



**Southern California Water Recycling
Projects Initiative**

Phase II Plan of Study

Cooperative Effort Funded And Managed By:

The United States Bureau of Reclamation

In Partnership With:

Big Bear Area Regional Wastewater Agency
California Department of Water Resources
Central Basin and West Basin Municipal Water Districts
City of Los Angeles
City of San Diego
Los Angeles County Sanitation Districts
Metropolitan Water District of Southern California
Orange County Sanitation District
San Diego County Water Authority
Santa Ana Watershed Project Authority
South Orange County Wastewater Authority

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Abbreviations and Acronyms

AFY	Acre-Foot per Year
CSDA	California Special Districts Association
CWA	Clean Water Act
DHS	California Department of Health Services
DWR	California Department of Water Resources
DWR-DPLA	California Department of Water Resources, Division of Planning and Local Assistance
EPA	U.S. Environmental Protection Agency
FARECal	Finance Authority for Resource Efficiency of California
FY	Federal Fiscal Year
HUD	U.S. Housing and Urban Development Agency
IEMT	Initiative Executive Management Team
Initiative	Southern California Water Recycling Projects Initiative
MWD	Municipal Water District
MWDSC	Metropolitan Water District of Southern California
NSF	National Science Foundation
P.L.	Public Law
PPIS	Pollution Prevention Incentives for States
Reclamation	U.S. Bureau of Reclamation
RWDF	Recycled Water Development Fund
RWQCB	California Regional Water Quality Control Board

SAWPA	Santa Ana Watershed Project Authority
SCCWRRS	Southern California Comprehensive Water Reclamation and Reuse Study
SDCWA	San Diego County Water Authority
SOCWA	South Orange County Wastewater Authority
SWRCB	California State Water Resources Control Board
TMDL	Total Maximum Daily Load
USDA	U.S. Department of Agriculture
WAG	Watershed Assistance Grant

1 Purpose and Needs

1.1 Background

Water supply is of vital importance to southern California due to its location in a semi-arid region, reliance on imported water from the Owens Valley, State Water Project and the Colorado River, and continued population growth. New water supplies need to be developed to continue to meet the demands of this growing area. However, legal, political, institutional, and environmental barriers make the development of new sources of water supply difficult. Due to these factors, existing water supplies must be conserved and utilized to the fullest extent. Increasing demands and limited supplies of fresh water have led water policymakers at the Federal, state and regional southern California levels to realize that the water supply of the area must be diversified to ensure reliability. One of the most dependable, abundant and most underused supplies of water comes from recycling the precious water that already exists within the community. Recycled water is reclaimed from municipal, industrial, or agricultural activities that has been treated to a quality suitable for beneficial uses. Recycled water can be used for a number of applications, including irrigation, industrial processes, groundwater recharge, and environmental enhancement.

The geographic location, population growth, and limited local water supplies make the southern California region mostly dependent on imported sources of water. Currently, southern California is faced with reductions in the amount of water supply it obtains from the Colorado River and northern California sources imported through the State Water Project aqueducts. The allocation of Colorado River water to southern California may soon be reduced due to increased demands for water in Arizona and Nevada who are now requiring their shares of water that southern California has been using for many years. In addition, southern California's allocation of State Water Project water is also being reduced to meet environmental needs in the San Francisco Bay/ Sacramento- San Joaquin Delta and the tributaries to the Delta. The reduction of the imported supplies, coupled with population

growth in the region, make water conservation measures, including water recycling, imperative.

The U.S. Bureau of Reclamation (Reclamation) has been assisting in the planning and development of water recycling projects for alternative water supply since 1991 when the Secretary of the Interior announced the Water Recycling Initiative for Southern California. The initial phase of this effort, the Southern California Comprehensive Water Reclamation and Reuse Study (SCCWRRS), was completed in 2000. This study, described in Section 1.1.1, focused on developing a long-range strategy for effective integration of fresh and recycled water management programs in the southern California coastal and inland valley areas, as well as a Short-term Implementation Plan. Reclamation is currently administrating the Southern California Water Recycling Projects Initiative (Initiative), which is outlined in this Phase I Report and Phase II Plan of Study. The Initiative is a multi-year planning study established to assist local agencies in continuing the work begun by SCCWRRS, as well as addressing additional regional issues that may influence water recycling in southern California over the coming years.

1.1.1 Southern California Comprehensive Water Reclamation and Reuse Study

In 1993, Reclamation, in conjunction with eight state and local agencies, adopted a Plan of Study to evaluate the feasibility of regional water recycling in southern California. The Plan of Study called for a 6-year comprehensive effort to examine recycled water opportunities from a regional perspective and to develop a long-term planning strategy to enlarge recycled water supplies for southern California. This activity was authorized by Title XVI of Public Law (P.L.) 102-575, which directs Reclamation to conduct a study to assess the feasibility of a comprehensive water recycling and reuse system in several areas including southern California. The need for such a study was based on the premise that the increased use of recycled water will reduce pressures on imported water supplies and provide a continuous and dependable local source of supplemental water for southern California.

This multiyear study was completed in 2000 with the report submitted in early 2001. The study was successful in bringing together a number of local and regional entities interested in southern California water recycling. These local and regional entities were led by an

Executive Management Team, which was composed of the major funding partners for the study. This committee was the basis for the non-Federal partnership of state and local water agencies that has made the financial commitment to conduct this comprehensive regional planning effort. These eight agencies represent a variety of water recycling interests in southern California and include the following:

- California Department of Water Resources (DWR)
- Central Basin and West Basin Municipal Water District (MWD)
- City of Los Angeles
- City of San Diego
- Metropolitan Water District of Southern California (MWDSC)
- San Diego County Water Authority (SDCWA)
- Santa Ana Watershed Project Authority (SAWPA)
- South Orange County Reclamation Authority (now South Orange County Wastewater Authority [SOCWA])

The SCCWRRS was organized into Phase IA, Phase IB, and Phase II. During Phase IA, the cost-sharing partners, along with Reclamation, developed an extensive database of existing and potential recycled water demands and supplies, land use, environmental assets, and local water and wastewater agency recycling plans. During Phase IB, a set of sophisticated planning tools was developed with which to analyze the data and evaluate the benefits of regional water recycling strategies. During Phase II, the cost-sharing partners opened the planning process to all southern California water and wastewater agencies, to work together in partnership using the tools and database from Phase I. The product of Phase II of the SCCWRRS was the generation of a list of 34 short-term projects for implementation by 2010, as well as the development of a long-term regional recycling strategy for projects through 2040. The short-term projects have a total potential yield of approximately 451,500 acre-feet per year (AFY) of additional recycled water. This quantity of water represents a significant commitment to recycling by southern California water and wastewater agencies. The long-term analysis determined that an additional 296,300 AFY of new demand could potentially be satisfied by the year 2040.

1.2 Goals and Objectives of the Southern California Water Recycling Projects Initiative

1.2.1 Study Authorization

The Southern California Water Recycling Projects Initiative is a multiyear planning study commencing in Federal fiscal year (FY) 2000. The project is funded as part of the Southern California Investigations Program and is managed out of Reclamation's Southern California Area Office. The Initiative is funded on a 50/50 percent cost sharing basis between Reclamation and 10 local agencies and the State of California Department of Water Resources, who together form the Initiative's Executive Management Team (IEMT). Table 1.1 lists the 12 members of the IEMT. The purpose of the IEMT is to formulate, guide, and manage the technical activities of the project.

TABLE 1.1
LIST OF IEMT MEMBERS

Big Bear Area Regional Wastewater Agency	Metropolitan Water District of Southern California
California Department of Water Resources	Orange County Sanitation District
Central Basin and West Basin MWD	San Diego County Water Authority
City of Los Angeles	Santa Ana Watershed Project Authority
City of San Diego	South Orange County Wastewater Authority
Los Angeles County Sanitation Districts	U.S. Bureau of Reclamation

The Initiative is composed of two major components, a project-specific work component and a regional component. The project-specific work component consists of identifying recycled water planning projects, including projects developed as a result of the SCCWRRS effort. After a list of projects was identified, project descriptions and type of services required for the projects were developed. The regional component consists of developing scopes of work for a public information and education program, financial support opportunities, and for regional concerns, including water quality, that need to be addressed.

1.2.2 Objective of the Study

The goal of the Initiative is to build upon the regional coalition and work begun during SCCWRRS. The SCCWRRS cooperative effort, which was the starting point for the project-specific work component, generated a significant commitment to recycling by southern California water and wastewater agencies. Through the Initiative, Reclamation continues to facilitate the regional partnership as well as investigate further the recycled water projects developed during the SCCWRRS.

The primary objective of the Initiative is to continue the work begun during SCCWRRS to assist local water and wastewater agencies in the final planning and documentation leading to implementation of their projects. The specific projects will include projects identified in SCCWRRS and new projects identified by local agencies since SCCWRRS has been completed. The project specific support will be an ongoing effort throughout the Initiative Study. In addition, the Initiative will assist the local agencies in addressing regional concerns including:

- Development of a regional water quality issues analysis to investigate the impacts of water recycling in the 21st century.
- Development of a program addressing public perception and education issues regarding recycled water and its uses.
- Development of a source list and a guide outlining how to apply for financial/funding options for recycled water projects.

2 Plan of Study

2.1 Introduction

Phase II of the Initiative consists of the implementation of the proposed work identified during Phase I. Phase II is broken down into yearly components based on the Federal fiscal year. Phase II also relies on the methodologies developed during Phase I for identifying and allocating resources to the project-specific and regional components. The Phase II work includes five major tasks:

- Implementation of project-specific work
- Implementation of regional work
- Continuation of budget allocation for project-specific work
- Continuation of program budget allocation for the Initiative
- Administration of Initiative Phase II work identified in the Plan of Study

The following sections provide scopes of work for each of these tasks as part of the plan of study. It is important to note that the Initiative is funded for a specific Federal budget year only. Budget allocations in future years cannot be explicitly identified until Reclamation's budget has been approved for that fiscal year.

2.2 Implementation of the Project-Specific Work

The project-specific work consists of entering into cooperative agreements with the project sponsors, monitoring and reporting on the progress of the project, and reviewing deliverables. In addition, the budget allocation procedure may need to be revisited if agencies are incapable of meeting the deadline for obligation of Reclamation funds within a specific fiscal year or if additional Federal funds are obtained.

2.2.1 Task 1: Entering into Agency Agreements

This task consists of meeting with the project sponsoring agencies and explaining the agency agreement package, working with the agencies to develop the cooperative agreement, ensuring that all necessary informational attachments are included in the agreement, and finalizing the agreement. The agreement includes a project schedule as well as additional mechanisms to track the progress and status of the project. In addition, verifiable documentation of the project sponsors' funding commitment to the project must be supplied. The agency agreements are contractually binding documents between Reclamation and local agencies whose projects have been allocated funding as part of Phase I of the Initiative or in future year allocations.

2.2.2 Task 2: Monitoring/Reporting

This task consists of monitoring and reporting the status of the project-specific work. In addition, project status information will be presented quarterly to Reclamation and the IEMT to keep abreast with the progress of the projects. The monitoring and reporting task enables Reclamation to verify that Federal funds are being utilized for the items defined in the project-specific cooperative agreement. Each cooperative agreement will provide an explicit mechanism explaining how the project will be tracked, as well as a breakout of the financial responsibilities of Reclamation and the project sponsor.

2.2.3 Task 3: Review of Deliverables

This task consists of the reviewing the deliverables of the project sponsor. Deliverables include elements such as revisions to the project schedule and budget, project progress reports, project progress payment requests, and final reports on planning activities. Reclamation, with the IEMT's assistance, will review and approve required deliverables.

2.3 Implementation of Regional Work

The regional work is defined as actions that will benefit all local agencies and the IEMT members in the implementation of recycling in southern California. The IEMT considered many issues that may need to be addressed during the implementation of water recycling

projects, including water quality impacts, methods to address public and regulatory agencies' concerns, funding considerations for future phases, and environmental impacts. The IEMT identified issues that should or could best be addressed by each project sponsoring agency. Also identified were broader "universal" issues that could be addressed on a regional or subregional basis to avoid duplication of effort by multiple agencies addressing the same concerns.

The IEMT determined that site-specific items, such as environmental documentation for an individual recycled water program, should be addressed on an agency-specific basis.

However, the IEMT agreed to consider several regional issues, including:

- Consideration of regional water quality issues and concerns related to implementation of a recycled water program throughout southern California with respect to public health, surface waters, groundwater, and receiving waters for brine and remaining effluent disposal.
- Preparation of an overall description of approaches to obtain financial support for recycled water projects.
- Development of a program to address public perception issues regarding recycled water and its uses, and communication of the overall objectives for the Southern California Water Recycling Projects Initiative.

These issues are scheduled to begin in Phase II Federal fiscal year 2002 as described below.

2.3.1 Water Quality Issues

The water quality issues component of the regional work will focus on examining water quality and concerns related to public health, public perception, regulatory issues, and other resources that could be benefited or impacted by recycled water projects. The analysis will evaluate these issues under a range of recycled water implementation scenarios.

The analysis examines the impacts of increased recycling on receiving waters, as well as public health and safety. In addition, the analysis will focus on contemporary water quality conditions that affect recycled water acceptance and /or use, such as industrial chemicals, natural pollutants, and pharmaceutical wastes existing in the wastewater. Potential impacts

to surface water flows, groundwater levels, surface water and groundwater quality, and biological resources will also be examined. Use of recycled water may also be affected by other water management programs, regulatory actions, and institutional issues. In addition, public concerns regarding potential changes to public health risks associated with the use of recycled water, and resulting from conditions on waters and lands, as mentioned above, may be considered.

The Water Quality Issues Analysis will consist of six major tasks as listed below and described in the following subsections.

- **Task 1:** Define alternative water recycling futures
- **Task 2:** Define interactions with other water management projects
- **Task 3:** Develop final scenarios
- **Task 4:** Identify potential constraints and benefits of scenarios
- **Task 5:** Conduct reconnaissance-level analysis of impacts, benefits, costs, and options for responding to the issues identified
- **Task 6:** Prepare a summary report

2.3.1.1 Task 1 - Define Alternative Water Recycling Futures

The alternative water recycling futures are defined by outlining scenarios. All of the scenarios are considered to occur at a future time as determined by the IEMT. Each scenario considers up to four levels of recycled water use consisting of ranges.

The scenarios consider the uses of recycled water (including habitat restoration; irrigation; groundwater replenishment; seawater intrusion; or commercial, miscellaneous or industrial water supplies); quantities; mass loadings for constituents; and existing regulations. The scenarios consider current projections for wastewater flows for each subregion as defined in the SCCWRRS. In addition, the scenarios include an assumed array of water management conditions and water chemistry implications.

The final selection of the initial scenarios will be defined through a meeting with the IEMT. The IEMT also will lead the determination of quantity assumptions and selection of the water quality conditions to be evaluated in subsequent tasks.

A technical memorandum will be prepared describing the scenarios. The description will include a matrix of the scenarios.

2.3.1.2 Task 2 - Define Interactions with Other Water Management Projects

The future recycling scenarios could be affected by the results of ongoing programs being considered by Federal, state, and local agencies. The programs could impact the use of recycled water in terms of quality of both the source and product water as well as the quantity of water utilized. These programs range from potable water supply desalination programs to changes in Regional Water Quality Control Boards' (RWQCB) and California Department of Health Services' (DHS) requirements. Programs that affect recycled water could include the following:

- Seawater desalination treatment plants could impact recycled water use by increasing the brine flows in the outfalls.
- Increased brine production, brine management, and sewer infiltration and inflow reduction programs may impact recycled water projects.
- Seawater and brackish water desalination generally produce high quality water changing the salinity of the community's water supply, which increases the quality of the influent stream. This higher quality water supply could affect both the recycled water and discharged water quality.
- Increased water conservation may have an impact on the quality and quantity of recycled water. Water conservation may reduce the amount of water available for recycling as well as degrade the water quality due to the concentration of constituents in the wastewater.
- CALFED water supply management of Delta export water could reduce salinity of imported water supplies thus reducing salinity of the resulting wastewater.

- Colorado River salinity management programs could reduce salinity of imported water supplies and thereby reduce salinity of the resulting wastewater.
- Groundwater and brackish water remediation programs could remove metals, organics, and possibly salinity as part of hazardous waste cleanup or general groundwater quality improvement programs resulting in changes to the water quality of the groundwater and possibly the surface waters.
- Regulatory policies changes could require additional wastewater treatment, such as tertiary treatment, nitrification-denitrification, or metals removal, thus affecting the effluent quality.
- Large water transfers or exchanges may result in changes in water supply quality and quantity.
- Interim and final results from concurrent recycled water or salinity management programs may result in changes in regulations, water recycling methods, or new technologies.

The final list of programs will be developed through a workshop with the IEMT.

The scenarios developed in Task 1 will be considered with respect to these potential programs to define changes that could impact the implementation of recycled water projects.

A technical memorandum will be prepared summarizing the effects of these programs on each of the scenarios.

2.3.1.3 Task 3 - Develop Final Scenarios

Information developed in Task 2 will be integrated to further define the scenarios initially described in Task 1. The final scenarios will be described by subregion based upon the potential uses of recycled water. A matrix will be used to define sub-regional scenarios based upon the interaction with other programs.

The final scenarios will be defined through a meeting with the IEMT. A technical memorandum will be prepared describing the scenarios. The description will include a matrix of the scenarios.

2.3.1.4 Task 4 - Potential Benefits and Constraints of Scenarios

The final scenarios identified in Task 3 will be evaluated to consider benefits related to ecological health, water quality, and public health; and potential constraints related to public perception, regulations, and new technology considerations. This will be an initial analysis to identify "benefits, hurdles, and fatal flaws." The water quality issues to be considered will include: nutrients, organics introduced by industrial and waste processes, metals, salinity, pathogens pharmaceutical residuals including endocrine disrupters and antibiotics, receiving water quality requirements, and total mass loading limits (i.e., total maximum daily loads [TMDLs]). Water quality issues will be considered for the potential impacts to the product and discharged waters. Higher levels of wastewater treatment or reduced flows because of diversion of recycled water to other uses could affect the receiving groundwaters and surface waters, as well as recycling efforts at downstream communities. Therefore, this analysis will consider how changes to the discharge methods will affect groundwater, surface water, and ocean water bodies. This analysis will examine issues on both a concentration and volumetric level.

The final "benefit, hurdles, and fatal flaws" array will be defined through two meetings with the IEMT. A technical memorandum will be prepared describing the results.

2.3.1.5 Task 5 - Conduct Reconnaissance Level Analysis of Options

Based upon the analysis completed in Task 4, a series of options will be identified to address potential hurdles or fatal flaws. These options could include:

- Water treatment
- Wastewater treatment
- Source control for water supply
- Source control for groundwater supply
- Source control for wastewater generators
- Discharge alternatives
- Blending of water supplies

These options will be evaluated by scenario and, if necessary, by subregion.

The analysis will consider the technical and economic issues both qualitatively and quantitatively. The generalized costs and benefits will be presented to determine the beneficial linkages. The benefits will include habitat, water quality, public health, political cooperation, and water supply reliability. A preliminary evaluation will be conducted of the options of each scenario to compare the costs and benefits at a regional level.

The analysis will be conducted through up to two meetings with the IEMT. A technical memorandum will be prepared describing the results.

2.3.1.6 Task 6 - Prepare Summary Report

Comments on the technical memoranda completed in Tasks 1 through 5 will be compiled, and a modified memorandum will be included in the summary report with an Executive Summary. Comments on the draft summary report will be incorporated into the final summary report.

2.3.2 Conditions Affecting Recycled Water Projects and Financial Support Information

Successful completion of recycled water projects requires detailed and interrelated efforts. SCCWRRS and the Initiative identified recycled water projects that could be implemented over a 10-year period. While these projects have the support of the agencies that have proposed them, each will require significant additional planning, public information, financing, construction, and marketing. Successful recycled water projects are those providing beneficial water supplies to users. What will it require to make Initiative projects successful? The IEMT has proposed to examine and describe the complex issues associated with implementing recycled water projects. Moreover, to support agencies in obtaining economic and financial assistance for their recycled water projects, the IEMT has decided to prepare an overall description of the available funding opportunities. While most agencies may be aware of the larger Federal and state programs, many agencies may not have the experience or understanding of how to obtain funding. Agencies may also not be aware of many of the smaller or lesser-known financial assistance packages that exist. As part of this component, the IEMT decided to include a section on how to secure these types of funding. As these funding mechanisms are often changing in structure and availability of funds, the

IEMT also agreed to perform an annual update of this document during the course of Phase II. The financial support component of the regional work will consist of four main tasks.

2.3.2.1 Task 1: Develop Description of Processes, Issues, and Strategies Required to Successfully Implement Recycled Water Projects

Development of a description of the complex processes and issues that project sponsors will confront when planning and implementing recycled water projects. The process identification will include discussion of the following project aspects; project planning; expertise necessary to plan and implement projects; environment documentation; public information and education programs; marketing to users; financial capability; and obtaining agency and board approval. Also, this description will outline optimal strategies that project sponsors could use to successfully implement recycled water projects. Optimal strategies will include, but are not limited to, discussion of mandatory use ordinances, rate structures, user agreements, and loans for retrofitting plumbing. This description will be based on information collected during Phase I, as well as information to be collected during an IEMT workshop. A technical memorandum will be developed to describe the processes and strategies identified through this task. The technical memorandum will consist of a flow chart of the process required to implement recycled water projects, as well as a monograph outlining the strategies.

2.3.2.2 Task 2: Develop Description of Economic and Financial Opportunities and Financial Support Document

Development of a description of economic and financial opportunities available to local agencies or their potential customers for helping to fund projects. The document will describe Federal, state, and nongovernmental funding mechanisms available for use on recycled water projects. Each description will also include a discussion of the range in types of the projects funded by each financial mechanism, as well as the historical funding. This will provide an indication of funding availability for recycled water projects in southern California. As part of this task, a technical memorandum will be developed. In addition, a short diagram will be prepared for each of the funding opportunities with specific notes that could assist agencies in

selecting appropriate funding mechanisms. The technical memorandum will also provide the contact information for each of the funding mechanisms. Also, the technical memorandum will include descriptions of the limitations on the types of work that will be funded; the matching allocation shares required (if necessary); and the schedules for submittals, approvals (including legislative approvals), authorization, and release of funds to the local agencies.

2.3.2.3 Task 3: Annual Update of Financial Support Document

Examples of the types and varieties of funding mechanisms available, which will be included in the financial support component, are presented in the following tables. Potential nongovernmental, state, and Federal funding mechanisms are outlined in Tables 2.1, 2.2, and 2.3, respectively.

TABLE 2.1
POTENTIAL NONGOVERNMENTAL FUNDING MECHANISMS FOR RECYCLED WASTEWATER PROGRAMS

Organization	Program
California Special Districts Association (CSDA)	CSDA Finance Program
Metropolitan Water District	Local Resources Program
California Municipal Utilities Association	Finance Authority for Resource Efficiency of California (FARECal)
Santa Ana Project Authority	Southern California Integrated Watershed Program
San Diego County Water Authority	Recycled Water Development Fund (RWDF)
	Financial Assistance Program

TABLE 2.2
POTENTIAL STATE FUNDING MECHANISMS FOR RECYCLED WASTEWATER PROGRAMS

Organization	Program
California State Water Resources Control Board (SWRCB)	SRF Loan (State Revolving Fund) NPS Grant: 319 (NonPoint Source) Wastewater Recycling Loan Water Recycling Facilities Planning Grant Program
California State Department of Water Resources, Division of Planning and Local Assistance (DWR-DPLA)	Prop 82 - Water Conservation Loans, Groundwater Recharge Loans, Local Water Supply Loan Prop 13 – Safe Drinking Water; Watershed Protection; Clean Water and Water Recycling; Water Conservation; Water Supply, Rehabilitation and Infrastructure Urban Streams Restoration Program Water Education Program
California Department of Parks and Recreation	Prop 12 Programs
California State Department of Housing and Community Development	Community Development Block Grant
California State Coastal Conservancy	Watershed Enhancement Program Coastal Resource Enhancement Program

TABLE 2.3
POTENTIAL FEDERAL FUNDING MECHANISMS FOR RECYCLED WASTEWATER PROGRAMS

Organization	Program(s)
U.S. Army Corps of Engineers	Water Resources Development Act Section 503 Watershed Management, Restoration, and Development Section 1135 Project Modifications for the Improvement of the Environment Aquatic Ecosystem Restoration
U.S. Environmental Protection Agency (EPA)	Environmental Programs and Management State and Tribal Assistance Grants Pollution Prevention Incentives for States (PPIS) Clean Water Act (CWA) Section 104(b)(3)- Wetlands program development Watershed Assistance Grant (WAG) Environmental Education National Estuary Program Sustainable Development Challenge Grants Clean Lake Grants
Economic Development Administration	Grants for Public Works and Economic Development
U.S. Bureau of Reclamation	Efficiency Incentives Program Title XVI - Reclamation Wastewater and Groundwater Study and Facilities Act
U.S. Department of Agriculture (USDA) -Natural Resources Conservation Service	Wetlands Reserve Program Watershed Projects River Basin Studies and Investigations
Housing and Urban Development (HUD)	HUD Grant (for construction of wastewater treatment facilities)
EPA, USDA and National Science Foundation (NSF)	Water and Watersheds Research (competition)

2.3.3 Public Information and Education

The primary objective of the public information and education program is to increase the level of awareness and public acceptance of recycled water use in the southern California region. A key component to any program is to obtain buy-in and support from DHS, the RWQCBs, and area environmental and community groups. Obtaining buy-in and support from these groups will aid in gaining public acceptance of the use of recycled water as a viable regional solution to the growing demand for this natural resource.

Another key component of this program will be the involvement of the IEMT. The IEMT, acting as a coalition, has a crucial role in working to gain an understanding and support for recycled water use and projects. In addition, the IEMT will be able to use the public information and education program as a tool to strengthen the existing regional coalition, as well as emerge as the regional leader in recycled water. Through the regional coalition, the IEMT will have the ability to encourage and support the use of recycled water in both language and action.

The public information and education program has four major components: a strategy memorandum, a white paper on the role of the regional water recycling coalition, a website framework, and a template for public information and education programs. These four components of the program will be produced in seven tasks.

2.3.3.1 Task 1: Conduct Strategy Brainstorming Sessions

A strategy session will be held to brainstorm and obtain information on the successes and challenges of existing recycled water projects with the IEMT. In addition, a brainstorming session will be held with the San Diego and Los Angeles Chapters of the WateReuse Association. The Study Team will facilitate these sessions.

2.3.3.2 Task 2: Develop Memorandum on Successful Strategies

A memorandum will be developed outlining successful strategies to implement recycled water projects. In addition, the memorandum will include a section on challenges that recycled water projects have experienced in the past with recommendations on methods to

overcome these challenges. The information contained within this memorandum will be summarized from the strategy session(s), as well as other input provided by the IEMT.

2.3.3.3 Task 3: Develop a White Paper Describing the Role of Regional Water Recycling Coalition

A white paper describing the role of the regional water recycling coalition will be developed. The description will include the history of the regional coalition, its objectives, and functions. This document will be included as part of the website, as well as a front-end document for the strategy memorandum, and will be designed to be used to inform elected officials and others about the purpose and value of the regional coalition and ultimately the value of recycled water to their communities.

2.3.3.4 Task 4: Develop a Framework for a Water Recycling Website

A framework for a website will be developed. This framework will outline the site map to the webpage and provide information and descriptions on the information to be contained within the website. The intended audience of the website will be the general public with information for local agencies provided within a second tier of the website. Information contained on the website will include general information on recycled water, a User's Site Supervisors Training Manual, regulations and regulatory issues, information on existing recycled water projects and agencies who have implemented projects, and links to other relevant sites.

2.3.3.5 Task 5: Develop a Water Recycling Website

A website will be designed utilizing the framework developed in Task 4.

2.3.3.6 Task 6: Assist to Develop User's Site Supervisors Training Manual

This task will consist of assisting other agencies or entities with the development or updating of a User's Site Supervisors Training Manual or training video. The assistance will be in the form of monetary support and expert advice or knowledge.

2.3.3.7 Task 7: Assist to Develop a Public Information and Education Template

This task will consist of assisting and developing, in coordination with other agencies or entities, a public information and education template that could be used by agencies in the development and planning of recycled water projects.

2.4 Continuation of Budget Allocation for Project-Specific Work

The project-specific work budget allocation will be revisited as part of Phase II of the Initiative. Allocation of funds during Phase I was only for the FY 2001 budget. Potential future allocations to project-specific work under Phase II will be made on an annual basis and will be subject to Reclamation's budget. In Phase II, the procedures for budget allocation continue through the following tasks, begun as part of Phase I.

2.4.1 Task 1: Confirmation of Interest in Participating in the Initiative by the Project Sponsors that Received Funding for FY 2001

This task will consist of identifying and confirming the interest in continued participation of agencies that received funding in FY 2001 of the Initiation.

2.4.2 Task 2: Confirmation of Interest in Participating in the Initiative by the Project Sponsors that were Not Funded in FY 2001

This task will consist of identifying and confirming the interest in continued participation of agencies that did not receive funding in FY 2001 of the Initiation.

2.4.3 Task 3: Identification and Preparation of Documentation for New Project-Specific Work

This task consists of preparation of project description, budget allocation, and cost estimates for agencies interested in participating in the Initiative.

2.4.4 Task 4: Completion of the Budget Allocation Procedure on the Updated List of Project-Specific Work

This task consists of consolidation of project scoring into the master spreadsheet, performing analysis on projects utilizing scoring criteria, and providing recommendations to IEMT for funding allocation..

2.4.5 Task 5: Preparation of a List of the Agencies that Meet the Funding Criteria as Developed in Phase I.

This task consists of the preparation of a final list of the agencies to receive funding based on IEMT recommendations.

2.5 Program Budget Allocation for the Initiative

The Initiative project budget is to be reallocated in each fiscal year based on the amount of funding the project receives from Reclamation's budget. The IEMT will continue to recommend the allocation of funds between project-specific and regional work. The allocation will be based upon the funding requirements of project components. The distribution is based on, but not limited to:

- The type and expense of work left to be done in the project-specific work and regional components.
- The timeframe constraints of the project-specific work and regional components.
- The limitation of total budget relative to Initiative program demands.

The IEMT will identify the allocation that most equitably distributes the funding among agencies for both the project-specific work and regional work. A schedule for the planned allocation of funds is provided in Section 2.5.2.

The following tasks will be performed under the Phase II budget allocation project component.

2.5.1 Task 1: Conduct Workshop to Formulate Allocation of the Budget

An IEMT workshop will be held to formulate the allocation of the budget for each year. The Study Team will facilitate this session.

2.5.2 Task 2: Develop Budget Allocation

The budget allocation for the project-specific work, which is based upon the IEMT's budget allocation between regional and project-specific components, will be developed. An annual

list of agencies that are eligible to receive funding based on the screening criteria will be prepared for distribution to the IEMT.

2.6 Administration of Phase II

This section provides information regarding how Phase II will be administrated, including a description of the roles and responsibilities of the Study Team, the schedule and budget for project implementation, and the meeting and report elements required to track the status of the Initiative.

2.6.1 Study Team

The IEMT, established during Phase I of the Initiative, will continue to direct the development of Phase II of the Initiative. The IEMT will be chaired by Reclamation and will be comprised of the cost-sharing partners of the regional component of the Initiative. The IEMT may form subcommittees as deemed necessary during the course of the Initiative study. A subcommittee will be formed to focus on a specific component that is important to the status of recycled water or the Initiative. The following defines the roles of the Study Manager and the IEMT.

The role of Reclamation and the Reclamation Study Manager are the following:

- To provide the overall program management for the Initiative.
- To contract and oversee work of the consultants.
- To work with the IEMT to establish and continue the work on the regional component.
- To contract and administer funds to the local project sponsors and ensure compliance and reporting on the progress of the projects per the local project sponsors.

The role of the IEMT will be to guide the process and provide direction to the regional work components and encourage a regional approach from local agency project sponsors. This regional approach is an important component in continuing the effort to develop the regional water recycling coalition and assure that the most effective projects be implemented. In addition, the IEMT will assist in the determination of how to administer the funds of the

current fiscal year between the project-specific work and regional components of the Initiative.

2.6.2 Study Budget and Schedule

The project budget and schedule are provided in Table 2.4 and Figure 2.1

2.6.3 Meetings and Reports

The IEMT and Study Team will continue to hold meetings as necessary to exchange information, make decisions, and monitor the progress of the Initiative work plan. Reclamation's Study Manager will develop these meetings and the meeting agendas. The meetings will also serve as a mechanism for tracking the status of the project-specific work and regional components of the Initiative. The IEMT will be provided regular monitoring reports as well as information on the project sponsors' compliance with the contractual agreement.

2.6.4 Project Administration

Administration of Phase II of the Initiative as described above is incorporated into the following tasks:

2.6.4.1 Task 1: Conduct Monthly IEMT Meetings

Monthly IEMT meetings will be held to exchange information, make decisions, and monitor the progress of the Initiative work plan.

2.6.4.2 Task 2: Conduct monthly Study Team Meetings

Monthly meetings will be held by the Study Team to coordinate work, discuss work products, and develop the agenda for the IEMT monthly meeting.

2.6.4.3 Task 3: Conduct Additional Meetings

Additional meetings will be held, as necessary, to address task-specific issues. Included within this task are meetings with local agencies; Regional Water Quality Control Boards; and other Federal, state, or local government agencies.

2.6.4.4 Task 4: Prepare Final Report

A final report will be prepared that will include the three technical memoranda developed for the regional components, a description of the project-specific work component, and the budget allocations for each Federal fiscal year.

2.6.4.5 Task 5: Project Management

Management of Phase II of the project including identification of any new regional work.

TABLE 2.4

SOUTHERN CALIFORNIA WATER RECYCLING PROJECTS INITIATIVE, PHASE II BUDGET

Initiative Project Components		Initiative - Phase II Program Budget ¹			
		Federal Share	IEMT Share	Project Specific Sponsor Share	Total
FY 2001	Project Specific Work	\$ 425,000		\$ 425,000	\$ 850,000
	Implementation of Regional Work				
	Water Quality Issues	\$ 145,000	\$ 145,000		\$ 290,000
	Conditions Affecting / Financial Support	\$ 25,000	\$ 25,000		\$ 50,000
	Public Information and Education	\$ 25,000	\$ 25,000		\$ 50,000
	Budget Allocation for Project Specific Work				
	Program Budget Allocation for the Initiative	\$ 50,000	\$ 50,000		\$ 100,000
	Project Management and Administration				
	Subtotal	\$ 670,000	\$ 245,000	\$ 425,000	\$ 1,340,000
FY 2002	Project Specific Work	\$200,000		\$200,000	\$400,000
	Regional Work	\$200,000	\$200,000		\$400,000
	Subtotal	\$ 400,000	\$ 200,000	\$ 200,000	\$ 800,000
FY 2003	Project Specific Work	\$200,000		\$200,000	\$400,000
	Regional Work	\$200,000	\$200,000		\$400,000
	Subtotal	\$ 400,000	\$ 200,000	\$ 200,000	\$ 800,000
FY 2004	Project Specific Work	\$200,000		\$200,000	\$400,000
	Regional Work	\$200,000	\$200,000		\$400,000
	Subtotal	\$ 400,000	\$ 200,000	\$ 200,000	\$ 800,000
	Total	\$ 1,870,000	\$ 845,000	\$ 1,025,000	\$ 3,740,000

¹ This is an estimated budget only. Actual budget will be based on Reclamation's annual budget allocation as determined by Congress and the Administration.

FIGURE 2.1
SOUTHERN CALIFORNIA WATER RECYCLING PROJECTS INITIATIVE, PHASE II SCHEDULE

		2002 (Fed Year)												2003 (Fed Year)												2004 (Fed Year)																						
Initiative Components		O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S											
Implementation of Project Specific Work	Task 1	Entering into Agency Agreements																																														
	Task 2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
	Task 3				X				X				X				X							X																	X							
Water Quality Issues	Task 1	X	X	X																																												
	Task 2				X	X	X																																									
	Task 3							X	X																																							
	Task 4									X	X	X	X																																			
	Task 5													X	X	X	X	X	X																													
	Task 6																		X	X	X																											
Conditions Affecting Recycled Water Projects and Financial Support	Task 1		X	X	X	X	X																																									
	Task 2		X	X	X	X	X																																									
	Task 3																					X	X	X	X																							
Public Information and Education	Task 1			X	X	X	X																																									
	Task 2					X	X	X																																								
	Task 3					X	X	X	X	X																																						
	Task 4								X	X	X	X																																				
	Task 5													X	X	X	X																															
	Task 6																																															
	Task 7																																															
Project Specific Work Budget Allocation	Task 1	X	X	X										X	X	X																																
	Task 2	X	X	X										X	X	X																																
	Task 3				X	X	X										X	X	X																													
	Task 4							X	X									X	X																													
	Task 5								X	X									X	X																												
Program Budget Allocation	Task 1				X	X	X										X	X	X																													
	Task 2				X	X	X										X	X	X																													
Execution of Phase II	Task 1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
	Task 2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	Task 3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	Task 4																																															
	Task 5	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	