops are not being grown, with field checking as needed. USBR staff visits once a year and conducts a random check on fields enrolled in the program.

The Local Entity Mitigation Program (LEMP) is intended to offset socioeconomic impacts resulting from the Fallowing Program and was implemented by IID within the IID water service territory. The fallowing at issue creates conserved water for transfer and for environmental mitigation under the QSA and Related Agreements.[7] LEMP funding amounts are determined by a schedule which compares funds available under the full life of the Mitigation Competitive Grant Program to the volume and timing of fallowing to create transfer and mitigation water. For the fallowing years 2005-06, 2006-07, 2007-08, a total of $4,124,008 was allocated to the non-competitive, or farm service provider component, and $2,220,629 to the competitive component for LE mitigation funding. Awards for the non-competitive

[6] Source: QSA by and among IID, MWD, and CVWD, Exhibit C <http://www.iid.com/Modules/ShowDocument.aspx?documentid=882> (p 39 of 44)
[7] The program is governed by the Revised Fourth Amendment as modified and amended, to the Agreement between IID and SDCWA for the Transfer of Conserved Water, dated October 10, 2003, and by other agreements.

component for these fallowing years were made by the Local Entity in 2009. LEMP funds in the amount of $2,220,619 were available for the 2010-2011 Program.[8]

12.1.5 IRWMP Opportunity

The consulting team has proposed an IID Managed in-valley MCI Exchange that could be used for cases in which a change in type of use or place of use create a demand that would impact historical use or when a land use change results in a substantial reduction of use. Crop idling (temporary fallowing or conditional use permit for solar and other projects) and irrigated land retirement (permanent change of use, such as MCI development) are identified as potential sources of water that could be apportioned to provide a stop gap (crop idling) or firm water supply (MCI development) that could be assigned by IID to repay inadvertent overruns and/or be made available to projects representing new water uses. This assignment of water could be through a water supply contract or some type of permit system.

12.2 PRELIMINARY CONSIDERATIONS FOR LAND USE AND WATER MANAGEMENT

For Water Forum findings on the CDWR Land Use and Management resource management strategy, see Chapter 11, Practice Resources Stewardship and Other Strategies. The following discuss programs and policies that IID and the County have in place and along with concepts for possible future development in the Imperial Region.

12.2.1 Policy and Program Conditions – IID Programs, IID and County Policies

In future Imperial IRWMP updates, program and policy alternatives related to the integration of land use planning and water management may be further analyzed. IID has the authority to manage the Colorado River supply and evaluate changes in the place of water use, type of water use, or amount of water use. The County and Cities land use planning and development review process provide the opportunity for coordination with IID to ensure that a secure water supply can be provided to new projects, and that any potential impacts to current agricultural users of Colorado River supplies, to IID facilities and/or to the environment are avoided or mitigated.

In addition IID has two policies in place that relate to land use and water supply: 1) an Interim Water Supply Policy for Non-Agricultural Projects, and 2) an Equitable Distribution Plan.

[8] IID Local Entity Mitigation 2010 Competitive Gran t Program Request for Proposals <http://www.iid.com/Modules/ShowDocument.aspx?documentid=3993>

12.2.1.1 IID Water Cards

IID has a water card requirement for Agriculture, Municipal and Service Pipe Accounts. Due to IID's annual consumptive use volume is capped under the terms of the QSA, in December of 2007, the IID board adopted regulations for an Equitable Distribution Plan (see below) to help apportion the available annual water supply to customers in years with a supply/demand imbalance. The new version of the water card allows the Water Department to acquire the essential information, lacking in the old system, to update the IID's customer information base.

12.2.1.2 IID Interim Water Supply Policy

In September 2009, the IID Board adopted an Interim Water Supply Policy (2009 IWSP). The purpose of the IWSP is to make available up to 50,000 acre-feet of water per year without impacting existing users. IID is looking to more effectively manage existing water supplies and to maximize its ability to store or create water when the available water supplies exceed the demand for such water. The stored water is to be made available for later use when there is a higher water demand. Based upon known pending requests to IID for water supply assessments/ verifications and pending applications to the County of Imperial for various Non-Agricultural Projects, the District currently estimates that up to 50,000 acre-feet per year of water could potentially be requested for Non-Agricultural Projects over the next ten to twenty years.

Under the IWRMP, IID will evaluate the projected water demand of such projects and the potential means of supplying that amount of water. The 2009 IWSP designates up to 25,000 acre-feet per year of water for potential Non-Agricultural Projects within IID's water service area. Proposed Non-Agricultural projects may be required to pay a Reservation Fee, and the reserved water shall be available for other users until such Non-Agricultural projects are implemented and require the reserved water supply.

The 2009 IWSP is to remain in effect until such time as IID identifies potential programs and projects to develop new water supplies and new storage, enhance the reliability of existing supplies, and provide more flexibility for Water Department operations, all in order to maintain service levels within the IID water service area. IID adopted the 2009 IWSP for Non-Agricultural Projects to address proposed projects that will rely upon a water supply from IID until such time as the IWSP is modified and/or superseded to take into consideration relevant policies and data.

As of May 2012, 1409 acre-feet per year of water have been apportioned to users under the 2009 IWSP.

In February 2010, as part of the IRWMP effort, IID and the County discussed land use changes and their impact on water management. In January 2012, the County approved conditional use permits (CUP) for solar development. A CUP allowing a solar photovoltaic project on land currently zoned for agricultural use would result in a reduction of water use for the duration of the CUP since solar photovoltaic projects use much less water than agriculture; thus, freeing up water for a new use. However, a conditional term for crop change presents challenges related to supply/demand imbalances (underruns or inadvertent

overruns by IID; i.e., under using or exceeding IID's annual right to consumptive use of Colorado River water) that would have to be resolved if this approach were to be adopted by the Region.

12.2.1.3 IID Temporary Land Conversion Fallowing Policy under Water Code Section 1013 for QSA

At its May 8, 2012 meeting the IID Board adopted IID Resolution 17-2012[9], which reads:

> ***A. WHEREAS,*** *the IID Board of Directors is the decision-making body for IID; and*
>
> ***B. WHEREAS,*** *in furtherance of its responsibility, mission, and intention to protect and preserve its water and water rights for its uses and purposes, IID has entered into the IID Water Conservation and Transfer Project (transfer project), including the Quantification Settlement Agreement and related agreements (collectively, the "QSA"); and*
>
> ***C. WHEREAS,*** *IID has certified a final environmental impact report/environmental impact statement for the IID Water Conservation and Transfer Project and Habitat Conservation Plan in June, 2002, as modified and supplemented by the addendum thereto approved by IID on October 2, 2003, (collectively, "Transfer Project EIR"), together with a mitigation, monitoring and reporting program (MMRP) and CEQA Findings and Statement of Overriding Consideration (CEQA findings) for the transfer project; IID also certified the final supplement to the IID Water Conservation and Transfer Project EIR/EIS for the Managed Marsh Complex on June 24, 2008 (SEIR for the Managed Marsh) and adopted a Final Negative Declaration for the Interim Water Supply Policy for Non-Agricultural Projects on September 29, 2009 (2009 Neg Dec for IWSP); and*
>
> ***D. WHEREAS,*** *the definition of "conserved water'' in the QSA and pursuant to the California Water Code allows that water be created that is available for transfer by "temporary land fallowing"; and*
>
> ***E. WHEREAS,*** *the term "temporary land fallowing" is defined in the QSA and pursuant to the California Water Code as "the retirement of land from crop production activities for a period starting no earlier than the effective date [of the QSA] and ending on or prior to the termination date [of the QSA]"; and*
>
> ***F. WHEREAS,*** *under the QSA and the California Water Code conserved water may be made available by IID to transfer under the QSA contracts with QSA transferees; and*
>
> *G.* ***WHEREAS,*** *California Water Code section 1013 was amended to implement the QSA to ensure that if "land fallowing conservation measures" were implemented by IID for QSA transfer or mitigation water, they would be statutorily deemed to be as if conserved by efficiency improvements, with "land fallowing conservation measures" then being defined as including "removing land from agricultural production regardless of whether the fallowing or removal from agricultural production is temporary or long term, and*

[9] For Resolution 17-2012 and Environmental Compliance Report, visit <http://www.iid.com/Modules/ShowDocument.aspx?documentid=5630> for Temporary Land Conversion Fallowing Policy, visit <http://www.iid.com/Modules/ShowDocument.aspx?documentid=5646>

regardless of whether it occurs in the course of normal and customary agricultural production"; and

H. ***WHEREAS,*** *Water Code section 1013 provides that IID perform any "land fallowing conservation measures" as part of a land fallowing conservation plan that includes mitigation provisions adopted by the Imperial Irrigation District Board of Directors. IID has already adopted and approved such measures as part of the Transfer Project EIR, MMRP, and CEQA findings, the SEIR for the Managed Marsh as well as the 2009 Neg Dec for the IWSP; and*

I. ***WHEREAS,*** *Water Code section 1013 provides that before IID adopts a land fallowing conservation plan, it shall consult with the County of Imperial Board of Supervisors ("county") and obtain the board's assessment of whether the proposed land fallowing conservation plan includes adequate measures to avoid or mitigate unreasonable economic or environmental impacts in the county of Imperial. There are an increasing number of proposed private projects that will temporarily take agricultural land out of agricultural production which must obtain approval from the County and for which the county will be the lead agency for compliance with the California Environmental Quality Act ("CEQA"). Because the conditions for county approval of any particular temporary land conversion fallowing project will vary according to the type of project, its location and size, and other factors, and because the county will evaluate the potential environmental and economic impacts for each such project that will have different potential effects on the environment and economics, this temporary land conversion fallowing policy is not a land fallowing conservation plan. However, the county's permitting and CEQA compliance process will give the county of Imperial and IID the opportunity to consult about each project individually to determine whether there are adequate measures to avoid or mitigate unreasonable economic or environmental impacts in the county of Imperial; and*

J. ***WHEREAS,*** *the county has been, is currently, and may be in the process of granting approvals to various solar and other industrial projects in the Imperial Valley which, if actually built, may meaningfully reduce water orders to IID, in that such projects are planned to be built on established farmland in the IID service area, though required to be returned to farmland in the future. As part of its permitting process the county of Imperial assesses the effects of such projects on the local region and its environment, and generally requires that the land used for such projects be returned to agricultural use in the future. The county of Imperial does not grant an approval unless it has determined that such project includes adequate measures to avoid or mitigate unreasonable economic or environmental impacts in the county of Imperial; and*

K. WHEREAS, *IID also desires that lands being utilized for the temporary land conversion fallowing policy addressed herein 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; and*

L. WHEREAS*, IID and its water customers, which consist of most if not all of the citizenry of the Imperial Valley, will be benefited by agreements between IID and landowners/tenants for temporary land conversion fallowing projects within the term of the QSA which: (a) ensure that IID has a right to demand that land being used for the projects will be returned to agricultural production; and (b) will allow IID to transfer or use for environmental mitigation any conserved water created by the temporary*

fallowing of land at the projects; and

M. WHEREAS, *when IID enters into land fallowing agreements with landowners/tenants for the temporary land conversion fallowing policy projects, it is necessary for IID to calculate how much water is being conserved per year for the length of the agreement. The determination of how much water is conserved and made available for transfer or environmental mitigation purposes due to the temporary removal of land from agricultural production will be made using IID historical data to determine an appropriately calculated water conservation yield attributable to the land being temporarily fallowed; and*

N. WHEREAS, *any conserved water transfers to be implemented by IID for the QSA water transfers must satisfy the conditions imposed by the State Water Resources Control Board (SWRCB) in its Revised WRO 2002-0013, with all amendments and modifications thereof (the "SWRCB Order"); and*

0. WHEREAS, *approval of a policy for temporary land conversion fallowing is beneficial so that IID may negotiate and enter into agreements for water supply and land fallowing consistent with the policy. The temporary land conversion fallowing policy is attached to this resolution as Attachment A; and*

P. WHEREAS, *IID staff has prepared an environmental compliance report, a copy of which is attached hereto as Attachment B; and*

Q. WHEREAS, *all of the findings and conclusions made by the IID Board of Directors pursuant to this resolution are based upon the oral and written evidence presented to it as a whole and not based solely on the information provided in this Resolution; and*

R. WHEREAS, *the board wishes to approve the environmental compliance report, make findings pursuant to CEQA, approve the temporary land conversion fallowing policy and authorize the general manager to negotiate and enter into agreements substantially in conformance with the policy set forth in Attachment A.*

NOW, THEREFORE, BE IT RESOLVED *as follows:*

(1) The IID Board of Directors hereby finds and determines that the proposed temporary land conversion fallowing policy is consistent with existing IID regulations and will not adversely affect existing customers.

(2) In order to comply with CEQA:

a. The board has reviewed and considered the environmental compliance report attached to this resolution as Attachment B.

b. The board finds that:

(i) The temporary land conversion fallowing policy does not authorize, permit or approve any specific project that will temporarily remove land from agricultural production;

(ii) Any such projects in the unincorporated area of Imperial County must apply to the county of Imperial for permits and undergo CEQA review by the county of Imperial as lead agency;

(iii) IID will have the opportunity to review specific projects as a responsible

agency during the county of Imperial's CEQA process;

(iv) The effects of temporarily removing land from agricultural production were assessed by the transfer EIR and appropriate mitigation was defined, which mitigation is in effect on an ongoing basis; and

(v) The temporary land conversion fallowing policy will not change or affect any of the terms of the QSA agreements.

(3) The board finds that it is prudent to adopt a temporary land conversion fallowing policy to enable IID staff to effectively carry out a temporary land conversion fallowing program.

(4) Consistent with the QSA, IID will enter into separate agreements with project developers/ landowners/tenants for the temporary land conversion fallowing policy projects that will allow IID to enforce the obligation of those persons who take lands out of agricultural production during the term of the QSA to restore such lands to agricultural production. 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 above, and shall be available for transfer or other use under the QSA and its related agreements, or otherwise as allowed by law.

(5) IID staff shall review the permitting process at the county for any temporary land conversion fallowing policy projects in the IID service area and determine whether the county has approved the project. If the county has already issued an approval, then the requirements of Water Code section 1013 have been satisfied by the county's determination that the temporary conversion of land use for each project includes adequate measures to avoid or mitigate unreasonable economic or environmental impacts in the county of Imperial. If the county has not yet issued its approval of any particular temporary land conversion fallowing policy project, then IID staff will consult with county of Imperial staff, and await a determination from the County Board of Supervisors that the given project includes adequate measures to avoid or mitigate unreasonable economic or environmental impacts in the county of Imperial. Any approval by the county of Imperial for such project shall be deemed a determination by the county that the project includes adequate measures to avoid or mitigate unreasonable economic or environmental impacts in the county of Imperial.

We hereby certify that the foregoing is a full, true and correct copy of a resolution adopted by the Imperial Irrigation District Board Directors at its meeting on May 8, 2012.

12.2.1.4 IID Equitable Distribution Plan and Regulations

While not having been put into practice due to not yet being needed, the IID Board has "approved a plan for the equitable apportionment of water (the 'Equitable Distribution Plan') in the event that in any [calendar] year, the expected demand for water is likely to exceed the supply expected to be available to the District (supply/demand imbalance or 'SDI' condition)." In 2009, the IID Board approved revised EDP

Regulations that would implement an District Water Exchange to be administered by the IID based on apportionment when demand is anticipated to exceed supply.[10]

The purpose of the EDP Regulations is to deal with the possibility that the amount of water IID will receive under the quantification of its Priority 3a water right under the terms of the 2003 Colorado River Water Delivery Agreement is insufficient to meet its users' demands and/or other obligations, including payback of inadvertent overruns.[11] Under EDP Regulations, a fixed volume of water is to be apportioned to six types of water users: municipal; industrial; feed lots, dairies and fish farms; environmental resources water; agricultural lands, and non-agricultural users.[12] Through the District Water Exchange, agricultural water users would be able to participate in the sale and purchase of water.

12.2.2 Program and Policy Opportunities

Developing viable land use and management alternatives requires involvement of the land use agencies, agriculture and other stakeholders to be successful. The consulting team has set forth strawman programs and policies for consideration in future Imperial IRWMP updates water supplier and land use agency roles for water and land use management, program alternatives, the economics of land conversion, standardized terms and definitions, and recommendations for how an integration strategy for the Imperial Region might work.

12.2.3 Strawman Concepts for Further Development

12.2.3.1 Strawman Programs and Policies

Consulting team points, presented to the IID board in 2009, are included for consideration in future Imperial IRWM updates:

- Apportionment is technically feasible; implementation would require the IID Board to determine whether solutions exist that do not involve fallowing and, if so, to develop policies, guidelines and/or regulations to handle economic, political, and legal issues including, but not limited to, the role of IID in a local water market, water pricing and rate structures, and whether and how potential impacts to agriculture or local communities from a water exchange, should they arise, could be mitigated.
- Opportunities for in-valley exchange of water may include extraordinary measures for reduction of water use such as fallowing (crop idling or solar development) and irrigated land retirement (e.g., urban development) that are not included in IID's Definite Plan.

[10] On April 7, 2009, the IID Board of Directors approved Resolution No. 8-2009 amending the Regulations for Equitable Distribution Plan (EDP) for 2009. <http://www.iid.com/Modules/ShowDocument.aspx?documentid=1210>. On September 22, 2009 the IID Board of Directors rescinded the 2009 SDI declaration thus lifting the apportionment limit and implementation of the Regulations for EDP.
[11] Colorado River Delivery Agreement, Oct 10, 2003. <http://www.usbr.gov/lc/region/g4000/QSA/crwda.pdf >
[12] The WIS-based IID Water Balance was modified in spring 2012 to include these six types of use.

- An in-valley exchange of water would require a systematic process by which IID would consider changes to the place or type of use of Colorado River water within the IID service area.[13]
- The economics of in-valley MCI Exchange merit further study to document if there are net regional economic benefits, and to ensure that any third-party and socioeconomic effects are identified and can be mitigated.
- An in-valley MCI Exchange (apportionment) to a new MCI use requires a firm supply of water that can be verified by IID and the land use agency for purposes of making findings to permit new development.[14]
- In years with a declared SDI, the certainty that IID gives to MCI supplies would reduce the supply available to agriculture and/or increase the overrun that must be paid back in subsequent years unless projects that developed new water (recycling, groundwater storage, etc.) are operational.
- New MCI water use in the IID service area could reduce the volume of water available to holders of junior rights to use Colorado River water;[15] however, an IID Managed MCI Exchange is likely to be politically acceptable even if not positively construed by other Colorado River diverters.
- If underruns were banked and agricultural use not capped, it is possible that available water may only meet inadvertent overrun payback requirements with none left over for new MCI uses. The IID board would need to develop a policy to resolve this.
- Development of policies, programs, and pricing strategies by IID that would encourage or facilitate an in-valley exchange could be complex; but if well conceived, they could reduce the potential for conflicts in the IID service area related to competition for the fixed water supply.
- If consensus among Imperial Region stakeholders can be achieved on mechanisms for an in-valley exchange (distribution) of available water, this could be a timely and relatively cost-effective solution for meeting future new MCI demand while minimizing impacts to agricultural, the environment and current MCI users.
- State law requires that IID, the Cities, and Imperial County cooperate and work together to better integrate land use and water supply plans and planning processes and to use water management and land use planning authorities, respectively, to provide water for new MCI demands while minimizing impacts to current users.
- IID is a responsible public agency with jurisdiction by law and has the necessary power and authority to review and approve changes in the place or type of water use of IID's Colorado River entitlement that would occur as a result of any land use decisions by Imperial County or the incorporated Cities.
- IID is required to manage its water right to ensure reasonable and beneficial use; as such IID is in a position to review and approve any change in place or change in type of use that is temporary (e.g., fallowing, conditional use permits) or permanent changes (e.g., urban development).
- IID could institute a permitting process to review and approve temporary (fallowing, CUP for solar development) or permanent (urban use) changes in place or type of water use. Such a

[13] An in-valley exchange implies that a historical water use is reduced or eliminated and unused water previously apportioned for that place and use is made available for use at a different place; or for a different use on all or a portion of the same property.

[14] SB610 and SB 221 revised the California Water Code to require that land use entities making land use decisions ensure that there is a verifiable water supply and that there are no impacts to existing water users.

[15] IID diversion of Colorado River water, whether for groundwater banking, ag or non-ag (MCI) use, is included in USBR accounting of IID consumptive use of Colorado River water. IID diversions in times of shortage on the Colorado River may reduce the amount of water available to be diverted by California entities with junior rights.

process could be used to mitigate negative impacts (see next section) and to ensure equity and fairness by increasing consistency and minimizing ad hoc and/or arbitrary decision making.

- An IID permitting process would complement the land use authorities of the Cities and Imperial County, provide a basis for the Cities and County to make legally defensible findings about water supply availability, and create certainty for project proponents.

12.2.3.2 Strawman Programs and Policy Impacts and Mitigations

- Land use changes that result in intensification of water use could have a negative effect on agricultural water supplies, since IID grants MCI demands higher reliability; thus, MCI users and are less subject to cut back in response to IID an overrun payback, SDI declaration and/or shortages on the Colorado River as a result of drought or climate change.
- An SDI declaration would trigger EDP Regulations including apportionment and a district water exchange; whereas, repayment of overruns under the USBR inadvertent overrun payback policy (IOPP) would require agricultural users to implement extraordinary conservation measures including fallowing. As such, without some new policy/program or projects, increased MCI use could increase the frequency or amount of land fallowing.
- Policies, programs and procedures instituted to deal with temporary land use changes that result in reduction of water use (e.g., solar development) may result in an overall lower demand in the IID service area; thereby, reducing IID Water Department revenue with perhaps an increase in local water cost ($/AF), while allowing those with holding Colorado River rights with priorities lower than IID's to increase their uses of water that could be allocated for use in the IID water service area.
- The lead land use agency (County or City) and IID and need to work together during project review to ensure adequate evaluation of direct, indirect, and cumulative impacts of new projects on agriculture water supplies; the environment, including reduction of return flows to IID drains, the Alamo and New rivers; and/or to IID facilities (such as stormwater discharge to IID drains, or subsidence due to groundwater pumping), are adequately evaluated. If needed, appropriate mitigation measures could be formulated and implemented as a condition of the lead agency's approval and permit for the project.

12.2.3.3 Strawman IID Managed In-Valley MCI Exchange

While revenue/fiscal models and pricing structures would be needed, an options model (e.g., tiered pricing to generate funds needed to pay for projects and programs that would supply "new" water could provide sufficient mitigation and financing to allow introduction of an in-valley MCI exchange using a fallowing program or solar development as a bridge to capitalizing projects that would create new sources of water supply.

Equitable Distribution Plan regulations provide a basis from which to build programs and policies that ensure impacts are appropriately mitigated and water is reasonably and beneficially used. In addition, the requirement that IID pay back inadvertent overruns has resulted in an approach to forecast annual supply and demand, so as to trigger an SDI declaration if needed.

Studies by the consulting team indicate that:

- Land use conversion from agricultural to non-ag (MCI) uses is not expected to result in sufficient reduction in water use to meet projected MCI demands in the long run.
- Conversion of 1,000 acre-feet of water use from agricultural use to non-ag (urban or power production) use would have a positive economic effect.

A conceptual in-valley MCI Exchange based on a hypothetical IID water supply portfolio is provided in **Error! Reference source not found.**. As the agency with water use authority and to ensure fairness and equity, IID should be responsible for managing and tracking the process. The elements shown in Figure 12-1 are described in the section following the figure. Many of these ideas are presented in Chapter 5 Water Supply, Demand and Water Balance.

12.2.3.4 In-Valley MCI Exchange Elements in Figure 12-2

New Supply: Expand Imperial Region water supply through reuse of Colorado River water (e.g., recycling) or developing unused water (e.g.; desalination of drain water or brackish groundwater). IID could adopt a water substitution (an *in-lieu*) policy to account for these new supplies. For example, if recycled water were provided to an agricultural user instead of a delivery by IID, the water that would have been delivered for that agricultural use could be provided to a new non-agricultural (MCI) demand.

Manage Existing Colorado River Supplies to Meet New Demands: Changes in land use by property owners and the Cities or County, whether short- or long-term, may change water use. IID would account for such changes in the type, place, or volume of Colorado River water use and apportion it to a new non-agricultural (MCI) demand through an IID Managed In-Valley MCI Exchange.

In Valley MCI Exchange elements might include:

- ***Groundwater Banking of Underruns*:** Banked water would allow agricultural users to have the water they need under most economic and environmental circumstances, while helping to prevent overuse of Colorado River water and supporting payback of inadvertent overruns.

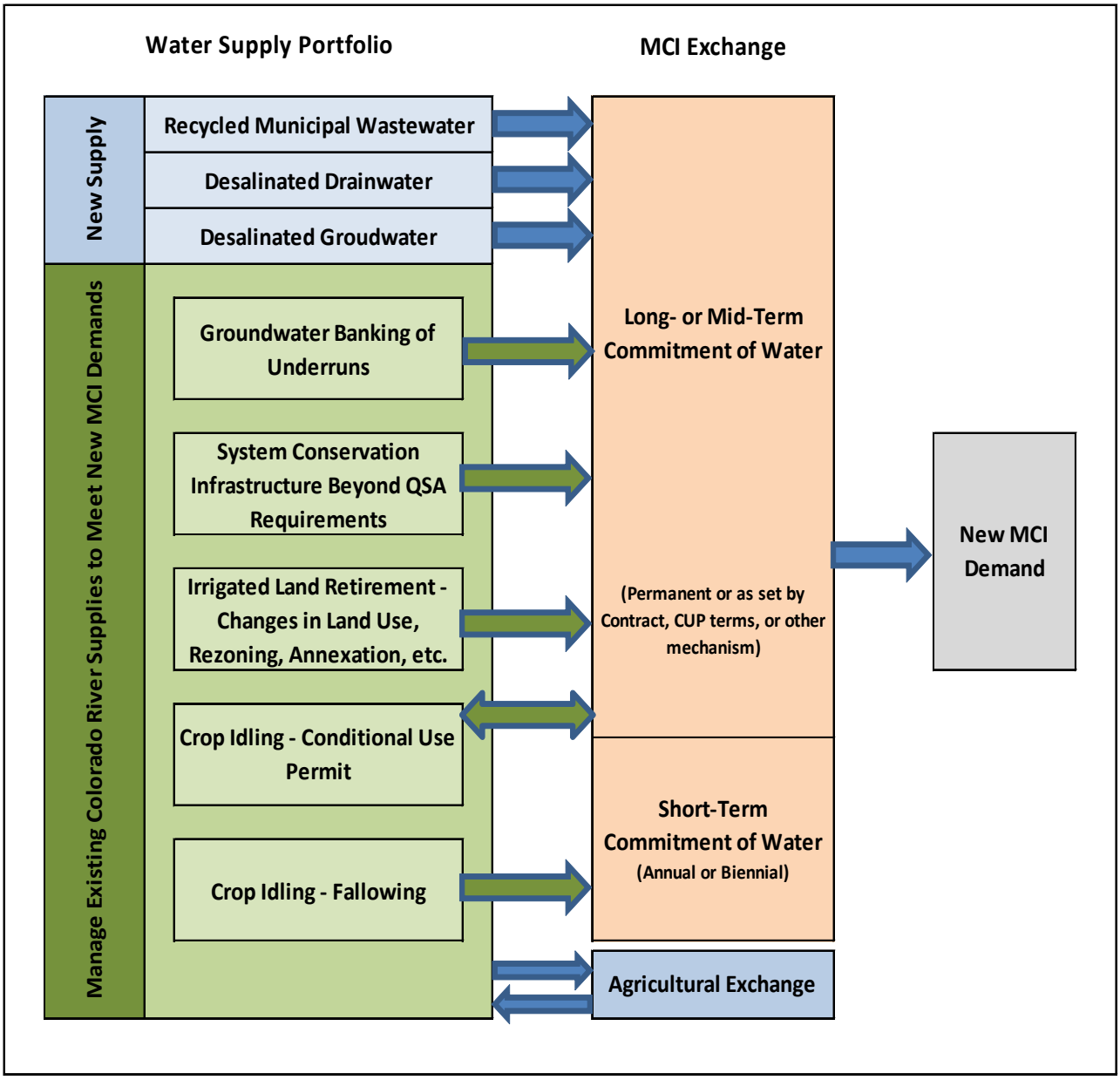


Figure 12-2. Hypothetical IID Managed In-Valley MCI Exchange

- ***IID System Conservation Infrastructure beyond QSA Requirements*:** Several projects remain for changing the IID delivery system that would conserve water that may be available to beyond that required to meet QSA obligations.
- ***Irrigated Land Retirement – Changes in Land Use, Rezoning, Annexation, etc.*:** Permanent irrigated land retirement would occur through rezoning or annexation by the County or Cities. Consequent reduction in water use would be accounted for and apportioned to a land use with an increased water demand through the MCI exchange. As part of the project/development review process, the land use agency (City or County) is required to obtain a Water Supply Assessment, including a pre- and post- project water balance, from the project proponent. The WSA must also be reviewed and approved by IID for water availability.

- ***Crop Idling – Changes in Land Use, Conditional Use Permit*:** A conditional use permit allows a temporary change in land use. The temporary change from agriculture to another use (e.g., solar photovoltaic) is for the term of the CUP; however, the land remains zoned for agricultural use. As noted above, the County is working on a solar ordinance, and IID has created a policy to manage water that may result from a reduction in use due to a change in use resulting from a CUP being issued.
- ***Crop Idling - Fallowing Program*:** Fallowing (for example for a period of two out of four years) is a short-term change in land use with resultant reduction in water use, and would be similar to the existing Equitable Distribution Plan or Salton Sea Mitigation program.
- ***Agricultural Exchange:*** Transfer of water between or among agricultural users in SDI years as provided in the 2009 IID Equitable Distribution Plan Regulations.
- ***New MCI Demand:*** Water supply primarily for future geothermal/solar thermal cooling with or without conservation best management practices (146 KAF, 180 KAF respectively), but could be the result of proposed changes in land use by a project proponent or the County or City pursuant to their land use authorities (see Appendix D).

12.2.4 Strawman Economic Incentives – Loans, Grants, Water Pricing

Economic incentives could be developed similar to those in the EDP Regulations, or the QSA Fallowing Program, or other QSA on-farm efficiency conservation which depend on the ability of the new MCI users to pay.

12.2.5 Strawman Presentation to Water Planning Group (2-plus-2)

After reviewing and discussing policy alternatives, the IID Board, with support of senior staff, developed a strawman proposal that was presented for consideration to the Imperial Valley Water Planning Group (Two-Plus-Two : two members of the IID Board and two County Supervisors). Broad policy concepts presented were as follows:

- ***Annual apportionment of water*:** IID Board would make an annual yearly determination of forecasted water use among all categories of users and apportion the available supply in a manner consistent with existing Equitable Distribution Plan Regulations.
- ***Joint land-use conversion policy*:** Imperial County, as the land-use planning entity, and IID, as the wholesale purveyor of untreated water to the region, would establish designated corridors that facilitate conversion of agricultural lands to renewable energy production.
- ***Joint groundwater study*:** Imperial County and IID would conduct a joint feasibility study to ascertain availability and accessibility of groundwater resources in the Imperial Region.
- ***Fallowing for in-valley water exchange*:** IID would consider short-term (rotational) fallowing of agricultural land to generate water for MCI use.
- ***Water storage and banking*:** IID would pursue storage projects it has identified within its service area and banking opportunities outside the Imperial Region. While projects to augment the existing water supply are generally more expensive to build and implement than policy options, IID and Water Forum stakeholders recognize that storage is vital to the long-term management of IID's water supply and that it provides the most durable and defensible means of addressing year-to-year fluctuations in usage.

- ***Commitment to regional planning model*:** In concert with Imperial County, IID would develop a regional water plan that actively solicits and relies on stakeholder input and consent in balancing the needs of the Imperial Region's diverse interests, guided by the twin goals of multiple use and sustained yield.

12.2.6 Concepts for Future IRWMP Consideration

Topics to be developed and resolved include:

- Conduct outreach efforts, workshops and hearings to engage the community in developing an in-valley MCI Exchange.
- Firmly define IID's role in reviewing and approving changes in place and type of use for new MCI water use.
- Cities, County and IID work together to:
    - Streamline the development review process so there is transparency and certainty in the process for obtaining water for new MCI water demands.
    - Update their developer guides[16] to define standards for information submittal requirements, water budgets, Water Supply Assessments and Water Supply Verifications (see Appendix J).
    - Develop permit systems to review and approve changes in the place and type of use; land use conversions; and apportionment of water to new MCI water users.
    - Define and communicate potentially significant impacts that could result from new MCI water uses, so stakeholders are aware of the need to avoid, minimize or mitigate impacts; and so project proponents, the Cities and Imperial County can work with IID to define and implement appropriate solutions.
    - Agencies will have to hire and retain staff to support the permitting process for evaluating changes in place and type of use, applying policies, reviewing Water Supply Assessments, making findings related to the impact on the water supply; and ensuring that identified third party impacts are mitigated.

- Comprehensive Geothermal Power Plant Water Use Policy: Could require proposed power plants, regardless of generating capacity and as part of the effort to mitigate for intensification of water use, first seek to develop brackish water from natural sources, irrigation return flows, inland wastewaters of low total dissolved solids (recycled water) or other sources (e.g., imports) for purposes of wet cooling, or that hybrid cooling be required if IID delivery of Colorado River water is to be relied upon.
- Apportionment Policy: Accounting for and making an annual apportionment of water resulting from permanent changes in place and type of land use ,or temporary changes to place and type of land use associated with an in-valley fallowing program.
- In- Valley "Bridge" Fallowing Program: Could provide quantifiable water for an MCI Water Portfolio and for generating capital to build projects that provide new supplies for the Imperial

[16] Water Department Developer Project Guide, IID, 2008.
<http://www.iid.com/Modules/ShowDocument.aspx?documentid=2328>

region and mitigate for impacts to agriculture from new MCI uses and intensification of water use to use until capital projects are developed.

- MCI Water Pool Option Program: Could provide water for new MCI water use in underrun years, while paying into a mitigation fund to either a) build capital projects, or b) compensate private interests and/or IID for using water that results in fallowing land in overrun years and provides industry with a reliable water supply and Cities and Imperial County with the means of approving development and mitigating impacts.
- Mitigation Fund: Purpose is to capitalize physical facilities, match state or federal grant or loan funds, or fund approaches to allow IID, Cities, and Imperial County to provide tangible mitigation and make appropriate findings pursuant to CEQA and the California Water Code.
- Implement tiered pricing for new MCI users (e.g., renewable energy industry) to provide incentives to conserve water, as in the IID Interim Water Supply Policy.

12.2.7 Imperial IRWMP Status and Water Forum Review

The Imperial Water Forum was formed and the IRWM process initiated to develop independent findings and advise the appropriate lead agency. There has been progress in the Region through Water Forum review and findings on a nine major concepts (see below) and an approach to integrating the CDWR strategies. There has been a dialog between IID and Imperial County to identify opportunities for in-valley water exchange (apportionment and transfer) and to coordinate land use planning and water management.

The Imperial IRWMP mission goals, objectives, and charter were adopted and resolutions of support passed by many of the public agency stakeholders (Concept 1). The Water Forum has identified impacts, reviewed water supply strategies and developed a consensus on water supply priorities (Concepts 2 and 3) that would provide “new” water by making secondary uses of Colorado River water or through demand management and conservation.

The Water Forum made findings and recommendations on the Renewable Energy Water Use Efficiency strategies and factored in the County General Plan Geothermal Energy Element and the approach for IID assignment of contracts for water through the Interim Water Supply Policy (IWSP). The Water Forum also considered best management practices for cooling to conserve Colorado River supplies and/or use of alternative supplies consistent with local programs and the state and federal Renewable Energy Action Team Report (Concept 4).

In-valley transfers or apportionment of water within the IID service through an in-valley MCI Exchange would account for how water is made available from the existing Colorado River supply to new users. The development of strategies to manage in-valley exchanges of water is the jurisdictional responsibility of IID. Land use decisions are the jurisdictional responsibility of Imperial County and the Cities. Overlap of the authorities occurs during the land use and development review process managed under the authority of the County and Cities acting as the lead agency for project review under their respective General Plans, local zoning and pursuant to the California Environmental Quality Act.

The Water Forum is advisory to the lead agencies. The approach to developing in-valley water transfers, apportionment and a water exchange continue to be evaluated and developed (Concepts 5, 6, and 7) by IID with input from the Water Forum.

The current approach to applying economic incentive strategies includes IID adoption of IWSP. The IWSP includes tiered pricing to provide economic incentives to conserve water by the proposed new use. The IWSP also defines how IID will review and assign water supply contracts to new development on a parallel path to the land use planning and development review process (Concepts 8 and 9). The IWSP includes development of a fund to capitalize facilities and manage water to ensure water supplies are available for apportionment by IID as Cities and Imperial County make land use decisions pursuant to CEQA and the California Water Code. Capital facility alternatives for providing new water supplies have been identified by the Water Forum. The TLCFP ?begins work needed to define the administrative process and program for using water from land use changes; additional work may be needed to define processes for apportionment, and in-valley transfer or exchange of the available water supply to meet the requirements for forecasted MCI demand, should they develop.

12.3 FUNDING ALTERNATIVES

As part of the IRWM planning process, research was conducted on alternative funding opportunities specific to implementation Imperial IRWMP projects and programs. This section reviews:

- Local Government funding available to the Cities, County and IID
- Grants and loans that may be available for Imperial IRWMP stakeholders

12.3.1 Local Government Funding

12.3.1.1 Integrating Funding Authorities and Sources

Integrating local funding authorities and sources will help the Imperial Region pursue grant funded projects and seek state and federal funding. Most grant programs require a local match. Integrating available local funding or supporting some approach to sharing costs may be needed to meeting local match contributions, and for funding project feasibility studies, design and environmental review. Planning and permitting work often requires local investment prior to obtaining state or federal grant funding or loans for construction.

Under their general government authority, local revenue is generated by cities and the County from a variety of sources including general funds or enterprise funds, water and sewer rates, developer or impact fees, connection fees, property taxes (acreage or ad valorem assessments), and sales taxes. Imperial County can also generate fees on groundwater pumping or storage pursuant to the County Ordinance and state law. IID is funded through water standby and availability charges, water rates, impact fees and water sales. Joint Powers Authorities (JPA) are often formed to coordinate shared project funding.

12.3.1.2 Benefits Assessments, Benefits Assessment Zone Formation

Funding for large regional projects such as groundwater banking facilities, often obtain funding through benefits assessments. Benefits assessments are a special charge levied on property to pay for public improvements that benefit property in a predetermined district. Regional flood control and stormwater projects are candidates for formation of benefits assessment zones in the Imperial Region.

Benefit assessments link the cost of public improvements to those landowners who specifically benefit from the improvements. They are defined geographically and levies are placed on all properties within a designated benefit assessment zone. The boundaries of a benefit assessment district may coincide exactly with those of a city, county, or other existing special district, or they may cover only part of those jurisdictions.

A comprehensive engineers report is needed to form an assessment district. The report must outline the proposed area, key projects, estimated project costs, annual cost to each property, and the benefit formula used to determine each property's share of the cost. It forms the legal basis for an assessment district and must be formally approved by the governing body that will administer the district. Proposition 218, which established a strict definition of "special benefits," instituted a common formation and ratification process for all benefit assessment districts.

12.3.1.3 Constraints

Like other regions of the state, the Imperial Region has a limited ability to pay for further projects or programs. Unemployment is high and the ability to raise local revenue is limited by economic conditions. Grants and loans become important in leveraging the limited local financing capacity.

Proposition 13 created limits on the ability of city and County governments to raise property taxes. Proposition 218 creates similar constraints to agencies and special districts like IID, including specific procedural requirements related to generating fees and assessments. Any efforts to generate new charges and assessments would be subject to voter approval. Planning or construction of new facilities requires a full evaluation of benefits and costs and an electoral process, as defined by the proposition and amendments to state law.

12.3.2 Grants and Loans – Propositions 34 and 1E, Other

Grants and/or loans are available to help implement Imperial IRWMP projects and programs. Federal and state agencies provide technical assistance and program funding for Imperial IRWMP related projects or programs, including implementation of the resource management strategies recommended by the Water Forum for implementation. The Water Forum has recommendations for groundwater management, water conservation, water recycling, desalination, water quality protection and improvement, and support for meeting the critical water supply and quality needs of disadvantaged communities. DACs often qualify for grant programs to support basic needs for facility planning, design work, and environmental review.

12.3.2.1 Proposition 84 IRWM and Proposition 1E Flood/Stormwater Grants

Both programs are managed by CDWR under common guidelines. A summary table of grant programs is provided in Table 12-7 at the end of the chapter.

12.3.2.1.1 Proposition 84 CDWR IRWMP Grant Program

Proposition 84, the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Act provided bond was passed by voters in 1996 and allocated $900,000,000 to support IRWM planning and implementation of projects. The intent of the IRWMP grant program is to promote and practice integrated regional water management to ensure sustainable water uses, reliable water supplies, better water quality, environmental stewardship, efficient urban development, protection of agriculture, and a strong economy. The program recognizes the inter-connectivity of water supplies and the environment and then pursues projects yielding multiple benefits.

The completed Imperial IRWMP will provide a mechanism for setting priorities to pursue IRWMP Implementation Grant funding. It will also help the Region in the long-term to coordinate, refine, and integrate existing planning efforts within a comprehensive, regional context; identify specific regional priorities for implementation projects; and help to obtain funding support for the Imperial Region plans, programs, and projects. A regional approach is strongly prioritized.

The Imperial IRWMP development was funded with $1M in IRWM Planning Grants along with IID revenues and impact fees collected as a condition of approval for a geothermal plan.[17]

The Imperial Region will be competing with the Coachella Valley, Borrego and Mojave Regions for the remaining funding. There is roughly $22 Million remaining for the Colorado River Hydrologic Region.

There will be two more rounds of Implementation Grant funding. The proposal solicitation package (PSP) will be released in late summer of 2012. It is likely that Round 2 applications will be due in March 2013 ($5.2M). Round 3 is likely to require applications be submitted in Spring 2014. There is expected to be $16.7 Million available in the Colorado River Region.

12.3.2.1.2 Proposition 1E, the Disaster Preparedness and Flood Prevention Bond

Proposition 1E was passed by California voters in November 2006. It authorized the Legislature to appropriate $300 million for grants for Stormwater and Flood Management (SWFM) projects. Future additional funding from Proposition 1E may become available for Regional Flood Management Planning Grants. Such planning grants would fund incorporating regional flood management into IRWM plans. Competition is statewide. Proposed projects must be in the Imperial IRWMP. The current schedule is

[17] Ormat, Inc.

for the proposal solicitation package to be released in October 2012, with applications due in December 2012, and awards announced in July 2013.

The Imperial Region could access the Proposition 1E funds to further conduct regional flood and stormwater management to implement the findings and recommendations of the Water Forum presented in Chapter 9.

12.3.2.2 Other State and Federal Grants and Loans

12.3.2.2.1 State and Federal Water Revolving Funds

The purpose of the EPA Water Revolving Loan Program is to support projects that will put the clean water and drinking water State Revolving Fund (SRF) on a "firmer foundation." There are two types of funds, the Clean Water SRF and the Drinking Water SRF. In California, the State Water Resources Control Board managed the Clean Water SRF for wastewater treatment[18] and the Department of Health Services Manages the Drinking Water SRF[19]. The EPA works with California State and local partners to develop a sustainability policy including management and pricing for future infrastructure funded through SRFs to encourage conservation and to provide adequate long-term funding for future capital needs. Portions of these funds may be applied to regional IRWMP programs that focus on urban water conservation programs that would benefit the entire Region.

Resources for Small Water Public Systems

Rural Community Assistance Corporation (RCAC) <http://www.rcac.org/>
California Rural Water Association (CRWA) < http://www.calruralwater.org/>
Self-Help Enterprises (SHE) < http://www.selfhelpenterprises.org/>
Expense Reimbursement Grant (ERG), CPS Human Resources Services <http://www.cps.ca.gov/>
California State University Sacramento, Office of Water Programs (CSUS) <http://www.owp.csus.edu/>
American Water Works Association (AWWA), California-Nevada Section <http://ca-nv-awwa.org/canv/web/>

12.3.2.2.2 Drinking Water SRF

CDPH has a range of funding opportunities for public water systems[20] The CDPH Safe Drinking Water State Revolving Fund Final Intended Use Plan (August 2011)[21] identifies specific set aside programs that help disadvantaged communities.

- Water System Technical, Managerial, and Financial (TMF) Capacity Development program helps DACs with systems assessments, operator training, engineering services and other support. Preliminary engineering assistance is provided through a contract with University of California, Davis "Center for Appropriate Technology for Small Water Systems" (UCD). The contract provides engineering services to small systems that lack the funds and expertise to obtain these services on their own. UCD prepares preliminary engineering reports for identified high priority small and

[18] <http://www.waterboards.ca.gov/water_issues/programs/grants_loans/srf/>
[19] <http://www.cdph.ca.gov/services/funding/Pages/SRF.aspx>
[20] <http://www.cdph.ca.gov/certlic/drinkingwater/Pages/DWPfunding.aspx>
[21] <http://www.cdph.ca.gov/services/funding/Documents/SRF/FinalSFY2011-2012IUP(FFY2011DWSRFAllotment)081711.pdf>

disadvantaged systems projects to move them through the funding process.

- Small Water System (SWS) Technical Assistance Set-aside. This program is for communities serving populations of less than 10,000 and provides technical assistance through the Rural Community Assistance Corporation (RCAC), California Rural Water Association (CRWA) and Self Help Enterprises. The CDPS Small Water Systems Technical Support Unit[22] holds quarterly meetings with the technical assistance providers (CalTAP). These meetings provide the opportunity to identify and implement more effective and meaningful methods of providing technical assistance to smaller and disadvantaged systems.

12.3.2.2.3 Clean Water SRF

The California State Water Resources Control Board (SWRCB) manages the SRF. The SWRCB has a Small Community Wastewater Strategy[23] and has a Small Community Wastewater Grant (SCWG) Program, most recently funded by Propositions 40 and 50, provided grants for the planning, design, and construction of publicly-owned wastewater treatment and collection facilities to small communities (i.e., with a population of 20,000 persons, or less) with financial hardship. On November 17, 2011, the State Water board executed a contract with California Rural Water Association (CRWA) to provide up to $500,000 in wastewater-related technical assistance to small, disadvantaged communities (SDACs) statewide. The types of technical assistance that will be offered include:

- Preparation of financial assistance applications
- Compliance audits and troubleshooting to address permit violations or improve operations
- Review of proposed project alternatives to assist in identifying low-cost, sustainable approaches
- Assistance with planning and budgets, including capital improvement planning
- Assistance with community outreach, awareness, and education, especially with regard to rate setting and Proposition 218 compliance

The technical assistance provided under this contract is intended to be targeted and specific, with each SDAC allotted a maximum of 20 hours of technical assistance. CDPH staff may approve additional time on a case-by-case basis.

12.3.2.2.4 USEPA Hardship Grants Program for Rural Communities

USEPA has a Hardship Grants program[24] to help small, disadvantaged rural communities address their wastewater treatment needs. California identifies eligible projects and may commit a portion of their grants for technical assistance. Designed to complement the Clean Water SRF loan program, this program will distribute funds based on the number of rural communities lacking access to centralized water treatment; and the rural per capita income in California.

[22] <http://www.cdph.ca.gov/certlic/drinkingwater/Pages/Smallwatersystems.aspx>
[23] <http://www.waterboards.ca.gov/water_issues/programs/grants_loans/small_community_wastewater_grant/strategy.shtml>
[24] <http://water.epa.gov/type/watersheds/wastewater/eparev.cfm#7>

12.3.2.2.5 Colonias Wastewater Assistance Program

The USEPA program forgives grants, loans and technical assistance through the Colonias Wastewater Assistance program for projects along the U.S.-Mexico border. The program is to design and build wastewater treatment facilities for the Colonias, which are low-income, unincorporated border communities that lack such basic necessities as paved roads, safe drinking water facilities, or wastewater sanitation. California administers these programs and match USEPA funds.

Two other federal programs have set-aside funding for Colonias assistance, including water and wastewater facilities. They are the U.S. Department of Housing and Urban Development (HUD) – Community Development Block Grant Program and the U.S. Department of Agriculture (USDA), Rural Utilities Service – Water and Waste Disposal Program.

12.3.2.2.6 State Community Development Block Grant Program

The USDA Housing and Urban Development (HUD) program offers Community Development Block Grants (CDBG). They are given directly to California, which then allocates the funds to small cities and nonurban counties. Grants may be used for community and economic development activities, but are primarily used for housing rehabilitation, public infrastructure projects including wastewater and drinking water facilities--and economic development. Seventy percent of grant funds must be used for activities that principally benefit low- and moderate-income communities.

12.3.2.2.7 Rural Utilities Service Water and Waste Disposal Program

The USDA Rural Utilities Service provides grants and loans through the Water and Waste Disposal (WWD) program. The program targets rural communities with 10,000 people or fewer for drinking water, wastewater, solid waste, and storm drainage projects. Rural Utilities Service also administers the "Water 2000" initiative to bring safe, affordable drinking water to all rural areas by the year 2000. These programs are administered locally by state and area rural development offices.

This would be a potential source for DACs in the Imperial Region that lack local resources to plan and develop water and wastewater facilities, and may help projects get ready for other funding sources. Money can be used for construction, land acquisition, legal fees, engineering fees, capitalized interest, equipment, initial operation and maintenance costs, and related costs to complete a project. Both public agencies and nonprofit organizations are eligible.

12.3.2.2.8 Economic Development Grants for Public Works and Development Facilities

The U.S. Department of Commerce provides grants through the Economic Development Administration (EDA) to economically distressed areas for public works projects, including water and wastewater facilities. The projects must promote economic development, create long-term jobs, and/or benefit low-income persons or the long-term unemployed.

Projects must fulfill a pressing need of the area. Recycling to create water for expanding the renewable energy industry should be a candidate since it would help to establish industrial plants or facilities. Projects must have an adequate share of local funds; evidence firm commitment and availability of matching funds, be capable of being started and completed in a timely manner; and be consistent with the IVEDC Economic Development Program for the area. State money could be used to match the federal money. The state, cities Imperial County, IVEDC or other nonprofit organizations would be eligible.

12.3.2.2.9 Federal Water Bank Fund

The Federal Water Bank Fund is designed to deliver funding to priority projects with significant national or regional economic benefit. The Federal Water Infrastructure Bank would be authorized to borrow money from the federal Treasury at very low rates. In turn, the bank would make low-interest loans for larger projects that typically are too big to access the SRF. If the Imperial Region were to embark on a large regional project, funds from the bank could be obtained for projects providing a regional benefit (i.e., Keystone Regional Water Recycling Plant).

12.3.3 Recycled Water/ Desalination Funding Programs

The Imperial IRWMP includes findings and recommendations to extend the available supply through recycling and desalination projects that would create a secondary uses of the Colorado River water. Integrating state and federal funding is a strategy that could be applied. There are a number of state and federal financial assistance programs relating to recycled water/desalination projects available to the Imperial Region, including the SWRCB's grant and low-interest loan programs,[25] and the U.S. Bureau of Reclamation's Title XVI Grant Program.

12.3.3.1.1 Reclamation Wastewater and Groundwater Study and Facilities Act - Title XVI

Title XVI of Public Law 102-575, the Reclamation Wastewater and Groundwater Study and Facilities Act, authorizes the federal government to partially fund the capital cost of recycling projects, which can include an interconnected system of recycling projects serving the Imperial Region and IID service area. Title XVI program the act directs the Secretary of the Interior to undertake a program to investigate and identify opportunities for water reclamation and reuse of municipal, industrial, domestic, and agricultural wastewater, naturally impaired ground and surface waters, and for design and construction of demonstration and permanent facilities to reclaim and reuse wastewater. It authorizes the Secretary to conduct research, including desalting, for the reclamation of wastewater and naturally impaired ground and surface waters. The funds have also been used to evaluate water markets, transfers and for creating economic incentives to conserve water. These funds are managed and distributed by the USBR.

[25] <http://www.waterboards.ca.gov/water_issues/programs/grants_loans/>

Imperial Region projects for recycling or desalination of brackish groundwater or drain water would be candidates for funding.

12.3.3.1.2 State Revolving Fund (SRF) / Water Recycling Loan Program (WRLP)/Water Recycling Grants (WRG)

The SRF, WRLP, and WRG provide agencies with low-interest construction loans for water recycling and groundwater development projects.

Clean Water State Revolving Fund. Mentioned earlier, the SRF can apply to recycling and desalination. Eligible project types include publicly-owned wastewater treatment facilities, local sewers, sewer interceptors, and water reclamation facilities, as well as, nonpoint source pollution control projects.

Water Recycling Funding Program (WRFP). The SWRCB provides funding for the planning, design, and construction of water recycling projects. Water recycling planning grant funding is available to assist public agencies with their feasibility study and planning efforts. Construction projects may be funded with a combination of grants and loans. Privately owned water utilities that are regulated by the Public Utilities Commission are also eligible to apply for construction grants.

Water Recycling Facilities Planning Grant Program (FPGP). The purpose of the FPGP is to provide grants to public agencies that will assist in the preparation of facilities planning studies for water recycling using treated municipal wastewater and/or treated groundwater from sources contaminated. In addition to encouraging new recycling planning studies, these funds are intended to supplement local funds and enhance the quality of local planning efforts. The FPGP Grants are provided for facilities planning studies to determine the feasibility of using recycled water to offset the use of fresh/potable water from state and/or local supplies.

Construction Funding Program. The Construction Funding Programs derive funding from the SRF loan program. The Category III and V program could support Imperial Region projects. Category III – Local Supply Water, provides treatment and delivery of municipal wastewater to users that replace the use of local water supply with recycled water. Category V – Pollution Control, provide treatment and disposal of municipal wastewater to meet waste discharge requirements imposed for water pollution control.

12.3.3.1.3 Water for America Initiative

USBR is responsible for administering and managing the Water for America Initiative Program. The Imperial Region IRWMP goals to improve and enhance local and regional water resources parallel the goals of the Water for America Initiative. Specific grants available under the Water for America Initiative include the following:

Advanced Water Treatment Grants. The Advanced Water Treatment Grants will provide funding for pilot or demonstration projects that will test the viability of advanced water treatment technologies. These grants will help create new water supplies to address water supply imbalances. The purpose of

these projects is to demonstrate the technical and economic viability of using an impaired water source within a specific locale.

Water Marketing and Efficiency Grants. Through the Challenge Grant Program - Water Marketing and Efficiency Grants, Reclamation provides some funding to irrigation and water districts for projects focused on water conservation, efficiency, and water marketing. The focus is on projects that can be completed within 24 months that will help sustainable water supplies in the western United States. The Water for America Initiative is intended to help communities meet increasing demands on limited water supplies through collaborative projects, water conservation technologies, and expanded information sharing.

System Optimization Review Grants. A System Optimization Review is a broad look at system-wide efficiency to improve efficiency and operations of the water delivery system. The Review results in a plan of action that focuses on improving efficiency and operations on a regional and basin perspective. Those recommended improvements may then be eligible for the Water Marketing and Efficiency Grant funding.

12.3.3.1.4 Recycled/Desalination Local Funding and Partnership Opportunities

Sources of local funding to local agencies will include individuals or entities (both public and private) that benefit from Lower Colorado River water, including those within the Imperial Region and those operating outside Imperial Valley who would be interested in increasing their volume and reliability of Colorado River water. In examining successful partnership histories and those that received funding, three types of partnering/funding relationships can be identified:

1. Partners provide financial support for projects that provide new yields from desalination or water recycling in exchange for equal yields from the Colorado River.

2. Partners provide financial support to compensate existing facilities in exchange for water from the Colorado River.

3. Potential revenue from increased water rates is used to build new desalination or water recycling facilities.

12.3.3.1.5 Metropolitan Water District of Southern California

Desalination Research and Innovation Partnership (DRIP). DRIP, managed by MWD, is aimed at developing and demonstrating next-generation desalination and disinfection technologies that are designed to economically treat large volumes of brackish water for potable and non-potable uses. This partnership includes applied research conducted by California utilities, universities, and private industry to evaluate innovative technologies for treating surface water, municipal wastewater, brackish groundwater, and agricultural drainage water applications.

Community Partnering Program (CPP). MWD's CPP provides sponsorships to non-profit community organizations, educational institutions, public agencies and professional associations for short- and long-term water-related projects, events and activities.

12.3.3.1.6 San Diego County Water Authority

Like MWD, SDCWA represents a potential partnership opportunity for IID. SDCWA maintains membership in the El Centro, Brawley, Calexico and Imperial chambers of commerce and is partnering in such programs as the Imperial Valley Economic Development Corporation, the San Diego Regional Economic Development Corp., and the Mega-Region Grant initiative, an effort aimed at attracting industrial development to a region that includes both the Imperial and San Diego counties to promote the economic strength of the mega region. SDCWA has a vested interest in Imperial Valley and would most likely benefit from programs/projects, which provide additional water supplies, thereby relieving future demand on the Colorado River. SDCWA maintains several funding programs that may help in the implementation of recycled and/or desalination projects within Imperial Valley.

SDCWA Reclaimed Water Development Fund (RWDF). The RWDF provides financial assistance up to $100 per acre foot for the development of recycled water projects capable of relieving a demand on the SDCWA.

SDCWA Financial Assistance Program (FAP). FAP provides loans for water recycling facilities planning, feasibility investigations, preliminary engineering studies and research projects related to water recycling and/or groundwater development. FAP funds are also available for research and development in the form of grants.

12.3.3.1.7 Water Environmental Research Foundation Partnership Program

Water Environmental Research Foundation (WERF) actively pursues opportunities to leverage funding and knowledge through research partnerships with other organizations. Research partners are typically nonprofit organizations or government entities with research objectives similar to those of the Foundation. Partnership agreements leverage resources and develop and disseminate broad-based knowledge. They also provide access to diverse audiences and foster cooperation. WERF will often allocate a set amount of funding in anticipation of projects to be identified by the partners. WERF also enters into multi-year partnership programs with government or quasi-governmental agencies. These partnerships focus in depth on particular topics and come together in the joint planning and co-funding of multiple projects. This opportunity would help IID in the identification of future partnerships for Project Alternatives that fall in line with the Partnership Program objectives.

Table 12-7.Grant Funding Matrix

Program	Brief Description	Key Points	Key Application Dates	Contact Info
Federal Stimulus (American Recovery & Reinstatement Act) in California				
CDPH, Safe Drinking Water State Revolving Funds	Projects that assist in achieving or maintaining compliance with the Safe Drinking Water Act (SDWA). Includes source water protection projects	$160M available plus regular annual allocation of - $80M Planning, design & construction projects; $20M max/yr/project, 20 yr payback; $30M max/yr/entity, 20 yr payback Planning only: $100k max/project, 5 yr payback; Current interest rate: 2.3%; principal forgiveness or negative interest loans may be available	The Universal Pre-application is now open until **Feb 27, 2009**. Invitations to submit a full application anticipated go out in **April 2009**, then applicant has 60 days to complete application (June 2009) and 60 days later must begin construction (Aug 2009).	<www.cdph.cagov/service/funding/Pages/SRF.aspx> 916-449-5600 sdwsrf@cdph.ca.gov
SWRCB, Clean Water State Revolving Fund	Eligible applicants; POTW (local public agencies) & NPS (local public agencies, non-profit organizations, and private parties) Eligible Projects: - Publicly owned treatment facilities such as: wastewater treatment, including installation and major rehabilitation of sewer lines, and storm water prevention/reduction - Water recycling projects - Nonpoint source and estuary enhancements projects (expanded use)	No state matching required. Program funding: $284.6M No upper limit for project; however maximum annual funding cap of $50M per agency per year.	Applications under Economic Stimulus Package due March 24 through FAAST.	<http://www.waterboards.ca.gov/water_issues/programs/grants_loans/CleanWaterSRF@waterboards.ca.gov> Christine White 916-341-5795 cwhite@waterboards.ca.gov
USBR CALFED Bay Delta		$50M as stated in ARRA		
USBR Title XVI	Recycled water feasibility investigations, preliminary engineering studies and research projects. Brackish water desalination is also considered.	$126M as stated in ARRA		

Table 12-7. Grant Funding Matrix

Program	Brief Description	Key Points	Key Application Dates	Contact Info
State				
Drinking Water, General – CA Department of Public Health (CDPH)				
CDPH, Prop 50 Chapter 3: Water Security	Projects designed to prevent damage to water treatment, distribution, and supply facilities, to prevent disruption of drinking water deliveries, and to protect drinking water supplies from intentional contamination.	Minimum: $5,000 Maximum: $2,000,000 No match required 25% of funds set aside for disadvantaged communities (DACs).	Applications not currently open; the prior pre-application period closed in **September 2008.** The Universal Pre-application also used for DWSRF is opened until February 27, 2009, but is currently only for Economic Recovery Funds and therefore not open for Prop 50 funds until after **February 27, 2009**	<www.cdph.ca.gov/services/funding/Pages/Prop50.aspx> 946-449-5600 prop50@cdph.ca.gov
CDPH; Prop 50 Chapter 4a1: Small Community Water System Facilities	Grants to small community water systems to upgrade monitoring, treatment, or distribution infrastructure. The water system must be in non-compliance with a safe drinking water standard.			
CDPH, Prop 50 Chapter 4a2: Demo Projects for New Containment Treatment and Removal Technologies	Development and demonstration of new treatment and related facilities for water containment removal and treatment. (Must demonstrate new technology).			
CDPH, Prop 50 chapter 4a3: Community Water Systems Monitoring Facilities	Community water system water quality monitoring facilities and equipment. (Must be in non-compliance with safe drinking water standard).			
CDPH, Prop 50 chapter 4a4: Drinking Water Source Protection	Source Water protection projects to protect contamination of water supply. Fund may be used for planning, preliminary engineering, detailed design, construction, education, land acquisition, conservation easements; equipment purchase, and implementing the elements of the SWP program.			
CDPH, Prop 50 chapter 4a5: Disinfection Byproduct Facilities	Treatment facilities necessary to meet DBP safe drinking water standard. (Must be in non-compliance with US EPA Stage 1 DBP Rule). If the project is receiving funds under Ch.6, it is not eligible under this chapter.	Minimum: $5,000 Maximum: $10,000,000 No match required. 25% of funds set aside for DACs.		

CDPH, Prop 50 Chapter 4b: Southern California Projects	Projects that assist in meeting drinking water standards and in meeting state's requirement to reduce Colorado River use to 4.4 MAF (Priority ranking based on population, volume of Colorado River water use reduction, and cost/volume saved). This program does not include recycled water.	Minimum: $50,000 Maximum: $20,000,000 1:1 match 25% of funds set aside for DACs. No match required for DACs or small water systems.		
CDPH, Prop 50 Chapter 6b: Containment removal	Containment treatment or removal technology (for Petroleum, NDMA, Perchlorate, Radionuclides, pesticides, heavy metals, pharmaceuticals).	Minimum: $50,000 Maximum: $5,000,000 1:1 match 25% of funds set aside for DACs. No match required for DACs or small water systems.		
CDPH, Prop 50 chapter 6c: UV and Ozone Disinfection	Projects using UV or Ozone Technology. (Must address MCL compliance violation).			
CDPH, Prop 84 Section 75021: Safe Drinking Water Emergency Funding	To fund emergency and urgent actions to ensure that safe drinking water supplies. Eligible projects include, but are not limited to, the following: Provide alternate water supplies including bottled water where necessary to protect public health. Improvements in existing water systems necessary to prevent contamination or provide other sources of safe drinking water including replacement wells. Establishing connections to adjacent water system. Design, purchase, installation and initial operation costs for water treatment equipment and systems.	Minimum 50% cost share Maximum: $250,000 per project	Applications not currently open; the prior pre-application period closed in September 2008. The Universal Pre-application also used for the DWSRF is open until February 27, 2009, but is currently only for Economic Recovery Funds and therefore not for Prop 84 funds until after February 27, 2009.	<www.cdph.ca.gov/services/funding/Pages/Prop84.aspx> 916-449-5600 prop84@cdph.ca.gov
CDPH, Prop 84 Section 75022: Small Community Infrastructure Improvements for Chemical and Nitrate Contaminants	These funds may be used for grants for small community drinking water system infrastructure improvements and related actions to meet safe drinking water standards. Priority shall be given to projects that address chemical and nitrate contaminants, other health hazards and by	Minimum: 50% cost share Maximum: $5,000,000 per project.		

	whether the community is disadvantaged or severely disadvantaged. Special consideration shall be given to small communities with limited financial resources.			

Integrated Regional Water Management (IRWM)				
DWR, Prop 84 chapter 2 & Prop 1E Article 4: Integrated Regional Water Management (IRWM)	Projects that assist local public agencies to meet long-term state water needs, including delivery of safe drinking water, protection of water quality, and protection of the environment. For: Development/Revision of IRWM plans, or Implementation projects of IRWM plans.	$1,000M total $900M for Regional allocations North Coast: $37M Sacramento River: $73M San Francisco Bay: $138M San Joaquin River: $57M Central Coast: $52M Tulare Lake: $60M Lahontan: $27M Los Angeles Sub region: $215M Santa Ana Sub region: $114M San Diego Sub region: $91M Colorado River: $36M $100M for interregional allocations No Maximum grant amount. 25% minimum cost share.	All IRWM regions must be approved via the Regional Acceptance Process (RAP) prior to grant application submittal. RAP guidelines are currently in draft form. Original schedule called for RAP applications due in March with Regional acceptance in April 2009. Current schedule is not known. 1st round of implantation later in 2009.	Norman Shopay (916) 951-9218 nshopay@water.ca.gov
Groundwater				
CDPH, Prop 84 Section 75025: Groundwater Contamination	Grants to prevent or reduce contamination of groundwater that serves as a source of drinking water.	CDPH is currently working on development of these criteria based on Senate Bills SB X2 1 and SB 732 (signed into law on 9/30/08)	Applications not currently open; prior pre-application period closed on Sep 2008. But not for Prop 84 funds until after February 27, 2009.	<www.cdph.ca.gov/services/funding/Pages/Prop84.aspx> 946-449-5600 prop84@cdph.ca.gov

DWR, Prop 84: Local Groundwater Assistance Program	Groundwater studies, groundwater monitoring, groundwater management	Program funds: $6.4M Up to $250,000 per applicant	Next application period expected Spring/Summer 2009.	<www.grantsloans.water.ca.gov/grants/assistance.cfm> Harley H. Davis 916-651-9229 hdavis@water.ca.gov
SWRCB, Underground Storage Tank Cleanup Fund	Federal and state governmental entities are not eligible for reimbursement from the Fund. This program was created to provide a means for petroleum UST owners and operators to meet the federal and state requirements. The Fund also assists in a large number of small businesses and individuals by providing reimbursement for unexpected and catastrophic expenses associated with the cleanup of leaking petroleum USTs.	$1.5 million less the eligible claimant's applicable level of financial responsibility (or deductible).	Applications accepted on a continuous basis.	<www.waterboards.ca.gov/water_issues/programs/ustcf/> 1-800-813-FUND
Recycled Water				
SWRCB, Prop 13/50: Water Recycling Funding Program- Construction Grants	Grants provided for design and construction of water recycling facilities. All proposed projects must be placed on the SWRCB's WRCP Competitive Project List (CPL) and/or the SRF Priority List to be considered.	25% of the eligible construction cost up to $5M	Applicants accepted on a continuous basis.	<www.waterboards.ca.gov/recycling/construction.html> Claudia Villacorta 916-341-5735 cvillacorta@waterboards.ca.gov
SWRCB, Prop 13/50: Water Recycling Funding Program- Construction Grants	Grants are provided for facilities planning studies to determine the feasibility of using recycled water to offset the use of fresh/potable water from state and /or local supplies. Pollution control studies, in which water recycling is an alternative, are not eligible.	50% of eligible costs up to $75,000	Applicants accepted on a continuous basis.	
Storm Water / Stream & Habitat Restoration				
CA State Parks, Prop 1E: Habitat Conservation Fund Program	Eligible funding categories: Deer/Mountain Lion Habitat: Land acquisition Rare, Endangered, Threatened, or Fully Protected Species Habitat: Land acquisition	$2M Available No Min/Max; Recommended maximum $200,000 Required match of 50%	Applications deadline the first work day of October annually. Next application due date: Oct. 2, 2009	<www.parks.ca.gov/pages/1008/files/hcf_guide_2007_final_draft_5-15-07.pdf> Deborah Viney

	Wetlands Habitat Projects: Acquisition, enhancement, or restoration Anadromous salmonids and Anadromous trout habitat: Acquisition, enhancement, or restoration Riparian habitat: acquisition, enhancement, restoration Trails: acquisition or development of trails Program: Event or series of events intended to bring urban residents into areas with indigenous plants and animals			916-651-8572 dvine@parks.ca.gov or
CA State Parks: Land and Water Conservation fund	Acquisition or development of lands and facilities that provide or support public outdoor recreation.	No Min/Max; 2007 awards (13) ranged from $30,000 to $210,000 Required match of 50% Funds are divided: 60% for SoCal, 40% for NorCal	Applications deadline generally the first week of March annually. Local Agencies: Applicants **accepted on March 2, 2009** **State Agencies: June 1, 2009**	<www.parks.ca.gov/?page_id=21360> Betty Ettinger 916-653-7423
CA Wildlife Conservation Board: Various	The Wildlife Conservation Board's three main functions are land acquisition, habitat restoration and development of wildlife oriented public access facilities. Wildlife Conservation Board programs: California Forest Conservation Program (CFCP) California Riparian Habitat Conservation Program (CRHCP) Ecosystem Restoration on Agricultural Lands (ERAL) Habitat Enhancement and Restoration Program (General)		Applications accepted continuously.	<www.wcb.ca.gov/Pages/wcb_grant_information.asp> Dave Means 9156-445-1095 dmeans@dfg.ca.gov
DWR, Prop 84 Chapter 4: Feasibility Studies	Conduct feasibility-level investigations of proposed flood risk reduction projects to address short term flood control needs such as levee inspection and evaluation, floodplain mapping and improving the effectiveness of emergency response	$10M in FY 2007-2008 $10M in FY 2008-2009	TBD	<www.grantsloans.water.ca.gov/grants/irwm/integregio.cfm> Joe Yun 916-651-9222 DWR_IRWM@water.ca.gov
DWR, Prop 84 Chapter 5: Urban Streams Restoration Program	Eligible uses include: Creek cleanups, eradication of exotic or invasive plants, channel reconfiguration to improve stream geomorphology and aquatic habitat functions, acquisition of parcels critical for flood management, coordination of community involvement	Program funding: $9M Max/Min per project: $4M / $1M Eligible applicants: local public agencies, non-profit/citizens'	Next round: TBD	<www.grantsloans.water.ca.gov/grants/streams.cfm> Bill Hoffman 916-651-9626 whoffman@water.ca.go

	of projects. Eligible applicants: local public agencies, non-profit/citizens' groups. Partnership is required.	groups.		v
SWRCB, Prop 84: Clean Beaches Initiative Grant	Water quality improvement projects that protect beaches and coastal waters from pollution and toxic contamination, such as sewer collection system improvements or storm water runoff reduction programs. Two types of concept proposal applications: implementation projects and research projects	$90M; to be distributed as follows: $35M to assist local public agencies comply with the discharge prohibition into Areas of Special Biological Significance. $18M to the Santa Monica bay Restoration Comm. $37M to the Clean Beaches Initiative program. Potential award limits (based on 2007 proposals): $125,000 to $5M 20% matching for projects > $1M 15% match for projects < $1M Matching for DACs waived	First Round of solicitation closed January 23, 2009; Second round TBD.	<www.waterboards.ca.gov/water_issues/program/beaches/cbi_projects/index.shtml> Jennifer Toney jtoney@waterboards.ca.gov 916-341-5646
SWRCB, Prop 84: Storm Water Grant Program	Projects designed to reduce and prevent storm water contamination of rivers, lakes, and streams.	Program funds: $82M Award limits: $5M Solicitations on hold. Future updates will be available.	TBD; No projects have been awarded funding (program on hold).	<www.waterboards.ca.gov/water_issues/program/grants_loans/prop84/index.shtml> Erin Ragazzi 916-341-5733 eragazzi@waterboards.ca.gov
Federal				
U.S. Army Corps of Engineers-Section 206 Wetland Restoration Grants	For local government projects to restore aquatic ecosystems. Projects are evaluated to determine if they benefit the environment through restoring, improving, or protecting aquatic habitat for plants, fish and wildlife. Proposed projects are also reviewed to determine if they are technically feasible,	Maximum federal expenditure per project is $5M Project costs are shared 65% federal and 35% non-federal.	Continuously soliciting programs to carry out the program objectives	Doug Putnam, Continuing Authorities Program Manager 503-808-4733

	environmentally acceptable, and provide cost effective environmental benefits. Each project must be complete within itself and not part of a larger project.			
USEPA: Targeted Watersheds Grant Program	Designed to encourage community-based approaches and management techniques to protect and restore watersheds	Unknown future funding	TBD	
USEPA, Region 9: Wetland Program Development Grants	Provide eligible applicants an opportunity to conduct projects that promote the coordination and acceleration of research, investigations, experiments, training, demonstrations, surveys, and studies relating to the causes, effects, extent, prevention, reduction, and elimination of water pollution.	Total anticipated funding = $1.9M 6 to 15 awards anticipated and likely range from $50k to $350k EPA funding max = 75%	Applications due March 30, 2009	Suzanne Marr 415-972-3468 marr.suzanne@epa.gov
USBR CALFED Bay Delta		$50M as stated in ARRA	Continuously soliciting programs to carry out the program objectives	
USBR Title XVI	Recycled water feasibility investigations, preliminary engineering studies and research projects. Brackish water desalination is also considered	$126M as stated in ARRA	TBD	<www.usbr.gov/lc/socal/titlexvi.html> Dennis Wolfe dwolfe@lc.usbr.gov 951-695-5310
USBR Water for America: Plan for our Nations Water Future				
Investigations Program	For planning studies on specific water resource problems conducted by USBR on a geographically defined basis with state, local and federal partners		TBD	<www.usbr.gov/wfa/investigate.html> <www.usbr.gov/wfa/basin.html> William Steele 951-695-5310 wfa@do.usbr.gov
Basin Study Program	Comprehensive water supply and demand studies to assess the impact of increasing water demands. USBR will work with the state and local partners to initiate and perform 2 to 3 comprehensive water supply and demand studies in the west.	-50/50 cost sharing -2 year duration -to be conducted on major river basins and subbasins		
USBR Water for America: Expand, Protect and Conserve our Nation's Water Resources				
Water for America- Water Marketing and Efficiency Grants	For providing funding to implement water conservation and marketing programs (i.e.	Up to $300,000 per project -Minimum 50% non-federal cost	Application period closed 1/14/09	<www.usbr.gov/water2025/

	implement the plan developed under the SOR grant).	share -Completion of project in 2 years		<www.usbr.gov/waterconservation/> William Steele 951-695-5310 wfa@do.usb.gov
Water for America- System Optimization Review (SOR) Grants	For studies to evaluate means of saving water via conservation and to develop a plan that includes elements of water conservation, water management, water marketing and preventing conflicts over water.		Application period closed 1/28/09	
Water for America- Advanced Water Treatment Grants	For pilot or demonstration projects that will test the viability of advanced water treatment technologies.		TBD	
Water for America- Species of Concern Grants	For planning, design and construction proposals that will benefit federally listed species that are affected by a Reclamation facility or action or that benefit federal recognized candidate species		TBD	
Water Conservation Field Services program	For water conservation and efficiency improvements.	$100,000 max in federal funding per project	TBD	
USBR Water for America: Enhance our Nations Water Knowledge (Administered jointly by the USGS and USBR) – To assess water availability, increase new technologies in water planning and management, and to map the geologic and hydrogeologic framework of the Nation's aquifers				
National Streamflow Information Program	Support upgrade of data transmission radios at stream gages and Support regional-scale for selected watersheds and aquifers	$2M available $3M available	TBD; USGS is requesting feedback on program at <http://water.usgs.gov/wsi/stakeholder_feedback.html>	Eric Evanson USGS 609-771-3904 eevenson@usgs.gov
Groundwater Resources Program	To develop and apply methods to enhance the quality of water use information, groundwater data accessibility and undertake regional-scale groundwater studies	$3M available		
National Cooperative Geologic Mapping Program	To enhance geologic mapping, geophysics, and hydrogeologic knowledge of regions being studied	$1.5M available		
Local				
Metropolitan Water District: Local Resources Program	New and expansion of existing water recycling and groundwater recovery projects. Includes construction of new substantive treatment or distribution facilities. Existing projects or those that have commenced construction prior to application submittal are ineligible.	$250/AF maximum incentive reimbursement (Applications must be made through the applicant's respective Metropolitan member agency).	Project applications accepted on open and continuous basis until target yield of 174 KAFY is fully subscribed	<www.mwdh2o.com/index.htm#grants> (middle of page) Andy Hui 213-217-6557 ahui@mwdh20.com

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