

Statewide Priority	Description
Expand Environmental Stewardship	<p>Develop regional mitigation bank to allow for mitigation of habitat impacts related to reducing flow to IID drains as a result of conservation or recycling wastewater.</p> <p>When designing and implementing projects, improve or enhance environmental conditions whenever feasible.</p>
Practice Integrated Flood Management	Address stormwater and flood management needs of DACs, develop project and program components for improved regional management.
Protect Surface Water and Groundwater Quality	<p>Address TMDLs and actions to improve water quality, including programs to address the New River.</p> <p>Investigate the use of desalinated groundwater or drain water to reduce reliance on Colorado River supplies (in lieu use).</p>
Improve Tribal Water	No tribal interests were identified in region
Ensure Equitable Distribution of Benefits	<p>DAC cities and Community Based Organization representatives on RWMG</p> <p>Develop multi- benefit projects with DAC involvement and which meet water supply and quality needs and help communities comply with standards</p>

Approach to CEQA

The Imperial IRWMP involves conduct of feasibility and planning studies to define possible future actions which may be taken by IID, County of Imperial and/or the cities, and as such, the Imperial IRWMP does not require preparation of an EIR or Negative Declaration (CEQA Guidelines § 15262; PRC §21083). The IRWMP will consider environmental factors when evaluating alternatives and defining potential future actions. The intent is to avoid, minimize or mitigate identified impacts to the degree possible during planning, or to anticipate such impacts so that mitigation cost could be factored into the project costs and when comparing alternatives. The planning process is to develop the Imperial IRWMP. There are currently no actions which are ready for decisions, and the plan is to review a wide array of projects, programs and policies.

The planning process seeks to produce a plan that may be adopted by participating public agencies in the future. It will be determined at that time whether the Imperial IRWMP would have a legally binding effect on later activities, and would be subject to CEQA. The Imperial IRWMP, once completed, could define proposed actions for implementation, and those actions could be defined as projects that may have an effect on the environment.

Projects which may be ready to proceed which would be included in the Imperial IRWMP, and would therefore be eligible to seek or obtain funding under Proposition 84, will be required to have their own CEQA review completed by the lead agency sponsoring the project, prior to submission of any implementation grant application.

Work Plan

The IRWMP Work Plan will build on the existing work and body of knowledge in the Draft IID Plan and includes additional technical and policy analysis to answer questions and address issues identified by the Water Forum and to meet Imperial IRWMP objectives and CDWR Standards.

There is a large body of knowledge and analysis contained in the *Draft IID Plan* which will be used as a starting point to inform the Water Forum and work groups and initiate the dialog. The existing *Draft IID Plan* information will be updated with additional information for the Imperial Region, which is larger than the area in the *Draft IID Plan*, and will be expanded through additional technical and policy analysis that is needed to update or improve the prior work, address issues identified during the scoping process, provide facts and data to support decision-making and meet CDWR standards. The technical and policy analysis will be documenting in Technical Memorandum, and summarized in briefings and presentations to make it useful and understandable to stakeholders and the public.

The IRWM process is task and deliverable oriented to drive the schedule, but is intended to be flexible and allow the process to move forward through a series of incremental decisions.

The task deliverables and review process provide meeting milestones. The planning process and meeting schedule give the Water Forum successive opportunities to move quickly where consensus is achieved, or to slow the process to be more deliberative. Some actions may be set aside completely or moved forward in time to be addressed at a later time in the process or as part of the implementation plan. To meet the Imperial Region's needs and the IRWMP Standards, there are eight major work elements to aggregate twenty two tasks that result in interim deliverables and the final Imperial IRWMP.

The Water Forum and work groups will be lead through a series of carefully crafted meetings to build understanding, obtain interim decisions, gain consensus, and to incrementally building the Imperial IRWMP.

The Integrated Regional Water Management (IRWM) process is intended to both provide information to, and elicit information from, the Water Forum. The Consulting team will move the Water Forum and work groups through a carefully sequenced series of meetings to review the interim deliverables, understand the alternative choices, build consensus, and to make incremental decisions on the path to building and adopting the Imperial IRWMP. Water Forum/RWMP participants will seek consensus on:

- Definition of the problem, purpose and need for the Imperial IRWMP, and definition and adoption of Imperial IRWMP goals and objectives
- Review and selection of water management strategies and overall approaches to integrating projects and programs
- Project submission and review process
- Approach to updating and amending the IRWMP and project lists
- Development of the project evaluation and ranking criteria
- Projects, demand management opportunities, and programs
- Project ranking and priorities
- Policy alternatives

- Funding strategies
- Long-term governance and oversight mechanisms
- Final content of the IRWMP

The governance and oversight process has been defined in the Water Forum Charter which was adopted by the Water Forum on September 9, 2010 and has been forwarded to stakeholders for adoption.

The conceptual decision process is shown below. Under the governance structure defined in the adopted Water Forum and RWMG Charter, the Water Forum provides ‘the big tent’ for stakeholder and public involvement, seeking consensus (collaborate, communicate, and cooperate), providing input and making decisions during development of the Imperial IRWMP. The process basically is to provide briefings to the Water Forum on key topics or analysis results, then delegated activities to one of the work groups for review and comment, and more in-depth discussion. Work Group findings and recommendations will then be brought back to the Water Forum for acceptance and consensus decisions. When Consensus cannot be achieved, the Regional Water Management Group (RWMG) will negotiate a solution and if necessary, vote to take action. The IRWMP will undergo public review and comment prior to adoption by each of the public agencies involved in the Water Forum.

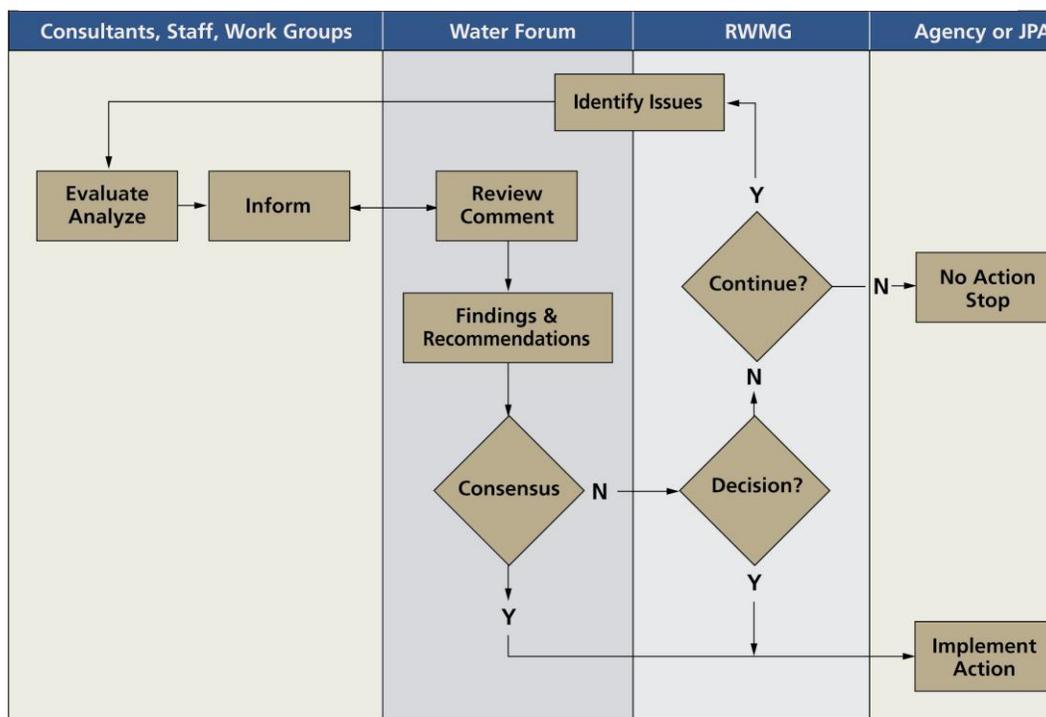


Figure 4 IRWMP Actions and Decisions

The Imperial IRWMP will provide a roadmap for the future which identifies project, policy and program priorities. The Imperial IRWMP implementation plan will document roles and responsibilities; schedules for near-, mid-, and long-term actions; and funding mechanisms and requirements.

The final Imperial IRWMP will identify regional priorities, funding mechanisms and sources; project implementation schedules, and responsibilities. Ultimately, as defined in the Water Forum and RWMG Charter, the elected bodies are to adopt the Imperial IRWMP.

Planning is the art and science of deciding what to do. The Water Forum process is intended to address and resolve complex issues in the Imperial Region. The planning process was designed to be dynamic and flexible to accommodate negotiations and adapt to the evolving Water Forum dialog. The process starts with definition of conceptual solutions, successively adding greater levels of detail, ultimately defining specific actions to be integrated and implemented. Projects may be at different stages of development (appraisal/formulation, pre-feasibility, feasibility, design, environmental review, etc.). New or amended policies and programs may be developed to resolve conflicts (apportionment, benefits/costs, financing), and these will require successive levels of development as the Water Forum moved through the process of developing and evaluating alternative concepts (project, policy, programs), and taking ideas from concept to firmly defined policy or program actions. The Water Forum is undertaking challenging tasks some more complex than others, and it is hard to anticipate how far the Water Forum is ready to move to integrate actions at regional scale, find common ground, and move forward. For example, a wetlands mitigation program has been identified as a Water Forum priority. The efforts will define concepts, develop draft and final policies and project alternatives, and seek to select a specific project(s). If controversy is encountered and consensus cannot be reached, for example, between concept and selection of alternatives, the Water Forum may decide to document the concept, provide guidelines for the next steps and include what was doable in the Imperial IRWMP implementation plan, laying a foundation for an ongoing process and setting priorities to action for subsequent action. The final deliverable will define those actions that are 'ready to proceed' and next steps for those actions that are evolving.

Tasks

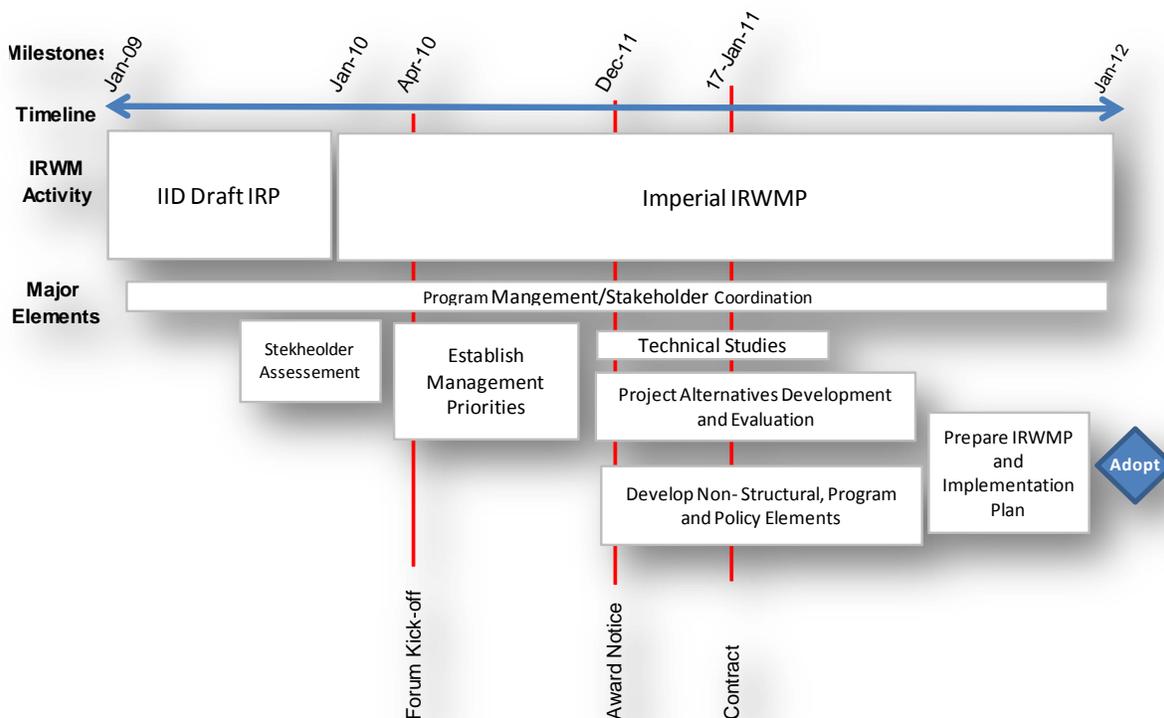
The Work Plan is broken into Major Elements as shown in Figure 5. Tasks are listed below. The purpose, approach, subtasks and deliverables are described. The budget is presented in Attachment 4. The detailed schedule is shown in Attachment 5.

Program Management Stakeholder Coordination

This work element is composed of two tasks:

- Program Management and Strategic Contract and Client Coordination
- Water Forum/RWMG Coordination, Facilitation and Outreach

Figure 5 Imperial IRWMP Work Plan Element



Program Management and Strategic Contract and Client Coordination

The Program Consultant will oversee program management to guide development of the Imperial IRWMP. This includes coordination of the consulting team and staff; strategic consultation and communications with the Contract Administrator (IID); bi-monthly conference calls with the Contract Administrator and/or Program Management Team (PMT); preparation of contracts, subcontracts, task orders invoices, and progress reports; and budget and schedule tracking, monitoring, and reporting. The Program Consultant will:

- Communicate program deliverables
- Resolve schedule issues and coordinate deadlines for project team
- Provide for quality control of program deliverables
- Review consultant team reports and documents
- Coordinate review of reports and work products with the Contract Administrator, Program Management Team, and stakeholders (Water Forum/RWMPG)
- Respond to program inquiries as needed

Tasks include:

- 1.1. Consulting team and staff coordination and meetings
- 1.2. Prepare budget and work plan for task orders and subcontracts
- 1.3. Quality control of program deliverables; review consultant team reports and documents
- 1.4. Prepare invoices and monthly status reports
- 1.5. Quarterly reports to CDWR

Deliverables: Subcontracts, monthly invoices and progress reports, DWR Quarterly Reports.

2. Water Forum/RWVG Coordination, Facilitation and Outreach

- 2.1. IWRMP Public Workshop Kick-off Meeting. The purpose of this meeting is to inform stakeholders about the IRWMP process. This will be a noticed public meeting. The overall IRWMP program will be introduced, the Imperial Region will be described, stakeholder involvement, roles and responsibilities defined. The summary of opportunities, issues and conflicts will be provided and draft goals and objectives presented. The public involvement process will be described along with the scope, schedule, and budget.
- 2.2. Convene the Water Forum and PMT. The purpose of the early meetings is to establish and convene the Water Forum and Program Management Team. It is anticipated that this could take up to three meetings. This includes:
 - Reviewing the results of the stakeholder assessment
 - Reviewing the Imperial IRWMP RAP document
 - Developing ground rules and establishing a meeting schedule
 - Forming work groups
 - Finalizing the governance structure, opportunities and issues; goals and objectives; resolving conflicts
 - Reviewing the work plan and schedule
 - Reviewing CDWR IRWMP requirements and standards
 - Refining the stakeholder list
- 2.3. Client Coordination, Bi-monthly Conference Calls. This includes conference calls with the PMT and Contract Administrator.
- 2.4. Monthly Water Forum and Work Group Meetings. The purpose of this task is to plan, coordinate and facilitate Water Forum, work group and RWVG meetings. Consulting Team will document the results of work group meetings. Meeting notes will focus on documenting follow-up action items, decisions, area of agreement or disagreement, and major discussion points. Work groups would be developed and assigned tasks by the PMT Team. Program Consulting Team costs for work group support are included in specific task.

It is assumed that this will take two days per trip for the Program Consultant and Facilitator; IID will prepare Water Forum/RWVG meeting notes for review and comment by Program Consultant and Facilitator; work groups will be scheduled the day before or day after the Water Forum or RWVG meeting; and that costs for work group meetings not included in the current budget would be paid from the contingency budget as directed by the Contract Administrator. It is assumed that should more frequent work group meetings be required, the Program Consultant and Facilitator would participate via conference call.

Work groups will be configured and coordinated through the PMT with logistical support provided by the Program Consulting Team. Membership will be from Water Forum/RWVG

delegates or public agency staff with unique and specific expertise in the areas to be discussed and analyzed. Program Consulting Team members with appropriate knowledge and skill would be assigned to coordinate and participate in the work group; prepare needed advance materials for review; and develop agendas, presentations, and meeting notes.

- 2.5. Outreach and Public Meetings. The purpose of this task is to support additional outreach to stakeholder groups, DACs, or to hold public meetings/workshops to engage the community. This could include attendance at meetings of the IID Board of Directors, County Board of Supervisors, City Councils or other stakeholder groups that require additional support and outreach (e.g., Farm Bureau, Imperial Valley Economic Development Commission, Imperial Valley Council of Governments, etc.). It is anticipated that the Program Consultant will attend up to eight (8) additional meetings per direction of the Contract Administrator.
- 2.6. Produce Public Affairs Materials. The purpose of this task is to produce public affairs materials as requested by the Contract Administrator. Such information is intended to support Water Forum/RWMP members in taking information back to their groups to explain the IRWMP process and results. Materials to be produced are not firmly defined at this time, but could include presentations, brochures, and pamphlets; briefings for the Web site; and opinion-editorial pieces for the newspaper. It is suggested that some materials be produced in both English and Spanish.

Deliverables: Agenda, presentation, meeting notes; list of stakeholders and proposed Water Forum membership; ground rules and operating principles; brochures and presentations.

Identify Needs & Establish Management Priorities

This work element is composed of the following tasks:

- Update Issues & Conflicts, Goals & Objectives, Governance
- Review and Update Supply/ Demand Analysis
- Review Resources Management Strategies (RMS)
- DAC Outreach and Needs Analysis, Develop Preliminary List of Projects
- Prepare Revised Work Plan
- Develop IRWMP Chapters 1-6

3. Update Issues & Conflicts, Goals & Objectives, Governance

To lay the foundation for agreement and practicable solutions, it is critical that Water Forum/RWMP members understand the nature and extent of the opportunities, conflicts and issues facing the Imperial Region. The objectives should seek to resolve the identified opportunities, conflicts and issues.

Preliminary purpose and need, and goals and objectives for the Imperial IRWMP have been presented in the Imperial RAP document and in the *Draft IID Plan*; these will be used as a starting point for consideration by the Water Forum/RWMP. The stakeholder process will result in review and comment

on the conflicts and issues to be addressed; consensus and common understanding regarding problems facing the Imperial Region to be resolved by the Imperial IRWMP; and refinement and adoption of the Imperial IRWMP goals and objectives. Each of the elected bodies (IID Board, County Supervisors, cities, and special districts) will be asked to review the Imperial IRWMP mission, goals, and objectives statement and the Charter and to adopt resolutions of support for the Imperial IRWMP; stakeholders representing non-elected bodies will be asked to do the same through action of on the part of their established governance structure, also accepting the Water Forum and RWMG Charter. Obtaining these resolutions of support and attending meetings of their representative bodies will be the responsibility of Water Forum/RWMG representatives. The objectives are critical to the screening of alternatives. Revised planning objectives will be based on the *Draft IID Plan*, local land use planning documents, such as Urban Water Management Plans and City or County General Plans, and Water Forum and work group inputs. Task activity includes:

- 3.1. Review issues and conflicts to be addressed by the Imperial IRWMP.
- 3.2. Draft and final mission, goals and objectives. Coordinate Policy Work Group.
- 3.3. Develop IRWMP Governance. This includes developing the draft and final Water Forum and RWMG Charter to define the decision-making process, and the governance and management structure. Coordinate Charter Work Group.
- 3.4. Draft resolutions for Water Forum. This includes adoption by Water Forum of adopt the governance structure and the mission, goals and objectives, and for a resolution of support for the Water Forum stakeholder's governing bodies to adopt.

Deliverables: Prepare presentations on opportunities, issues and conflicts; purpose and need; mission, goals and objectives for use at Water Forum when presenting to other elected bodies; draft and final mission, goals and objectives; draft and final Water Forum and RWMG Charter; draft and final resolution of support for Imperial IRWMP to be adopted by stakeholder groups (County of Imperial, Cities, IID, Farm Bureau, etc.).

4. Review and Update Supply/Demand Analysis

The purpose of this task is to achieve common understanding of the constraints and opportunities inherent in the Imperial Region water supply from the Colorado River and from the underground aquifer in the Ocotillo and West Mesa area; achieve consensus on planning assumptions and methods for quantifying future demands; and create understanding of the water budget, including potential uncertainties and areas of risk to Imperial Region water supplies. Program Consultants will work with the Water Forum and related work groups to evaluate available surface water from the Colorado River and local groundwater sources so that constraints are well documented and understood. Quantification of current demands and forecast of future demands for the Imperial Region will be updated and presented with the water budget. This will define the gaps between the anticipated demand and available supply, help size the potential solutions and lay a foundation for comparing capital projects that could close the gap with institutional solutions like developing a water exchange internal to the Imperial Region.

A Demand Work Group will be formed to provide detailed technical review and comments and to make findings and recommendations to the Water Forum. The work product will be discussed at two Demand Management Work Group meetings. Work group input will be used to update or prepare portions of the Imperial IRWMP. Consultants will document Demand Management Work Group meeting results, issues, consensus and divergent opinions, and results and recommendations for consideration by Water Forum. As the work group makes its findings and recommendations and completes the tasks, the results will be passed to the Water Forum for discussion and action. Task and activities includes:

- 4.1. Draft of Updated Technical Memorandum - Current and Forecasted Demand to include demand forecasts for areas outside IID's service area which are within the Imperial Region.
- 4.2. Prepare Supply, Demand and Water Budget Presentation.
- 4.3. Demand Work Group Meetings - Update Current and Forecasted Demand and prior water supply analysis.
- 4.4. Prepare work group meeting results and briefing for Water Forum
- 4.5. Prepare Final Updated Technical Memorandum Current and Forecasted Demand. This will include the Imperial Region. Incorporate Demand Work Group and Water Forum comments.

Deliverables: Draft and Final Updated Technical Memorandum 2.2- Current and Forecasted Demand.

5. Review Resources Management Strategies (RMS)

The purpose of this task is to introduce the Water Forum to the wide array of resource management strategies available to the Imperial Region. Program Consultant will update the Review Resources Management Strategies (*Draft IID Plan, Vol. 2, Appendix A*) to apply to the Imperial Region, consistent with the revised CDWR resources management strategies in the 2009 CWP Update.

The intent of the RMS is to encourage diversification of water management approaches as a way to mitigate for uncertain future circumstances and comply with PRC §75026 (a) and CWC §10541(e)(2). An IRWM Plan must consider each RMS in the CWP Update 2009.

DWR Guidelines (page 24)

The RMS will receive a preliminary ranking. Review by the Water Forum and the Project Work Group will be coordinated to provide the basis for project, program and policy formulation and integration. The review will support establishing IRWMP priorities; the planning framework to integrate the mix of project, policy and program alternatives and to develop evaluation, screening, and ranking criteria. During the scoping and review of RMS and DAC outreach, a preliminary list of potential stakeholder projects will be compiled.

A presentation on the RMS will be made to the Water Forum to initiate more detailed review by the work groups. The Demand Work Group will review RMS that relate to demand management, and the Project Work Group will review all others. The work groups will make findings and recommendations regarding the value of each of RMS to the Imperial Region. These findings and recommendations may take the form of policy statements which provide overall direction for both plan development and

implementation. Ultimately, the information will be used by the Program Consultant to produce an updated appendix and the resources management chapter in the Imperial IRWMP.

- 5.1. Update the existing Project Scoping Report, Review of Resource Management Strategies (*Draft IID Plan, Vol. 2, Appendix A*).
- 5.2. Prepare RMS Presentation and Briefing.
- 5.3. Coordinate Project Work Group Meetings to review RMS. Project Work Group is tasked with reviewing, prioritizing and integrating the Supply Augmentation, Operations Efficiency, Improve Water Quality, and Flood Management RMS, along with RMS not recommended for inclusion in the Imperial IRWMP.
- 5.4. Coordinate Demand Work Group Meetings to review RMS. The Demand Work Group will review and comment on the demand management related RMS for urban, agricultural and industrial conservation.
- 5.5. Develop Work Group Findings and Recommendations on RMS. This briefing will summarize the results of the Demand and the Project work groups' review of the RMS and serve to document their findings and recommendations.
- 5.6. Prepare final Scoping Report, Review of Resources Management Strategies as Appendix A to the Imperial IRWMP.

Deliverables: RMS Briefings and Presentations to Water Forum (two); work group agendas, meeting notes; Draft and Final Scoping Report, Review of Resources Management Strategies as Appendix A to the Imperial IRWMP; Preliminary Project List.

6. Disadvantaged Community Outreach and Needs Analysis, Develop Preliminary List of Projects

Outreach to disadvantaged communities (DACs) has been identified as a high priority. The purpose of the task is to provide outreach to the disadvantaged communities to identify water supply, water quality and stormwater management needs; to provide meaningful participation; to include objectives and strategies critical to involving DACs and that will help them in recommending and pursuing projects and programs in their community; to document their existing plans and to develop a preliminary list of potential projects for the DACs. The purpose is also to evaluate the management, financial and engineering capacity and support requirements of the DACs so that they can effectively participate in the IRWMP process. This task will help orient the DACs to CDWR requirements and funding opportunities and to the IRWMP process to identify; and to evaluate and rank their project priorities. Projects they have in the queue will be reviewed as will additional support needed to get their projects ready to proceed (e.g.; additional feasibility study, preliminary design; environmental review; etc) to the point where they can be integrated into the Imperial IRWMP. Tasks activities include:

- 6.1. Identify Points of Contact for special districts providing water and wastewater services. This involves building a database of DAC and special district representatives and using this to

target outreach to communities in order to increase the number of DAC representatives and residents participating in the Imperial IRWMP process.

- 6.2. Coordinate with DAC and Special District Representatives. Outreach activities will be designed to provide awareness of and to encourage participation in the IRWMP process.
- 6.3. Develop interview questions and formats for project review and to assess needed support.
- 6.4. Schedule and Conduct Interviews. Coordinate with DACs and stakeholders involved in the IRWMP process; collect preliminary data specific to each agency's drinking water, stormwater and wastewater facilities that will be consolidated; provide preliminary data to each entity in advance of the interview. Interviews would be conducted to gauge current conditions and identify priority needs.
- 6.5. Interview Information Collection. Information garnered from each entity will be consolidated to document baseline and/or existing conditions for current systems and rates. This includes drinking water treatment, wastewater treatment and stormwater facilities and identification of issues. Document issues and needs.
- 6.6. Develop Preliminary List of DAC Projects or Project Concepts. Based on information collected and/or provided by the DAC contact, build a preliminary list of DAC projects and assess those that are ready or nearly ready to proceed consistent with IRWMP objectives and CDWR IRWMP funding criteria.
- 6.7. Prepare Technical Memorandum, DAC Outreach and Needs Analysis. This memorandum will summarize existing conditions for DACs and highlight needs and commonalities amongst the stakeholders. This information will be presented to the Project Work Group with the intent of identifying viable regional projects.
- 6.8. Project Work Group Meeting - DAC Needs, Regional Projects Review and Discussion.

Deliverables: Bibliography of planning and engineering studies for DAC related facilities; list DAC water and wastewater providers; Preliminary DAC Project List; Technical Memorandum, DAC Outreach and Needs Analysis.

7. Prepare Revised Work Plan

The purpose of this task is to revise the work plan in cooperation with the PMT based on input from the Water Forum and work groups, review of the RMS, DAC outreach and final CDWR Guidelines. It is assumed that the scope, schedule, and budget will be updated once the CDWR guidelines have been released and the stakeholder assessment has been completed.

Deliverable: Revised Work Plan for IRWMP.

8. Develop IRWMP Chapters 1-6

The purpose of this task is to prepare the first part of the IRWMP using input from the first part of the planning effort. This will allow early review of the final draft of the issues and conflicts, goals and objectives, RMS to be applied, integration and planning framework and preliminary decisions.

Deliverables: IRWMP Chapters 1-6, related technical appendices documenting technical work.

Supporting Technical Studies

This work element is composed of two tasks:

- Climate Change Analysis
- Regional Economic and Financial Evaluation, Evaluation of Impacts and Benefits

9. Climate Change Analysis and Strategy

This purpose of the task is twofold; 1) account for regional climate change and assess vulnerability of the Imperial Region, including review of each of RMS and the potential to adapt to climate change, and 2) evaluate the effects of IRWMP projects on greenhouse gas emissions (GHG). CDWR is expected to provide additional climate change guidelines in early January 2011. This scope seeks to anticipate the pending guidelines to the degree possible.

The IRWM Plan must address both adaptation to the effects of climate change and mitigation of GHG emissions.

DWR Guidelines (page 24)

- 9.1. Climate Change Research and Scoping. Research and review different approaches to the IRWMP climate change standard, including review of CDWR climate change bibliography, CEC documents, and information on quantitative and qualitative methods. Develop scope and approach.
- 9.2. Quantifying Projected Changes in Regional Climate. This will occur at two levels within the Imperial Region. First changes in temperature or rainfall within the region could affect water demand. Second, changes within the Colorado River Basin that affect the Colorado River flows could impact Imperial Region water supplies. Program Consultant will review and summarize climate projections from state and federal sources. This will include identification of climate indicators that are most likely to change in the Imperial Region based on findings of the Intergovernmental Panel on Climate Change (IPCC), the scientific intergovernmental body tasked with evaluating the risk of climate change assessment methods, and other key studies, including federal and State interpretations of regional downscaling studies. Relevant climate indices will be developed to include water supply, water demand, ecosystem, and water hazards, and a qualitative and/or quantitative matrix will be developed for assessing vulnerability in the Imperial Region. As discussed below, vulnerability will be assessed for the

RMS to be applied, and at the project level in terms of how a given RMS or project would help the Imperial Region respond to uncertainty and adapt to climate change.

The U.S. Bureau of Reclamation *Colorado River Basin Water Supply and Demand Study*⁹ will define current and future imbalances in water supply and demand in the Colorado River Basin, including potential effects of climate variability and climate change. This USBR study will assess the capability of existing and proposed infrastructure and operations to meet future demands and water supply challenges, and identify and quantify potential opportunities to address imbalances in supply and demand in order to best meet future challenges. A report describing findings from the system reliability analysis is due in April 2011. Progress and interim deliverables will be tracked, and the information will be assessed and utilized to the degree possible to meet Imperial IRWMP needs. The vulnerability assessment will be used to evaluate the Imperial Region's ability to meet its planning goals and objectives in light of the qualified climate change effects both on climate patterns in the Imperial Region and as a result of potential changes in Colorado River flow.

- 9.3. Assess Vulnerability and Adaption Strategy. The goal is to incorporate climate change in the IRWMP process so as to reduce vulnerability and prioritize the RMS and projects that would help the Imperial Region adapt to climate changes. The assessment of vulnerability and adaptability will occur at two levels, the RMS level and the project review level. First, a relative comparison of RMS will be conducted to evaluate the relative ability of the selected strategies to support the region in responding to potential climate changes. Program Consultant will work with the Water Forum to identify whether climate change would require an adjustment of priorities to Imperial IRWMP goals and objectives. This analysis will help to establish climate change project screening and evaluation criteria. Second, the climate change criteria that are developed during the project ranking and evaluation process will be applied to determine each project's relative ability to support a climate change adaptive management strategy for the Imperial Region.
- 9.4. Develop Greenhouse Gas Baseline and Project Evaluation Methods. The purpose of this task is to establish a credible baseline for current GHGs against which the potential GHG impacts of options can be evaluated. Program Consultant will develop *Imperial Region Water-Energy Profile*. Using the data and tools that Program Consultant (GEI) developed for the California Public Utilities Commission's water-energy studies, develop a region-wide annual profile that identifies primary water resources by agency, infrastructure needed to support existing water customers, and both an energy use quantity and time-of-use profile for water agencies in the region. Separate profiles will be prepared for various segments of the water use cycle, since that framework is already understood and generally accepted by the CEC, CPUC, CDWR, SWRCB and other state agencies. In addition, energy intensities will be documented of short-

⁹ <http://www.usbr.gov/lc/region/programs/crbstudy.html>