Inland Empire Utilities Agency
A MUNICIPAL WATER DISTRICT

February 2014

Fiscal Year 2014/15 Ten-Year Capital Improvement Plan

Inland Empire Utilities Agency Fiscal Year 2014/15 Ten-Year Capital Improvement Plan

Inland Empire Utilities Agency
6075 Kimball Avenue
Chino, CA 91708

Executive Summary

Each year, pursuant to the terms of the Regional Sewage Service Contract, the Inland Empire Utilities Agency submits a ten-year forecast of capacity demands and capital projects or Ten-Year Capital Improvement Plan (TYCIP) to the Regional Technical and Policy Committees. The current TYCIP identifies projects for the FY 2014/15 through FY 2023/24 that are needed for the rehabilitation, replacement, or expansion of the facilities owned or operated by the Agency.

In the past, the Budget and TYCIP have been written in tandem, with the TYCIP functioning as the supporting, second volume of the budget. This year the timeline for the TYCIP has been accelerated in an effort to streamline the project identification and prioritization phase of the financial planning process. The financial planning and budget for FY 14/15 will be discussed in detail in the FY 14/15 Operating and Capital Program Budget which will be published in June, 2014.

A new feature of this TYCIP was the development of a project ranking system based on the timing and criticality of projects. Drivers used to determine the timeframe and criticality during which a project would be undertaken include the regulatory and permitting requirements, wastewater flow projections, asset age, performance, efficiency, and grant or funding availability.

Two major themes that have carried over from the FY 2013/14 TYCIP to the FY 2014/15 TYCIP are the continuing need for maintenance, repair, and replacement of aging equipment and facilities and the need for expansion of the Regional System to meet future growth. Maintaining the Agency's facilities and infrastructure is critical to ensure the long-term reliability and quality of services that the Agency is committed to provide.

A major project that has been carried over from the FY13/14 TYCIP is the expansion of the RP-5 solids processing. Expansion of RP-5 liquids processing has been delayed due to projects currently under consideration, such as local lift stations that could be operated as part of the regional program. Flow forecasts and expansion options will be further explored in the Wastewater Facilities Master Plan which is currently underway.

In addition to the Wastewater Facilities Master Plan, IEUA is in the midst of updating several key planning documents, including the Long-Range Plan of Finance, Asset Management Plan, Recycled Water Program Strategy, Recharge Master Plan, Water Use Efficiency Business Plan, 2015 Urban Water Management Plan, and EIR. It is anticipated that these planning efforts will result in new priorities for the region and will be completed by fall 2014. Projects identified in these documents will be further refined and included in next year's TYCIP to meet the region's future needs.

Table of Contents

Acronyms

4R	Repair, Relocation, Reconstruction, and Rehabilitation
AFY	Acre-Feet of Water per Year
AMP	Asset Management Plan
ARRA	American Recovery Rehabilitation Act
BIP	Base Interruptible Program
BCU	Baseline Capacity Units
BMPTF	Basin Monitoring Program Task Force
CASA	California Association of Sanitation Districts
CBFIP	Chino Basin Facilities Improvement Project
CBWCD	Chino Basin Water Conservation District
CBWM	Chino Basin Watermaster
CCRA	Capital Capacity Reimbursement Account
CCTV	Closed Circuit Television
CCWRF	Carbon Canyon Wastewater Recycling Facility
CDA	Chino Desalter Authority
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CH4	Methane
CBFIP	Chino Basin Facilities Improvement Project
CO2	Carbon Dioxide

CO2-eq	CO2 Equivalent
CPUC	California Public Utilities Commission
CSI	California Solar Incentive
CSDLAC	County Sanitation Districts of Los Angeles County
CUWCC	California Urban Water Conservation Council
CVWD	Cucamonga Valley Water District
DA	Direct Access
DCS	Distribution Control System
DR	Demand Response
DWR	Department of Water Resources
DYY	Dry Year Yield
EDU	Equivalent Dwelling Unit
ESP	Electricity Service Provider
FMP PEIR	Facilities Master Plan Program Environmental Impact Report
FSL	Firm Service Level
FY	Fiscal Year
GG	Administrative Services Program
GPD/EDU	Gallons per Day per Equivalent Dwelling Unit
GPS	Global Positioning System
GWP	Global Warming Potential
H2S	Hydrogen Sulfide
HFC	Hydrofluorocarbon
HVAC	Heating/Ventilation/Air Conditioning

ICE	Internal Combustion Engine
IE	Inland Empire
IERCF	Inland Empire Regional Composting Facility
IRP	Integrated Resource Plan
KPI	Key Performance Indicators
KW	Killowatt
LOC	Lewis Operating Company
LOS	Level of Service
MACR	Modified Accelerated Cost-Recovery
Mg/L	Milligrams per liter
MGD	Million Gallons per Day
MW	Megawatts
MG	Million Gallons
MWH	Megawatt Hours
MOU	Memorandum of Understanding
MVWD	Monte Vista Water District
MWD	Metropolitan Water District of Southern California
N2O	Nitrous Oxide
NC	Non-Reclaimable Wastewater Program Capital Fund
NEM	Net Energy Metering
NPDES	National Pollutant Discharge Elimination System
NRW	Non-Reclaimable Wastewater
NRWS	Non-Reclaimable Wastewater System

O&M	Operations & Maintenance
OBMP	Optimum Basin Management Plan
OBMP PEIR	Optimum Basin Management Plan Program Environmental Impact Report
OCSD	Orange County Sanitation District
OWOW	One Water One Watershed
PPA	Power Purchase Agreement
PFC	Perfluorocarbon
RC	Regional Capital Improvement (Wastewater) Fund
RCA	Regional Composting Authority
RDA	Redevelopment Agency
REC	Renewable Energy Credit
RO	Regional Operations and Maintenance (Wastewater) Fund
RP-1	Regional Plant No.1 in the City of Ontario
RP-2	Regional Plant No.2 in the City of Chino
RP-4	Regional Plant No.4 in the City of Rancho Cucamonga
RP-5	Regional Plant No.5 in the City of Chino
RP-5 SHF	RP-5 Solids Handling Facility
R&R	Repair and Replacement
RW	Groundwater Recharge Fund
RWC	Recycled Water Contribution
RWRPs	Regional Water Recycling Plants
RWQCB	Regional Water Quality Control Board

SAWA	Santa Ana Watershed Association
SAWPA	Santa Ana Watershed Project Authority
SBCFCD	San Bernardino County Flood Control District
SCADA	Supervisory Control and Data Acquisition
SCAP	Southern California Alliance of Publicly-Owned Treatment Works
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SF6	Sulfur Hexafluoride
SGIP	Self-Generation Incentive Program
SRF	State Revolving Fund
SWRCB	State Water Resources Control Board
TA&TI	Technical Assistance and Technology Incentives
TDS	Total Dissolved Solids
TIN	Total Inorganic Nitrogen
TOU	Time of Use
TOU-BIP	Time-of-Use Base Interruptible Program
TYCIP	Ten-Year Capital Improvement Plan
UPC	Unit Production Cost
USBR	United States Bureau of Reclamation
UWMP	Urban Water Management Plan
VFD	Variable Frequency Drives
WC	Recycled Water Program Fund
WFMP	Wastewater Facilities Master Plan

WSAP Water Supply Allocation Plan

WUE Water Use Efficiency

Introduction

PURPOSE OF THE TEN-YEAR CAPITAL IMPROVEMENT PLAN

The purpose of a Capital Improvement Plan is to catalog and schedule capital improvement projects over a multiyear period. Each year, pursuant to the terms of the Regional Sewage Service Contract, the Inland Empire Utilities Agency (Agency) submits a ten-year forecast of capacity demands and capital projects or Ten-Year Capital Improvement Plan (TYCIP) to the Regional Technical and Policy Committees. This TYCIP identifies projects for the Fiscal Years (FY) 14/15 through FY 23/24 that are needed for the rehabilitation, replacement, or expansion of the facilities owned or operated by the Agency.

The TYCIP is a document which links the vision of the Agency with a list of physical projects to fulfill that purpose. Projects identified in the TYCIP are necessary to accomplish the Agency's goals based on physical conditions of assets and forecasted regional projections of water and wastewater needs. Based on these projections, the TYCIP proposes a schedule for the implementation of projects based on necessity. The projects identified in the TYCIP are then prioritized in the Capital Budget and connected to available financial resources.

DEFINITION OF A CAPITAL PROJECT

The TYCIP is composed of a list of Capital Projects. Capital Projects are projects which involve the purchase, improvement or construction of major fixed assets and equipment, which are typically large in size, expensive, non-recurring, and

permanent. Examples of capital projects include the expansion of treatment plants and the construction of pipeline and pump stations.

REGIONAL SEWAGE SERVICE CONTRACT REQUIREMENTS AND TYCIP ADOPTION

The Regional Sewage Service Contract is the guiding document that defines the terms of the services and facilities in the Agency's regional sewage system. The contract defines one Equivalent Dwelling Unit (EDU) as 270 gallons. This number is used for both wastewater flow calculations and connection fee revenues. The contract was originally signed in January 1973, amended in April 1984, and is due for renewal in January 2023, 50 years after it was originally executed.

Per the Regional Sewage Service Contract, the TYCIP includes wastewater flow forecasts and a description of planned capital projects, including any necessary facility expansions, major asset repair and rehabilitation, and major capital equipment purchases. Projected annual expenditures and financing will be developed in the Agency's annual Operating and Capital Program Budget. After comments and recommendations from the Regional Technical and Policy Committees have been considered and incorporated, the TYCIP is presented to the Inland Empire Utilities Agency Board of Directors for adoption.

CONNECTION OF TYCIP TO OTHER AGENCY PLANNING INITIATIVES

The TYCIP is one of several critical planning documents involved in the delivery of capital improvements. These include:

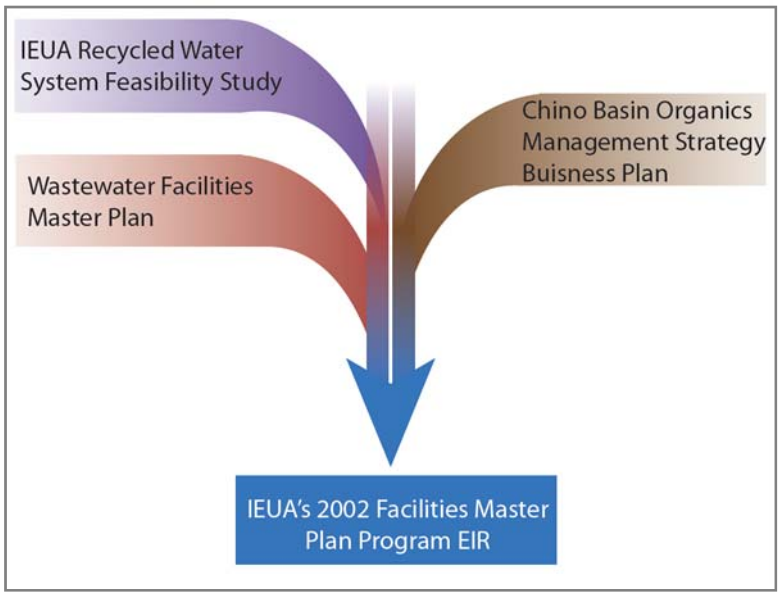
- IEUA Business Goals
- IEUA Strategic Plan
- Urban Water Management Plan
- Facilities Master Plan Program Environmental Impact Report
- Asset Management Plan
- Ten Year Capital Improvement Plan
- Operating and Capital Program Budget
- Long-Range Plan of Finance

The IEUA Business Goals (2013) guide the development of the capital improvement program, operational budget, and organizational goals and objectives. The objectives and commitments outlined in the document establish the framework for the

direction of the Agency and subsequent planning efforts. The Goals reflect the Agency's commitment to deliver high-quality, reliable services to customers in a regional, cost-effective manner through prudent financial planning and strategic resource management. Goals were categorized into six main areas: Fiscal Responsibility, Workplace Environment, Business Practices, Water Reliability, Wastewater Management and Environmental Stewardship. To meet these commitments the Agency is also conducting studies to establish baseline conditions at the RWRPs, such as an Odor Assessment Panel Study. A copy of the Goals can be found in Appendix A.

The IEUA Strategic Plan serves as a transitional document between the IEUA Business Goals and the annual Operating and Capital Program Budget (Budget). Every two years a Strengths, Weaknesses, Opportunities, Threats (SWOT) analysis based on the current business environment is completed by executive management to update strategies within the IEUA Strategic Plan. These strategies introduce actions and timeframes to the high level IEUA Business Goals. In turn, those strategies become specific work plans containing department goals and objectives referenced in the budget book. The Strategic Plan, with a rolling five year timeframe, outlines the fundamental decisions that shape what the Agency plans to accomplish and sets a rational course of action.

FIGURE 1: FACILITIES MASTER PLAN EIR PROCESS



The 2010 Urban Water Management Plan (UWMP) and 2002 Facilities Master Plan Program Environmental Impact Report (FMP PEIR) are long-range planning documents that provide a vision of the desired future water resources and wastewater facilities programs for the Agency. The FMP PEIR, as illustrated in Figure 1, links together three major fundamental master planning documents: the Chino Basin Organics Management Strategy (May 2001), the Recycled Water System Feasibility Study (2002), and the Wastewater Facilities Master Plan (2002). Within

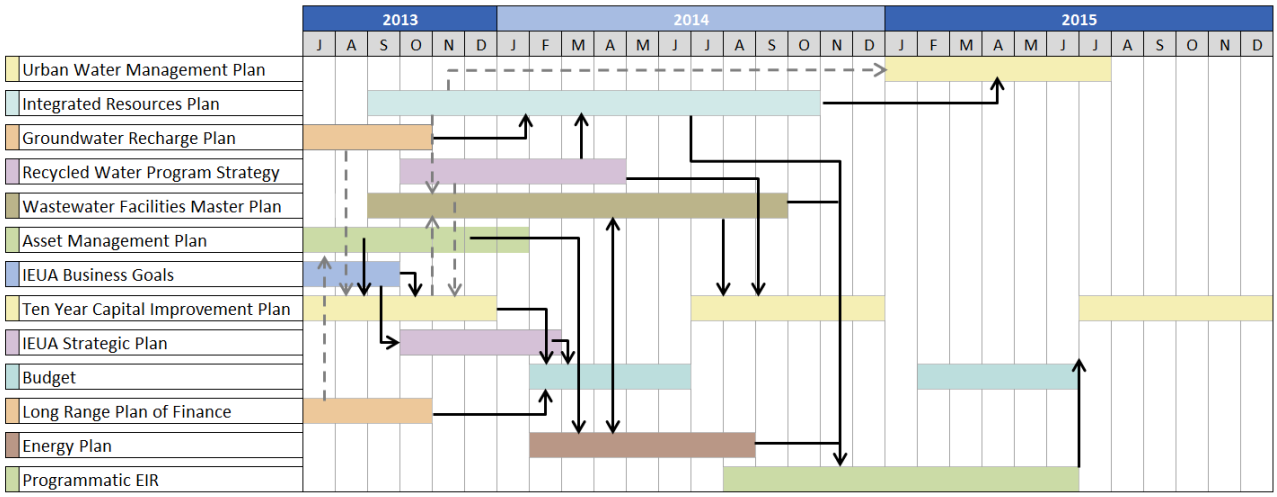
these documents, projects are identified to accommodate changes within the service area, such as increasing and shifting population growth, wastewater flows, water and recycled water supply demands, and salinity management. The Agency is currently updating these documents and developing an Integrated Resources Plan (IRP), which will be the foundation for the Agency's major programs. The IRP will be published in December 2014. For additional details on the Agency's existing planning documents, refer to Appendix B. Once the updated planning documents have been completed, identified projects will be used to generate a new Programmatic Environmental Impact Report (EIR) that will be used to guide the Agency's future planning initiatives.

The Agency is currently in the process of developing an Asset Management Plan (AMP). The AMP will provide an accurate representation of the physical assets owned by the Agency and the future funding requirements needed to maintain, repair, and manage these assets. A key process of developing the AMP is assembling a comprehensive list of the Agency's assets at each of the regional water recycling plants, recycled water distribution system, Inland Empire Regional Composting Facility, regional sewer system, and non-reclaimable wastewater system. Projects identified in the AMP will be instrumental in prioritizing and planning for the repair and replacement of equipment and facilities. The AMP will be published early 2014.

The Ten-Year Capital Improvement Program (TYCIP) identifies and prioritizes the capital assets required to successfully carry out the Agency's dual mission of providing wastewater treatment services and wholesale potable water supplies to the service area in an environmentally responsible manner over the next ten years. The TYCIP contains projects identified by the maintenance, operations, engineering, and planning departments and will be used to determine revenue requirements and long-term rates and financial impacts to fund the proposed projects and anticipated operating costs. The TYCIP and financial planning budget documents are currently updated annually as part of an ongoing financial planning cycle.

The annual Operating and Capital Program Budget

FIGURE 2: CURRENT IEUA PLANNING INITIATIVES

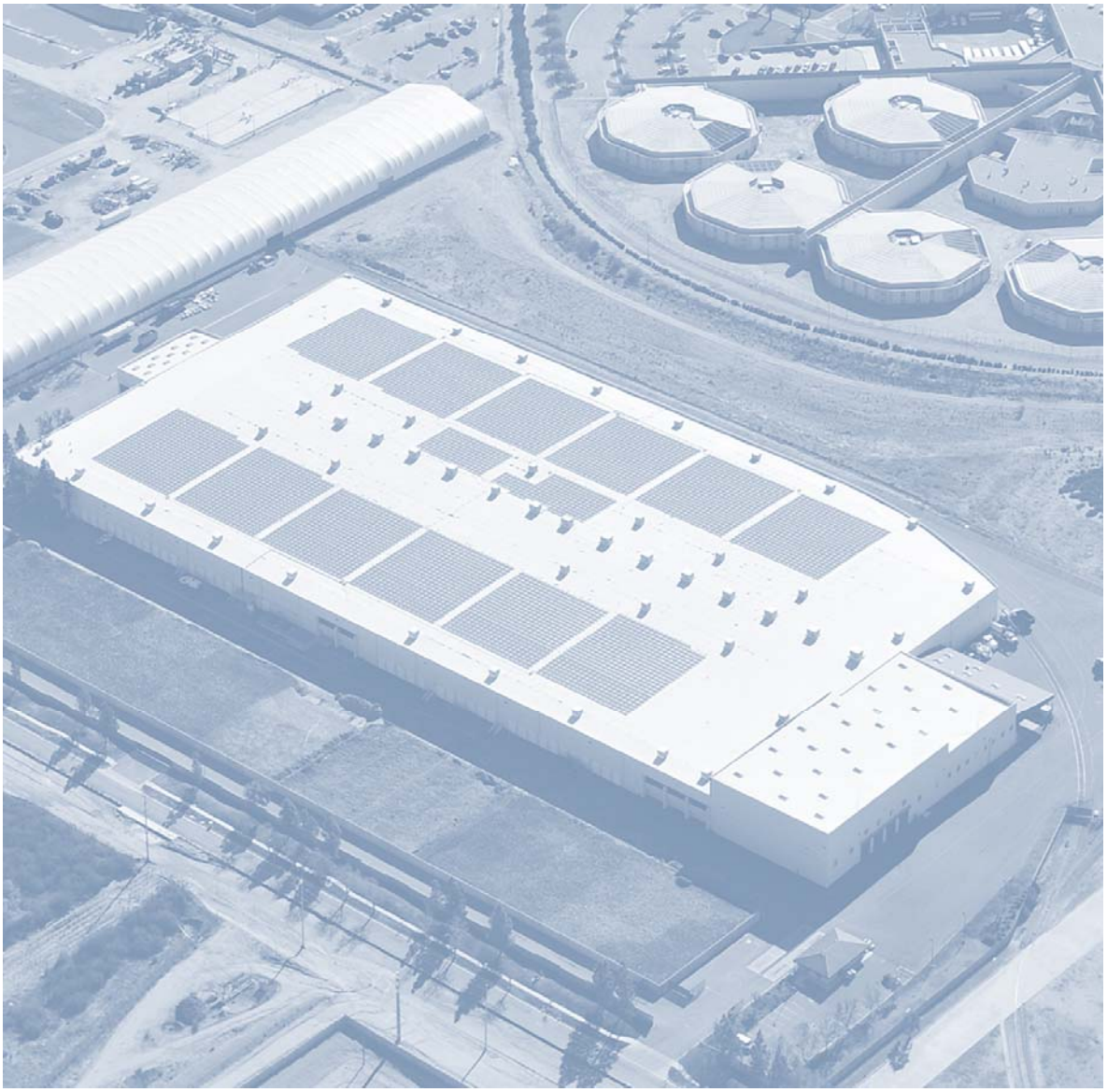


(Budget) is an implementation document that prioritizes the identified physical improvements in the TYCIP and links them with available financial resources for the upcoming year. In the past, the Budget and TYCIP have been written in tandem, with the TYCIP functioning as the supporting, second volume of the budget. This year the timeline for the TYCIP has been accelerated in an effort to streamline the project identification and prioritization phase of the financial planning process. The FY 14/15 Budget will be published in June, 2014.

The Long-Range Plan of Finance is document analyzing the long-term implications of financial decisions. Shot-term actions can have far reaching implications and impact the Agency's future financial standing and available options. As a result, the Finance Department is in the process of completing the Long-Range Plan of Finance which is projecting financial trends over a 50-year period, so that the Agency can better anticipate and prepare for necessary adjustments and reduce sudden budgetary impacts to stakeholders and operations.

IEUA is initiating a series of planning efforts that will update previous work by incorporating both recent successes and new challenges facing the state and local water resources settings. Although each document functions as an independent or "stand-alone" planning document, there are inherent synergies between them that rely upon having a consistent foundation, approach, and implementation strategy. Key documents that are currently under development or being updated include the Long-Range Plan of Finance, Asset Management Plan, Wastewater Facilities Master Plan, Recycled Water Program Strategy, Recharge Master Plan, Water Use Efficiency Business Plan, 2015 Urban Water Management Plan, and EIR.

The IRP, with the purpose of developing an overall strategy to meet projected water demands within the IEUA service area in a cost-effective manner, will play a central role in the integration of previous and these new planning efforts. Figure 2 illustrates the projected timeline for the completion of these documents and the interconnection and synergies that exist between them.



IEUA Overview

INTRODUCTION

The Agency is a regional wastewater treatment agency and wholesale distributor of imported water. Today the Agency is responsible for serving approximately 830,000 people[1] over 242 square miles in western San Bernardino County. The Agency is focused on providing three key services: (1) treating wastewater, developing recycled water, local water resources, and conservation programs to reduce the region's dependence on imported water supplies and drought-proof the service area; (2) converting biosolids and waste products into a high-quality compost made from recycled materials; and (3) generating electrical energy from renewable sources. This Ten-Year Capital Improvement Plan, beyond being a requirement of the Regional Sewage Service Contract between the Agency and its Contracting Agencies, is also a means of communicating with the public concerning priorities for future projects and capital spending requirements needed to meet future demands in the service area.

FORMATION & PURPOSE

The Agency was originally formed as the Chino Basin Municipal Water District on June 6, 1950 as a municipal corporation with a mission to supply supplemental imported water purchased from the Metropolitan Water District of Southern California (MWD) to municipalities in the Chino Groundwater Basin. Since then, the Agency has expanded its mission from a supplemental water supplier to include regional wastewater treatment with domestic and industrial disposal systems, and energy production facilities. In addition, the Agency has become a major provider of recycled water, a supplier of biosolids/compost materials, as well as continuing its leading role in water quality management and environmental protection in the Inland Empire.

GOVERNANCE

The Agency is a special district which is governed by five publicly elected Board of Directors. Each director is assigned to one of the five divisions: Division 1- Upland/

[1] *Source: California Department of Finance, April 2013 census projection.*

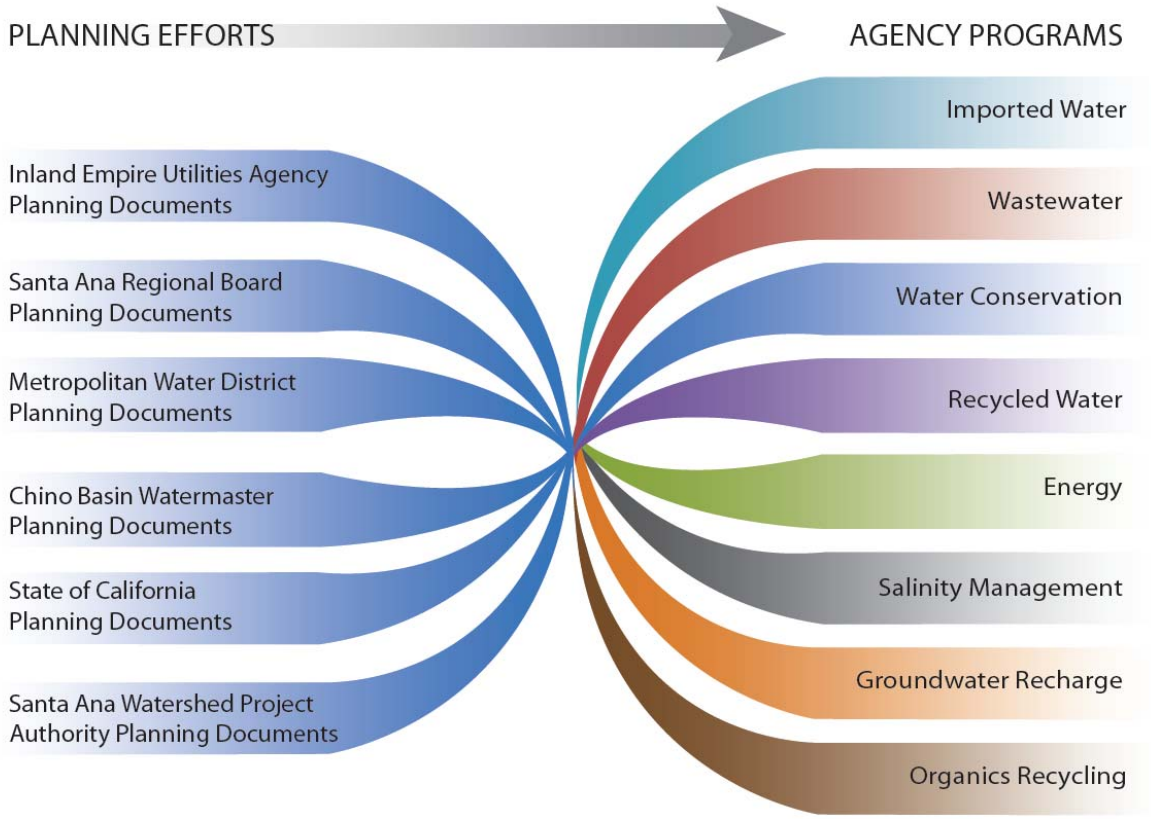
Montclair; Division 2- Ontario/Agricultural Preserve; Division 3- Chino/ Chino Hills; Division 4- Fontana; Division 5- Rancho Cucamonga. Monthly meetings are also held with the Regional Technical and Policy Committees that are comprised of representatives from each of the Agency's Regional Sewer Service Contracting Agencies to discuss and provide information on technical and policy issues affecting the Agency.

INTER-AGENCY COORDINATION IN THE CHINO BASIN

The Agency joined the Santa Ana Watershed Project Authority (SAWPA) in 1972 to participate in regional watershed-scale planning. The Agency also currently sits on the Board of Directors for MWD, SAWPA, and Chino Basin Watermaster (CBWM).

The Agency collaborates with SAWPA, MWD, CBWM, and the Regional Water Quality Control Board (RWQCB) to develop regional planning documents. The Agency also works with state agencies, such as the Department of Water Resources and CalEPA in the development of State of California planning documents. Figure 3 below illustrates how the various regional and state planning documents are tied to the Agency's capital and operational programs.

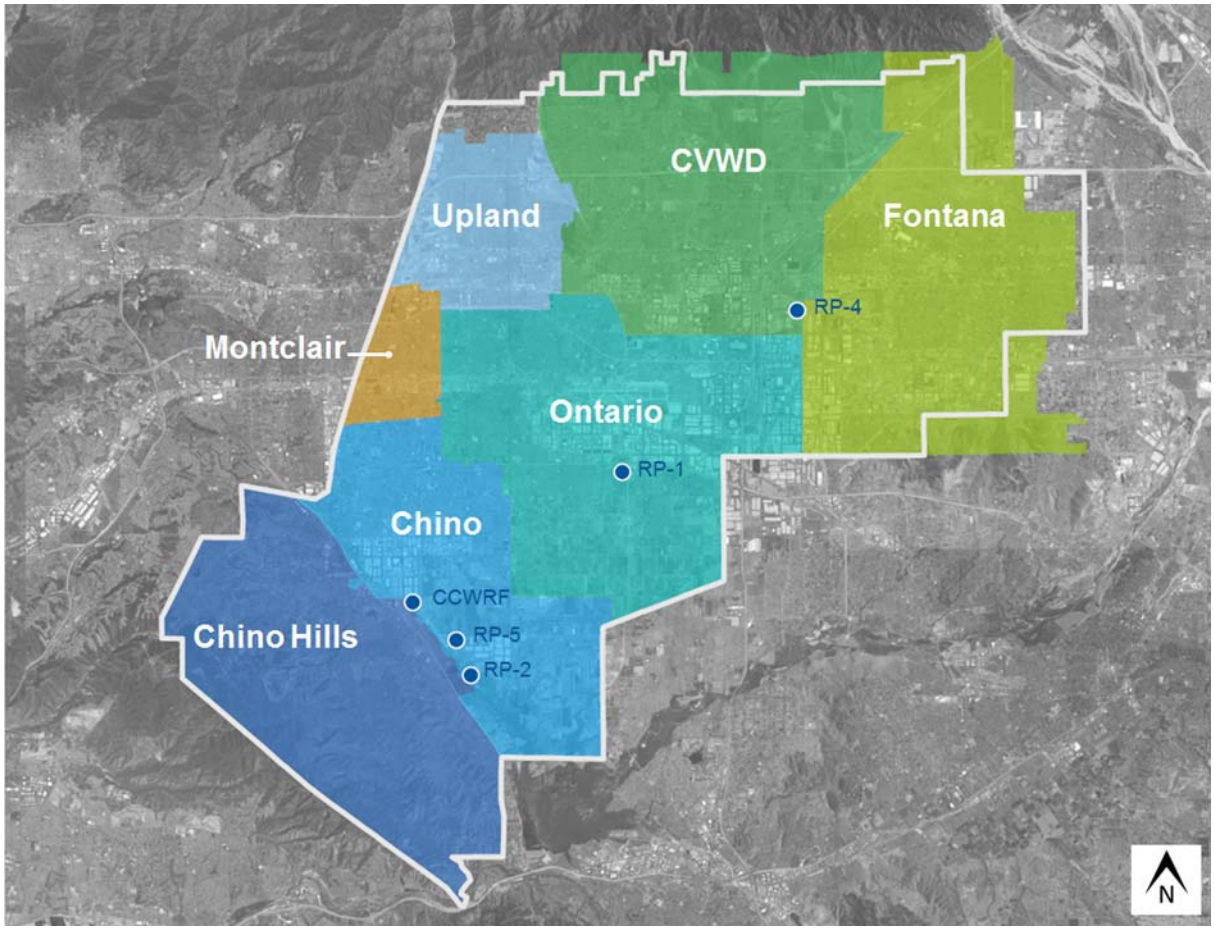
FIGURE 3: COORDINATED REGIONAL PLANNING PROCESS



CONTRACTING AND RETAIL AGENCIES

As a regional wastewater treatment agency, the Agency provides sewage utility services to seven contracting agencies under the Chino Basin Regional Sewage Service Contract: the cities of Chino, Chino Hills, Fontana, Montclair, Ontario, Upland, and Cucamonga Valley Water District (CVWD) in the city of Rancho Cucamonga. Figure 4 depicts each Contracting Agency's sphere of influence within the Agency's service area.

FIGURE 4: IEUA CONTRACTING AGENCIES



In addition to the contracting agencies, the Agency provides wholesale imported water from MWD to seven retail agencies: the cities of Chino, Chino Hills, Ontario, Upland, CVWD in Rancho Cucamonga, Fontana Water Company in Fontana, and the Monte Vista Water District (MVWD) in the city of Montclair.

FINANCING/CAPITAL FUNDING SOURCES

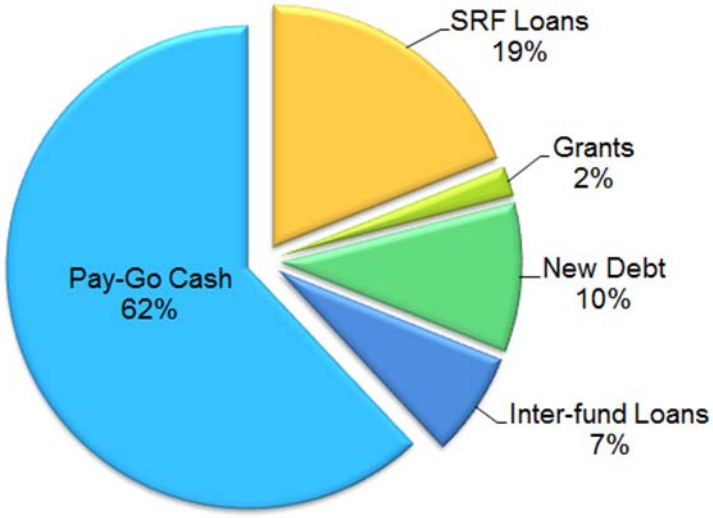
In general, the Agency's capital financing is derived from four primary sources:

1. Pay-go cash, defined as net system revenues—primarily user charges, Equivalent Dwelling Unit (EDU) connection fees, and property taxes not needed for debt service;
2. New debt borrowing from State Revolving Fund (SRF) at fixed low interest rate loans and the issuance of new debt
3. Federal and State grant receipts
4. Inter-fund loans from Regional Capital Program and Non-Reclaimable Wastewater Program to support Recycled Water Program projects
5. Service Rates will be used to fund Replacement and Rehabilitation projects, thereby reducing a portion of the pay-go cash.

In the past, the Agency's Budget and TYCIP have been written in tandem, with the TYCIP functioning as the supporting, second volume of the budget. This year the timeline for the TYCIP has been accelerated in an effort to streamline the project identification and prioritization phase of the financial planning process.

The financial planning and budget for FY 14/15 will be discussed in detail in the FY 14/15 Operating and Capital Program Budget which will be published in June, 2014. Illustrated below in Figure 5 is a brief summary of the Agency's primary revenue sources for capital expenditures based on the FY 13/14 TYCIP.

FIGURE 5: TYPICAL CAPITAL FUNDING SOURCES
(based on FY 13/14 TYCIP)



REGIONAL PROGRAMS & FACILITIES OVERVIEW

Industrial and municipal wastewater collections are provided through regional wastewater interceptors and two non-reclaimable wastewater pipeline systems. Recycled water is produced at four regional water recycling plants (RWRPs). In addition, the Agency has three facilities where the biosolids produced at the water recycling plants are handled: RP-1 Solids Handling Facility, RP-2 Solids Handling Facility, and the Inland Empire Regional Composting Facility. The Agency also has a solids handling facility at RP-5 which is leased to a private enterprise that intends to produce biogas and energy from food and dairy waste.

Although the Agency is a wholesale water provider, the Agency has very little infrastructure or assets related to potable water treatment, conveyance, or use. Water resources-related assets are primarily connected to the recycled water program. In addition to recycled water and wastewater services, the Agency operates a network of groundwater recharge facilities in partnership with Chino Basin Watermaster (CBWM), San Bernardino County Flood Control District (SBCFCD), Chino Basin Water Conservation District (CBWCD). The Agency also operates the Chino Desalter I facility in coordination with the Chino Desalter Authority. The Agency also manages an extensive regional water use efficiency program, and collaborates with Santa Ana Watershed Project Authority (SAWPA), MWD, and RWQCB to develop regional planning documents.

Regional Wastewater Facilities

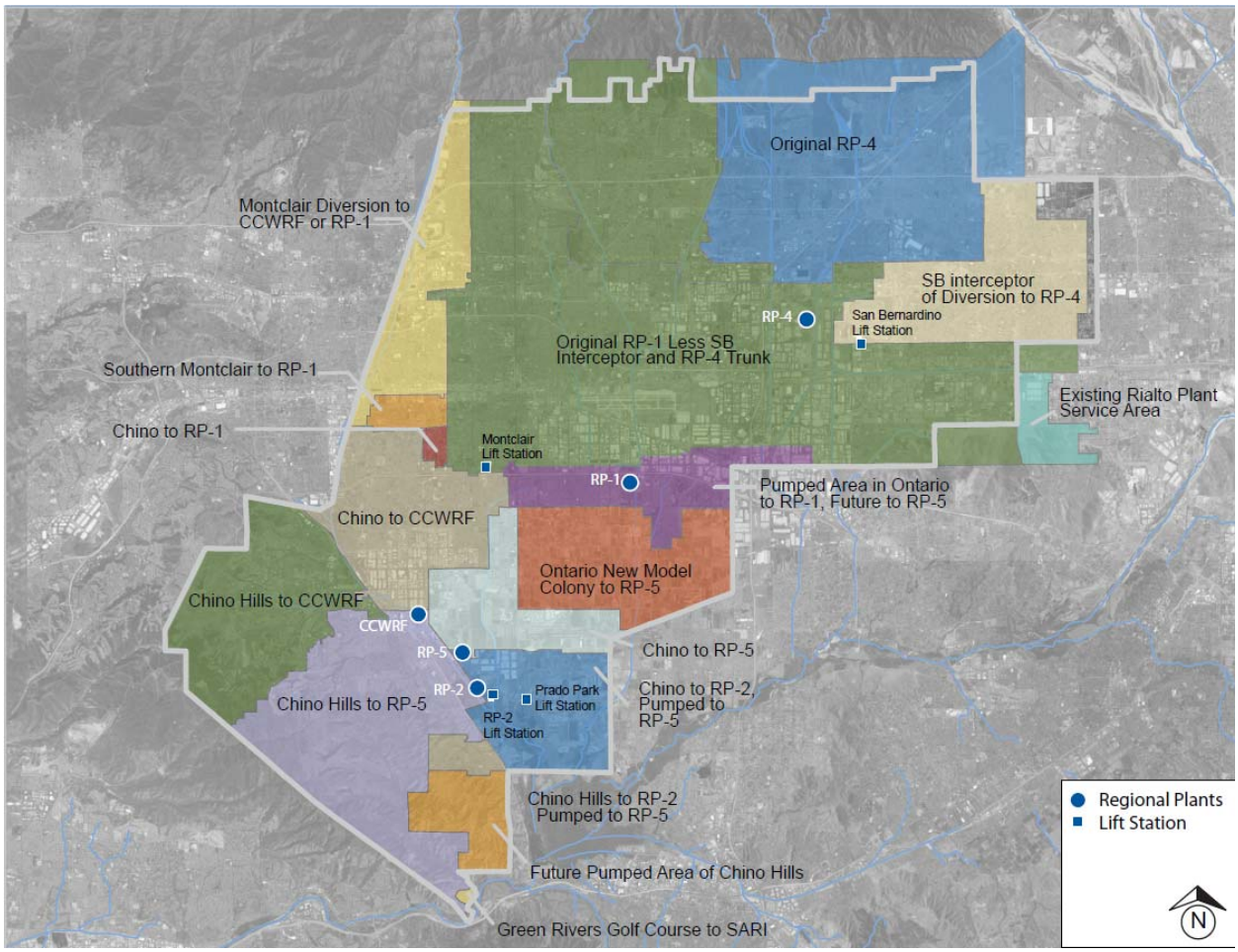
The Agency has four RWRPs which produce recycled water that meets Title 22 standards for indirect reuse and groundwater recharge. All of the RWRPs have primary, secondary, and tertiary treatment and recycled water pumping facilities and are interconnected in a regional network. Agency staff routinely use the Agency's bypass and diversion facilities, such as the San Bernardino Lift Station, Montclair Diversion Structure, Etiwanda Trunk Line, and Carbon Canyon bypass, to optimize the Agency's flows and capacity utilization. In general, flows are routed between regional plants in order to maximize recycled water deliveries while minimizing overall pumping and treatment costs. Figure 6 illustrates the service area boundaries for the Agency's four RWRPs

The four Regional facilities are: Regional Water Recycling Plant No. 1 (RP-1), Regional Water Recycling Plant No. 4 (RP-4), Regional Water Recycling Plant No. 5 (RP-5), and Carbon Canyon Wastewater Recycling Facility (CCWRF). The biosolids

produced at RP-4 and RP-1 are thickened, digested, and dewatered at solids handling facilities located at RP-1. Similarly, the CCWRF and RP-5 biosolids are treated at Regional Water Recycling Plant No. 2 (RP-2). The stabilized and dewatered solids are then transported to the Inland Empire Regional Composting Facility for processing into soil amendment.

RP-5 began treating and discharging wastewater in March 2004. At that time, the RP-2 wastewater influent was diverted to RP-5 for treatment. Since portions of RP-2 are located in the 100-year flood plain, liquid wastewater processing at RP-2 was discontinued and the plant is currently used only for processing solids from RP-5 and CCWRF. Biosolids will continue to be processed at RP-2 until the lease with the U.S. Army Corps of Engineers expires in 2035, or the maximum operational water level behind the dam is raised, which would place RP-2 in the inundation zone. In anticipation of this, land at RP-5 has been reserved for a future solids processing facility.

FIGURE 6: REGIONAL PLANT SERVICE AREA BOUNDARIES



The Agency has a network of regional interceptor sewers that can be used to bypass flow from one water recycling plant to another to balance and optimize the use of treatment capacity. Currently, the regional interceptors can bypass flow from RP-4 to RP-1 and from CCWRF to RP-5. In addition, primary effluent can be bypassed from the RP-1 equalization basins to RP-5. Figure 7 illustrates the existing regional trunk wastewater system and tributary areas.

The main routes for bypassing/diverting flow are:

- Up to approximately 6 million gallons per day (MGD) can be bypassed from RP-4 to RP-1 through the Etiwanda Interceptor.
- 1 to 2 MGD is typically bypassed from CCWRF to RP-5 through the Chino Interceptor.
- A portion of the flow from the Cities of Upland and Montclair (approximately 4 MGD) can be diverted either to CCWRF, through the Westside Interceptor, or to RP-1, via the Montclair Lift Station and Montclair Interceptor. Typically, most of the flow is routed to CCWRF to avoid pumping costs.
- Primary effluent and sludge can be diverted from the RP-1 equalization basins into the Eastside Interceptor where it then flows by gravity to RP-5. Up to 9 MGD could potentially be bypassed; however, operational experience has shown that typically 1 to 2 MGD is bypassed.

The Agency also has four wastewater lift stations, as shown on Figure 6. These are used to shift flows that would naturally flow from one portion of the service area to a different treatment plant, to balance flows and keep water in the northern portion of the service area to maximize potential recycled water use. The lift stations are as follows:

- Montclair Lift Station– pumps wastewater from portions of Montclair, Upland, and Chino to RP-1.
- Prado Park Lift Station– pumps wastewater from the Prado Regional Park in the City of Chino to the RP-2 Lift Station
- RP-2 Lift Station– pumps wastewater from the southeastern portions of the cities of Chino and Chino Hills, and the solids treatment side streams from RP-2 to RP-5.
- San Bernardino Avenue Pump Station– pumps a portion of the flow from the City of Fontana to RP-4.

Recycled Water Distribution System

The Agency has been serving recycled water to its member agencies since formation of the Regional Sewage Service Contract in 1972. Initially, recycled water was delivered to Whispering Lakes Golf Course and Westwind Park in the city of Ontario, as well as to Prado Regional Park and El Prado Golf Course in San Bernardino County. In the early 1990's, the Agency planned and built the first phase of the Carbon Canyon Recycled Water Project, which now serves several customers in Chino and Chino Hills. The connected demand for the recycled water has more than tripled since FY 2006/07 from 13,000 AFY to over 43,800 AFY. Recycled water and groundwater recharge sales have nearly tripled as well. Major benefits of the recycled water program include:

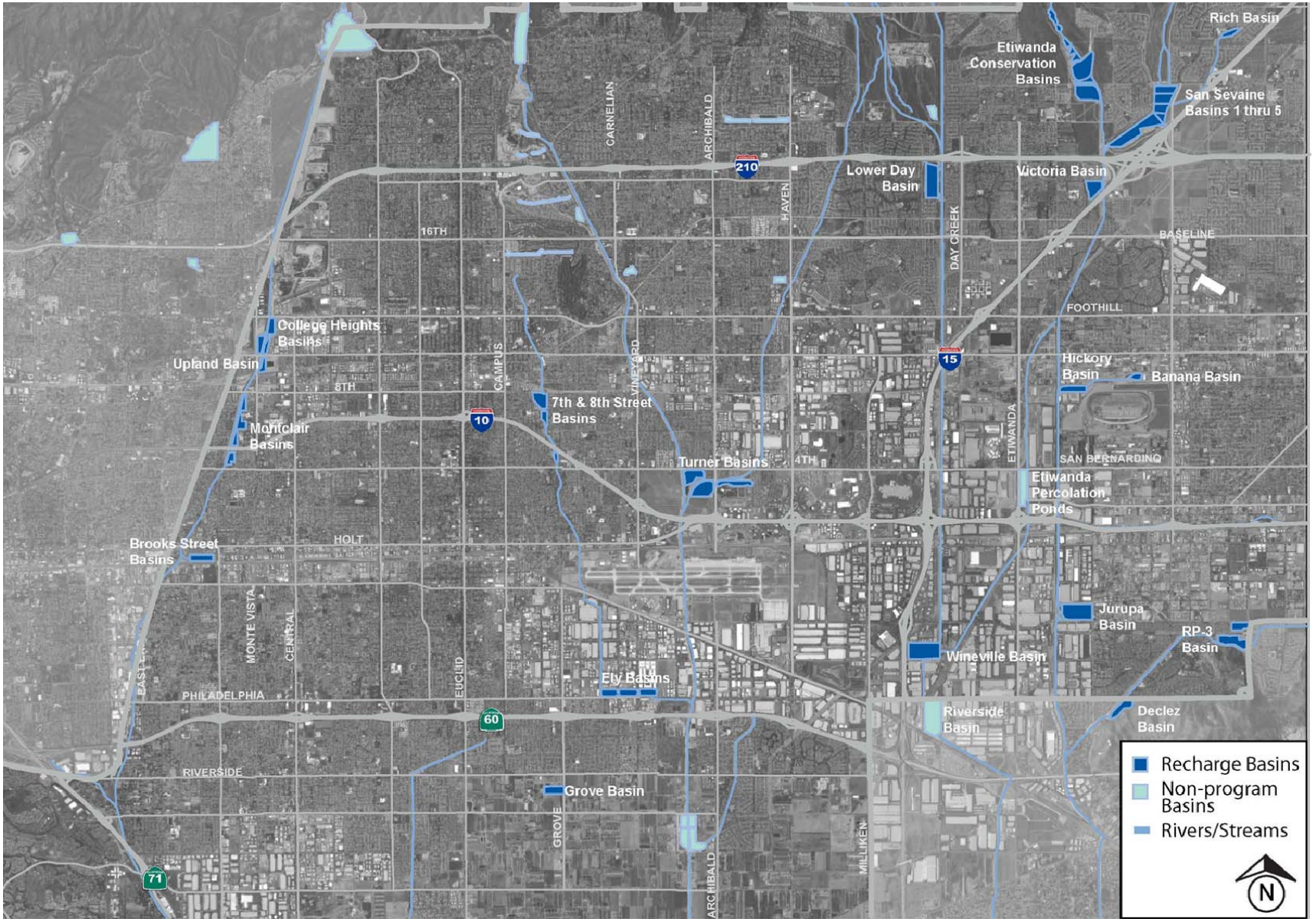
- New Water Supply – 30,000 AFY Increase in Connected Demand since FY 2006/07.
- Recycled Water Revenues – an estimated $10 million/year (wholesale rate revenue plus MWD rebate). The goal of the program was to eventually be self-funded through recycled water sales revenue.
- The recycled water supply is not impacted by drought and will mitigate the impacts of regional or statewide water supply limitations.

Since 2010, the rate of connections for direct use customers to the regional recycled water system has decreased. The main causes for the decreased rate of connection can be attributed to the recession and limited financial resources. As a result, the Agency has shifted its focus from direct connections to pursuing additional regional groundwater recharge projects. The next phase of projects and priorities will be developed in the Recycled Water Program Strategy, scheduled for completion in spring 2014.

Groundwater Recharge Basins

In conjunction with the CBWM, the Agency is implementing the groundwater recharge program to increase artificial groundwater recharge within Chino Basin using stormwater, recycled water, and imported water. By enhancing the recharge capacity in the Chino Basin, greater quantities of high quality water can be captured and stored during wet years. Subsequently, the stored water can be drawn from the Basin during droughts and shortages of imported water. The 22 recharge basins which are a part of this program are shown in Figure 7. Annual recharge varies due

FIGURE 7: CHINO BASIN RECHARGE PROGRAM SITES



to weather patterns, and the availability of imported water and recycled water supplies. Potential monthly recharge capacities for the recharge sites are listed in Table 1.

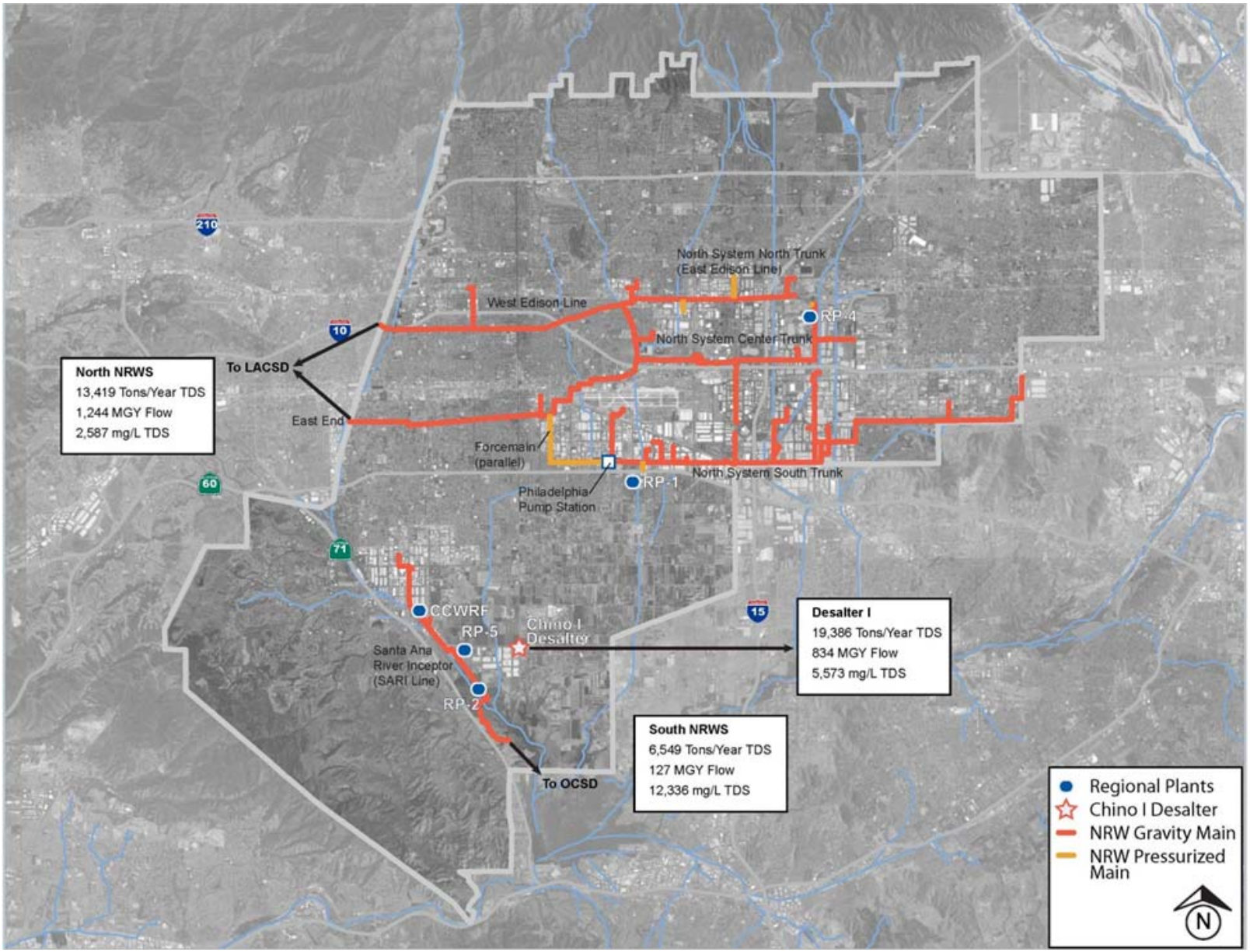
The Agency, CBWM, the CBWCD, and their respective member agencies recently completed a 2013 Recharge Master Plan Update (Update) to the 2010 Recharge Master Plan. The Update evaluated 27 yield enhancing capital projects for the Chino Basin and the Agency has agreed to finance 3 of these projects, which are included in the TYCIP project lists. The remaining projects required additional investigation to evaluate the feasibility and cost-effectiveness of incorporating the basins into the recharge program. The Agency will continue to work with CBWM and CBWCD toward this end.

TABLE 1: ESTIMATED MONTHLY RECHARGE CAPACITIES

Recharge Site	Recharge Capacity Acre Feet per Month
Ely Basins	193
Banana Basin	117
Declez Basin (2 & 3)	151
Etiwanda Conservation Ponds	**
Hickory Basin	136
Jurupa Basin	117
RP-3 Basins	760
Turner Basin (1-4)	161
7th & 8th Street Basins	170
Brooks Street Basin	188
San Sevaine (1-3, 5)	108
Victoria Basin	160
Wineville Basin	**
Total	**2,261**

*** Not currently in use*

FIGURE 8: SALT EXPORT FROM CHINO BASIN 60 MILE NON-RECLAIMABLE WASTEWATER SYSTEM (NRWS)



The NRWS removes a total of 36,675 tons of TDS each year from the Agency's service area.

Salinity Management

To reduce the salinity, the Agency operates a Non-Reclaimable Wastewater System (NRWS) of pipelines and pump stations which export high-salinity industrial wastewater generated within the Agency's service area to the Pacific Ocean (see Figure 9). Maintaining a low salinity level in recycled water is critical to ensure that recycled water can be used for groundwater recharge and other uses. This system also ensures that the RWRPs do not exceed the TDS discharge limits established by the Regional Water Quality Control Board.

The NRWS is comprised of a north and a south system. The north system conveys the non-reclaimable wastewater to CSDLAC for treatment and disposal. The south system conveys wastewater through the Brine Line owned by SAWPA, and to the Orange County Sanitation District (OCSD).

Wastewater discharged to the NRWS consists mainly of industrial and groundwater treatment brines. The Agency also discharges belt press filtrate resulting from the dewatering of the biosolids generated within the Agency's water recycling treatment facilities and some domestic waste from non-sewered areas. The NRWS is physically separated from the Regional Wastewater System and provides a means for segregating poor-quality saline wastewater and exporting it out of the Agency's service area. By maximizing the use of the NRWS, the quality of recycled water is improved for local use and helps ensure that the Agency can comply with the final effluent total dissolved solids (TDS) and total nitrogen limits listed in the National Pollutant Discharge Elimination System (NPDES) permits.

The CSDLAC and Agency entered into agreements dating back to 1966 under which the CSDLAC agreed to accept a portion of the Agency's industrial wastewater flows from the NRWS. In early 2013, Agency staff met with CSDLAC staff to commence negotiations on a new NRWS Agreement which will go into effect on July 1, 2014. The new agreement includes a 30 year term with up to four additional five year extensions and provides 15,000 initial Baseline Capacity Units (BSU) for allocation amongst current customers. Additional Capacity may be purchased or leased, and payment of remaining 4R Capital Charges funded by SRF loans, will be paid in full over a 6 year term.

Inland Empire Regional Composting Facility

Inland Empire Regional Composting Facility (IERCF) was constructed in 2007 under a Joint Powers Authority agreement between the Agency and the CSDLAC. The IERCF, located in Rancho Cucamonga, is completely enclosed to control odors to meet stringent air quality regulations and is the nation's largest indoor biosolids composting facility.

The IERCF uses the Aerated Static Pile composting process to recycle approximately 150,000 wet tons/year of dewatered and stabilized biosolids from the Agency and CSDLAC's wastewater treatment processes as well as wood waste from local communities. It produces over 230,000 cubic yards of high quality compost each year for local landscaping and horticultural use. The composted product, which is marketed as SoilPro® Premium Compost, is sold as a soil conditioner which helps improve water retention, resulting in better plant growth and water savings.

The facility is currently operating at its design capacity, receiving nearly 600 tons per day of biosolids and recycled waste products. The RP-1 Dewatering Facility, listed in the capital projects list in the following section, which will use centrifuges to dry solids to a higher percentage, has the potential of freeing up 50 wet tons per day of additional capacity at the IERCF.

Renewable Energy

The Agency has made significant strides in reducing its dependence on the electrical power grid by investing in renewable energy. In an effort to diversify and maximize renewable energy generation, the Agency installed 3.5 megawatts (MW) of solar power in 2008, a 1 MW wind turbine in 2011 and a 2.8 MW biogas fuel cell in 2012. Combined, these projects have provided more than 50% of peak energy demand Agency wide, zero net consumption at RP-1 during winter months, potential zero net energy consumption at RP-4 during winter months, and net energy export at RP-2. To continue towards the goal of achieving energy independence by 2020, the Agency will update the Energy Management Plan in 2014.

Wastewater Flow Projections

Wastewater flow forecasts are conducted annually based on three components: (1) historical wastewater flow trends; (2) per dwelling unit wastewater generation factors; and (3) expected future growth numbers provided by Contracting Agencies. Projections are used to determine future demands on the Agency's facilities in order to anticipate the need for modifications to Regional Water Recycling Plants (RWRP) and Solids Handling facilities.

Based on analyses of the components, ten-year flow projections have been made for each of the Agency's RWRPs, and for the Agency's service area as a whole. The projected flows are then compared to current and future planned plant capacities. For these forecasts, the "tributary area flow" is defined as raw sewage flow from the service area that is naturally tributary to a particular RWRP without pumping, diversion or bypassing. In contrast, the "treated influent flow" is the actual flow that is received and treated at the RWRP. The treated influent flow is different than the tributary area flow because the RWRPs are interconnected, allowing some of the tributary flow to be re-routed between plants. In addition, treated influent flow includes the recycle streams generated during solids processing that are sent back to the plant headworks for additional treatment.

WASTEWATER FLOW TRENDS

Figure 10 illustrates the wastewater flow pattern within the Agency in FY12/13 and Table 2 shows the current flows being treated at each of the Agency's RWRPs. For FY 2012/13, the average raw wastewater flow treated was 52.7 MGD and the treated influent flow was 54.9 MGD. The difference was due to 2.2 MGD of solids processing recycle flow sent from RP-2 to the RP-5 headworks for additional treatment. Since FY 2006/07, the Agency's wastewater flows have declined by approximately 10 percent, but strength has increased. This is believed to reflect the effects of water conservation, the recession, and drought conditions. However, even though wastewater flows declined, the Agency has been able to increase the amount of recycled water supplied to users by using the San Bernardino Avenue Lift Station and the Montclair Lift Station to route additional raw wastewater to the recycling

FIGURE 9: FY 12/13 REGIONAL WASTEWATER FLOW SCHEMATIC

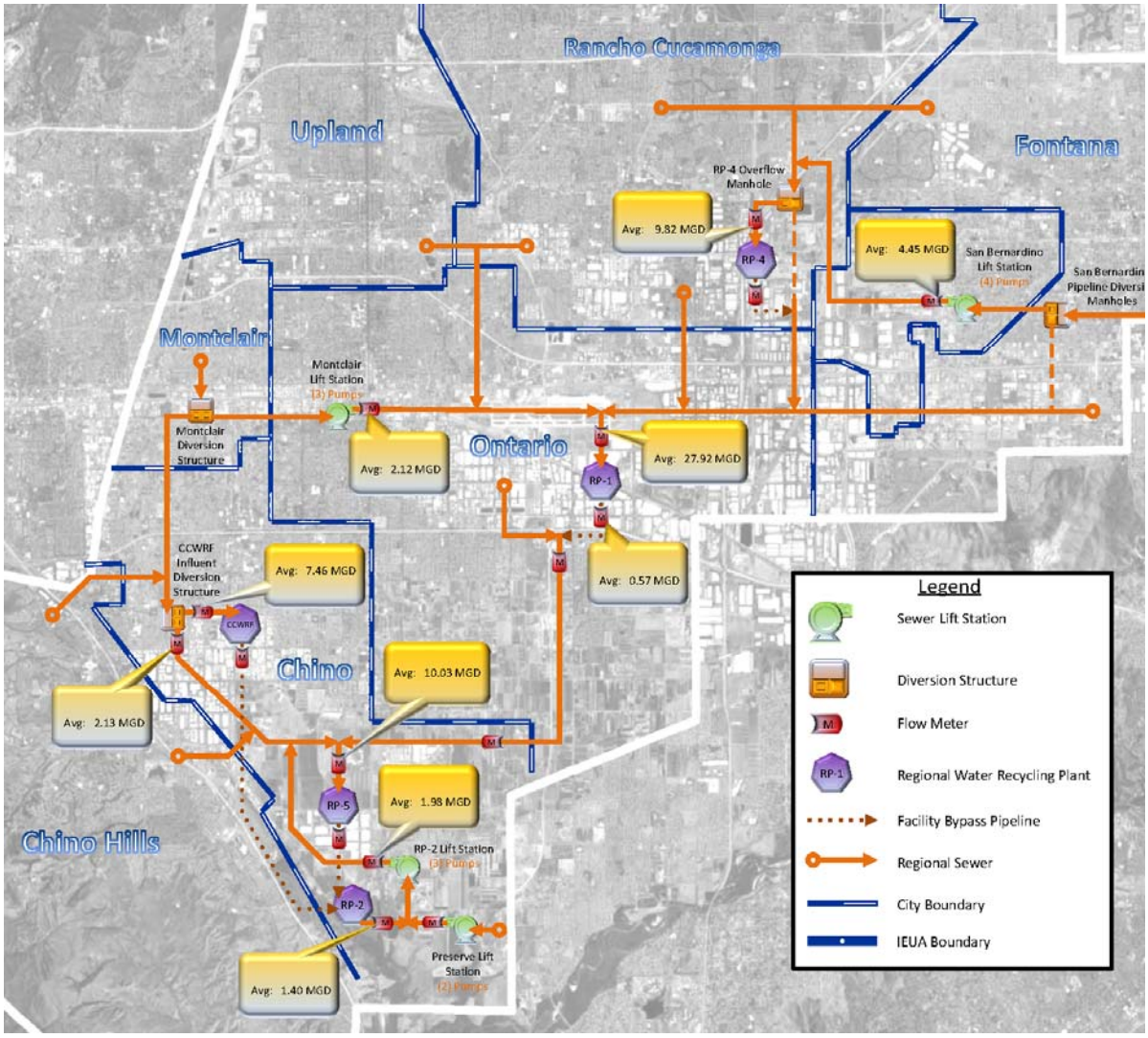


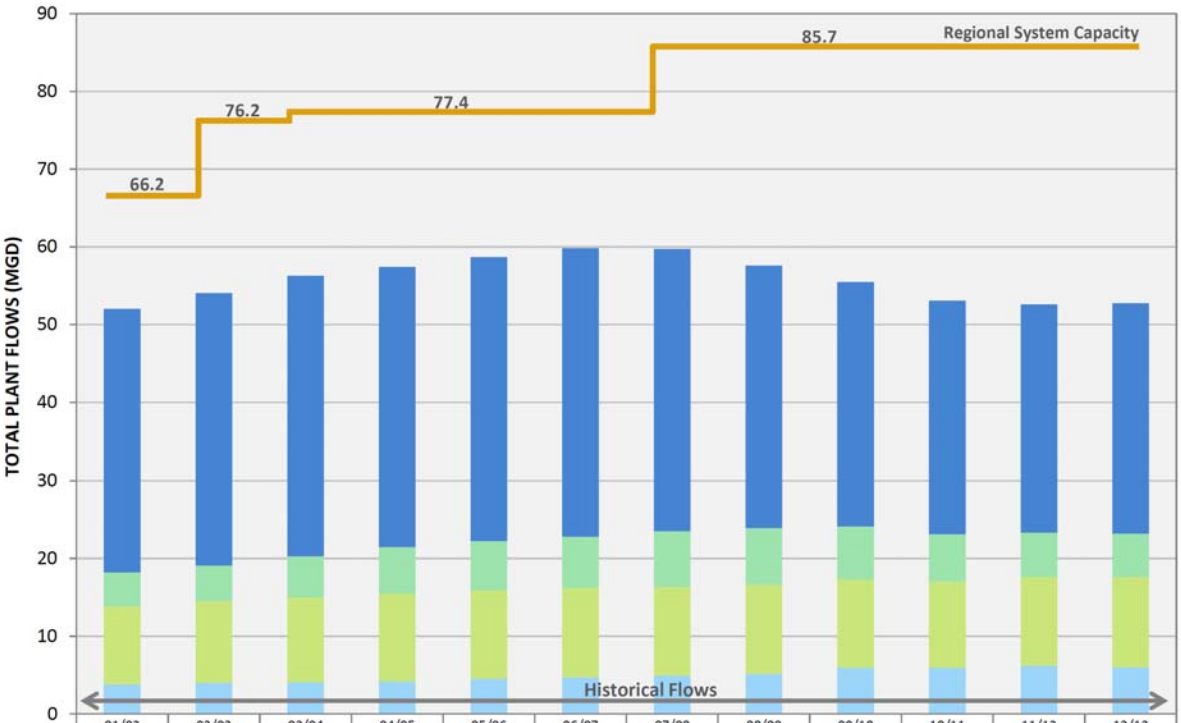
TABLE 2: AVERAGE ANNUAL FLOW (FISCAL YEAR 2012/13)

AGENCY	RP-1	RP-4	RP-5	CCWRF	TOTAL
Chino	0.1		1.9	2.1	4.1
Chino Hills			3.8	2.0	5.8
Ontario	8.9		4.2		13.1
Montclair	0.2			2.1	2.3
Upland	4.1			1.0	5.0
Fontana	6.9	5.5			12.4
CVWD	7.7	4.6			12.3
TOTAL	**27.9**	**10.0**	**9.9**	**7.0**	**54.9**

plants in the northern service area where the system has been expanded and where groundwater recharge basins are located.

The Agency's historical wastewater flow trend is shown below in Figure 11. This figure depicts the raw sewage from each RWRP's tributary area (i.e. the natural flow) for all of the Agency's facilities.

FIGURE 10: HISTORICAL TRIBUTARY AREA FLOWS



	01/02	02/03	03/04	04/05	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13
RP-1	33.80	34.97	36.00	35.95	36.46	37.00	36.21	33.70	31.40	30.00	29.30	29.54
RP-4	4.40	4.60	5.30	6.00	6.30	6.60	7.20	7.30	6.80	6.10	5.70	5.60
CCWRF	10.02	10.50	10.92	11.29	11.41	11.50	11.41	11.43	11.40	11.10	11.40	11.61
RP-5	3.80	3.99	4.07	4.18	4.51	4.71	4.91	5.17	5.90	5.90	6.20	6.00
Total	52.02	54.06	56.29	57.42	58.69	59.81	59.73	57.60	55.50	53.10	52.60	52.75

WASTEWATER FLOW GENERATION FACTORS

The regional collection system and RWRPs were planned and designed using the raw wastewater generation factor of 270 gallons per day per equivalent dwelling unit (GPD/EDU), as specified in the Regional Sewerage Service Contract, Exhibit J. Although the Agency still plans its regional system around Exhibit J, new developments are using less water due to water-conserving devices and new water use efficiency laws. The Agency expects average flows throughout the service area to

TABLE 3: TEN YEAR CAPACITY DEMAND FORECAST BY AGENCY

Fiscal Year	Chino	Chino Hills	CVWD	Fontana	Montclair	Ontario	Upland	Total
	EDUs	EDUs	EDUs	EDUs	EDUs	EDUs	EDUs	EDUs
2014/15	355	1023	364	734	262	2200	168	5106
2015/16	665	840	364	831	139	2700	110	5649
2016/17	727	617	364	804	29	2650	110	5301
2017/18	537	314	364	728	29	2050	110	4132
2018/19	334	184	364	537	29	1450	110	3008
2019/20	334	156	364	502	29	1450	110	2945
2020/21	334	91	364	374	29	850	55	2097
2021/22	272	44	364	367	29	850	55	1981
2022/23	272	29	322	367	29	850	55	1924
2023/24	272	17	0	361	29	850	0	1529
Totals	**4102**	**3315**	**3234**	**5605**	**633**	**15900**	**883**	**33672**

remain well below the 270 GPD/EDu, even as the economy improves, due to the rising water costs, reduced imported water supply availability, and increased water conservation measures.

Recent flow monitoring conducted by the Agency as part of the Wastewater Facilities Master Plan Update suggests that the current average flow rate is 200 GPD/EDU. As a result, the future flow projections for the RWRPs illustrated on the following pages were calculated using both 200 and 270 GPD/EDU. Despite the projected decrease in wastewater flow per EDU, the Agency anticipates an increase in strength (BOD/TSS) relative to amount of flow, which may translate to increased treatment capacity needs and costs per unit of flow.

ANTICIPATED SERVICE AREA GROWTH

The results of the ten-year capacity demand forecast based on the August 2013 member agency survey are summarized by Contracting Agency in Table 3. For FY14/15, the forecasted activity was 5,106 EDUs. Over the next ten years, activity was projected to total 33,672 EDUs. Almost 50% of this activity was projected to occur in the city of Ontario as the result of new development. Over the next ten years, building activity is projected to be approximately 78% residential and 22% commercial/industrial.

Individual baseline forecast exhibits for each treatment plant at 200 and 270 GPD/ EDU are located at the end of this section. These tables represent typical operational flow scenarios, based on current operating procedures. This includes the following assumptions:

- Assumes that actual flow is between 270 and 200 GPD/EDU
- Uses the contracting agencies projected EDU growth as a basis
- Former Ontario Lift Station flow (2.5 MGD) is considered part of RP-5 raw service area flow
- San Bernardino Lift Station routes 4.5 MGD which would otherwise naturally flow to RP-1 to RP-4
- 2.2 MGD of Montclair Interceptor flows are routed to RP-1
- 2.3 MGD is bypassed from CCWRF to RP-5
- SARI flows from (0.7 MGD) will be diverted to RP-5 starting in FY 14/15

TABLE 4: TEN YEAR DEMAND FORECAST BY LAND USE

Fiscal Year	Residential (EDUs)	Commercial/ Industrial (EDUs)	Total (EDUs)
2014/15	4167	939	5106
2015/16	4627	1022	5649
2016/17	4257	1044	5301
2017/18	3200	932	4132
2018/19	2299	709	3008
2019/20	2209	736	2945
2020/21	1567	530	2097
2021/22	1466	515	1981
2022/23	1410	514	1924
2023/24	1129	400	1529
TOTALS	**26331**	**7341**	**33672**

Alternative flow scenarios and operational measures are being evaluated as part of the Wastewater Facility Master Plan Update (WWFMPU) that is currently under development. Recommendations and changes from the WWFMPU will be incorporated into future treatment plant forecasts. Table 5 below indicates the projected EDUs by treatment plant over the next 10 years. Total regional system capacity utilization projections are illustrated in Figure 12 and 13.

FIGURE 11: REGIONAL SYSTEM TREATED INFLUENT FLOW FORECAST (270 GPD/EDU)

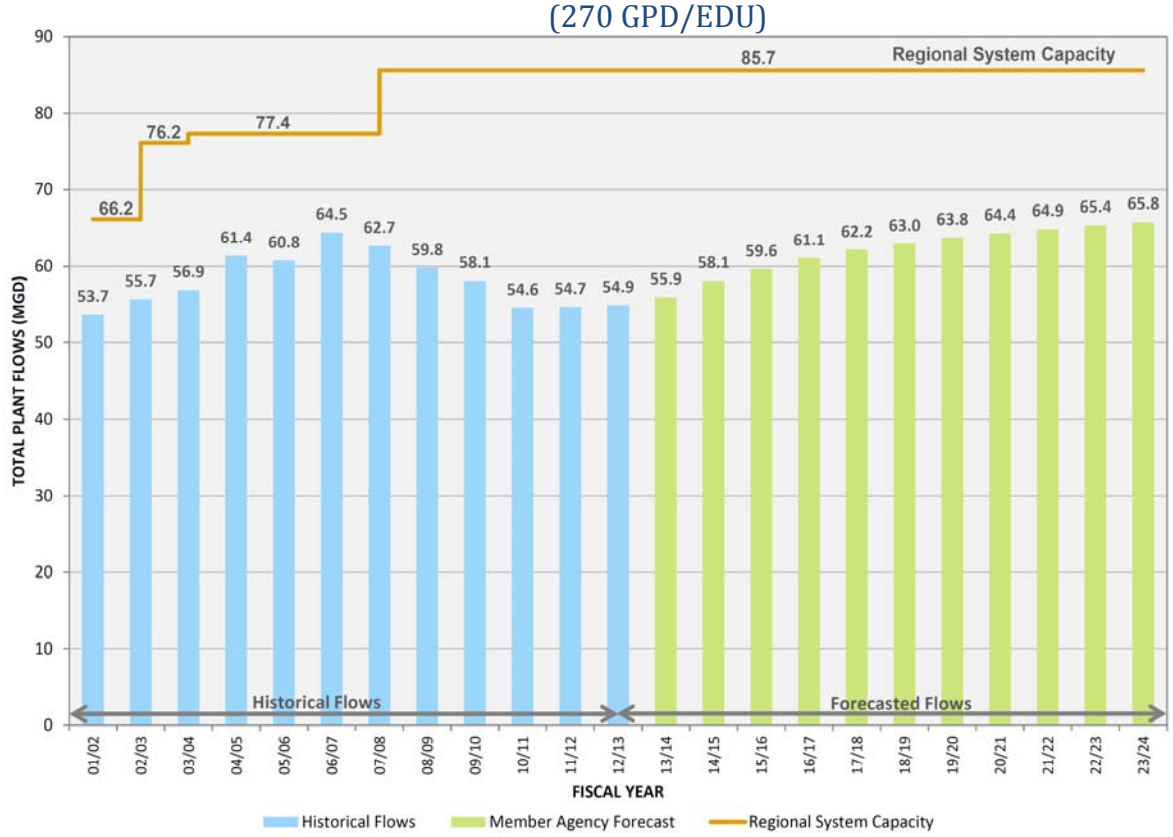


FIGURE 12: REGIONAL SYSTEM TREATED INFLUENT FLOW FORECAST (200 GPD/EDU)

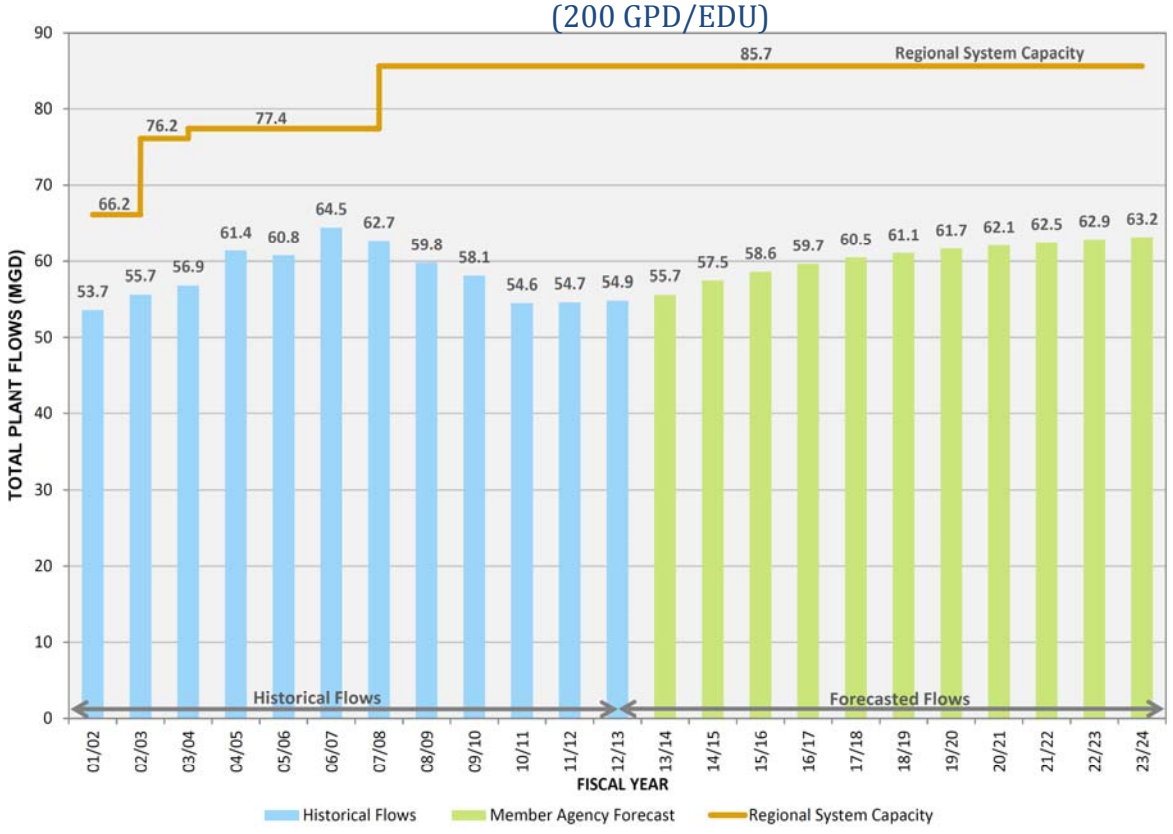


TABLE 5: TEN YEAR DEMAND FORECAST BY REGIONAL PLANT

Fiscal Year	RP-1 EDUs	RP-4 EDUs	CCWRF EDUs	RP-5 EDUs	SARI EDU	TOTAL EDUs
2014/15	1005	646	574	2881	306	5412
2015/16	921	724	483	3521	0	5649
2016/17	874	706	363	3358	0	5301
2017/18	798	656	273	2405	0	4132
2018/19	717	546	202	1543	0	3008
2019/20	703	525	201	1516	0	2945
2020/21	636	441	157	863	0	2097
2021/22	572	436	121	852	0	1981
2022/23	531	435	103	855	0	1924
2023/24	379	236	62	852	0	1529
TOTAL	**7136**	**5351**	**2539**	**18646**	**306**	**33978**

FIFTY YEAR FLOW PROJECTION

As indicated in Figure 14, Regional System 50-Year Forecast, wastewater flows have been projected to reach between a low of 79 MGD to a high of 95 MGD by the year 2060. These projections and data were developed considering current, historical, and future growth information. The low scenario reflects a wastewater flow increase of approximately 0.5 MGD per year. The high scenario reflects a 8.2 MGD increase per year. Conservation, water use efficiency, measures to meet the SBX 20 percent water use reduction by 2020 legislation, and additional flow monitoring will play a part in achieving the lower projected ultimate flows.

FIGURE 13: REGIONAL SYSTEM 50-YEAR PROJECTION

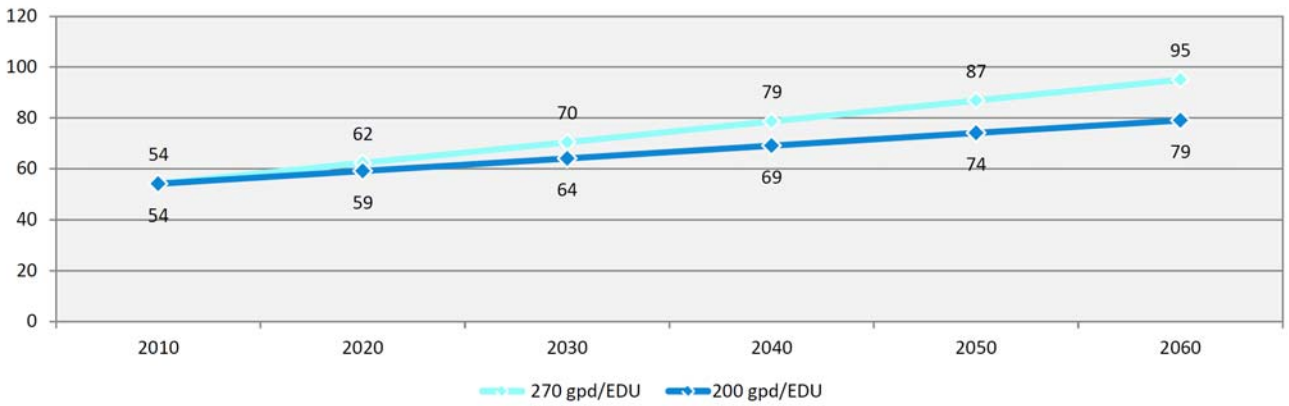
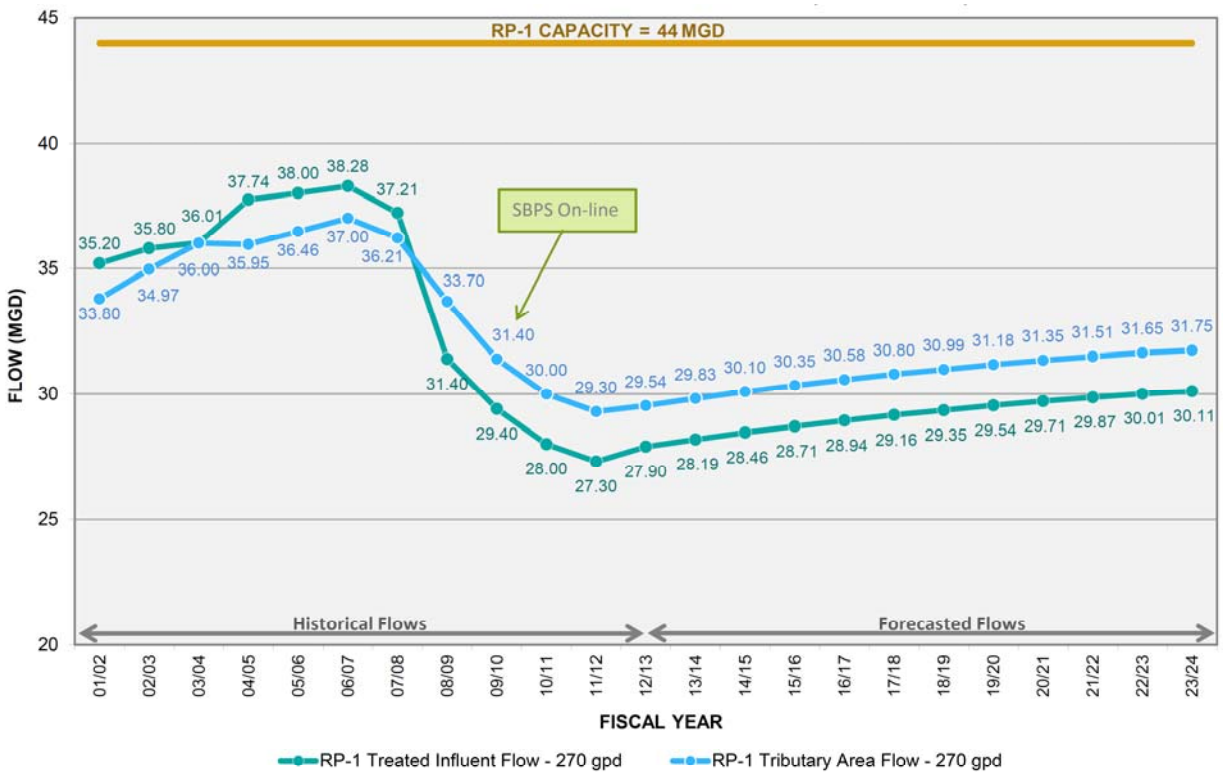


EXHIBIT A: RP-1

RP-1 Member Agency Flow Forecast (270 GPD/EDU)



RP-1 Member Agency Flow Forecast (200 GPD/EDU)

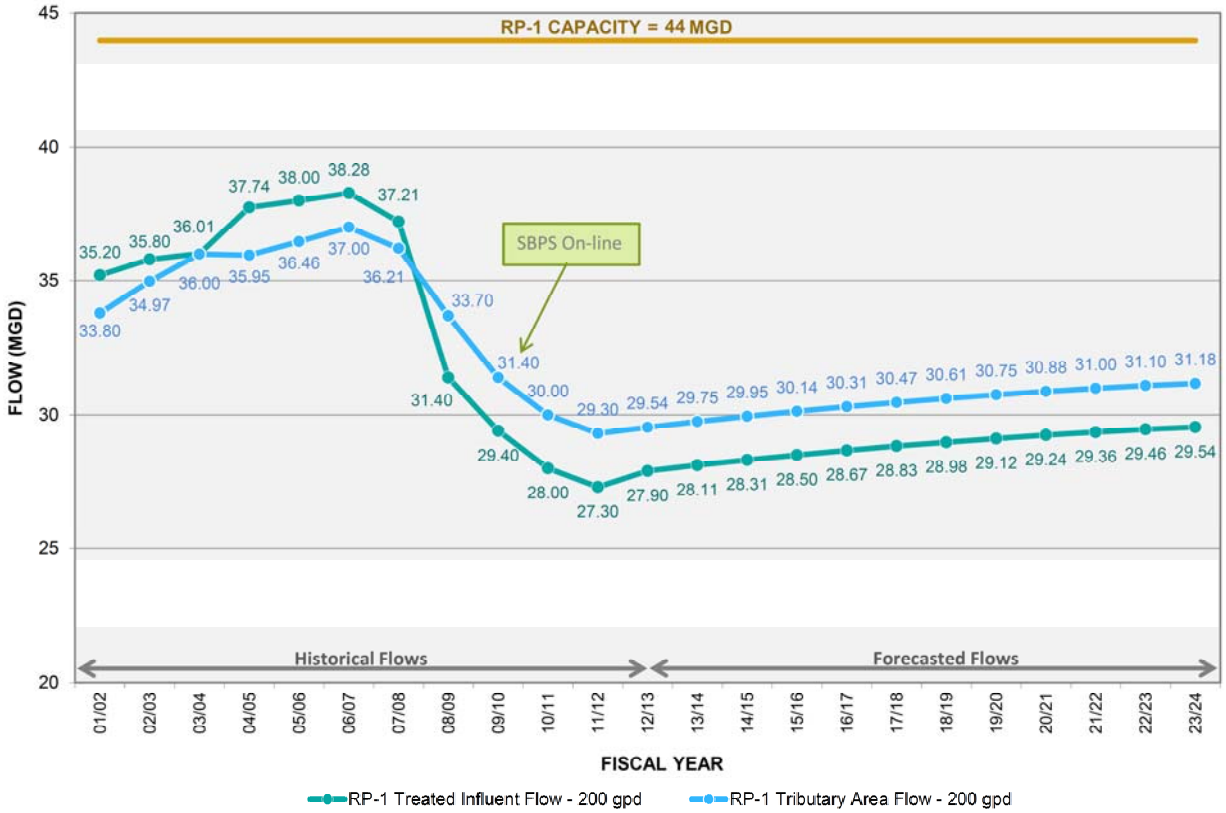
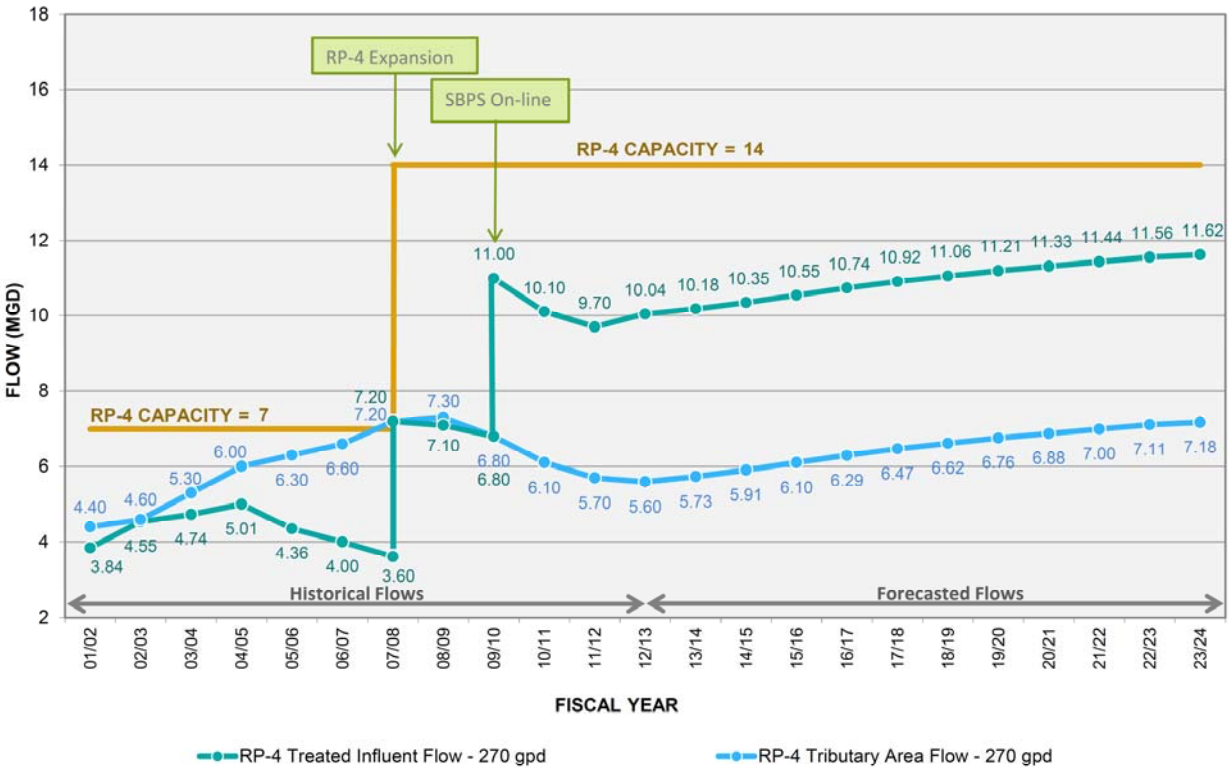


EXHIBIT B: RP-4

RP-4 Member Agency Flow Forecast (270 GPD/EDU)



RP-4 Member Agency Flow Forecast (200 GPD/EDU)

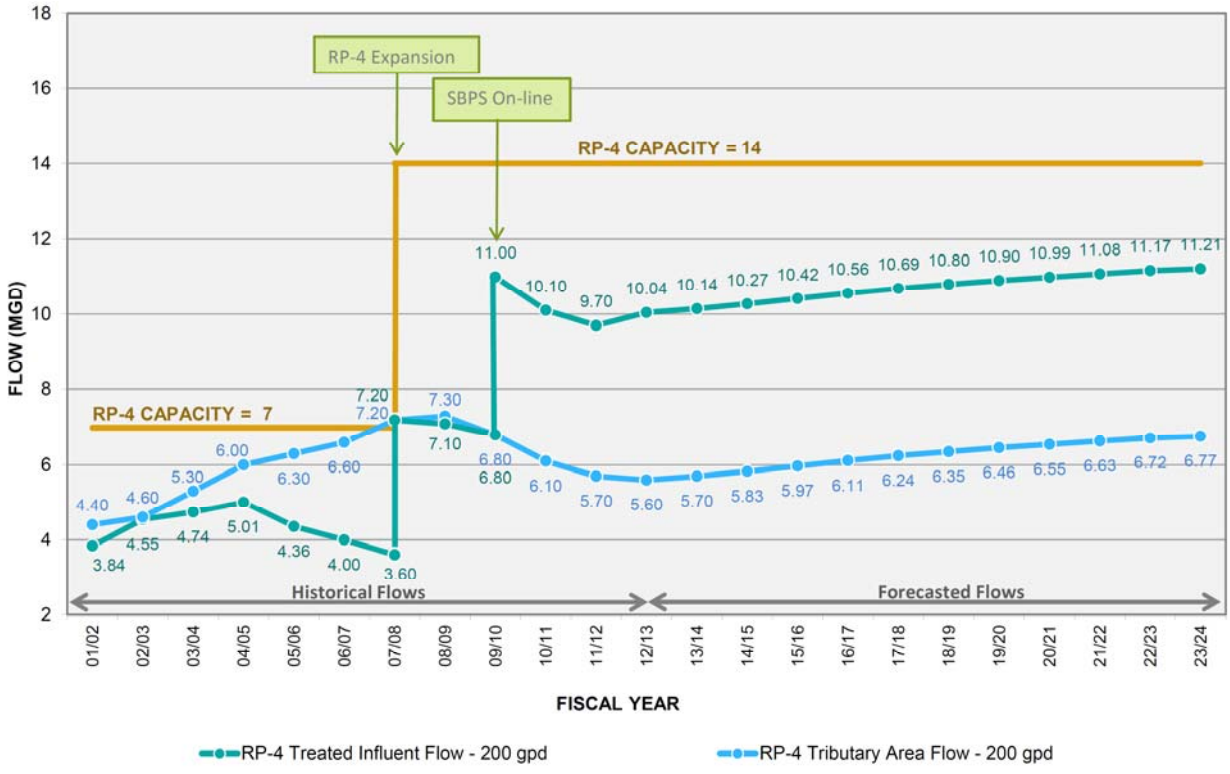
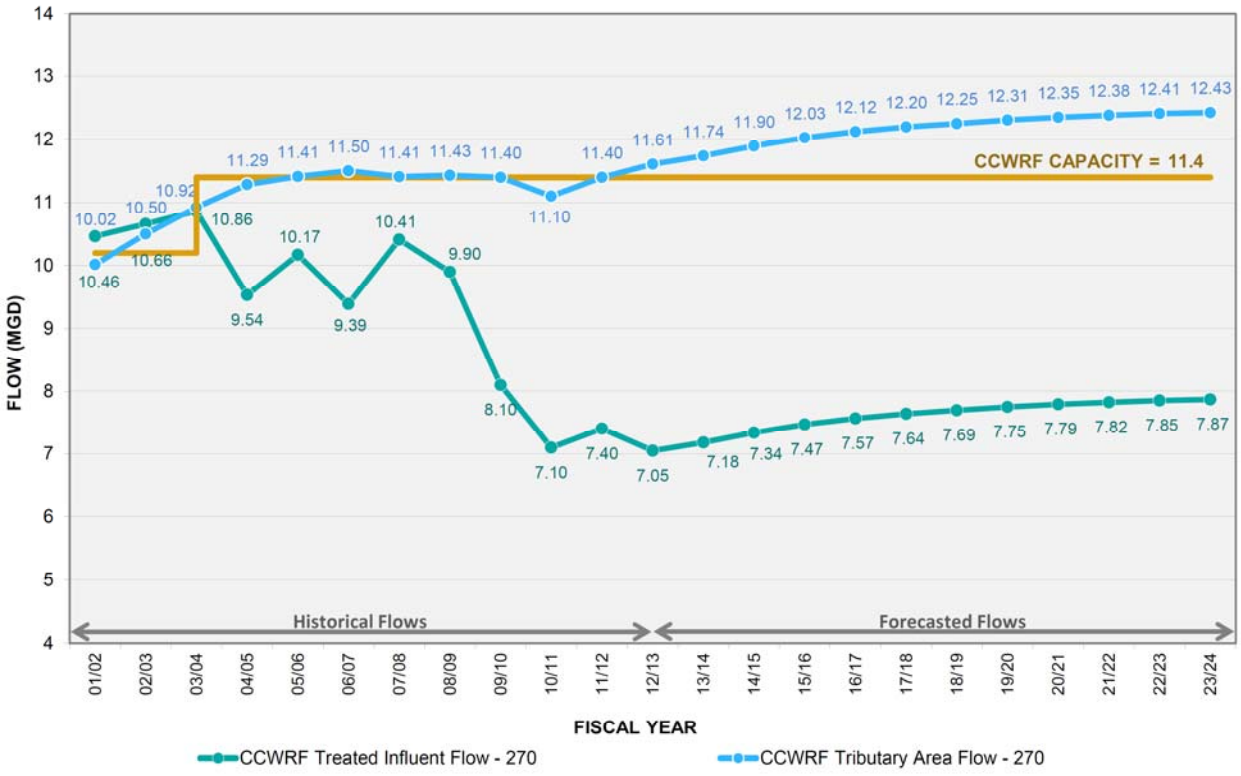


EXHIBIT C: CCWRF

CCWRF Member Agency Flow Forecast (270 GPD/EDU)



CCWRF Member Agency Flow Forecast (200 GPD/EDU)

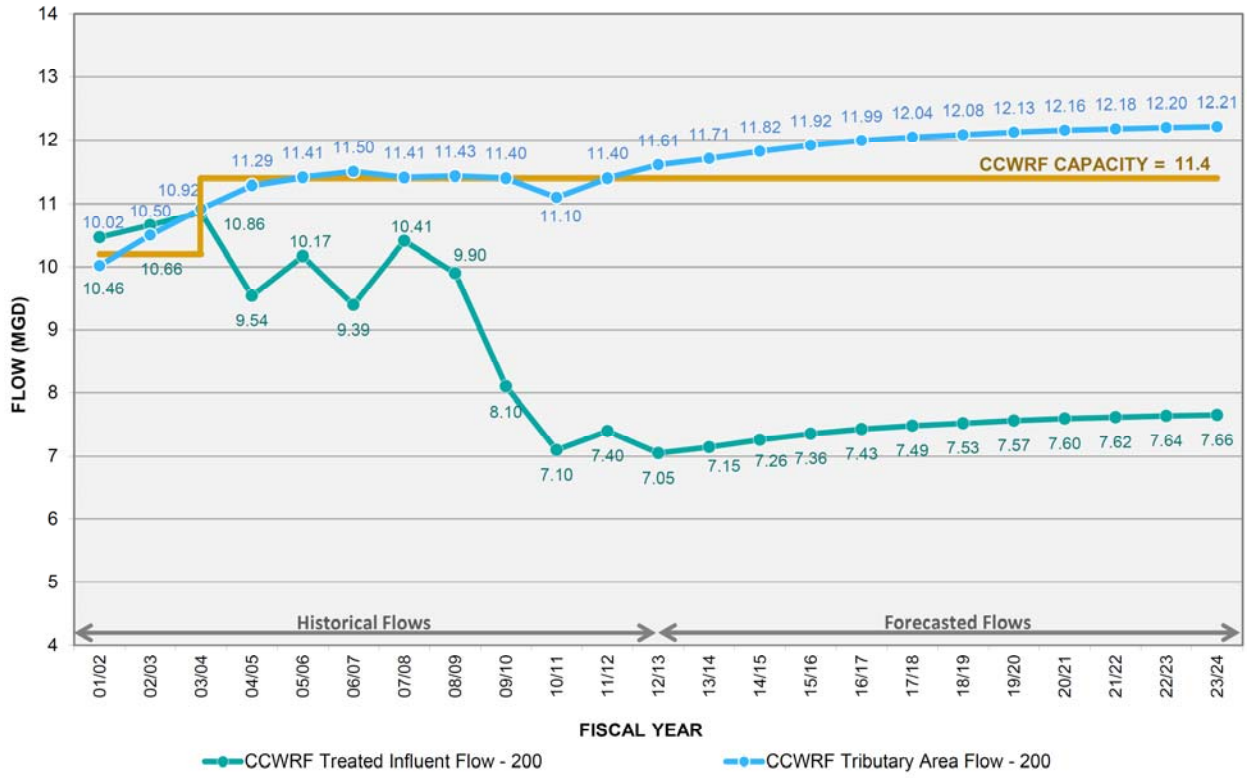
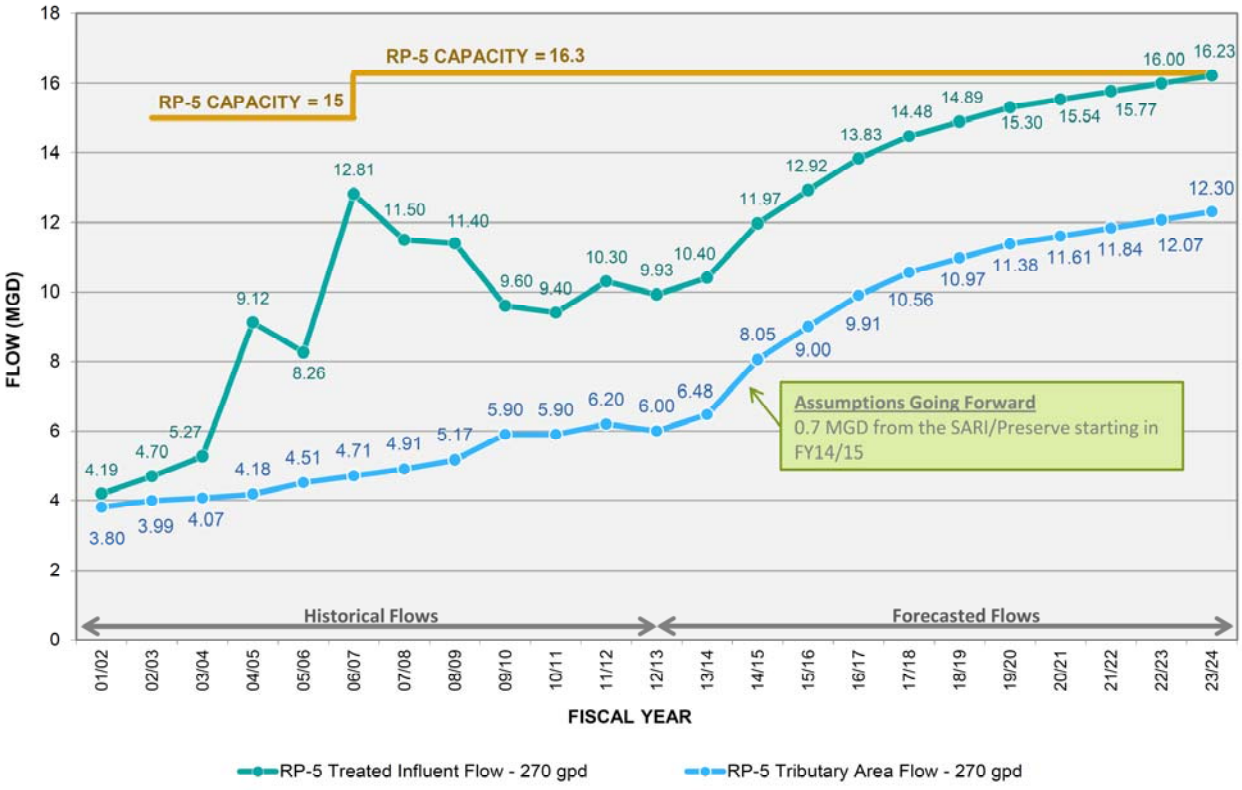
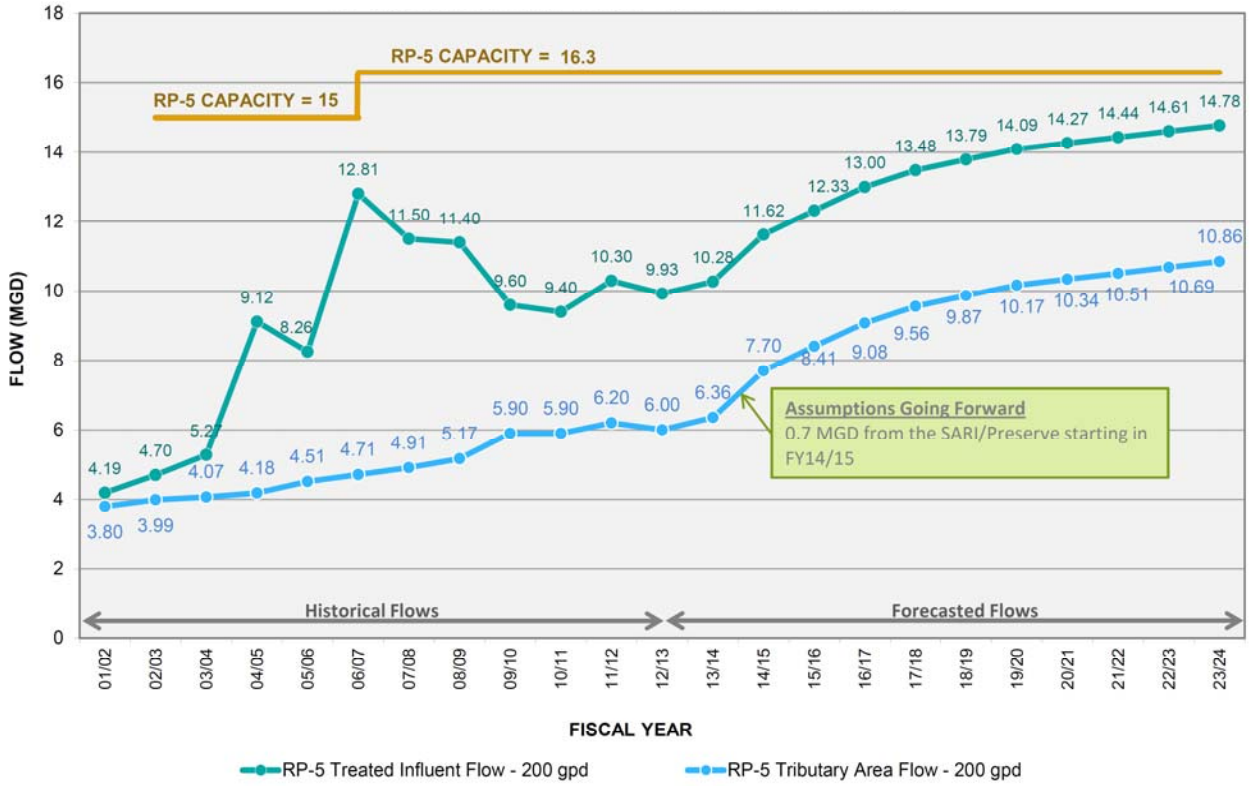


EXHIBIT D: RP-5

RP-5 Member Agency Flow Forecast (270 GPD/EDU)



RP-5 Member Agency Flow Forecast (200 GPD/EDU)



Capital Improvement Projects

PROJECT IDENTIFICATION PROCESS

The TYCIP contains projects which were identified by the Maintenance, Operations, Engineering, and Planning departments. There are two main ways to identify projects: 1) as repair and rehabilitation project for existing facilities; and 2) expansion projects to provide additional capacity.

PROJECT PRIORITIZATION CRITERIA

Projects listed in the TYCIP are prioritized by timing and criticality. Drivers used to determine the timeframe and criticality during which a project would be undertaken include the regulatory and permitting requirements, wastewater flow projections, asset age, performance, efficiency, grant or funding availability. Project prioritization levels are assigned based on the following criteria:

Timing

Immediate: projects that must or are on track to be completed in the next 1 to 2 year timeframe

Intermediate: projects that will be completed within the next 3 to 5 years

Long-Term: projects that will occur within the next 6 to 10 years

Criticality:

Critical: the project is necessary to correct an imminent existing or foreseen health hazard, or to meet or maintain new regulatory requirements

High: the project will to meet new regulatory requirements, affect significant cost savings, be performance enhancing

Medium: the project will increase efficiency and generate cost savings or the project is necessary to maintain current levels of processing capacity and efficiency (annually recurring projects)

Low/ Grant Dependent: the project will provide a benefit to the Agency but it is not absolutely mandatory for the management and operation of the Agency; project may be dependent on the availability of outside funding.

In the future, projects that are identified in the completed planning documents and baseline studies, such as the Wastewater Facilities Master Plan and Odor Assessment Panel Study, will be evaluated in this way and may be added to future TYCIPs. The ten-year project list in Appendix D represents the Agency's best assessment of what projects will occur based on existing planning documents; the list will be refined regularly as planning documents are updated (see Figure 2 on page 5 for the current planning documents timeline). An estimated ten-year budget by fund, based on currently identified projects is summarized below in Table 6.

TABLE 6: TEN-YEAR BUDGET ESTIMATE, BY FUND

Fund	Description	FY 14/15	FY15/16	FY16-24	TYCIP Total
GG	Administrative Services Fund	$1,631,000	$1,540,000	$7,034,000	$10,205,000
RW	Recharge Water Fund	$50,000	-	-	$50,000
NC	Non-Reclaimable Wastewater Fund	$3,112,000	$350,000	$3,100,000	$6,562,000
WC	Recycled Water Fund	$27,799,000	$17,497,000	$41,641,000	$86,937,000
RO	Regional Operations and Maintenance	$12,812,000	$6,245,000	$49,758,000	$68,815,000
RC	Regional Capital Improvement Fund	$6,856,000	$5,705,000	$144,031,000	$156,592,000
RCA	Organics Management/IERCA	$2,798,000	$1,200,000	$4,000,000	$7,998,000
	TOTAL	**$55,058,000**	**$32,537,000**	**$249,564,000**	**$337,159,000**

WASTEWATER FACILITIES

Regional Program & Sewerage System

The Agency's Regional Program encompasses the activities associated with repair and replacement (R&R) of the Agency's wastewater, energy generation, and solids handling facilities.

TABLE 7: REGIONAL PROGRAM & SEWERAGE SYSTEM CAPITAL PROJECTS

Project #	Description	Prioritization		FY 14/15	FY 15/16	FY 16-24	Total
		Timing	Criticality				
EN11035	Philadelphia Pump Station Upgrades	immediate	medium	$2M	-	-	$2M
EN13016	SCADA Enterprise System	immediate	medium	$1.6M	$2M	$6M	$9.6M
EN13054	Montclair Lift Station Upgrades	immediate	medium	$2.9M	-	-	$2.9M
EN13056	Agency-Wide HVAC Improvements - Pckg No. 2	Immediate	medium	$700,000	$200,000	-	$900,000
EN14006	Misc RC Constr & Emergency Projects	annually recurring	medium	$250,000	$250,000	$2M	$2.5M
EN14009	CM Misc RC Constr & Emergency Projects	annually recurring	medium	$250,000	$250,000	$2M	$2.5M
EN14008	NRWS Conn & Emergency Projects	annually recurring	medium	$100,000	$100,000	$800,000	$1M
EN14011	CM Misc NRWS Constr & Emergency Projects	annually recurring	medium	$250,000	$250,000	$2M	$2.5
EN14024	CM Misc RO Constr & Emergency Projects	annually recurring	medium	$250,000	$250,000	$2M	$2.5M
EN14026	Misc RO O&M Emergency Projects	annually recurring	medium	$250,000	$250,000	$2M	$2.5M
EN14035	22-inch Manholes Along NRW North System North Trunk (NSNT) Rehab	immediate	medium	$613,000	-	-	$613,000
EN14037	Fontana Interceptor Relief Sewer Manholes Rehab	immediate	medium	$860,000	$350,000	-	$1.2M
EN16011	Whispering Lakes LS Improvements	intermediate	critical	-	-	$3M	$3M
TBD	Biofilter Media Replacement	annually recurring	medium	$200,000	$200,000	$1.6M	$2M
TBD	Tertiary Facility Rehab	annually recurring	medium	$100,000	$100,000	$3.6M	$3.8M
TBD	Septage Dump System	intermediate	low	-	-	$900,000	$900,000
TBD	Facility Access Improvements	Immediate	medium	$300,000	$300,000	$300,000	$900,000
TBD	Aeration Systems Rehab	annually recurring	medium	$300,000	$300,000	$1.6M	$2.2M
TBD	Aeration System Improvements	intermediate	medium	-	-	$6.3M	$6.3M
TBD	Clarifier Rehab	annually recurring	medium	$350,000	$350,000	$800,000	$1.5M
TBD	Major Equipment Rehab/ Replace	annually recurring	medium	$700,000	$500,000	$3.2M	$4.4M

Project #	Description	Prioritization		FY 14/15	FY 15/16	FY 16-24	Total
		Timing	Criticality				
TBD	Major Asset Rehab/ Replace	annually recurring	medium	$200,000	$200,000	$1.6M	$2M
TBD	Agency Wide Coatings and Paving	annually recurring	medium	$200,000	$200,000	$900,000	$1.3M
TBD	Energy Efficiency Improvements	annually recurring	medium	-	$100,000	$1.6M	$1.7M
TBD	Underground Piping Rehab	annually recurring	medium	$500,000	$500,000	$4M	$5M
TBD	Haven LS SCADA Improvements	intermediate	critical	-	-	$3M	$3M
TBD	ERP Improvements	immediate	medium	$744,000	$825,000	$2.5	$4.1M
TBD	Business Network IT Improvements	annually recurring	medium	$200,000	$200,000	$1.6	$2M
TBD	Process Automation Controls IT Improvements	annually recurring	medium	$300,000	$300,000	$2.4M	$3
TBD	Agency Wide HVAC Improvement Package Number 3	immediate	medium	$150,000	$900,000	$150,000	$1.2M
			TOTAL	**$14.3M**	**$8.9M**	**$55.9M**	**$79M**

The Regional Sewerage System includes 90 miles of regional sewage interceptors. The sewage lateral pipelines are owned and maintained by the individual contracting agencies. All of the wastewater is treated at the Agency's RWRPs, which provide advanced tertiary treatment that meets or exceeds all California Department of Public Health Services (Title 22 regulations) and RWQCB waste discharge permit requirements.

The Regional Sewerage System connects several regional water recycling plants. Waste biogas produced by the RWRPs is used to produce energy and the tertiary treated water is used as recycled water. The biosolids waste from the RWRPs is further treated to produce grade A compost, which is used as a fertilizer. Projects listed in Table 7 lists key projects over $500,000 that are a part of the regional system-wide program. Projects under $500,000 are listed in the ten-year project list in Appendix D and will be further refined as the planning documents are completed. Individual projects associated with a specific treatment plant are listed in the subsequent sections.

TABLE 8: RP-1 CAPITAL PROJECTS

Project #	Description	Prioritization		FY 14/15	FY 15/16	FY 16-24	Total
		Timing	Criticality				
EN13046	RP-1 Flare System Improvements	intermediate	critical	-	-	$3.4M	$3.4M
EN14019	RP-1 Headworks Rehab (aka Headworks Gate Replacement)	intermediate	medium	-	-	$10.5	$10.5
EN14020	RP-1 Sludge Thickening Upgrades	intermediate	medium	-	-	$8.5M	$8.5M
TBD	RP-1 Odor Control Improvements	long-term	medium	$150,000	$500,000	-	$650,000
TBD	RP-1 Flow Equalization Upgrade and Odor Control	long-term	medium	-	-	$1M	$1M
TBD	RP-1 East Primary Effluent Pipe Rehab	immediate	critical	$750,000	-	-	$750,000
TBD	RP-1 IPS System Improvements	intermediate	medium	-	-	$1M	$1M
TBD	RP-1 Digester Mixing Upgrade	long-term	medium	-	-	$2.3M	$2.3M
			TOTAL	**$900,000**	**$500,000**	**$26.6M**	**$28.1M**

RP-1 (Northern Service Area)

Regional Water Recycling Plant No. 1 (RP-1) is located in the City of Ontario near the intersection of Highway 60 and Archibald Avenue. This facility was originally commissioned in 1948 and has undergone several expansions to increase the design wastewater treatment capacity to approximately 44 MGD. RP-1 serves areas of Ontario, Upland, Fontana, Chino, Montclair and Cucamonga Valley Water District, treating approximately 27.9 MGD.

RP-1 also has biosolids treatment, designed at a capacity of approximately 60 MGD. Treatment consists of gravity thickening and dissolved air flotation thickening, anaerobic digestion, and dewatering by centrifuges. The stabilized, dewatered solids are trucked to the IERCF in the City of Rancho Cucamonga for further treatment to produce grade A compost. RP-1 handles solids from both RP-1 and RP-4. Based on wastewater flow projection surveys by member agencies, plant flows are expected to reach between 29.5 and 30.1MGD by FY 23/24 (see Exhibit A).

Table 8 lists key projects over $500,000 at RP-1. Projects under $500,000 are listed in the ten-year project list in Appendix D and will be further refined as the planning documents and baseline studies are completed.

RP-4 (Northern Service Area)

The Regional Water Recycling Plant No. 4 (RP-4) is located in the City of Rancho Cucamonga and has been in operation treating wastewater and producing recycled water since 1997. The RP-4 facility capacity expanded from 7 MGD to 14 MGD in 2009.

Waste sludge generated at RP-4 is discharged back to the sewer and flows by gravity to RP-1. RP-4 serves areas of Fontana and Cucamonga Valley Water District, treating approximately 10.0 MGD. Based on wastewater flow projection surveys by member

TABLE 9: RP-4 CAPITAL PROJECTS

Project #	Description	Prioritization		FY 14/15	FY 15/16	FY 16-24	Total
		Timing	Criticality				
EN09021	RP-4 Headworks Retrofit	immediate	medium	$1.2M	-	-	$1.2M
EN14018	RP-4 Process Improvements	immediate	high	$400,000	$700,000	$425,000	$1.5M
TBD	RP-4 Secondary Drains	intermediate	medium	-	-	$1.1M	$1.1M
			TOTAL	**$1.6M**	**$700,000**	**$1.5M**	**$3.8M**

agencies, plant flows are expected to reach between 11.2 and 11.6 MGD by FY 23/24 (see Exhibit B).

Table 9 lists key projects over $500,000 at RP-4. Projects under $500,000 are listed in the ten-year project list in Appendix D and will be further refined as the planning documents are completed.

CCWRF (Southern Service Area)

The Carbon Canyon Water Reclamation Facility (CCWRF) is located in the City of Chino and has been in operation since May 1992. The CCWRF works in tandem with RP-2 and RP-5 to serve the areas of Chino, Chino Hills, Montclair and Upland.

Wastewater is treated at CCWRF while the biosolids removed from the waste flow are pumped to RP-2 for processing. The CCWRF is designed to treat an annual average flow of 11.4 MGD, and treats approximately 7.1 MGD. Based on wastewater flow projection surveys by member agencies, plant flows are expected to reach between 7.7 and 7.8 MGD by FY 23/24 (see Exhibit C).

Table 10 lists key projects over $500,000 at CCWRF. Projects under $500,000 are listed in the ten-year project list in Appendix D and will be further refined as the planning documents and baseline studies are completed.

TABLE 10: CCWRF CAPITAL PROJECTS

Project #	Description	Prioritization		FY 14/15	FY 15/16	FY 16-24	Total
		Timing	Criticality				
EN13018	CCWRF Odor Control	immediate	high	$1M	$1.9M	-	$2.9M
EN14027	Secondary Clarifier #3 Rehabilitation	immediate	medium	$910,000	-	-	$910,000
			TOTAL	**$1.9M**	**$1.9M**	**-**	**$3.8M**

RP-2 (Southern Service Area)

The Regional Plant No. 2 (RP-2) in the City of Chino has been in operation since 1960. RP-2 was both a liquids and solids treatment facility until 2002, when RP-5 was constructed to handle the liquids portion. Since then, RP-2 treats only the solids from the CCWRF and RP-5 facilities. Biogas is a byproduct of the treatment process

TABLE 11: RP-2 CAPITAL PROJECTS

Project #	Description	Prioritization		FY 14/15	FY 15/16	FY 16-24	Total
		Timing	Criticality				
EN14012	RP-2 Drying Beds Rehab	immediate	medium	$1.1M	-	-	$1.1M
			TOTAL	**$1.1M**	**-**	**-**	**$1.1M**

and utilized as a fuel source to operate an engine generator that produces electricity. The electricity is used to operate equipment, thereby reducing the Agency's need to purchase power. RP-2 treatment processes include: gravity thickening and DAF thickening, anaerobic digestion for stabilization, and dewatering by either belt press or centrifuge.

Once the solids are dewatered, they are transported to the IERCF. RP-2 is located on land leased from the US Army Corps of Engineers and the lease is due to expire in 2035. RP-2 is also located within the flood zone behind Prado Dam. Orange County Flood Control District and the Army Corps have plans to raise the maximum operational water level behind the dam to allow greater water storage and conservation. Since RP-2 does not have physical flood protection, IEUA is planning to relocate the solids handling from RP-2 to RP-5. The relocation of RP-2 to RP-5 will be part of the WFMP Update.

Table 11 lists key projects over $500,000 at RP-2. Projects under $500,000 are listed in the ten-year project list in Appendix D and will be further refined as the planning documents and baseline studies are completed.

RP-5 (Southern Service Area)

The Regional Water Recycling Plant No. 5 (RP-5) is located immediately east of the Agency's Administrative Headquarters campus in the City of Chino and began operation in March 2004. It has a capacity rating of 16.3 MGD, which includes capacity for approximately 15 MGD of raw wastewater and 1.3 MGD of solids processing return or recycled flows from RP-2. Waste sludge produced at RP-5 is pumped to the RP-2 solids handling facility. RP-5 serves areas of Chino, Chino Hills, and Ontario, treating approximately 9.9 MGD. Based on wastewater flow projection surveys by member agencies, plant flows are expected to reach 14.8 and 16.2 MGD by FY 23/24 (see Exhibit D).

The Regional Plant No. 5 Solids Handling Facility (RP-5 SHF) was operated by IEUA from 2001 to 2009 as a regional facility accepting dairy manure for recycling and

generating biogas. In 2010, IEUA entered into a lease agreement with Environ Strategies, and in 2012, they began utilizing the facility for digestion of primarily food wastes with minor amounts of dairy manure. RP-5 SHF can process 705 wet tons/day of food and dairy waste through an anaerobic digestion process and can generate electricity from the biogas produced. When the RP-2 Solids Handling Facility is eventually decommissioned, the Agency expects to build biosolids handling facilities at RP-5 next to the existing RP-5 solids handling facilities, utilizing some of the land that has been reserved for such future expansion.

Table 12 lists key projects over $500,000 at RP-5. Projects under $500,000 are listed in the ten-year project list in Appendix D and will be further refined as the planning documents and baseline studies are completed.

TABLE 12: RP-5 CAPITAL PROJECTS

Project #	Description	Prioritization		FY 14/15	FY 15/16	FY 16-24	Total
		Timing	Criticality				
EN11031	RP-5 Flow Equalization and Effluent Monitoring	immediate	medium	$1.4M	100,000	-	$1.5M
TBD	RP-5 Solids Handling Facility	intermediate	critical	-	-	$100.3M	$100.3M
			TOTAL	**$1.4M**	**$100,000**	**$100.3M**	**$101.8M**

Salinity Management Program

The salinity management program consists of the NRWS system. Although the Agency operates the Chino Desalter I facility, it is managed by the Chino Basin Desalter Authority and so there are no capital projects associated with the Desalter.

The NRWS collection system includes 75 miles of pipeline and is comprised of a north and a south system. The north system, which serves approximately 42 industries, conveys wastewater to adjacent interceptor sewer lines owned and operated by the County Sanitation Districts of Los Angeles County (CSDLAC). From there, it is conveyed to CSDLAC's treatment facility in Carson, where it is treated and discharged to the ocean.

The south system, which serves approximately 11 industries, conveys wastewater to the Inland Empire Brine Line (also known as the Santa Ana Regional Interceptor-SARI), owned by the Santa Ana Watershed Project Authority (SAWPA), and from

there it is carried to the Orange County Sanitation Districts (OCSD) facility in Fountain Valley for treatment and ocean discharge. The combined northern and southern NRWS system removes an estimated total of 36,675 tons of salt each year from the service area, reducing the region's salinity and enhancing the opportunities for beneficial use of recycled water.

In addition to the NRWS system, the salinity management program includes a Self-Regenerating Water Softener Rebate Program. This program incentivizes the removal of self-regenerating salt-based devices which increase the salinity of recycled water supplies. As of January 2014, the program has removed 634 devices, removing approximately 146 tons per year of salt from the Regional system, saving approximately 12 acre-feet of water each year. However, there are no identified capital projects in the salinity management program over $500,000 in the ten year period. Projects under $500,000 are listed in the ten-year project list in Appendix D and will be further refined as the planning documents are completed.

WATER SUPPLY

Recycled Water

The Agency's regional recycled water system consists of a pipeline system which connects all four RWRPs. The regional facilities have been defined in over 50 separate projects of pipelines, pump stations and reservoirs. These projects have been grouped into priorities and categorized into four project areas: Northeast, Northwest, Central and the Southern Area Project. The priority of the projects was determined based on the amount of recycled water that could be served, and by proximity to a RWRP or existing recycled water supply system. Priorities I and II of the program will deliver recycled water to most of the recharge sites since the recharge sites represent significant recycled water users. The Agency has completed the priority projects in the Northeast and Northwest Areas, and is in the construction phase for the Southern Area and in the final design phase for the Central Area. The Regional Recycled Water Program facilities in the various stages of implementation are shown in Figure 14.

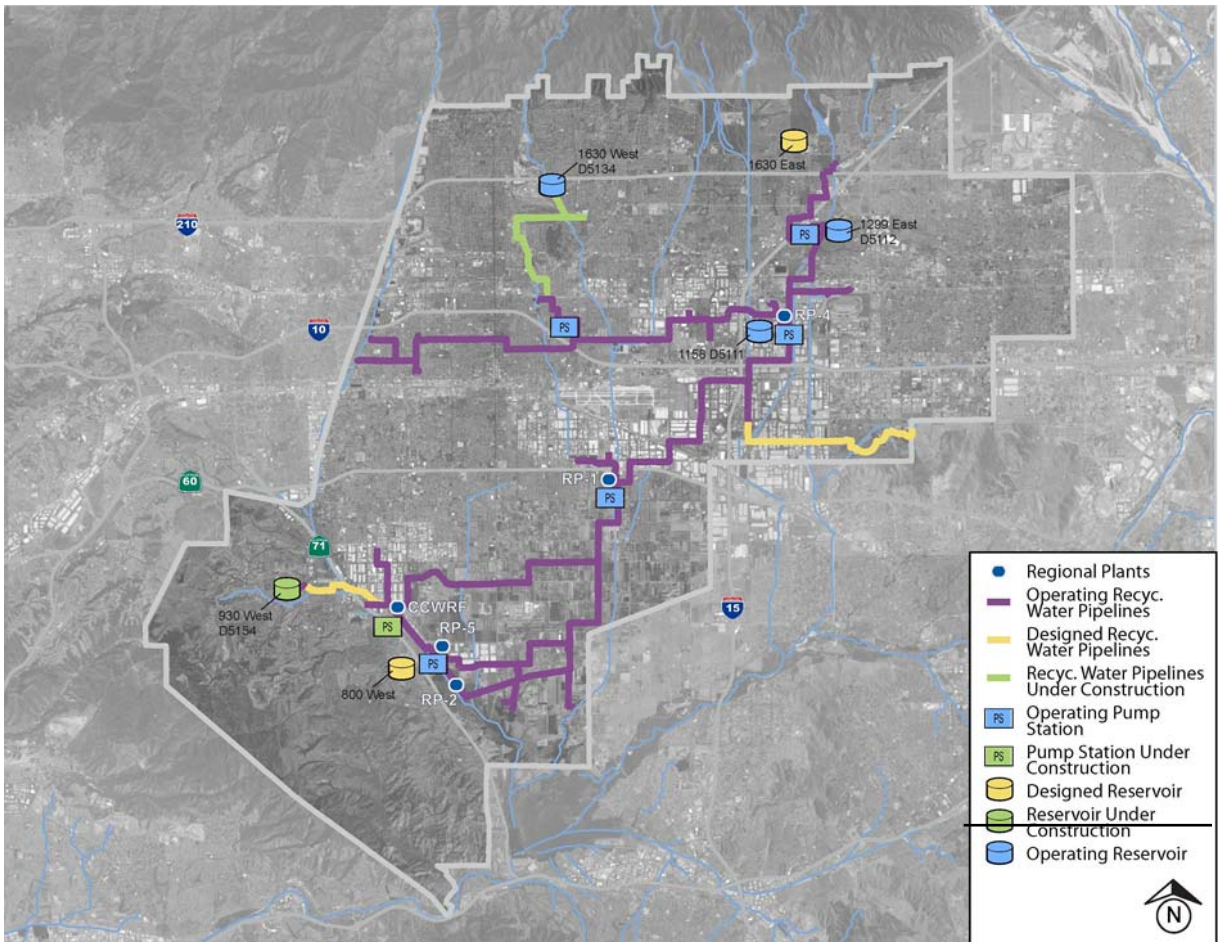
Projects listed in the TYCIP are primarily for the construction of the major new facilities included in the Recycled Water Business Plan, including pipelines, pump stations, and reservoirs, and the recycled water SCADA master plan. Once the recycled water projects in southern and central service areas have been completed,

TABLE 14: RECYCLED WATER & GROUNDWATER RECHARGE CAPITAL PROJECTS

Project #	Description	Prioritization		FY 14/15	FY 15/16	FY 16-24	Total
		Timing	Criticality				
EN06025	Wineville Extension Pipeline Segment A	immediate	medium	$12M	$3.7M	-	$15.7M
EN09007	1630 East Reservoir & Segment B Pipeline	long-term	medium	-	-	$5.4M	$5.4M
EN12019	GWR & RW SCADA Communication System Upgrades	immediate	high	$1.1	$70,000	-	$1.2M
EN13001	San Sevaine Improvements	immediate	high	$150,000	$990,000	$810,000	$2M
EN13023	930 Pressure Zone Pipeline	immediate	high	$535,000	-	-	$535,000
EN13045	Wineville Extension Pipeline Segment B	immediate	medium	$10M	$1.8	-	$11.8M
EN13048	Second 12kV Feeder to TP-1	immediate	high	$250,000	$1M	-	$1.3M
EN14007	Misc RW Projects	annually recurring	medium	$200,000	$200,000	$1.6	$2M
EN14010	CM Misc RW Constr & Emergency Projects	annually recurring	medium	$250,000	$250,000	$2M	$2.5M
EN14041	RP-4 1158 and 1299 Pump Station Upgrades	immediate	high	$100,000	$500,000	$5M	$5.6M
EN14042	RP-1 1158 Pump Station Improvements	immediate	high	$150,000	$500,000	$3.4M	$4M
EN14043	RP-5 Pipeline Bottleneck	immediate	high	$150,000	$500,000	$650,000	$1.3M
EN14047	GWR & RW SCADA Control Equipment Upgrades	immediate	high	$675,000	$127,000	-	$802,000
EN19002	800 Pressure Zone Reservoir	immediate	medium	-	-	$3.4M	$3.4M
EN19003	RP-1 Parallel Outfall Pipeline	immediate	medium	-	-	$5.7M	$5.7M
EN20001	Lower Day Basin Pipeline	long-term	medium	-	-	$2.5M	$2.5M
EN20003	Montclair Basin Pipeline	long-term	medium	-	-	$1.5M	$1.5M
EN20004	Brooks Basin Improvements	long-term	medium	-	-	$900,000	$900,000

Project #	Description	Prioritization		FY 14/15	FY 15/16	FY 16-24	Total
		Timing	Criticality				
EN20005	800 PZ-Bottleneck	long-term	medium	-	-	$1.3M	$1.3M
EN21001	Upland Basin	long-term	medium	-	-	$3M	$3M
TBD	RP-3 Basin Improvements	immediate	medium	$800,000	$4.5M	-	$5.3M
TBD	Napa Lateral	immediate	medium	$200,000	$3M	$2.8M	$6M
			TOTAL	**$26.6M**	**$17.1M**	**$39.9M**	**$83.6M**

FIGURE 14: IEUA REGIONAL RECYCLED WATER CAPITAL PROJECT PRIORITIES



the projects will focus on capacity improvements such as developing the RP-1 outfall parallel pipeline and increasing pumping and pipeline capacities as needed to meet the increasing demand of the system. The RP-1 outfall parallel pipeline will provide the capacity and reliability for the future growth in the southern area. Other projects include pipelines and turnouts for added groundwater recharge capacity for basins that are permitted and those that could potentially be permitted. Additional projects and priorities are expected to emerge from the Recycled Water Program Strategy which is currently under development and will be completed by spring 2014.

Table 14 lists key projects over $500,000 in the recycled water program. Projects under $500,000 are listed in the ten-year project list in Appendix D and will be further refined as the planning documents are completed.

Groundwater Recharge

The capital projects for the groundwater recharge program mainly involve capacity improvements and refurbishment at selected basins to enhance and increase recharge at the basins. Three such yield enhancement projects were identified as part of the 2013 Recharge Master Plan Update. Other potential projects identified in the Update require additional investigation and may be added to future TYCIPs.

Recycled water is used to recharge the basins, and has become a key component of the water supply portfolio: the more water recharged into the Chino Groundwater Basin, the more self-reliant and less dependent the region becomes on imported water supplies. To maximize past investments, projects are primarily focused on increasing the basin maintenance frequency to increase infiltration rates. These are typically low cost projects that can potentially increase infiltration by 20% per basin. A critical component of the groundwater recharge program is the use of recycled water. These and other investigative projects will be explored and funded in the future years as a means to diversify the water supply for the region and maximize the beneficial reuse of recycled water.

Table 14 lists key projects over $500,000 in the groundwater recharge program. Projects under $500,000 are listed in the ten-year project list in Appendix D and will be further refined as the planning documents are completed.

TABLE 15: HEADQUARTERS & PARK CAPITAL PROJECTS

Project #	Description	Prioritization		FY 14/15	FY 15/16	FY 16-24	Total
		Timing	Criticality				
TBD	Chino Creek Park	long-term	low	-	-	$1.9M	$1.9M
			TOTAL	**-**	**-**	**$1.9M**	**$1.9M**

ADDITIONAL AGENCY FACILITIES

Headquarters & Chino Creek Wetlands and Educational Park

The Agency headquarters, located in the City of Chino, opened in the summer of 2003. It was constructed to meet the Platinum rating from the United States Green Building Council's Leadership in Energy and Environmental Design (LEED) 2004. The headquarter facilities demonstrate how using recycled building materials and state-of-the-art energy efficient technologies can be used to incorporate environmental sensibilities in an urban setting while creating a better environment, saving water, improving staff productivity, and contributing to the restoration of native landscapes. The headquarters' complex is one of the largest public landscapes in Southern California to use native plants and to have integrated stormwater management, including the restoration of natural drainage and the creation of wetlands and riparian habitat known as the Chino Creek Wetlands and Educational Park.

The Chino Creek Wetlands and Educational Park (Park) is located adjacent to the Inland Empire Utilities Agency headquarters in Chino. The 22 acre Park opened in 2004 and was partially funded by a state grant from the SWRCB. It was designed to restore native habitat and natural drainage, showcasing the environmental values of the Prado Basin, the largest freshwater habitat remaining in Southern California. The Prado Basin, within which the park resides, provides a critical link for biological and trail networks between the extensive riparian open space of the Prado Flood Control Basin and the Chino Hills State Park to the west, and is home to endangered species, including the Least Bell's Vireo and Southwestern Willow Flycatcher.

Educational awareness is facilitated through a series of programs, implemented in partnership with the Santa Ana Watershed Association (SAWA), which provides tours and manages the interpretive wetlands and wildlife education center. The Park facilities include an outdoor classroom, 1.7 miles of trails, and educational stations and signage. Local and regional school programs are held at the park, including the Water Discovery educational program. The park is open to the public seven days a week throughout the year, with special programs about water quality, conservation, and local ecosystems provided by SAWA.

Table 15 lists key projects over $500,000 at the Headquarters and Park. Projects under $500,000 are listed in the ten-year project list in Appendix D and will be further refined as the planning documents are completed.

Laboratory

The Laboratory consists of two buildings, the original facility built in 1979, and the expansion building built in 1997. At present, the Laboratory facilities are insufficient. The current Laboratory facilities are crowded, the ventilation system needs improvement, the sample receiving area is small and not easily accessible, the heating and cooling system do not to operate well, and the overall layout of the laboratory is inefficient.

In addition, laboratory testing technologies continue to advance and regulations continue to change, requiring laboratories to detect constituents at lower levels and test for additional chemicals of emerging concern. The current laboratory facilities will be unable to accommodate these changes, and more testing will need to be sent to contract laboratories at additional cost to the Agency if the Laboratory facility is not updated to current and future lab standards. In order to maintain certification, continue to be a leader in the industry, and meet the current and future laboratory needs, either major improvements to the current facility or a new laboratory needs to be constructed.

In 2006 the Agency hired the Austin Company to assist in conducting a comprehensive Needs Assessment and Feasibility Study for a new laboratory to be located either at the existing laboratory site at RP-1 or at RP-5. At that time it was determined a new laboratory should be built at RP-5. The design portion of the new laboratory began in 2010, and then put on hold in late 2010 after 50% of the design had been completed. Budget for laboratory improvements or a new facility is currently included in the TYCIP.

Table 16 lists key projects over $500,000 at the laboratory. Projects under $500,000 are listed in the ten-year project list in Appendix D and will be further refined as the planning documents are completed.

TABLE 16: LABORATORY CAPITAL PROJECTS

Project #	Description	Prioritization		FY 14/15	FY 15/16	FY 16-24	Total
		Timing	Criticality				
EN08009	New Operations Laboratory	immediate	medium	-	$1.1M	$16M	$17.1M
TBD	New Lab Equipment	intermediate	medium	-	-	$650,000	$650,000
			TOTAL	**-**	**$1.1M**	**$16.7M**	**$17.8M**

Inland Empire Regional Composting Authority

The Inland Empire Regional Composting Authority (IERCA) is a joint powers authority between the Inland Empire Utilities Agency and the Los Angeles County Sanitation District. Together, these agencies have shared the costs and resources to develop a state-of-the-art biosolids compost manufacturing facility in Rancho Cucamonga called the Inland Empire Regional Composting Facility (IERCF). The facility is completely enclosed to control odors and to meet stringent air quality regulations.

The IERCF is designed to process and recycle the dewatered and stabilized biosolids from the Agency and SDLAC's wastewater treatment processes as well as wood waste from local communities. It produces over 230,000 cubic yards of high-quality compost each year for local landscaping and horticultural use. The composted product, which is marketed as SoilPro® Premium Compost, is sold as a soil conditioner which helps improve water retention resulting in better plant growth and water savings.

The facility is currently operating at its design capacity, receiving nearly 600 tons per day of biosolids and recycled green waste products. The RP-1 Dewatering Facility uses centrifuges to dry solids to a higher percentage. This has the potential of freeing up 50 wet tons per day of additional capacity at the IERCF.

Capital projects for the RCA include replacement and upgrade projects. Ongoing projects include emergency lighting, amendment hopper improvements, belt conveyor modifications to match actual process flow, door widening for improved truck access, belt conveyor catwalks improvement, and lighting and structure protection evaluations. The lighting and structural evaluations may result in future projects for improvements in both areas. Future demands and operational issues will determine what specific future capital projects are needed. Any capital

maintenance, enhancement, or replacement projects will be jointly analyzed and determined with the CSDLAC.

Table 17 lists key projects over $500,000 at the IERCF. Projects under $500,000 are listed in the ten-year project list in Appendix D and will be further refined as the planning documents are completed.

TABLE 17: IERCF CAPITAL PROJECTS

Project #	Description	Prioritization		FY 14/15	FY 15/16	FY 16-24	Total
		Timing	Criticality				
RA11004	IERCF Process Improvements	immediate	medium	$900,000	-	-	$900,000
RA14003	Receiving Pit & Fan Corridor Drains	immediate	medium	$50,000	$500,000	$200,000	$750,000
TBD	IERCF Baghouse Improvements	immediate	medium	$450,000	$500,000	-	$950,000
			TOTAL	**$1.4M**	**$1M**	**$200,000**	**$2.6M**

Administrative Services

The capital purchases in the administrative services program are primarily for furniture, vehicles, office equipment (defined by the Agency policy as greater than $5000) computers and software (greater that $1,000) and other administrative purchases commonly used for general Agency purposes. The capital projects for this program include system upgrades, computer equipment replacement, network infrastructure replacement, software purchases, and capital improvements to the Agency's headquarters. As part of the Agency's cost-containment plan, a run-to-failure strategy has been imposed for computers and peripheral equipment.

There are no projects in the administrative services program over $500,000. Projects under $500,000 are listed in the ten-year project list in Appendix D.

Administrative Services

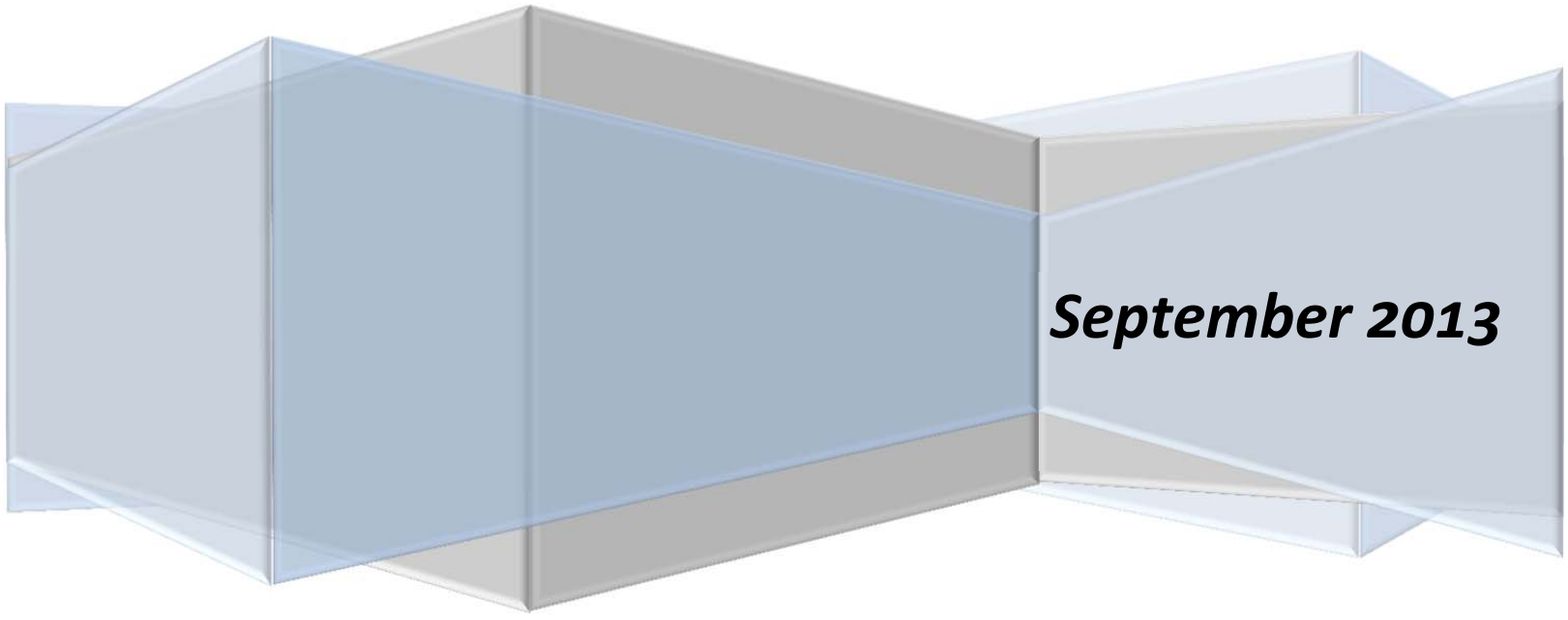
The capital purchases in the administrative services program are primarily for furniture, vehicles, office equipment (defined by the Agency policy as greater than $5000) computers and software (greater that $1,000) and other administrative purchases commonly used for general Agency purposes. The capital projects for this program include system upgrades, computer equipment replacement, network infrastructure replacement, software purchases, and capital improvements to the Agency's headquarters. As part of the Agency's cost-containment plan, a run-to-failure strategy has been imposed for computers and peripheral equipment.

There are no projects in the administrative services program over $500,000. Projects under $500,000 are listed in the ten-year project list in Appendix D.

Appendix A

IEUA Business Goals

IEUA Business Goals



Business Goal Development

PURPOSE: It is critical that IEUA Business Goals align with the Agency's Mission, Vision & Values which are defined by the needs of our stakeholders and the public value provided to the community. The Business Goal Development process includes a review of existing Agency-wide policy goals and their refinement based on current and future needs. It is also critical in setting the framework for the development of the IEUA Strategic Plan that will shape and guide the Agency's fundamental decisions and actions over the next several years.

BACKGROUND: Over the last several years, the Agency-wide policy goals which have guided the Agency's decisions and actions in executing its mission and attaining its vision have been categorized into nine major thematic areas: Conservation & Water Quality, Technological Innovation, Rate Stabilization and Cost Effectiveness, Operational and Maintenance Efficiency, Strategic Planning and Capital Implementation, Waste Management and Resource Utilization, Interagency Relationships and Community Partnerships, Fiscal Accountability and Regulatory Compliance, and Staff Training, Development and Well Being.

These Agency-wide policy goals guide the development of the capital improvement program, operational budget, and organizational goals and objectives each budget cycle. As a way to further define the Agency's levels of service (LOS), several workshops were held with the IEUA Board in 2011. However, the LOS developed as part of these workshops were primarily focused on the Agency's operational functions. In early 2013 staff recommended the LOS be expanded into more broad based IEUA Business Goals to also include the following topics: water reliability, fiscal accountability and employee wellbeing. It was also determined that the development of the IEUA Business Goals should include input from stakeholders including: IEUA Board, staff, member agencies and other regional policy makers.

For any organization to remain relevant and effective, its ability to adapt and prepare for change is essential. As illustrated below, the IEUA Business Goals must be must be continually evaluated as part of the planning process to ensure that they meet the current and future needs of the region. This relationship is shown in the following figure:

BUSINESS GOALS STRUCTURE: The IEUA Business Goals were categorized into six main areas: *Fiscal Responsibility, Workplace Environment, Business Practices, Water Reliability, Wastewater Management and Environmental Stewardship.* Within each Business Goal (i.e. Water Reliability), several Objectives were established to support the Business Goal (i.e. beneficial use of recycled water, etc.). For each Objective, a Commitment was developed to define the level of service that IEUA will provide (i.e. develop recycled water infrastructure to reuse 50,000 AFY). The structure of the Business Goals is shown in the following figure:

IEUA Business Goals

DOCUMENT STRUCTURE: Included within this report is one page for each Business Goal – which outlines the Business Goal intent, each Objective and the corresponding recommended Commitment. Background on each Objective/Commitment is included within the Appendix.

A. Business Goal: Fiscal Responsibility

IEUA will safeguard the Agency's fiscal health through organizational efficiency, adoption of balanced multiyear budgets and rates that meet full cost-of-service targets, maintain a high quality credit rating and preserve established fund balance reserves to effectively address short term and long term economic variability.

Business Goal

1. Funding & Appropriation *[Agency Management, Financial Planning, Accounting & Fiscal Management]*

Objective: IEUA will appropriately fund operational, maintenance and capital investment costs.

Key Objective

Recommended Commitment: IEUA will adopt service rates and charges that fully support the costs of service and provide a reliable and steady flow of operating revenue to support all operational expenses, capital replacement and debt service costs. In addition, IEUA will ensure that service rates and charges support the Agency's commitment to sustain high quality levels of service.

Commitment Level

Reference Material: Appendix A.1

Background Information Location

SCHEDULE: The development, review and approval of Business Goals entails a sequence as indicated in the schedule below:

Following the completion of this process, the adopted Business Goals will be used as the basis for the development of several planning documents, including the Strategic Plan, Integrated Water Resources Plan, Facilities Master Plan Update and the Asset Management Report.

A. Business Goal: Fiscal Responsibility

IEUA will safeguard the Agency's fiscal health through organizational efficiency, adoption of balanced multiyear budgets and rates that meet full cost-of-service targets, maintain a high quality credit rating and preserve established fund balance reserves to effectively address short term and long term economic variability.

1. Funding & Appropriation *[Agency Management, Financial Planning, Accounting & Fiscal Management]*

Objective: IEUA will appropriately fund operational, maintenance and capital investment costs.

> ***Recommended Commitment*:** IEUA will adopt service rates and fees that fully support the costs of service and provide a reliable and steady flow of operating revenue to support all operational expenses, capital replacement and debt service costs. In addition, IEUA will ensure that service rates and fees support the Agency's commitment to sustain high quality levels of service.
>
> ***Reference Material*:** Appendix A.1

2. Budget Planning *[Agency Management, Financial Planning, & Accounting & Fiscal Management]*

Objective: IEUA will accurately forecast future operational, repair & replacement, capital improvement and debt service costs as needed for the creation of multiyear budgets and rate resolutions that create fiscal stabilization for the Agency and its stakeholders.

> ***Recommended Commitment*:** IEUA will provide multiyear forecasts for operational, repair & replacement, capital investment and debt service costs to support the adoption of multiyear budgets and rates enhancing dependability and stability.
>
> ***Reference Material*:** Appendix A.2

3. Reserves *[Financial Planning, Accounting & Fiscal Management]*

Objective: IEUA will preserve fund reserves that sustain the Agency's long term fiscal health, high quality credit rating and ensure its ability to effectively address economic variability.

> ***Recommended Commitment:*** IEUA will adopt financial policies to establish and preserve fund reserves above legally or contractually mandated levels to maintain committed levels of service. In addition, IEUA will support short and long term funding requirements and sustain the Agency's long term fiscal health and high quality credit rating to reduce future borrowing costs.
>
> ***Reference Material*:** Appendix A.3

4. Creditworthiness *[Financial Planning, Accounting & Fiscal Management]*

Objective: IEUA will sustain a high quality credit rating and debt service coverage ratio to safeguard the Agency's fiscal health and reduce future borrowing costs.

> ***Recommended Commitment*:** IEUA will reinstate the Agency's credit rating to AAA by FY 17/18 to reduce borrowing costs anticipated to be needed to support expansion and improvement of existing facilities to meet future growth in the Agency's service area.
>
> ***Reference Material*:** Appendix A.4

B. Business Goal: Workplace Environment

IEUA is committed to provide a positive workplace environment by recruiting, retaining and developing a highly skilled team dedicated to the Agency's Mission, Vision and Values.

1. Mission, Vision & Values *[All Agency Staff & Board]*

Objective: IEUA will uphold business goals, objectives and commitment levels that support and advance the Agency's Mission, Vision and Values.

> ***Recommended Commitment*:** IEUA will maintain the highest standard of ethical conduct from all Agency staff by promoting values of prudent leadership, integrity, collaboration, open communication, respect, accountability, high quality, passion and efficiency to support the Agency's Mission, Vision and Values.
>
> ***Reference Material*:** Appendix B.1

2. Employer of Choice *[Human Resources, & Agency Management]*

Objective: IEUA will be an Employer of Choice.

> ***Recommended Commitment*:** IEUA will provide a work environment that will attract and retain highly skilled, motivated, professional and committed employees.
>
> ***Reference Material*:** Appendix B.2

3. Training *[Agency Management & Human Resources]*

Objective: IEUA will provide employees with state-of-the-art skills and knowledge to meet current and anticipated Agency needs.

> ***Recommended Commitment*:** IEUA will facilitate and provide opportunities for staff to further their personal/professional development in support of maintaining a highly skilled workforce.
>
> ***Reference Material*:** Appendix B.3

4. Staff Safety *[Safety, Human Resources, & Agency Management]*

Objective: IEUA will promote and ensure a safe and healthy work environment to protect employees and stakeholders.

> ***Recommended Commitment*:** IEUA will have no more than 1 day of lost time due to work related illness or injury per 1,000 days worked.
>
> ***Reference Material*:** Appendix B.4

C. Business Goal: Business Practices

IEUA is committed to applying ethical, fiscally responsible and environmentally sustainable principles to all aspects of business and organizational conduct.

1. Efficiency & Effectiveness *[All Departments]*

Objective *IEUA will promote standards of efficiency and effectiveness in all Agency business practices and processes.*

> ***Recommended Commitment*****:** IEUA will integrate ***LEAN*** techniques to evaluate its current business practices and processes and identify ways to improve the quality, cost and value of the services the Agency provides to its customers.
> ***Reference Material*****:** Appendix C.1

2. Customer Service *[All Departments]*

Objective: IEUA will provide excellent customer service that is cost effective, efficient, innovative and reliable.

> ***Recommended Commitment*****:** IEUA will respond to and meet customer's expectation for enhanced value added services. IEUA will solicit customer feedback on performance and goal alignment on an annual basis.
>
> ***Reference Material*****:** Appendix C.2

3. Regional Leadership and Community Relations *[Agency Management, Planning, & Engineering]*

Objective: IEUA will cultivate a positive and transparent relationship with local and regional stakeholders to enhance quality of life, preserve our heritage and protect the environment.

> ***Recommended Commitment*****:** IEUA will partner with the cities, local water districts, regional agencies and the broader community on common issues to create and implement integrated and innovative solutions, while minimizing duplication of efforts by all parties. Furthermore, IEUA will incorporate member agencies into various IEUA related projects and programs to ensure that a transparent and broader regional representation is achieved.
>
> ***Reference Material*****:** Appendix C.3

4. Policy Leadership *[Agency Management, Planning, & Engineering]*

Objective: IEUA will effectively advocate, campaign and guide the development of policies and legislation that benefit the communities that we serve.

> ***Recommended Commitment*****:** IEUA will promote a collaborative approach for the development of positions on policies, legislation and regulations that impact Agency policy objectives.
>
> ***Reference Material*****:** Appendix C.4

D. Business Goal: Water Reliability

IEUA is committed to the development and implementation of an integrated water resource management plan that promotes cost-effective, reliable, efficient and sustainable water use along with economic growth within IEUA's service area.

1. Water Use Efficiency & Education *[Planning, Engineering, & Public Information]*

Objective: The region will educate and promote water use efficiency to enhance regional water supplies and exceed State goals for reductions in per capita water use within our service area.

> ***Recommended Commitment*:** IEUA will promote a regional approach to reduce water use to less than 200 gallons per capita per day (gpcd) by 2018.
>
> ***Reference Material*:** Appendix D.1

2. New Water Supplies *[Planning &, Engineering]*

Objective: The region will develop reliable, drought-proof and diverse local water resources in order to reduce dependence on imported water supplies.

> ***Recommended Commitment*:** IEUA will regionally promote reducing demand for imported water during dry and normal years and storing imported water into the Chino Groundwater Basin during wet years. In addition, IEUA will support maximizing the beneficial use of existing water infrastructure, while meeting future increased demands through investment in local water resources and conservation efforts.
>
> ***Reference Material*:** Appendix D.2

3. Recycled Water *[Planning, Engineering, Operations, & Maintenance]*

Objective: The region will maximize beneficial reuse of recycled water to enhance reliability and reduce dependence on imported water.

> ***Recommended Commitment*:** The IEUA region will complete the development of recycled water infrastructure to achieve reuse of 50,000 AFY by 2025.
>
> ***Reference Material*:** Appendix D.3

4. Groundwater Recharge *[Planning, Engineering, Operations, & Maintenance]*

Objective: The region will maximize all sources of groundwater recharge.

> ***Recommended Commitment*:** IEUA will support the recharge of all available stormwater and maximize the recharge of recycled water within the region. Furthermore, IEUA will aggressively pursue the purchase and storage of cost-effective surplus imported water supplies.
>
> ***Reference Material*:** Appendix D.4

E. Business Goal: Wastewater Management

IEUA systems will be master planned, managed and constructed to ensure that when expansion planning is triggered, designs/construction can be completed to meet regulatory/growth needs in an expeditious, environmentally responsible and cost effective manner.

1. Capacity *[Planning, Engineering, & Construction Management]*

Objective: IEUA will maintain capacity within systems and facilities to meet essential service demands and to protect public health and environment.

> ***Recommended Commitment*:** IEUA will ensure that systems are managed and constructed so that 90% of capacity is never exceeded.
>
> ***Reference Material*:** Appendix E.1

2. On-Time Construction *[Engineering, & Construction Management]*

Objective: IEUA will ensure capital projects are designed and implemented in a timely and economically responsible manner.

> ***Recommended Commitment*:** IEUA will design and construct facilities through efficient project management to ensure that 80% of projects are completed on schedule and 90% of projects are on budget.
>
> ***Reference Material*:** Appendix E.2

3. Biosolids Management *[Operations & Maintenance]*

Objective: IEUA will manage all Agency produced biosolids in a compliant, fiscally prudent and environmentally sustainable manner.

> ***Recommended Commitment*:** IEUA will ensure that 95% of the Inland Regional Compost Facility's capacity is utilized, all biosolids produced by IEUA are treated at IERCF, Agency solids generation is minimized through efficient dewatering operations and all compost is marketed for beneficial use.
>
> ***Reference Material*:** Appendix E.3

4. Energy Management *[Planning, Engineering, Operations, & Maintenance]*

Objective: IEUA will optimize facility energy use and effectively manage renewable resources to achieve peak power independence, contain future energy costs, achieve statewide renewable energy, distributed generation and greenhouse gas reduction goals, and provide for future rate stabilization.

> ***Recommended Commitment*:** IEUA will achieve peak power independence by 2020 through the implementation of renewable projects, energy management agreements and operational efficiencies.
>
> ***Reference Material*:** Appendix E.4

F. Business Goal: Environmental Stewardship

IEUA is committed to the responsible use and protection of the environment through conservation and sustainable practices.

1. Regulatory Compliance *[Compliance, Operations, & Maintenance]*

Objective: IEUA will comply with all federal, state and local laws at each Agency facility.

> ***Recommended Commitment*:** IEUA will have no more than 2 notices of violation annually from the State Water Resources Control Board, Air Quality Management District, or Non-Reclaimable Waste System for all Agency owned and operated facilities.
>
> ***Reference Material*:** Appendix F.1

2. Good Neighbor Policy *[Compliance, Operations, & Maintenance]*

Objective: IEUA will control odors at all Agency facilities for the purpose of improving the environment and being a good neighbor to the local community.

> ***Recommended Commitment*:** IEUA will perform a quarterly odor monitoring assessment to develop actual and acceptable baseline odor thresholds. Acceptable baseline thresholds will be used to measure treatment plant performance and drive necessary capital improvements.
>
> ***Reference Material*:** Appendix F.2

3. Response & Complaint Mitigation *[Compliance, Operations, & Maintenance]*

Objective: IEUA will investigate and appropriately respond in a timely manner to any environmental issue or complaint received at any Agency Facility.

> ***Recommended Commitment*:** IEUA will immediately respond to any event that threatens public health and safety and will respond within 5 working days to any non-emergency complaint or suggestion.
>
> ***Reference Material*:** Appendix F.3

4. Environmental Responsibility *[Agency Management, Planning, & Engineering]*

Objective: IEUA will strive to implement actions that enhance or promote environmental sustainability and the preservation of the region's heritage.

> ***Recommended Commitment*:** IEUA will consider and assess environmental sustainability, public use and heritage preservation options into all of its programs and projects.
>
> ***Reference Material*:** Appendix F.4

Appendix

Reference Materials

A. Fiscal Responsibility

A.1 – Funding & Appropriation
A.2 – Budget Planning
A.3 – Reserves
A.4 – Creditworthiness

B. Workplace Environment

B.1 – Mission, Vision & Values
B.2 – Employer of Choice
B.3 – Training
B.4 – Staff Safety

C. Business Practices

C.1 – Efficiency & Effectiveness
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C.3 – Regional Leadership & Community Relations
C.4 – Policy Leadership

D. Water Reliability

D.1 – Water Use Efficiency & Education
D.2 – New Water Supplies
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E. Wastewater Management

E.1 – Capacity
E.2 – On-Time Construction
E.3 – Biosolids Management
E.4 – Energy Management

F. Environmental Stewardship

F.1 – Regulatory Compliance
F.2 – Good Neighbor Policy
F.3 – Response & Complaint Mitigation
F.4 – Environmental Responsibility

Appendix A.1

Fiscal Responsibility – Funding & Appropriation

Business Goal: *IEUA will safeguard the Agency's fiscal health through organizational efficiency, adoption of balanced multiyear budgets and rates that meet full cost-of-service targets, maintain a high quality credit rating and preserve established fund balance reserves to effectively address short term and long term economic variability.*

Objective: *IEUA will appropriately fund operational, maintenance and capital investment costs.*

Commitment: *IEUA will adopt service rates and fees that fully support the costs of service and provide a reliable and steady flow of operating revenue to support all operational expenses, capital replacement and debt service costs. In addition, IEUA will ensure that service rates and fees support the Agency's commitment to sustain high quality levels of service.*

Commitment Level Background

- Historically, the Agency's operating revenues (net of property tax supplement) have been lower than operating expenses (i.e., services provided by the Agency do not generate revenues needed to pay for total cost of operations), resulting in an operating structural deficit. The operating structural deficit has been supported by a combination of property tax receipts and fund reserves.
- The allocation of property tax receipts and fund reserves to support operating activities reduced the amount of property taxes available to support capital investment, and over time, diminished the Agency's fund reserve balances.
- Given the uncertainty of property taxes, it is essential for the Agency to reduce its reliance on this funding source to support recurring expenditures (O&M and debt service costs) over time.
- In 2013, IEUA will release the first Asset Management Plan, which will provide management strategies and funding requirements to repair and replace aging equipment at each of the treatment facilities based on condition assessments. Funding of R&R is essential to ensuring facilities are maintained to support the Agency's committed levels of service.
- IEUA is committed to ultimately having rates that fully support recurring costs, including O&M,R&R, and debt service costs. Achieving this goal will allow the Agency to fully allocate property tax receipts to support capital investment, including future expansion of existing facilities, and reduce future borrowing costs.
- Fiscal Year 2013/14 is the second year of a three-year rate resolution adopted by the Agency's Board of Directors in February 2012 for the Regional Wastewater and Recycled Water programs. The multi-year rate increases begin to address the net operating structural deficit resulting from rates not fully recovering program costs.

Appendix A.2

Fiscal Responsibility – Budget Planning

Business Goal: *IEUA will safeguard the Agency's fiscal health through organizational efficiency, adoption of balanced multiyear budgets and rates that meet full cost-of-service targets, maintain a high quality credit rating and preserve established fund balance reserves to effectively address short term and long term economic variability.*

Objective: *IEUA will accurately forecast future operational, repair & replacement, capital improvement and debt service costs as needed for the creation of multiyear budgets and rate resolutions that create fiscal stabilization for the Agency and its stakeholders.*

Commitment: *IEUA will provide multiyear forecasts for operational, repair & replacement, capital investment and debt service costs to support the adoption of multiyear budgets and rates enhancing dependability and stability.*

Commitment Level Background

- In addition to the annual adoption of the Operating Budget and TYCIP, the Agency also prepares a Long Range Plan of Finance (LRPF).
- The LRPF aligns the Agency's financial capacity with long-term service objectives. The LRPF uses forecasts to provide insight into the Agency's future financial capacity so that Agency strategies can achieve long term sustainability of financial and service objectives. It provides the most cost-effective funding strategy to support the operations and capital requirements in line with established policies and goals.
- Based upon the LRPF and other financial documents, the Agency is committed to adopting multiyear budgets and rates to facilitate the integration of the financial and strategic planning.
- Adoption of multiyear budgets and rates will provide a more strategic approach to resource allocation, as well as streamline the Agency's contracting agencies rate increase process and provide long term stability.

Appendix A.3

Fiscal Responsibility – Reserves

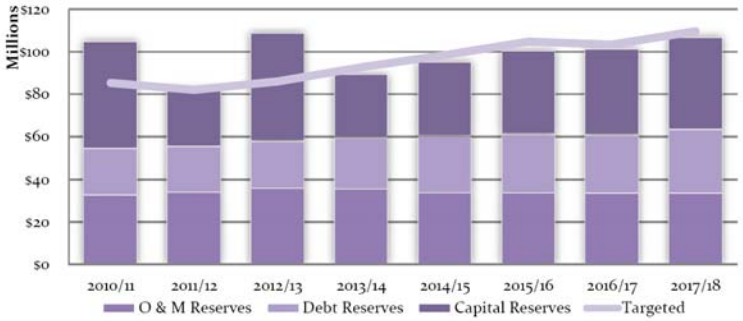
Business Goal: *IEUA will safeguard the Agency's fiscal health through organizational efficiency, adoption of balanced multiyear budgets and rates that meet full cost-of-service targets, maintain a high quality credit rating and preserve established fund balance reserves to effectively address short term and long term economic variability.*

Objective: *IEUA will preserve fund reserves that sustain the Agency's long term fiscal health, high quality credit rating and ensure its ability to effectively address economic variability.*

Commitment: *IEUA will adopt financial policies to establish and preserve fund reserves above legally or contractually mandated levels to maintain committed levels of service. In addition, IEUA will support short and long term funding requirements and sustain the Agency's long term fiscal health and high quality credit rating to reduce future borrowing costs.*

Commitment Level Background

- Fund balance is a measure of the net worth (total assets minus total liabilities) of an organization and a strong indicator of its financial health. In addition to consolidated fund balance at the Agency-wide level, IEUA also maintains fund balances at the individual program level.
- The fund balance reserves are designated for specific purposes, and include four month operating contingency and debt service as prescribed by the current bond covenants, capital construction, improvement and replacement, rate stabilization, self-insured workers' compensation and liability insurance, retiree medical benefits, and other short term and long term requirements.
- The figure below compares the Agency's actual and projected total fund balance to the "targeted" amount from FYs 2009/10 through 2016/17. Targeted fund balance as defined in the Agency's 2012 LRPF is the sum of 50 percent of operating revenues, and total fund balance reserves designated to support debt service costs.



- AN update of the Agency's financial policies adopted in 2005 is planned in 2013 as part of the implementation of a long range financial model. A key objective will be to align reserves and thresholds to meet the Agency's short term and long term needs and develop a funding strategy.

Appendix A.4

Fiscal Responsibility – Creditworthiness

Business Goal: *IEUA will safeguard the Agency's fiscal health through organizational efficiency, adoption of balanced multiyear budgets and rates that meet full cost-of-service targets, maintain a high quality credit rating and preserve established fund balance reserves to effectively address short term and long term economic variability.*

Objective: *IEUA will sustain a high quality credit rating and debt service coverage ratio to safeguard the Agency's fiscal health and reduce future borrowing costs.*

Commitment: *IEUA will reinstate the Agency's credit rating to AAA by FY 17/18 to reduce borrowing costs anticipated to be needed to support expansion and improvement of existing facilities to meet future growth in the Agency's service area.*

Commitment Level Background

- As part of the 2012 multi-year rate increase, IEUA established minimum debt coverage ratio targets for the upcoming fiscal years. The following table shows the DCR targets, the and forecasted DCR's (F):

DCR	FY 11/12	FY 12/13	FY 13/14	FY 14/15	FY 15/16
	Actual	Projected	Forecasts		
Target		1.43x	1.50x	1.70x	
Actual/Forecast	1.69x	1.92x	1.75x	2.01x	2.18x

- The FY 2011/12 Comprehensive Annual Financial Report (CAFR) reported an Agency DCR of 1.69x and the following credit ratings: AA- (S&P), Aa2 (Moody's), and AA- (Fitch).
- The adopted FY 2014-2023 Ten Year Capital Improvement (TYCIP) includes expansion of the Agency's southern service area facilities in FY 2018/19 where most of the future population growth is anticipated. This expansion is projected to be financed with new debt. Improvement of the Agency's long term credit rating to AAA and DCR to 2.70x (DCR is the ratio of net revenue available to meet debt service costs). In the current market, the differential cost of borrowing between AA and AAA is about 20 basis points. On a $40 million bond issue, this equates to a borrowing-cost-savings of over $2.4 million over a 30 year term.
- Lower borrowing costs equate to lower fees.

Appendix B.1

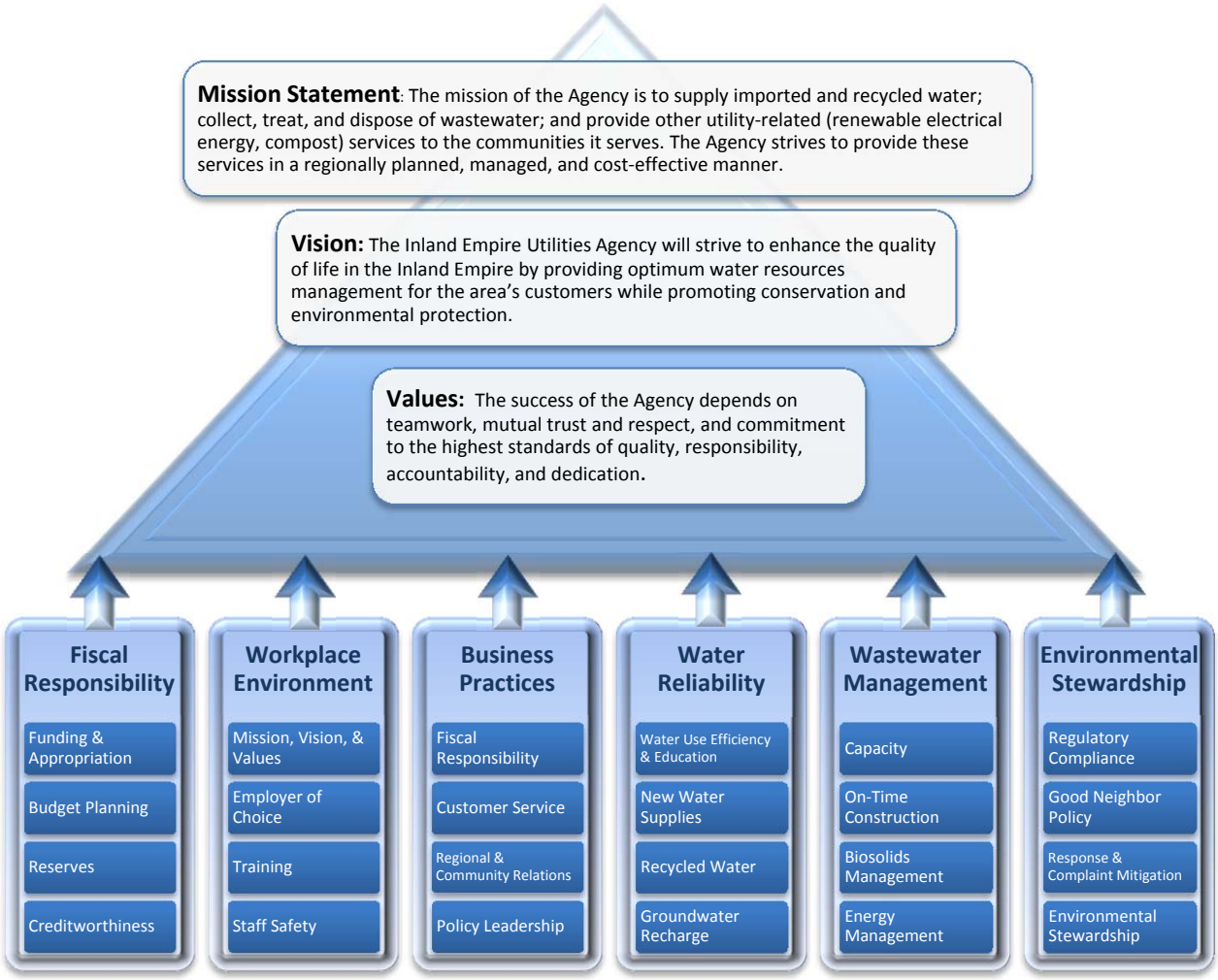
Workplace Environment – Mission, Vision & Values

Business Goal: *IEUA is committed to provide a positive workplace environment by recruiting, retaining and developing a highly skilled team dedicated to the Agency's Mission, Vision and Values.*

Objective: *IEUA will uphold business goals, objectives and commitment levels that support and advance the Agency's Mission, Vision and Values.*

Commitment: *IEUA will maintain the highest standard of ethical conduct from all Agency staff by promoting values of prudent leadership, integrity, collaboration, open communication, respect, accountability, high quality, passion and efficiency to support the Agency's Mission and Vision.*

Commitment Level Background



- Management will ensure that principles, policies and practices support the Business Goals, Mission, Vision and Values of the Agency.

Appendix B.2

Workplace Environment – Employer of Choice

Business Goal: *IEUA is committed to provide a positive workplace environment by recruiting, retaining and developing a highly skilled team dedicated to the Agency's Mission, Vision and Values.*

Objective: *IEUA will be an Employer of Choice.*

Commitment: *IEUA will provide a work environment that will attract and retain highly skilled, motivated, professional and committed employees.*

Commitment Level Background

- IEUA will recruit, retain, and promote a diverse and qualified workforce committed to the Agency's Mission, Vision and Values. This will be achieved by utilizing modern recruitment practices that provide flexible and responsive recruiting solutions to assist with filling positions in a timely and effective manner.
- IEUA will encourage and maintain a highly motivated and trained staff by designing, implementing, and supporting a learning environment which encourages growth and development of Agency staff.
- IEUA will strive to align project/work tasks with the skills of its employees to create a rewarding and successful work environment.
- IEUA will create a culture that recognizes a dedicated staff and attracts qualified individuals through the use of creative communication methods and continued education of available employee benefits to increase knowledge of these programs and services. In addition, IEUA will update the Agency's various award recognition programs to reflect the Agency's cost containment strategies.
- IEUA will reduce stress from work-life imbalance by promoting partnerships, cross training, shared responsibilities, and a culture of teamwork to allow any and all employees recuperative time away from work activities.
- IEUA will inspire trust and confidence in Management by: clearly defining the Agency's Mission/Vision/Values, by creating Business Goals that support the Mission/Vision/Values, outlining a Strategic Plan to achieve those goals, communicating how the Agency is accomplishing these goals, and effectively linking these goals to each employee objectives and performance.

Appendix B.3

Workplace Environment – Training

Business Goal: *IEUA is committed to provide a positive workplace environment by recruiting, retaining and developing a highly skilled team dedicated to the Agency's Mission, Vision and Values.*

Objective: *IEUA will provide employees with state-of-the-art skills and knowledge to meet current and anticipated Agency needs.*

Commitment: *IEUA will facilitate and provide opportunities for staff to further their personal/professional development in support of maintaining a highly skilled workforce.*

Commitment Level Background

- All Agency employees have access to online training:
  - Leadership, Team Building, and Mentoring Skills Training
  - Microsoft Office Training
  - OSHA Required Safety Trainings

  Employees are provided with login information, which allows the employee to perform trainings at the most optimum time to fit their daily schedule.
- Selected Agency employees have the ability to attend onsite classroom trainings. The following onsite classroom trainings are going to be provided for Fiscal Year 2013/2014: "7 Habits of Highly Effective People", (4) specialized onsite workshops, (12) 4-hour Microsoft Office trainings and policies and procedures training.
- Three types of offsite training are going to be provided for Fiscal Year 2013/2014:
  - Southern California Local Government Supervisory Program – This is a 3 day training course to provide skills for new supervisors.
  - Southern California Local Government Leadership Academy – This is a 7 day training program for Managers provided by current or retired City Managers.
  - Liebert Cassidy Whitmore Training – Legal Counsel provides workshops to Managers, Supervisors, and aspiring Supervisors on relational issues.
- IEUA also provides tuition reimbursement up to $2,500 per year for employee educational expenses that increase their job knowledge and skills. Additionally, certification and degree incentives are awarded to employees who earn Associates, Bachelor's and Master's Degree, and specific program certification.
- Each Agency Department has training budgets to perform trainings on specialized skill sets for their employees.

Appendix B.4

Workplace Environment – Staff Safety

Business Goal: *IEUA is committed to provide a positive workplace environment by recruiting, retaining and developing a highly skilled team dedicated to the Agency's Mission, Vision and Values.*

Objective: *IEUA will promote and ensure a safe and healthy work environment to protect employees and stakeholders.*

Commitment: *IEUA will have no more than 1 day of lost time due to work related illness or injury per 1,000 days worked.*

Commitment Level Background

- IEUA will sustain a clean, safe, and healthy working environment for all Agency employees at all facilities. This will be achieved by:
  - Administering and monitoring required safety and regulatory trainings;
  - Conducting annual intra-department safety audits; and
  - Conducting annual emergency response drills, such as HAZWOPER training, fire drills, and earthquake drills
- IEUA has maintained an outstanding employee workplace injury record. For Fiscal Year 2012/2013 the Agency had no lost time due to work related illness or injury. Most employee workplace injury events that occur at IEUA are typically due to cuts, scrapes, and bruises. Rarely does a workplace injury incident result in lost time.
- Occupational Safety and Health Administration (OSHA) categorizes work related illnesses or injuries by: recordable cases (a case that resulted in medical treatment beyond 1st aid, loss of consciousness, or a significant injury diagnosed by a physician), transfers or restrictions (a case that resulted in an employee not being able to perform their job duties; however, their job duties were modified to meet the requirement of the illness or injury), lost time (a case that resulted in an employee not being able to work for one day after the date of injury), and death. For 2010 through 2012, IEUA had the following work injury statistics:

By Case

Calendar Year	Recordable Cases	Transfers or Restrictions	Lost Time	Deaths
2010	9	6	1	0
2011	12	6	1	0
2012	13	12	0	0

By Days

Calendar Year	Transfers or Restrictions	Lost Time
2010	81	180
2011	235	56
2012	390	0

Appendix C.1

Business Practices – Efficiency & Effectiveness

Business Goal: *IEUA is committed to applying ethical, fiscally responsible and environmentally sustainable principles to all aspects of business and organizational conduct.*

Objective: *IEUA will promote standards of efficiency and effectiveness in all Agency business practices and processes.*

Commitment: *IEUA will integrate **LEAN** techniques to evaluate current business practices and processes and identify ways to improve the quality, cost and value of the services the Agency provides to its customers.*

Commitment Level Background

- IEUA is committed to providing its customers with high quality service in a cost effective, regionally planned manner. Continued assessment and improvement of our business processes and practices is essential to ensure optimization of efficiency and effectiveness.
- ***LEAN*** was originally developed to reduce waste in manufacturing and evolved from Total Quality Management (TQM); the manufacturing practices of the Toyota Motor Corporation. However, rather than focusing on mass production, ***LEAN*** focus on the elimination of waste while providing the same, or enhanced, value to the customer.
- Application of ***LEAN*** techniques will help define key performance indicators (KPIs) to more effectively measure, monitor, and realign processes to meet the Agency's business goals and objectives.
- In April 2013, the second phase of the Agency's Enterprise Resource Planning (ERP) business system, first implemented in 2007, went live to streamline the recording, tracking and reporting of employee and payroll data. This enhancement helps support the Agency's efficiency and effectiveness initiative by eliminating redundant systems, enhancing data integrity, and supporting more transparent and timely reporting.
- The Agency's ERP system and integrated format also helps support the transition from a reactive to a condition based monitoring (CBM) maintenance philosophy strategy; a key initiative of the Agency. Under CBM, the 45 percent of resources currently allocated to reactive maintenance (unplanned or emergency repairs) will shift to support a predictive strategy denoted by improved planning and scheduling and more effective diagnosis of equipment functionality.
- The same integrated approach is being applied to the Agency's existing Supervisory Control & Data Acquisition (SCADA) System network which is currently comprised of a wide variety of equipment and applications located throughout the various facilities. Significant effort went into documenting the current state and analyzing the Agency's SCADA systems resulting in the 2012 Board adoption of the Recycled Water, Groundwater Recharge and Facilities SCADA Master Plans (Plans).

Appendix C.2

Business Practices – Customer Service

Business Goal: *IEUA is committed to applying ethical, fiscally responsible and environmentally sustainable principles to all aspects of business and organizational conduct.*

Objective: *IEUA will provide excellent customer service that is cost effective, efficient, innovative and reliable.*

Commitment: *IEUA will respond to and meet customer's expectation for enhanced value added services. IEUA will solicit customer feedback on performance and goal alignment on an annual basis.*

Commitment Level Background

- IEUA is committed to providing excellent customer service by:
  - Providing the primary services of the Agency – water management, wastewater management, biosolids management, and other resources management disciplines.
  - Ensuring that these services are offered in an effective, sustainable and cost efficient method.
  - Providing clear and direct responses to customer suggestions, inquiries, and complaints.
  - Maintaining open sources of communication to ensure stakeholder's interests are discussed and opportunities are pursued.
- IEUA will optimize customer service by ensuring alignment and management of core procurement business functions, roles, and responsibilities.
- Media relations will continue to be cultivated, and press releases will remain a major effort, along with the Agency internal and external newsletter and updates.
- Social networking and website maintenance will remain a top priority for Agency outreach and communication initiatives.
- IEUA will collaborate with all stakeholders to ensure open communication and discussion of issues and policies that affect the communities we serve, (i.e. topics such as imported water rates and deliveries, development and availability of local water supplies.)

Appendix C.3

Business Practices – Regional Leadership & Community Relations

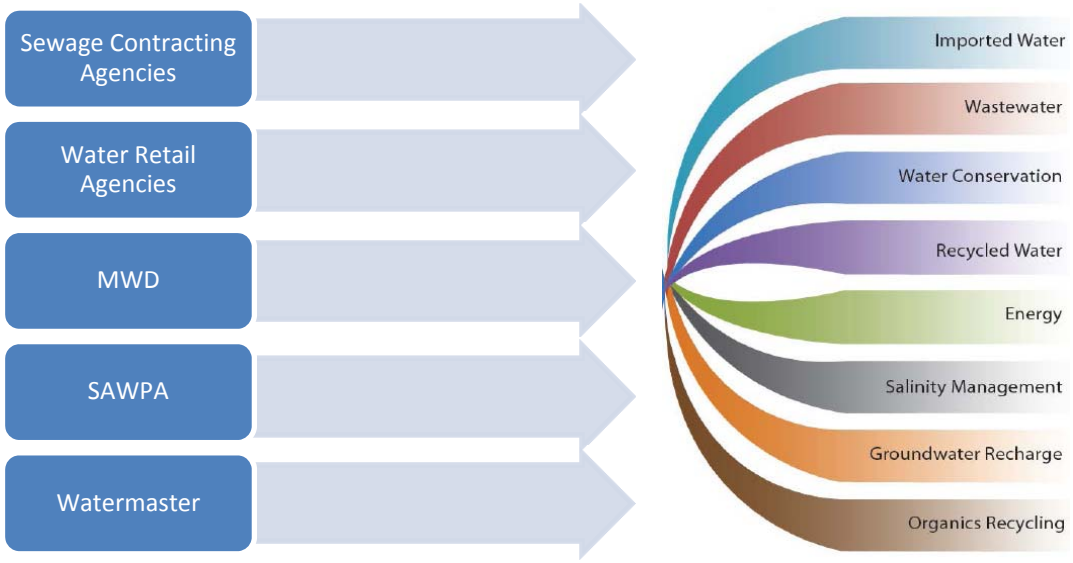
Business Goal: *IEUA is committed to applying ethical, fiscally responsible and environmentally sustainable principles to all aspects of business and organizational conduct.*

Objective: *IEUA will cultivate a positive and transparent relationship with local and regional stakeholders to enhance quality of life, preserve our heritage and protect the environment.*

Commitment: *IEUA will partner with the cities, local water districts, regional agencies and the broader community on common issues to create and implement integrated and innovative solutions, while minimizing duplication of efforts by all parties. Furthermore, IEUA will incorporate member agencies into various IEUA related projects and programs to ensure that a transparent and broader regional representation is achieved.*

Commitment Level Background

- IEUA will promote and sustain effective communication between the Agency and its stakeholders through use of various methods, including frequent meetings/workshops, newsletters and electronic media.
- Incorporating the Agency's branding initiatives, staff will create a recognizable standard to educate the public about water recycling, water conservation and capital infrastructure/replacement investments.
- IEUA is committed to taking actions that consider the cost, quality, and value of service for communities we serve.
- The Agency strives to foster open, positive and collaborative relationships with all stakeholders to meet the water needs of the region now and in the future.



Appendix C.4

Business Practices – Policy Leadership

Business Goal: *IEUA is committed to applying ethical, fiscally responsible and environmentally sustainable principles to all aspects of business and organizational conduct.*

Objective: *IEUA will effectively advocate, campaign and guide the development of policies and legislation that directly benefit the communities we serve.*

Commitment: *IEUA will promote a collaborative approach for the development of positions on policies, legislation and regulations that impact Agency policy objectives.*

Commitment Level Background

- IEUA will provide leadership on legislative solutions and regulatory standards for water reliability, water quality, energy management, wastewater collection, treatment and reuse, organics management, and stormwater and watershed management.
- IEUA will continue to effectively seek State and Federal grant funding for Agency and regional projects that achieve IEUA's policy objectives; (e.g. the Recharge Master Plan, Renewable Energy, the Optimum Basin Management Plan, and the Recycled Water Program).
- IEUA will actively research, monitor, review, and adopt positions on federal and state legislation that benefit the Agency's policy objectives and the member agencies that it serves. This information will be shared with all member agencies and stakeholders.
- IEUA will support the development of public affairs, public awareness, community education and outreach, media relations and legislative programs on issues that address the policy objectives of IEUA. Open communication and collaboration among the Agency and its multiple stakeholders is of prime importance.
- IEUA will work with member Agencies to formulate methods and approaches for addressing community and agency concerns and ensure that concerns, needs, and requests are responded to in a timely manner.
- IEUA will actively review and provide recommendations on procedures and processes to improve the efficiency, cost effectiveness, customer responsiveness, quality and environmental sustainability of Agency programs and projects.
- IEUA will coordinate intergovernmental activities with member agencies, industry associations, and regulatory agencies and will appear before local and state bodies on public affairs and other matters.
- IEUA will comply with the Brown Act requirements, and other laws pertaining to special districts.
- IEUA will navigate and implement the regulatory changes as a result of pension reform.

Appendix D.1

Water Reliability – Water Use Efficiency & Education

Business Goal: *IEUA is committed to the development and implementation of an integrated water resource management plan that promotes cost-effective, reliable, efficient and sustainable water use along with economic growth within IEUA's service area.*

Objective: *The region will educate and promote water use efficiency to enhance regional water supplies and exceed State goals for reductions in per capita water use within our service area.*

Commitment: *IEUA will promote a regional approach to reduce water use to less than 200 gallons per capita per day (gpcd) by 2018.*

Commitment Level Background

- The Water Conservation Act of 2009 (SBX 7-7) requires urban retail water suppliers to continue demand management measures to reduce water use, as measured by gpcd, by 10% by December 31, 2015 and by 20% by December 31, 2020 to maintain eligibility to receive state water management grants and loans.
- The baseline water use for the region from 1999 - 2008 was calculated to be 251 gpcd.
- The reduced water use targets can be achieved through: water use efficiency (WUE) active programs, WUE passive policy initiatives, and recycled water use. The current goal of the Urban Water Management Plan and the Water Use Efficiency Business Plan is to achieve the 20 x 2020 per capita water use reduction in the following manner:

	2015 Reduction	2020 Reduction
Projected Reduction from WUE Activities	5 gpcd	13 gpcd
Projected Reduction from Recycled Water Use	38 gpcd	45 gpcd
TOTAL Projected Reduction	**43 gpcd**	**58 gpcd**
10 Year Baseline	**251 gpcd**	
Target	226 gpcd	201 gpcd
Projected Achievement	208 gpcd	193 gpcd

- Additional per capita water use reductions can be achieved within the region. IEUA's policy goal is to strive to achieve the 20 by 2020 reduction through conservation measures alone. IEUA will collaborate with all stakeholders to review and update Water Use Efficiency Business Plan to achieve this goal, and will support member agencies to maximize the reduction of water use below 200 gpcd by 2018.
- IEUA will continue to expand regional water efficiency educational, outreach and rebate programs.

Appendix D.2

Water Reliability – New Water Supplies

Business Goal: *IEUA is committed to the development and implementation of an integrated water resource management plan that promotes cost-effective, reliable, efficient and sustainable water use along with economic growth within IEUA's service area.*

Objective: *The region will develop reliable, drought-proof and diverse local water resources in order to reduce dependence on imported water supplies.*

Commitment: *IEUA will regionally promote reducing demand for imported water during dry and normal years and storing imported water into the Chino Groundwater Basin during wet years. In addition, IEUA will support maximizing the beneficial use of existing water infrastructure, while meeting future increased demands through investment in local water resources and conservation efforts.*

Commitment Level Background

- As part of the 2010 Urban Water Management Plan (UWMP), IEUA has set a goal to maximize use of local water supplies and minimize the need for imported water, especially during dry years and other emergency shortages from Metropolitan Water District (MWD).
- Unless additional water reductions are achieved or new local water supplies are developed, current projections show that regionally an additional 10,000 AFY of costly imported water will be required by year 2025.
- It is understood that future imported water reliability will be lower and costs will be higher. Over the next ten years, it is estimated that the IEUA/member agencies will purchase $600 million in imported water. A 10,000 AFY water supply shift from imported water would reduce MWD purchases by approximately $100 million over the same ten year period.
- IEUA is in the process of preparing an Integrated Resources Plan (IRP), which will provide an achievable long-term strategy to meet current and future water needs. The IRP will evaluate existing water supplies and demands, forecast future water supplies and demands, and evaluate additional water efficiency and alternative sources of new water supply that will reduce future reliance on imported water.

Appendix D.3

Water Reliability – Recycled Water

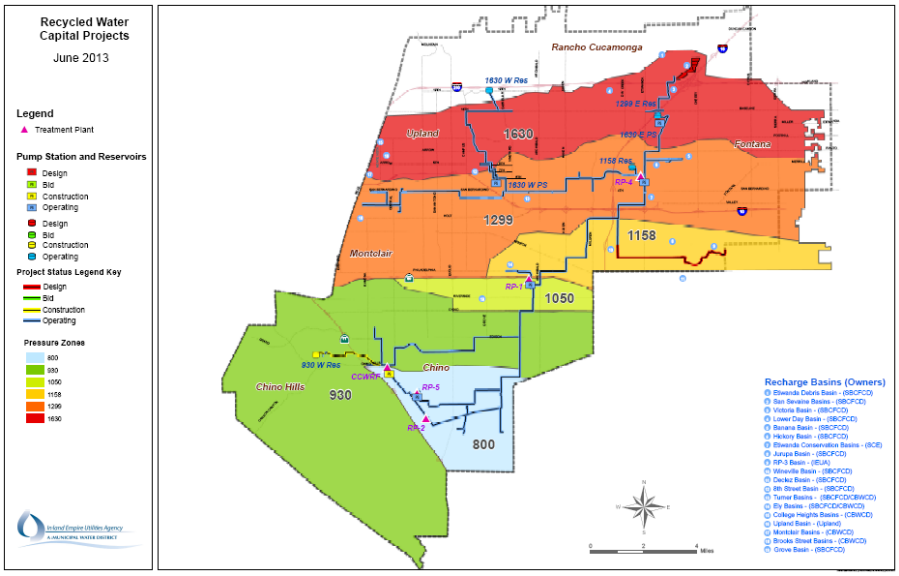
Business Goal: *IEUA is committed to the development and implementation of an integrated water resource management plan that promotes cost-effective, reliable, efficient and sustainable water use along with economic growth within IEUA's service area.*

Objective: *The region will maximize beneficial reuse of recycled water to enhance reliability and reduce dependence on imported water.*

Commitment: *The IEUA region will complete the development of recycled water infrastructure to achieve reuse of 50,000 AF by 2025.*

Commitment Level Background

- IEUA has a current wastewater flow of approximately 60,000 AFY. Based upon wastewater forecasts and potential future interconnections, IEUA is targeting a reliable recycled water supply of 50,000 AFY for direct use and groundwater recharge by 2025.
- As outlined in the Recycled Water Business Plan, IEUA is in the process of expanding recycled water infrastructure to meet the 50,000 AFY delivery target. IEUA will release the Recycled Water Plan Update in 2014.
- In addition, the IRP will have specific focus on the development of additional direct recycled water connections and a specific emphasis on recycled water interties and enhanced groundwater recharge capabilities.



- Estimated Fiscal Year 2012/2013 recycled water delivery for direct use and groundwater recharge is 31,500 AFY. Increasing recycled water deliveries to 50,000 AFY is key to meeting the other three objectives/commitment levels (Water Use Efficiency & Education, New Water Supplies, and Groundwater Recharge) for the Water Reliability Business Goal.

Appendix D.4

Water Reliability – Groundwater Recharge

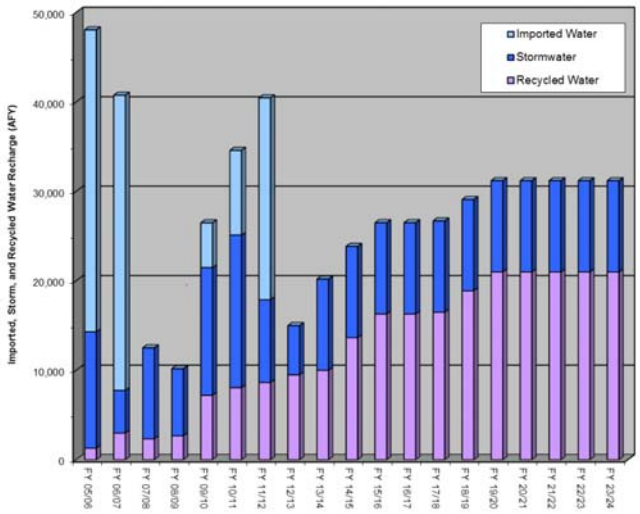
Business Goal: *IEUA is committed to the development and implementation of an integrated water resource management plan that promotes cost-effective, reliable, efficient and sustainable water use along with economic growth within IEUA's service area.*

Objective: *The region will maximize all sources of groundwater recharge.*

Commitment: *IEUA will support the recharge of all available stormwater and maximize the recharge of recycled water within the region. Furthermore, IEUA will aggressively pursue the purchase and storage of cost-effective surplus imported water supplies.*

Commitment Level Background

- Groundwater currently comprises about 60% of the water supply needed to meet urban water demand for the region.
- The Chino Groundwater Basin contains approximately 5 million AF of water storage with an additional 1 million AF in unused storage capacity. The current safe-yield of the Basin is 145,000 AFY and declining. Historically, discounted imported water has been available and utilized to recharge the Basin when pumping has exceeded the safe-yield. The MWD discounted replenishment water was discontinued in 2012, changing the economic impacts of over-production of groundwater.
- The Chino Basin Groundwater Recharge Program developed new sources of replenishment water: local stormwater and recycled water.
- IEUA has been shifting the need to buy imported water to meet replenishment needs, to the cost-effective use of stormwater and recycled water.



- IEUA will continue to partner with CBWM to maximize the recharge of all available stormwater and recycled water and will only recharge imported water proactively when economically viable or as necessary to meet replenishment requirements.

Appendix E.1

Wastewater Management – Capacity

Business Goal: *IEUA systems will be master planned, managed and constructed to ensure that when expansion planning is triggered, designs/construction can be completed to meet regulatory/growth needs in an expeditious, environmentally responsible and cost effective manner.*

Objective: *IEUA will maintain capacity within systems and facilities to meet essential service demands and to protect public health and environment.*

Commitment: *IEUA will ensure that systems are managed and constructed so that 90% of capacity is never exceeded.*

Commitment Level Background

- Economic development of the region is dependent upon well planned public works infrastructure in place prior to land development. Wastewater collection and treatment are critical components of this infrastructure.
- IEUA has and will continue to utilize operational flexibilities provided through flow diversion and bypass systems to maximize beneficial use and capacity of the integrated collection system, wastewater treatment system, recycled water system, and organics management system.
- For Fiscal Year 2012/2013, all four IEUA Wastewater Recycling Facilities have a Percent Capacity Utilization between 60% - 70%. The Ten-Year Percent Capacity Utilization projection shows slight increases for RP-1, RP-4, and CCWRF; however, RP-5 has a substantial increase to 95%:

	FY 2012/13 Actual*			FY 2022/23 Projection		
Regional Water Recycling Plant	Treated Influent Flow	Plant Rated Capacity	Percent Capacity Utilization	Treated Influent Flow	Plant Rated Capacity	Percent Capacity Utilization
RP-1	27.7	44.0	63%	30.4	44.0	69%
RP-4	9.8	14.0	70%	10.8	14.0	77%
CCWRF	7.4	11.4	65%	8.0	11.4	70%
RP-5	10.5	16.3**	64%	15.5	16.3	95%
IEUA Total	**55.3**	**85.7**	**65%**	**64.7**	**85.7**	**76%**

- For Fiscal year 2013/2014, IEUA will be updating the Facilities Master Plan, which will considered future growth patterns, alternatives for expansion of the Wastewater Recycling Facilities, and impacts to the Recycled Water and Organics Management systems.
- IEUA will ensure that all planning, design, construction, and start-up activities for treatment system expansions are scheduled and completed before the 90% Percent Capacity Utilization is reached.

Appendix E.2

Wastewater Management – On-Time Construction

Business Goal: *IEUA systems will be master planned, managed and constructed to ensure that when expansion planning is triggered, designs/construction can be completed to meet regulatory/growth needs in an expeditious, environmentally responsible, and cost effective manner.*

Objective: *IEUA will ensure capital projects are designed and implemented in a timely and economically responsible manner.*

Commitment: *IEUA will design and construct facilities through efficient project management to ensure that 80% of projects are completed on schedule and 90% of projects are on budget.*

Commitment Level Background

- IEUA is committed to ensuring that projects are completed: on-time to obtain the beneficial use of required equipment as required by Operations, Maintenance, and Compliance, and on budget to contain costs and accurately project Agency future expenditures.
- Constructability reviews, which will include technical input from Construction, Operations, Maintenance, and DCS staff, will be included as a standard design element with the goal of reducing the number of change orders experienced during construction.
- Construction Management staff have received schedule training to allow for detailed reviews of contractor construction schedules. Staff will effectively analyze contractor schedules to highlight deficiencies in critical paths that may result in extended project schedules.
- At the completion of a project pre-design report (PDR), budgets will be created with well-defined scopes of work that include all project costs: design/construction consultants, construction contract award, and all Agency labor costs (Engineering, Construction Management, Operations, Maintenance, DCS, Finance, and Accounting).
- A project will be deemed on budget if all design, construction, and start-up activities are completed and expenditures on the project are between 90-100% of the project budget.
- Schedules for duration of design and construction/start-up will be created at the time the project budget is created (completion of the PDR).
- The Engineering schedule metric will be based upon the project design kickoff meeting and the Award of Construction Contract. The Engineering activities will be deemed on schedule if the duration between the Award of Construction Contract and design kickoff meeting is +/- 10% of the initial estimate.
- The Construction Management schedule metric will start at the preconstruction meeting and conclude with the Operations acceptance of the project. The Construction activities will be deemed on schedule if the duration between the project acceptance and preconstruction meeting is +/- 10% of the initial estimate.

Appendix E.3

Wastewater Management – Biosolids Management

Business Goal: *IEUA systems will be master planned, managed and constructed to ensure that when expansion planning is triggered, designs/construction can be completed to meet regulatory/growth needs in an expeditious, environmentally responsible, and cost effective manner.*

Objective: *IEUA will manage all Agency produced biosolids in a compliant, fiscally prudent and environmentally sustainable manner.*

Commitment: *IEUA will ensure that 95% of the Inland Regional Compost Facility's capacity is utilized, all biosolids produced by IEUA are treated at IERCF, Agency solids generation is minimized through efficient dewatering operations, and all compost is marketed for beneficial use.*

Commitment Level Background

- In 2001, the Chino Basin Organics Management Business Plan set a goal for the region to divert organic solids from landfills and to consume locally generated recycled organic material. Under a Joint Powers Agreement, IEUA in partnership with Los Angeles County Sanitation District constructed the Inland Empire Regional Composting Facility (IERCF) to meet this goal.
- IERCF has an operating capacity of approximately 400 wet tons per day for wastewater biosolids. IEUA's owned portion of this operating capacity is equivalent to 50% or approximately 200 wet tons per day of biosolids material. IEUA currently generates approximately 190 wet tons per day of biosolids.
- IEUA's goal is to send all biosolids generated at its wastewater facilities to IERCF; however, IERCF requires one shutdown day per month to perform preventative maintenance on operating equipment. On maintenance days, IEUA will utilize the use of storage at RP-1 and RP-2, while maintaining contracts with third party composting facilities as a contingency.
- IEUA supports reducing solids generation at its wastewater facilities. Currently, start-up activities for the new RP-1 Centrifuge Dewatering Building are commencing and full operation should be achieved by the end of 2013. The new centrifuges will increase the biosolids total solids percentage from the current 16% up to 24%. This will decrease the IEUA biosolids generation by approximately 50 wet tons per day, resulting in excess IEUA capacity at IERCF.
- All biosolids and wood amendment sent to IERCF are processed and treated to produce a Class A exceptional quality compost. IERCF compost, which is created and marketed as SoilPro Premium Compost, is beneficially used by contracting agencies and sold as a soil conditioner that improves water retention, resulting in better plant growth and reduces water requirements.

Appendix E.4

Wastewater Management – Energy Management

Business Goal: *IEUA systems will be master planned, managed and constructed to ensure that when expansion planning is triggered, designs/construction can be completed to meet regulatory/growth needs in an expeditious, environmentally responsible, and cost effective manner.*

Objective: *IEUA will optimize facility energy use and effectively manage renewable resources to achieve peak power independence, contain future energy costs, achieve statewide renewable energy, distributed generation and greenhouse gas reduction goals, and provide for future rate stabilization.*

Commitment: *IEUA will achieve peak power independence by 2020 through the implementation of renewable projects, energy management agreements and operational efficiencies.*

Commitment Level Background

- IEUA facilities currently use approximately 75,000 MWh of electricity annually at an annual cost of approximately $9,000,000. This is 26% of the non-labor Operations and Maintenance budget and the highest, non-labor cost of the Agency.
- The region's population is forecasted to increase by 50% by 2030, which will further increase demand and cost for electricity. Electricity prices are volatile; however, historically, the average annual increase has been between 4% - 6%.
- IEUA has created a preliminary Energy Management Plan to reach energy independence from the grid during peak energy use/pricing period (noon – 6:00 PM) by 2020 through increased energy efficiency, increased on-site energy generation, a diversified energy portfolio and energy demand response.
- Through Power Purchase Agreements (PPA's), IEUA has expanded its renewable energy portfolio to include 3.5 MW of solar, 1.0 MW of wind, and 2.8 MW of biogas fuel cell production.
- IEUA will develop an updated energy management plan that will focus on integrating energy efficiency, demand response, and renewable energy generation programs to contain future energy costs and contribute to achieving statewide renewable energy and greenhouse gas reduction goals.

Appendix F.1

Environmental Stewardship – Regulatory Compliance

Business Goal: *IEUA is committed to the responsible use and protection of the environment through conservation and sustainable practices.*

Objective: *IEUA will comply with all federal, state and local laws at each Agency facility.*

Commitment: *IEUA will have no more than 2 notices of violation annually from the State Water Resources Control Board, Air Quality Management District, or Non-Reclaimable Waste System for all Agency owned and operated facilities.*

Commitment Level Background

- IEUA has set Key Performance Indicators (KPI) at each Agency facility to monitor compliance with all regulations stipulated in the NPDES, AQMD, and NRWS permits.
- When compliance KPI's are exceeded, incident reports are created to outline the facts and causes of any noncompliant event. The incident reports are reviewed and corrective action is taken to prevent future KPI noncompliance.
- It is up to the discretion of AQMD to issue NOV's; however, in general a NOV is issued for: operation of equipment without a valid permit to operate, excessive exceedance of a permit stipulated emissions requirement, or operations resulting in a nuisance to the public.
- For Calendar Year 2012, IEUA had the following AQMD notices of violation:

Date	Incident	Comments
9/5/12	Ammonia Tank Level Exceedance (greater than permitted capacity)	NOV issued (item resolved)
9/5/12	Unpermitted Pilot Unit Installation	NOV issued (item appealed)

- SWRCB defines violations as "serious" and "non-serious" and each type of violation may be subject to a minimum liability penalty (MMP). In addition, sewage spills, including large recycled water spills, are subject to administrative civil liability penalties (ACL). Any MMP or ACL would be considered a notice of violation. For Calendar Year 2012, IEUA had the following SWRCB incidents; however no NOVs were deemed serious:

Date	Incident	Comments
1/10/12	Turner Basin RW Release	
4/3/12	SB Lift Station Sewer Overflow	Spill was contained and cleaned before reaching surface water
4/12/12	CalPoly Pomona RW Release	
5/8/12	Philadelphia NRW Sewer Overflow	Spill was contained and cleaned before reaching surface water
12/19/12	CCWRF 7-d Median Coliform	Investigation identified issue as sample contamination.

Appendix F.2

Environmental Stewardship – Good Neighbor Policy

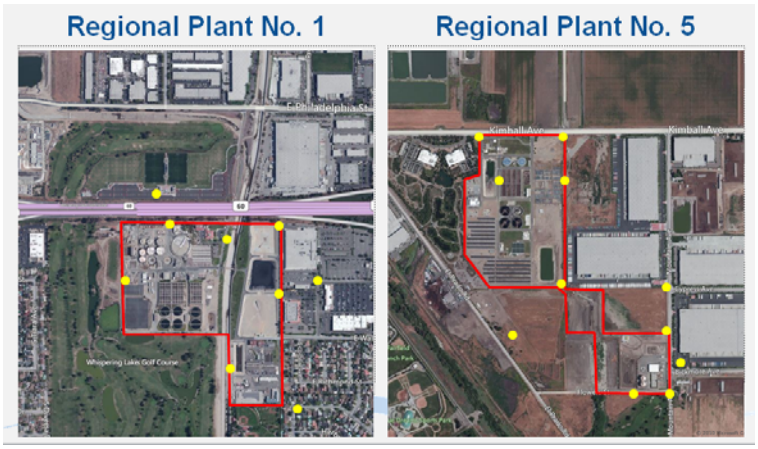
Business Goal: *IEUA is committed to the responsible use and protection of the environment through conservation and sustainable practices.*

Objective: *IEUA will control odors at all Agency facilities for the purpose of improving the environment and being a good neighbor to the local community.*

Commitment: *IEUA will perform a quarterly odor monitoring assessment to develop actual and acceptable baseline odor thresholds. Acceptable baseline thresholds will be used to measure treatment plant performance and drive necessary capital improvements.*

Commitment Level Background

- IEUA facilities and processes have the potential to produce odors.
- Each facility is operated under AQMD permits that include odor control requirements.
- AQMD has a rule that prohibits odor impacts to the community.
- Substantial funding has been made into odor control technologies at Agency Facilities.
- IEUA routinely performs odor circuits around each facility to measure for hydrogen sulfide. Hydrogen sulfide has an odor described as smelling similar to rotten eggs and is generally used as a surrogate for wastewater odor presence.
- IEUA will review extending similar odor circuits to all Agency Facilities and will review expanding measurements to include ammonia (pungent smell) and mercaptans (rotten cabbage smell).
- In addition, IEUA will perform a quarterly odor profile analysis at each of the treatment facilities. An odor profile analysis is completed by inviting participants from member Agencies and IEUA staff to survey facility odors and grade them by intensity (week to strong) and characteristic (rotten eggs, fishy, rotten cabbage, etc.). See following diagram for example sample locations.



- Based upon the odor circuits and odor profile analysis, odor baselines will be created and thresholds will be set for each facility. An odor control plan will be created to determine any capital expenditures required to meet the established thresholds. Based upon the required capital expenditures, the odor thresholds may be adjusted to provide the most efficient odor control strategy.

Appendix F.3

Environmental Stewardship – Response & Complaint Mitigation

Business Goal: *IEUA is committed to the responsible use and protection of the environment through conservation and sustainable practices.*

Objective: *IEUA will investigate and appropriately respond in a timely manner to any environmental issue or complaint received at any Agency Facility.*

Commitment: *IEUA will immediately respond to any event that threatens public health and safety and will respond within 5 working days to any nonemergency complaint or suggestion.*

Commitment Level Background

- Generally, all Agency facilities have Operations & Maintenance staff onsite 10 hours per day, 7 days a week to respond to any compliance or public health & safety events. During hours when facilities are unmanned, Operations & Maintenance staff are on-call and receive alarm notifications for any compliance or public health and safety event.
- For Calendar Year 2012, IEUA had 17 onsite compliance related incidents, 2 emergency response events due to recycled water releases, and 2 response events to sanitary sewer overflows. Each event was responded to immediately.
- For Calendar Year 2012, IEUA received 4 odor complaints from members of the public. Each complaint was thoroughly investigated by Agency staff and incident reports were created. Most complaints cannot be substantiated; however, the Agency has modified operations in an attempt to reduce the potential of creating odors.

Appendix F.4

Environmental Stewardship – Environmental Responsibility

Business Goal: *IEUA is committed to the responsible use and protection of the environment through conservation and sustainable practices.*

Objective: *IEUA will strive to implement actions that enhance or promote environmental sustainability and the preservation of region's heritage.*

Commitment: IEUA will consider and assess environmental sustainability, public use and heritage preservation options into all of its programs and projects.

Commitment Level Background

- IEUA constructed a new headquarters building and committed to design standards that ensured prudent use of natural resources and proactive conservation measures. This project has enabled the Agency to achieve recognition and leadership in support of building a sustainable environment. This recognition was presented to the Agency through the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED™) program earning the "Platinum" level rating by meeting specific requirements. IEUA will take actions to sustain the Platinum LEED status of its facilities.
- In 2007, IEUA opened the Chino Creek Wetlands and Educational Park, one portion of the overall efforts being taken in the watershed under the Chino Creek Integrated Plan (CCIP). The general function of the CCIP is to focus planning attention on the lower Chino Creek area of the Prado Basin in a process of preserving and restoring the Prado Basin, maximizing value to the community, improving water-quality and flood control, and providing habitat restoration, recreation, water conservation and public education. The park is open to the public during daytime hours and consists of: 22,000 various drought tolerant plants, 1.7 miles of nature trails, 22 acres of habitat, and 6 ponds.
- The 1630 West Recycled Water Pump Station was constructed at Vineyard Park in Ontario. As part of the project, new park bathroom facilities were constructed and improvements of the parking lot, electrical, and irrigation systems were completed providing benefit to the local residents.
- IEUA will expand its environmental and education programs including: annual Earth Day activities, Garden in Every School and Inland Empire Garden Friendly. IEUA will collaborate with all stakeholders (including Cal State San Bernardino Water Resource Institute and Home Depot) on the Inland Empire Garden Friendly program to promote sustainable environmental principles and incorporate the history and tradition of the region.
- IEUA completed construction of the wetlands mitigation area in Basin 2 of the RP-3 Recharge Facility in July 2004. Basins 1, 3 and 4 are used actively for groundwater recharge, while most of Basin 2 is occupied by the mitigation wetlands. The vegetation was planted and the irrigation system installed in May 2005.

Appendix B

Overview of Existing IEUA Planning Documents

History of Agency Planning Documents & Activities

INTRODUCTION

This document contains summaries of the Inland Empire Utilities Agency's major planning documents that have been used to guide the development of the wastewater facilities, water resources, recycled water, groundwater recharge, and salinity management programs. These documents are the foundation that the Agency's planning initiatives have followed. Although the Agency is currently in the process of updating and re-evaluating its key planning documents, it is useful to understand the history of the historic planning documents to understand how the Agency's programs have evolved into their current form.

1. Facilities Master Planning

The Agency adopted its Facilities Master Plan Program Environmental Impact Report (FMP PEIR) on June 28, 2002. The FMP PEIR links together three major, fundamental master planning documents: the Recycled Water System Feasibility Study (dated January 2002, adopted August 2002), the Chino Basin Organics Management Strategy (dated May 2001, adopted August 2002), and the Wastewater Facilities Master Plan (dated April 2002, adopted August 2002). These plans are often referred to as the Recycled Water Master Plan, the Organics Management Master Plan and the Wastewater Facilities Master Plan, or collectively as the Facilities Master Plans. In addition, the Chino Basin Watermaster completed the Optimum Basin Management Plan (OBMP) Phase I report in August 1999 and the IEUA Board certified the OBMP Program Environmental Impact Report (OBMP PEIR) in July 2000. Together with the Facilities Master Plans, these documents make up the foundation for the Agency's major programs.

1. A Wastewater Facilities Master Plan

The Agency's Wastewater Facilities Master Plan (WFMP) was adopted in August of 2002 with the approval of the Regional Technical and Policy Committees. The WFMP integrated all of the Agency's related planning activities into one comprehensive document in order to address the overall effects of the projects contemplated by the Agency. This comprehensive planning process is illustrated in Figure 1.

FIGURE 1: WASTEWATER FACILITIES MASTER PLAN DEVELOPMENT

Some of the 2002 WFMP's goals were to: (1) identify facilities that need to be replaced or expanded in the near and long-term to meet projected growth and wastewater flow needs; (2) develop a cost-effective, phased implementation plan; (3) determine space and location needs for additional or expanded treatment facilities; (4) develop strategies for flow diversion between service areas to optimize existing treatment capacity utilization; and (5) maximize water recycling, energy efficiency, and organics recycling. The WFMP included plans for the expansion of wastewater facilities to meet the needs of growth within the service area through 2050.

Some of the major projects identified in the 2002 WFMP which have subsequently been implemented include:

- Expansion of wastewater capacity at RP-4 from 7 to 14 million gallons per day (MGD);
- A new, 16-MGD wastewater facility at RP-5;
- Elimination of wastewater treatment at RP-2, leaving RP-2 as a solids-handling facility only;
- A state-of-the art composting facility adjacent to RP-4 that handles biosolids and green waste;
- A new, LEED-Platinum administration building and adjacent wetlands educational park;
- Organics management facilities for handling biosolids, manure, and food waste in the southern service area;
- Numerous upgrades and odor control facilities at RP-1 and CCWRF; and

- Expansion of the recycled water system to include additional recycled water pump stations, pipelines, and reservoirs in the northeast, northwest and central service areas.

1.B Organics Management Master Plan

The Chino Basin Organics Management Business Plan (Organics Management Master Plan) developed a strategy to manage the organics in the Chino Basin, including biosolids, dairy animal manure, and composting of local community green waste material. The Organics Management Master Plan was published in May 2001, along with a Project Report containing ten Technical Memoranda which provided the background and basis for the recommendations in the Business Plan. The Agency's Board of Directors certified the Programmatic EIR for the Organics Plan in June 2002 and adopted the Organics Management Master Plan together with the Wastewater Facilities Master Plan and Recycled Water Master Plan in August 2002. The Organics Management Master Plan presented specific short-term and long-term recommendations as well as outlined the steps and considerations that must be addressed when implementing projects consistent with the Agency's goals and mission.

The Organics Management Master Plan, as an integral tool for implementing the CBWM's Optimum Basin Management Plan (OBMP) includes two key initiatives. The first is a comprehensive renewable energy reliability program, and the second is a local organics recycling program. Implementation of these initiatives advances one of the paramount goals of the Organics Management Master Plan: protection of the Chino Groundwater Basin from infiltrating salts and nitrogen compounds from agricultural wastes. By implementing these programs, the Agency will be able to avoid the costly removal of those contaminants from groundwater.

As a major milestone for implementing the Organics Management Master Plan was the completion of the Inland Empire Regional Composting Facility (IERCF) in 2007. The IERCF allows the Agency to be self-sufficient regarding biosolids disposal, rather than being subjected to the uncertainties of other options. Alternative options, such as land application of biosolids, are unreliable as a result of shifting public opinion and the need to haul biosolids farther distances for disposal. Additionally, many alternatives are increasingly expensive because of increasing contract costs, high energy costs, air pollution regulations, and the lack of nearby disposal facilities or markets.

The IERCF is designed to process over 200,000 tons-per-year of recycled wood wastes and biosolids producing over 250,000 cubic yards of high-quality compost each year. The facility began daily operations in April 2007 and ramped up to full capacity in late 2008 receiving nearly 600 tons per day of biosolids and recycled wood waste products. Compost, which is created and marketed as SoilPro® Premium Compost, is sold as a soil conditioner that improves water retention, resulting in better plant growth and reduces water requirements. In order to receive biosolids year-round, a compost storage facility was constructed to store compost during the winter season when compost demand is low.

1.C Recycled Water Master Plan

The Agency prepared a Recycled Water Feasibility Study (Recycled Water Master Plan), adopted by the Board of Directors in August 2002, which delineated the Agency's recycled water program through the year 2020. In 2004, the Agency initiated development of the Regional Recycled Water Program Implementation Plan, which updated information from the 2002 Recycled Water Master Plan. In 2005, the Implementation Plan identified additional future recycled water demand, primarily in the developing areas of the cities of Chino and Ontario. The Agency recognizes that water recycling is a critical component of an effective water resources management strategy. Over the years, recycled water has, and will continue to become a larger proportion of the overall water resources supply portfolio in the Chino Basin by "drought proofing" the Basin and providing a lower-cost water supply to residents.

The 2002 Recycled Water Master Plan and the 2005 Implementation Plan confirmed that interconnection of all four of the Agency's regional treatment plants in a looped distribution system would maximize beneficial uses of recycled water, increase system reliability and flexibility, and provide other operational and cost-reducing benefits. As discussed in Chapter 6, major portions of the looped system have been completed and other portions are under design and construction. The looped system both allows more customers to be served, and provides the flexibility to release surplus recycled water to spreading basins throughout the Chino Basin for groundwater recharge.

According to the 2002 Recycled Water Master Plan, ultimately the use of recycled water would exceed 70,000 acre-feet per year (AFY) and over 1,700 customers will be connected to the regional recycled water distribution system. The 2005 Implementation Plan later identified plans for phased construction of a backbone distribution system over the course of ten years to serve 93,000 AFY of recycled water to 1,200 of the largest customers, including 33,000 AFY for recharge. The current, revised expectations for recycled water use, based on the Agency's 2010 Urban Water Management Plan, are discussed in Chapter 7. The Agency's goal is to use as much recycled water for local beneficial uses as is economically achievable and replenish the Chino Groundwater Basin.

During FY 2007/08, in response to potential water supply shortages and reductions in MWD imported water supplies, the Agency accelerated implementation of the recycled water program deliveries by committing to a Recycled Water Business Plan. The Recycled Water Business Plan (adopted in December 2007) was intended to be a "short-term" action-oriented document that would be updated periodically to adjust the goals, timelines, and projects to expand the use of recycled water. It also addressed program funding, which was to be accomplished by a combination of state and federal grants, State Revolving Fund Financing and MWD rebates. The Recycled Water Business Plan had an initial goal of increasing the total recycled water connected demand to 50,000 AFY. The Agency now anticipates reaching that goal in FY 2019/20. The Agency intends to complete an update of the Recycled Water Business Plan in FY 2013/14.

2. Optimum Basin Management Plan

The Optimum Basin Management Plan (OBMP) for the Chino Basin was prepared by the court-appointed Chino Basin Watermaster (CBWM) to address groundwater quality problems and identify groundwater management opportunities that should be pursued to maximize basin resources. The OBMP Phase I Report was completed by Wildermuth Environmental, Incorporated for CBWM on August 19, 1999 and the OBMP Recharge Master Plan Phase II Report was completed by CBWM in August 2001. The OBMP reports recommended studies, programs and facilities to further the development of long-term, cost-effective, reliable potable water supplies while enhancing and protecting the Basin yield, quality of the Basin groundwater aquifers, and downstream uses. The OBMP provided a framework for developing a cooperative groundwater management program among agencies which use, manage or regulate water resources in the Basin. To facilitate implementation of the OBMP, an agreement (referred to as the "Peace Agreement") was signed by CBWM, IEUA, Orange County Water District, and various other stakeholders on June 29, 2000. The OBMP Program EIR was certified on July 12, 2000, with the IEUA acting as the lead agency.

2.A Optimum Basin Management Plan Phase I Report

The purpose of the OBMP was to develop a water quality and quantity based management plan for the Chino Groundwater Basin. The OBMP was intended to allow continued reliance on groundwater for beneficial uses within the basin, while minimizing demand for imported water, and encourage the beneficial use of the large, available storage space in the aquifer system. The OBMP Phase I Report addressed the need to develop additional water sources within the Chino Basin to meet future demands through water quality treatment, groundwater recharge, groundwater desalination, and water recycling programs. It has resulted in the design and construction of the looped pipeline recycled water system, storage reservoirs, and pump stations that connect the Agency's recycled water production facilities to customers and groundwater recharge basins. Construction and improvement of 18 groundwater recharge basins has also been completed, allowing for the conservation of stormwater, recycled water, and imported water in the Chino Basin Aquifer. The OBMP Phase I Desalter program has also been implemented and provides an additional 12 MGD of new groundwater desalination capacity. In addition, the MWD Dry Year Yield Program funded six new groundwater treatment facilities.

2.B Recharge Master Plan

The OBMP included a comprehensive plan to increase artificial groundwater recharge within the Chino Basin using stormwater, recycled water, and imported water. As a component of the OBMP, the recharge program is described in the Recharge Master Plan, Phase II Report (August, 2001). In January of 2002, the IEUA Board of Directors approved the Recharge Master Plan Implementation Memorandum of Agreement between CBWM, Chino Basin Water Conservation District, San Bernardino County Flood Control District (SBCFCD), and the Agency. Members of

these four agencies formed a Groundwater Recharge Coordinating Committee to implement the initial $40-million program entitled the Chino Basin Facilities Improvement Project (CBFIP).

In July 2010, CBWM completed and submitted the Chino Basin Groundwater Recharge Master Plan Update (Update) to the court. Two years later, in July 2012, CBWM completed and submitted the Implementation Plan of the Update to the court. The Implementation Plan included a revised assessment of demand, recharge capacity, and safe yield. It also identified preliminary opportunities for enhancing stormwater, recycled water, and imported water recharge through low impact development, new recharge projects, and integrated stormwater and supplemental water facilities. As part of the Implementation Plan, a Steering Committee was formed to further evaluate and refine the list of potential projects and develop a funding and execution plan. The Steering Committee is preparing an amendment to the 2010 Update with supplemental information and recommendations which will be submitted to the court by October, 2013.

2.C Peace Agreements

To facilitate implementation of the OBMP, an agreement referred to as the "Peace Agreement" was signed by CBWM, IEUA, Orange County Water District, and various other stakeholders on June 29, 2000. The original Peace Agreement was updated to redefine future programs and actions required to implement the OBMP, based on nine years of experience and accomplishments. The "Peace II Agreement" was approved by the Court on December 21, 2007. The Agency served as the lead agency under CEQA for a focused Subsequent EIR for the OBMP, called the "Peace II SEIR." The Peace II SEIR was adopted in October 2010.

The Peace II Agreement provides, among other things, for "re-operation" and attainment of "hydraulic control" in the groundwater basin. Re-operation means the gradual increase in controlled overdraft of the Chino Groundwater Basin from 200,000 AF to 600,000 AF. Hydraulic control[1] ensures that the water management activities in the Chino North Management Zone will not impair the beneficial uses of the Santa Ana River downstream of Prado Dam. Both of these objectives will be achieved by expansion of the desalter program so that the groundwater pumping for the desalters will reach 40,000 acre-ft/yr and pumping for hydraulic control will occur in amounts and at various locations for the strategic reduction in groundwater storage (re-operation).

The final expansion of the desalter program will be accomplished with the installation and operation of the Chino Creek well field. This expansion will produce an additional 10,000 acre-ft/yr from the Desalter II facility. The new product water developed at Desalter II will be conveyed to the Jurupa Community Services District, the City of Ontario, and/or Western Municipal Water District.

[1] Hydraulic control is defined as the reduction of groundwater discharge from the Chino North Management Zone to the Santa Ana River to *de minimis,* or virtually safe quantities.

3. Metropolitan Water District Integrated Resources Plan

The Integrated Resources Plan (IRP) is a long-term water resources strategy for MWD's six-county service area. The IRP is the blueprint that guides MWD's efforts to increase water supplies and lower demands through 2035. MWD's first IRP was developed in 1996 and updated in 2004.

MWD completed another IRP Update in 2010 which set a new course for water supply planning. The 2010 IRP Update built upon MWD's core resources and programs, added a supply buffer, and took an adaptive management approach to address the challenge of uncertainty. Inherent in the adaptive management approach is the ability to effectively respond to unforeseen water supply disruptions through cost-effective strategies that ensure water supplies and facilities are in place when needed.

The 2010 IRP Update:

- Maintained a core resource strategy that will meet demands through 2035 under foreseeable hydrologic conditions;
- Committed to additional resource actions as part of a supply buffer to ensure reliability under uncertain circumstances beyond foreseeable hydrologic conditions;
- Increased the regional goals for water-use efficiency, including recycling, in order to account for future uncertainty; and
- Established foundational, preparatory actions necessary to further develop options for alternative resources that may be needed in the future.

4. Metropolitan Water District Dry Year Yield Program

In accordance with the goals of the OBMP, in 2003, the Agency entered into an agreement with MWD, CBWM, and Three Valleys Municipal Water District to provide up to 100,000 acre-feet of groundwater storage in the MWD Storage Account in the Chino Basin as part of the Dry-Year Yield Program (DYY). The program provided for the extraction of up to 33,000 AFY. The Operating Parties under this Agreement were: City of Chino, City of Chino Hills, Cucamonga Valley Water District, City of Ontario, City of Upland, Monte Vista Water District, and Jurupa Community Services District. As part of the Program, MWD helped fund ion exchange plants that treat well water for removal of nitrate and salinity.

In June 2007, MWD agreed to fund $1.5 million for technical and environmental studies to expand the DYY Program beyond 100,000 acre-feet. The technical studies looked at the DYY program objectives and Chino Basin capabilities. The Chino Basin DYY Project Development Report, published by CBWM in December 2008, identified the facilities needed to expand the program, provided conceptual designs, and costs estimates for potential facilities development. The IEUA Board of Directors adopted a CEQA Mitigated Negative Declaration for the DYY Expansion Project on December 17, 2008. Due to cost and funding considerations, the facilities

that would be needed to expand the program have not been built and the program remains at 100,000 acre-ft of storage capacity.

Since 2003, the DYY storage account has been filled and emptied in conjunction with MWD's surplus and shortage conditions. Although the storage account is currently empty, once the performance requirements of the existing agreement have been clarified, it is anticipated that the storage account will be filled and emptied at least twice more prior to the end of the agreement in 2023. This 200,000 AF will be a critical component to the region's water supply portfolio and reliability.

5. Metropolitan Water District Water Supply Allocation Plan

In 2008, MWD worked jointly with its member agency to develop a Water Supply Allocation Plan (WSAP). The WSAP includes the specific formulas for calculating member agency supply allocations and the key implementation elements needed for administering an allocation should a shortage be declared. Ultimately, the WSAP has become the foundation for the urban water shortage contingency analysis required under Water Code Section 10632 and has been incorporated into MWD's Regional Urban Water Management Plan.

On April 14, 2009, the MWD Board implemented the WSAP, effective July 1, 2009. This decision came at a time when California was facing its third consecutive year of drought, the State Water Project 2009 Table A allocation was 20 percent and Governor Schwarzenegger had proclaimed a statewide water shortage emergency (February 26, 2009). The WSAP was in effect for two years before a relatively wet 2010 rainy season brought the region out of shortage and out of the WSAP. Since then, MWD has been able to put more water in storage than ever before (almost 3-million AF), helping to keep the region out of another shortage and WSAP in the near future.

6. Inland Empire Utilities Agency Drought Plan

Working together in response to MWD's WSAP, the Agency, its member agencies, Chino Basin Watermaster and the Chino Basin Water Conservation District, prepared the IEUA Drought Plan. The purpose of the IEUA Drought Plan is to implement the MWD WSAP according to these goals:

- Ensure equity and fairness throughout the Agency's service area;
- Avoid any payment of MWD WSAP or Dry Year Yield penalties to MWD;
- Recognize the Agency and/or MWD's investments in local supplies to "drought proof" the Agency's service area;
- Encourage additional local investments to further drought proof the economy, such as:
    - Enhanced Conservation
    - Recycled Water – Connect parks, schools and other landscapes
    - Interconnections to promote flexibility (Azusa Pipeline)
    - Increase Chino Desalter deliveries to the maximum

- Groundwater Recharge (recycled water and capture of stormwater when available)

- Coordinate communication efforts throughout the service area; and
- Implement consistent with MWD WSAP and DYY contracts.

If and when the Agency is forced to implement its drought plan again, the service area is well-prepared for an extended period of water shortages as the result of earlier investments in recycled water, the Chino Basin Desalter, groundwater, and water use efficiency programs.

7. Comprehensive Energy Plan

In response to the uncertainty in energy pricing and supply experienced in the winter of 2000, the Agency adopted a Seven-Point Emergency Energy Action Plan in the early 2000's. Some of the goals of this plan were to:

- Maximize the efficiency and self-sufficiency of existing office and plant operations;
- Generate new local sources of energy and minimize external energy/fuel costs;
- Maximize operational flexibility of plants to "roll off" the electric grid and natural gas sources, particularly during peak usage periods; and
- Promote regional energy and water conservation programs.

Through this plan, the Agency has made major strides in becoming self-sufficient and gaining local control over long-term energy supplies, assisting both the region and California in meeting their energy needs.

The Agency's energy management strategy is evolving in response to both the volatility of the energy market and the new legislation (AB 32) governing greenhouse gas emissions. The Agency completed a Solar Power Project in 2008 which will account for up to about nine percent of its energy needs from renewable, non-polluting energy sources. The Agency's goal is to maximize the amount of power that is self-generated from renewable sources, which will help the Agency in its goal of peak power independence. To accomplish these goals, the Agency updated and expanded the Seven-Point Emergency Energy Action Plan into a Comprehensive Energy Plan (first presented to the Board on 11/12/08). The Comprehensive Energy Plan includes optimizing energy consumption at Agency facilities; increasing the production and use of digester gas; increasing self-generation capacity utilization; pursuing new technologies; and utilizing effective energy procurement strategies. The Comprehensive Energy Plan also addresses new regulations such as the South Coast Air Quality Management District Rule 1110.2 governing the ability to blend natural gas and biogas in engines.

8. Salinity Management Plan

The Agency and its contracting agencies are implementing a regional recycled water distribution system to serve recycled water for non-potable reuse and groundwater recharge. Salinity is a critical element of recycled water quality for recharge and many other uses. Reduced salinity

will enhance the marketability of recycled water and help the Agency meet the goals of the OBMP and meet the groundwater quality objectives in the Regional Water Quality Control Board Basin Plan for the Santa Ana Region. Reduced wastewater salinity will also help the Agency to comply with effluent limitations for TDS in its wastewater discharge permits. The Agency developed a Salinity Management Action Plan in 2002. Some of the strategies that were identified included:

- Maximizing the use of the Agency's non-reclaimable wastwater (NRW) system by connecting more industries;
- Reducing the use of water softeners in the area to decrease saline flows into the regional water recycling plants; and
- Reducing the salt contributions from the Agency's treatment plant operations by optimizing the use of chemicals at the facilities.

As an outgrowth of the Salinity Management Plan, the Agency also developed an NRW Action Plan with extensive coordination and discussion with the Agency's Regional Technical and Policy Committees, the CBWM, and the Regional Board. The Agency has achieved substantial avoided costs and valuable benefits for the region as a result of implementation of the NRW Action Plan.

9. Regional Board Nitrogen/Salt Management Plan and Maximum Benefit Basin Plan Amendment

The Regional Water Quality Control Board, Santa Ana Region, (Regional Board) adopted amendments to the Water Quality Control Plan for the Santa Ana River Basin (Basin Plan) on January 22, 2004 incorporating a "maximum benefit" proposal recommended by the Agency and CBWM. The Maximum Benefit Basin Plan establishes new groundwater Total Dissolved Solids (TDS) and Total Inorganic Nitrogen (TIN) water quality objectives and waste load allocations that allow the use of recycled water for groundwater recharge while providing reasonable protection of the groundwater quality in the region. The Basin Plan amendment followed several years of technical work by the SAWPA TIN/TDS Task Force which showed that the new objectives were technically sound.

Reuse of recycled water for groundwater recharge is a critical component of the OBMP and water supply plans for the region. As part of the Maximum Benefit Basin Plan, the Agency and CBWM have committed to a specific set of projects and requirements in order to demonstrate that the water quality of the groundwater basin is protected and that the plan provides the maximum benefit to the users of the groundwater basin. These commitments include:

- Surface water and groundwater monitoring programs;
- Chino Desalters (consistent with OBMP requirements of 40 MGD by 2020);
- Recharge facilities/conjunctive use program;

- Recycled water quality management (through industrial waste source control and optimum utilization of the Agency's non-reclaimable waste (NRW) system); and
- Hydraulic control to protect the Santa Ana River quality (consistent with the Orange County Water District and IEUA Memorandum of Understanding).

If the Agency and CBWM achieve timely and appropriate implementation of these commitments, then the Basin Plan's "maximum benefit" water quality objectives will be applied instead of more restrictive historical "anti-degradation" objectives. This will result in significant savings to the Agency for outside water imports and wastewater treatment costs.

10. Urban Water Management Plan

In June 2011, the Agency's Board adopted the completed 2010 Urban Water Management Plan (2010 UWMP). The 2010 UWMP outlines the plan for the region's water management needs and complies with the California Urban Water Management Planning Act. The 2010 UWMP updated the current Urban Water Management Plan, adopted by the Board in December 2005. It covers the following topics:

- Population and Land Use
- Water Supplies
- Water Use Efficiency Program
- Wastewater Flows
- Recycled Water Program
- Regional Groundwater Management Programs
- Alternative Water Supplies
- Water Shortage Contingency Plan
- Water Quality Impacts on Reliability
- Water Service Reliability
- UWMP Adoption and Implementation

Important additions to the Agency's 2010 UWMP, compared to the 2005 UWMP, are Wastewater Flows and Projections, Climate Change, Stormwater Management and development of a Regional Water Use Efficiency Plan that meets the new 20 percent reduction in per capita water use by 2020 mandate and other conservation related requirements that have been adopted by the legislature since 2005.

Staff also prepared the 2010 UWMP's for consideration and adoption by the Water Facilities Authority and the Chino Basin Desalter Authority, using the Agency's UWMP as a basis. This approach ensured continuity among the Urban Water Management Plans within our service area and provided an important cost-saving service to both of these agencies.

The 2010 UWMP was prepared in coordination with the regional planning efforts of the Chino Basin's Optimum Basin Management Plan (OBMP), the Chino Basin Groundwater Recharge Master Plan Update, the SAWPA One Water One Watershed (OWOW) Plan and MWD's IRP.

The 2010 UWMP was prepared in close coordination with the retail agencies within the Agency's service area as well as with the MWD, SAWPA, Chino Basin Watermaster, Water Facilities Authority, the Chino Basin Desalter Authority and other cities and agencies within the watershed.

11. Long Term Water Use Efficiency Business Plan

In FY 2010, the Agency developed a Long Term Water Use Efficiency Business Plan that created a pathway to a more collaborative and coordinated approach for implementing regional water use efficiency programs. Long Term Water Use Efficiency Business Plan provided an assessment of current activities and an in-depth technical analysis of new, cost-effective water use efficiency (WUE) programs that target limited program resources on activities with the highest water savings potentials. A second function of the plan was to design a blueprint that would ensure that the Agency's retail members were able to meet compliance with the 2010 Urban Water Management Planning Act, the California Urban Water Conservation Council's Best Management Practices, Assembly Bill 1420 (mandatory implementation of Demand Management Measures Statute), the Water Conservation Act of 2009 (SBX 7-7), and State grant and loan eligibility requirements.

Prior to 2010, staff and member agencies developed the Interim Regional Water Use Efficiency Business Plan to provide a limited assessment of existing conditions and to build a work plan for implementing short-term initiatives while the long term plan was under development. Completed in June 2010, the Long Term Water Use Efficiency Business Plan provided both expertise and an in-depth technical evaluation of programs to be considered for implementation. In addition, the plan included detailed sector analyses based on end-use data, assessed regional saturation of locally implemented WUE programs, identified active and passive water savings within the region, provided a cost-benefit analyses for existing and new proposed WUE programs, and identified potential water savings opportunities.

Based on the Long Term Water Use Efficiency Business Plan, the water use reduction goal for the Agency's service area is 5,157 AF by the year 2015 and 15,020 AF by 2020. The Agency expects to exceed the 20 percent reduction by 2020 goal for both the 2015 and 2020 targets through regional and local actions utilizing:

- **WUE Active Programs** – offering customers a program portfolio with cost-effective water efficiency measures;
- **WUE Passive Policy Initiatives –** including building codes and landscape ordinances; and
- **Recycled Water Supply** – augmenting potable water demand by increasing the use of recycled water.

12. Santa Ana Watershed Project Authority Integrated Watershed Program

Since its formation in 1967, SAWPA has been a water resource planning agency for the Santa Ana River Watershed region. In 2002, SAWPA acted as a coordinator for the stakeholders of the region to produce the Santa Ana Integrated Watershed Program (SAIWP). It consisted of seven major elements:

- Water storage to drought-proof the watershed by storing up to 1.3 million AF of new water underground throughout the Santa Ana River Basin
- Water quality improvement to mitigate negative impacts from past agricultural, industrial and residential point and non-point source pollutants
- Implementation of water recycling as a means of reducing the area's overall need for imported water
- Development of flood protection along the main stem of the Santa Ana River
- Enhancement of wetlands environment and habitat to restore the Pacific Flyway
- Recreation and conservation to bring additional recreational opportunities and increase public awareness of the Santa Ana River's environmental needs and purposes
- Use of the Santa Ana Regional Interceptor (SARI) brine disposal pipeline to carry saline wastes to the ocean in order to protect the long-term beneficial uses of the groundwater basins

SAWPA has pursued those elements simultaneously based on the availability of state grant funding and the aggregated needs of SAWPA member agencies, including the Agency, water districts, cities, counties, and several environmental groups. The success of this planning effort provided $235 million of Proposition 13 grant funding for the watershed. In 2005, SAWPA updated the SAIWP to include the urban water management plans of the member agencies and provide an updated summary of the many planning processes underway and priority projects of the stakeholders of the watershed. As a result of this effort, SAWPA received a $25 million integrated planning grant (Proposition 50) from the Department of Water Resources and provided a $4.9 million grant to the Agency for recycled water projects during FY 2008/09.

In early 2009, SAWPA completed a new integrated water management plan for the region known as "One Water One Watershed," or OWOW. Part of the impetus for starting the OWOW planning process was the passage of Proposition 84 by the California voters in 2006. Proposition 84 allocated $1 billion to regions with qualifying integrated watershed plans. The OWOW plan provides the basis for seeking Proposition 84 grant funds from DWR and will help to address the significant water supply crisis which has arisen throughout the state. The goal of OWOW is a sustainable watershed that is drought-proofed, salt-balanced, and supports economic and environmental vitality.

The SAWPA region conducted Round 2 of the competitive Prop 84 funding process in FY 2012/13. A total of 52 projects were submitted by various agencies within the watershed to SAWPA for consideration. The Agency has been pre-approved to receive funding for three projects: $1,000,000 for the Wineville Regional Recycled Water Pipeline and Groundwater Recharge System Upgrades; $750,000 for the San Sevaine Groundwater Recharge Basin; and

$500,000 for the Regional Residential Landscape Retrofit Program. It is anticipated that funding will be confirmed by September 2013. Prop 84 funds will complement funding from other sources, including other grants and SRF loans.

13. Santa Ana Watershed Project Authority Planning Work Groups

SAWPA is a joint powers agency which conducts water-related investigations and planning studies, and builds physical facilities where needed for water supply, wastewater treatment or water quality remediation. Since the early 1970's, SAWPA has played a key role in the development and update of the Basin Plan for the Santa Ana Region. Several task forces have been formed to address complex technical and regulatory issues and resolve inter-Agency conflicts. These task forces generally include staff of the Regional Water Quality Control Board-Santa Ana Region as active members or advisors, and may seek buy-in from other state and federal regulatory bodies.

The Maximum Benefit Basin Plan Amendment described above was an outgrowth of SAWPA's Nitrogen/Total Dissolved Solids (N/TDS) Task Force. The task force, which met between 1996 and 2003, included the Agency and 21 other water supply and wastewater agencies from the region as well as the Regional Board. Coordinated by SAWPA, the task force completed multimillion dollar studies to review groundwater TDS and nitrogen objectives, groundwater sub-basin boundaries, the TIN and TDS waste load allocations and other components of the Regional Board's nitrogen and TDS management plans. The purpose of this study was to develop more scientifically defensible water quality objectives and avoid any unnecessary constraints on water recycling opportunities. The original scope of work of the N/TDS Task Force included conducting a nitrogen loss coefficient monitoring program for Santa Ana River, Reach 3, which was completed in 2005.

The Agency is currently participating in SAWPA's Basin Monitoring Program Task Force (BMPTF). This task force was an outgrowth of the N/TDS Task Force study and the 2004 Basin Plan amendments. The group is tasked with executing some of the monitoring and reporting commitments of the Maximum Benefit Basin Plan Amendment, such as a triennial compilation of ambient groundwater quality data and an annual report of Santa Ana River water quality.

The BMPTF also funds updates to the Santa Ana River Wasteload Allocation model that was developed by Wildermuth Environmental, Inc., and uses the model to evaluate different discharge scenarios and the impacts on Orange County groundwater. In late 2009, the Basin Monitoring Task Force proposed an amendment to the task force's founding agreement. The amendment to the agreement includes the new task of conducting Santa Ana River wasteload allocations and other related studies to be used for new Basin Plan Amendments. Recent activities include wasteload allocation modeling for the Chino South groundwater sub-basin to update the N/TDS Management Plans; and drafting the Declaration of Conformance with the Recycled Water Policy.

Another SAWPA work group in which the Agency is an active participant is the Emerging Contaminants (EC) Work Group. The EC Workgroup was formed in 2007 to develop a characterization program for emerging constituents. The workgroup is comprised of imported water agencies and publicly-owned treatment works. The EC Work Group study effort was separated in two phases:

- Phase 1 covered current water quality monitoring programs, regulatory issues, stakeholder concerns, analytical methods, and the state-of-the-science with respect to potential public health & environmental impacts. This phase culminated in a written report submitted to the Regional Board in December 2008 characterizing the workgroup's preliminary findings.

- Phase 2 defines the Emerging Constituents Investigative Plan based on ongoing characterization studies and other related evaluations. The work plan was approved by the RWQCB during the December 2009 Regional Board meeting as Resolution No. R8-2009-0071.

In accordance with the adopted work plan, each participating wastewater agency samples and pays for their own analyses. Two rounds of sampling have been completed for a list of emerging constituents identified during the characterization phase of the study. The results were summarized in a report to the Regional Water Quality Control Board and released to the public.

14. California Water Plan

In March 2009, California's Department of Water Resources published the latest update to the California Water Plan (Update 2009). The five-volume report is a comprehensive reference document on California water conditions, challenges and water resource management. It is a blueprint for sustainable water management in a condition of uncertainty and vulnerability due to climate change and changing ecosystem needs. Update 2009 came on the heels of a historic water legislation package passed by the California State Legislature and signed by the Governor in November 2009.

Updates of the 1957 California Water Plan are required by law every five years. These reports have evolved from statistical summaries of water supply and demand to expert analyses of complex issues of hydrology, water use, conservation, and emerging trends in water resource management, flood safety and climate change adaptation. The Plan also provided broadly supported strategic recommendations to guide future investments and inform resource management policy-making.

15. Delta Plan

The Sacramento-San Joaquin River Delta in California is the hub of the state's major water supply systems. The Delta is crossed east to west and north to south by channels, aqueducts, and pipelines to convey water to the majority of Californians to the south to sustain one of the world's

largest economies. The Delta itself is home to half a million people and is also the largest estuary on the West Coast and supports a vast array of birds, fish, and wildlife.

In 2009, the California Legislature declared that the Delta Watershed and California's water infrastructure are in crisis. The Delta Stewardship Council was created to develop the Delta Plan which addresses the need to reconcile the competing goals of ecosystem restoration and water supply reliability in the Delta. After a two year process which involved nearly one hundred public meetings and thousands of public comments the plan resulting Delta Plan provides a mix of legally enforceable policies and essential recommendations to prioritize actions and strategies for improved water management, ecosystem restoration, and levee maintenance. It also restricts actions that may cause harm, and provides regulatory guidance for significant plans, projects, and programs in the Delta.

Key initiatives and recommendations in the Delta Plan are:

- **Improve California's water supply reliability** by calling for more regional water supply development and setting a deadline for successful completion of the BDCP, which is intended to improve water conveyance through the Delta and improve habitat for threatened and endangered species.

- **Protect and enhances the Delta ecosystem** by identifying and protecting high-priority restoration areas and setting a deadline for the State Water Resources Control Board to take actions that support the coequal goals by updating water quality objectives, including flow objectives, for the major rivers and tributaries of the Delta.

- **Protect and enhances the Delta as a place** by recognizing that all actions must be achieved in a manner that protects and enhances the values and unique but "evolving" characteristics of the Delta. The Delta Plan defines a role for local input in decision making about major projects and minimizes interference with local land use planning. It also supports designation as a National Heritage Area and encourages economic development through agriculture and recreation.

- **Improve water quality** by prioritizing State and regional actions to deal with high-priority Delta-specific water quality problems.

- **Reduce risk** by requiring new development in and around the Delta to have adequate flood protection, protects and preserves floodplains, and promotes setback levees to increase habitat and reduce flood damage.

- **Set an example by using the "best available science"** and adaptive management and requires that others do the same so that projects can move forward in a way that is efficient and allows decision making in the face of uncertain conditions.

16. Bay-Delta Conservation Plan

The Bay-Delta Conservation Plan (BDCP) is being prepared through a collaboration of state, federal, and local water agencies, state and federal fish agencies, environmental organizations, and other interested parties. These organizations have formed the BDCP Steering Committee. The plan will identify a set of water flow and habitat restoration actions to contribute to the recovery of endangered and sensitive species and their habitats in California's Sacramento-San Joaquin Delta. The goal of the BDCP is to provide for both species/habitat protection and improved reliability of water supplies.

As the BDCP evaluates habitat, physical and operational alternatives necessary to restore the Delta ecosystem while providing water supply reliability, state and federal agencies are developing a joint Environmental Impact Report/Statement (EIR/EIS) under the Delta Habitat Conservation and Conveyance Program (DHCCP). The EIR/EIS will determine the potential environmental impacts of the proposed BDCP.

Lead agencies for the EIR/EIS are the California Department of Water Resources, the Bureau of Reclamation, the U.S. Fish and Wildlife Service, and NOAA's National Marine Fisheries Service, in cooperation with the California Department of Fish and Game, the U.S. Environmental Protection Agency and the U.S. Army Corps of Engineers. A draft EIR is currently available for public review and comments.

The BDCP is being developed in compliance with the Federal Endangered Species Act (ESA) and the California Natural Communities Conservation Planning Act (NCCPA). When completed, the BDCP would provide the basis for the issuance of endangered species permits for the operation of the state and federal water projects. The plan would be implemented over the next 50 years. Draft chapters 1 through 7 of the BDCP are currently available for public review and comments.

Appendix C

IEUA Comprehensive Energy Plan

IEUA COMPREHENSIVE ENERGY PLAN

BACKGROUND

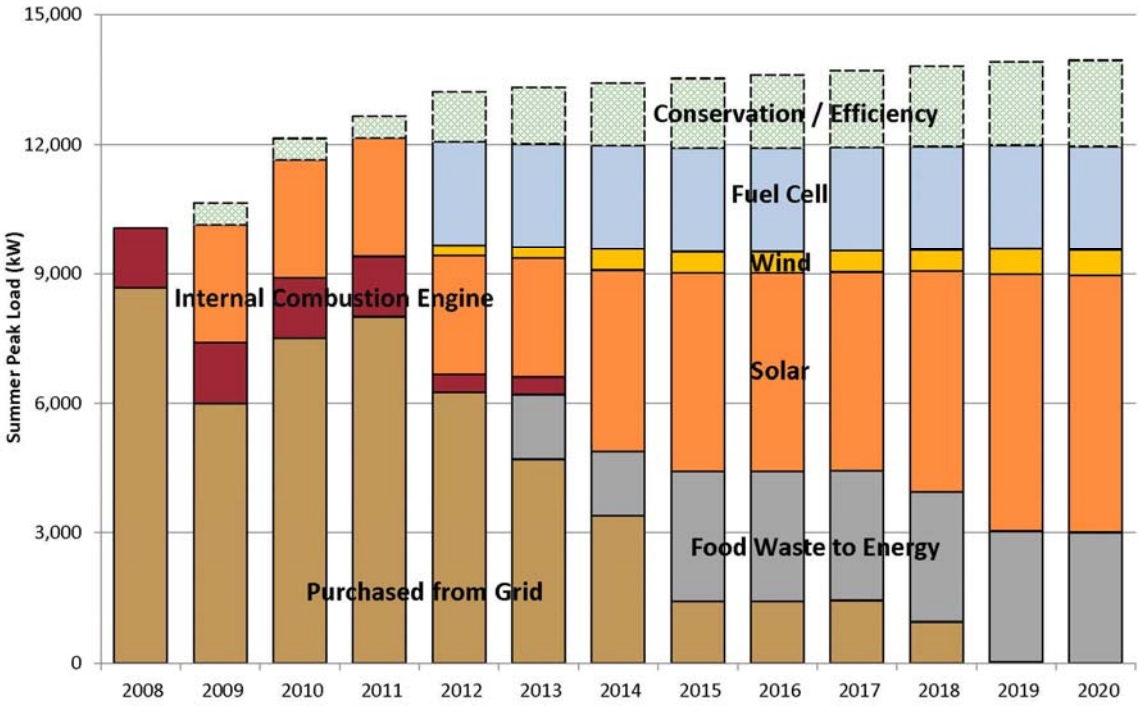
Water and energy resources are inextricably connected. The transportation and treatment of water, the treatment and recycling of wastewater, and the energy used to heat and consume water account for nearly 20 percent of the total electricity consumed in California. Consideration of this water-energy nexus is important when developing short and long-term goals to achieve energy reliability in a sustainable manner that demonstrates good environmental stewardship.

The Agency's interest in energy generation started in 1978 with the installation of a 400 kW Caterpillar engine which was designed to utilize digester gas as fuel in providing power to the plant and heat to the digesters. In concurrence with plants' expansions and increased biogas production, more cogeneration systems were installed at RP-1, RP-2 and RP-5.

In addition, the Agency installed two natural gas peaking units at RP-4 and CCWRF in response to the 2001 energy crisis. These units were designed to produce power only during the peak hours of the peak season to hedge against electric utility rates. However, in February 2008, the South Coast Air Quality Management District (SCAQMD) amended Rule 1110.2, which lowered emissions limitations on internal combustion engines, requiring expensive control equipment as well as digester gas pretreatment. As a result, the Agency was forced to shut down one engine at RP-1 and the two peaking units. With the certainty that the existing engines would not be able to operate in the same capacity in the future, Agency staff developed an energy management plan aimed at reducing demand on an already taxed California power grid system while enhancing the Agency's energy reliability and rate stability in an environmentally prudent manner.

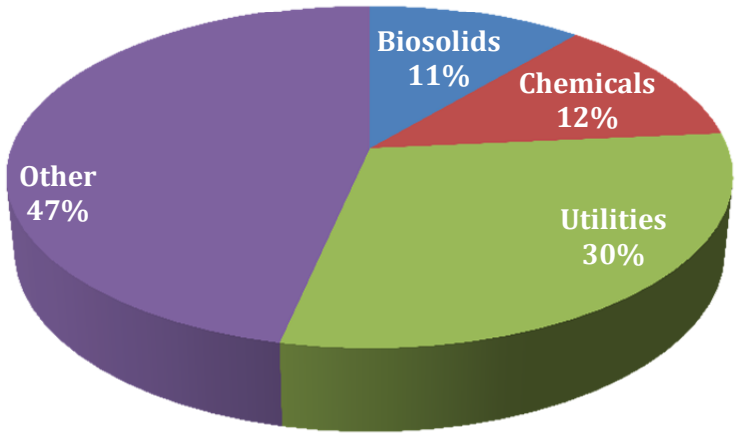
The Agency's energy management plan has a specific focus on energy independence from the grid during the peak energy use/pricing period (noon to 6:00 PM) by the year 2020 or earlier (Figure 1). This strategy is achieved by increasing energy efficiency and on-site energy generation, optimizing an energy demand response program, and developing a diversified energy portfolio,. In February 2012, the Agency's Board of Directors officially endorsed support of this plan through the adoption of Resolution No. 2012-2-1.

FIGURE 1: PEAK POWER INDEPENDENCE BY 2020



The Agency currently uses approximately 77,000 Megawatt hours (MWh) of electrical energy annually at its regional water recycling plants (RWRPs) and other facilities at an annual cost of about $9,600,000. Currently, energy costs for these facilities account for approximately 30% of the non-labor operation and maintenance (O&M) costs (Figure 2). As population is expected to increase by more than 50% within the Agency's service area through 2030, demand for electricity will increase. Since the cost of electricity has historically climbed between 4% and 6% per year annually, sound energy management planning and practices are critical to the Agency's O & M cost containment strategy, as well as meeting regulatory compliance goals and carbon footprint reduction targets while maintaining service reliability. The Agency is working to improve these management practices through further expansion of on-site renewable energy and a renewed focus on energy efficiency.

FIGURE 2: IEUA NON-LABOR O&M COSTS



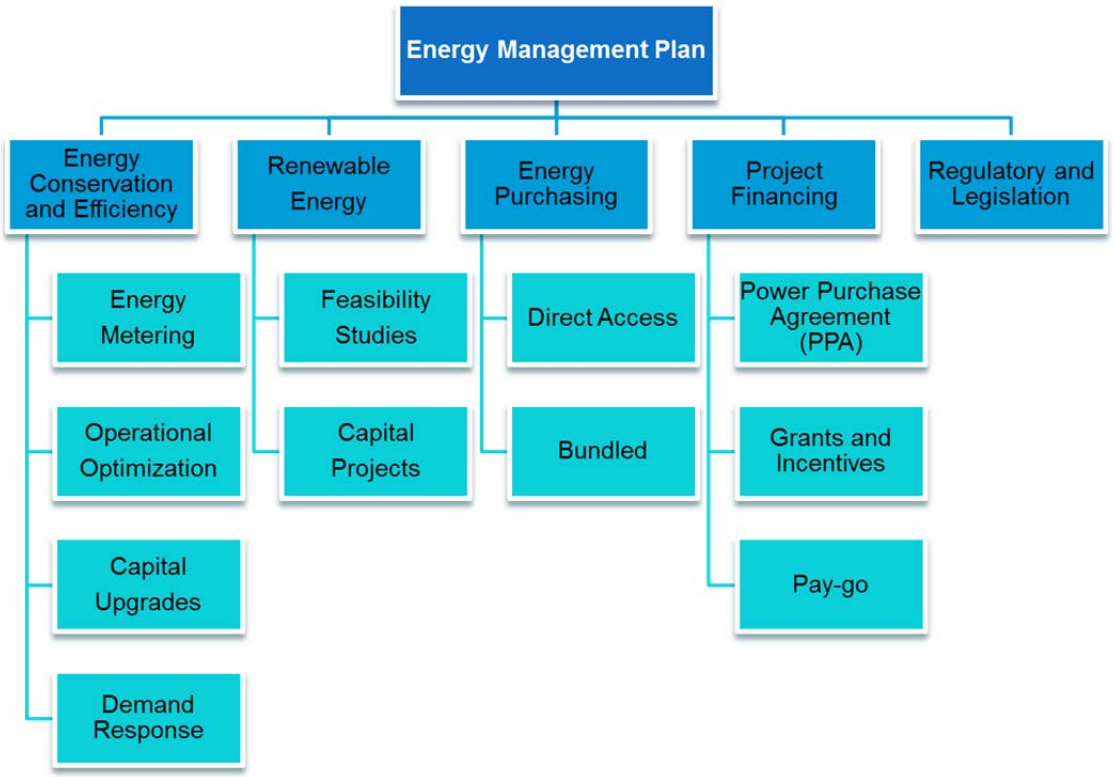
ENERGY MANAGEMENT PLAN

The energy management plan provides planning and implementation guidelines for the reduction in energy demands from the grid within the Agency.

The cornerstones of the plan (Figure 3) are:

- Energy Conservation and Efficiency
- Renewable Energy
- Energy Purchasing
- Project Financing
- Regulatory and Legislation

FIGURE 3: ENERGY MANAGEMENT PLAN



ENERGY CONSERVATION AND EFFICIENCY PLANNING

Optimizing energy efficiency not only results in reduced O&M costs, but can also increase treatment efficiency and capacity. To meet these goals, staff will continue to evaluate all the major process systems and follow through with the development and implementation of the effective energy conservation and efficiency projects. Improvement in this area is a key to reducing the Agency's peak demand (estimated 13% reduction in 10 years).

Some of the key components of the Energy Conservation and Efficiency planning include:

- Energy Usage Evaluation
- Operational Optimization
- Capital Upgrades
- Demand Response

Energy Usage Evaluation

At many facilities, the energy use is recorded at a single metering location. Although this is effective for billing purposes, it does not allow personnel to see the energy used by individual processes. Sub-metering, which tracks energy use by monitoring large equipment or individual processes' energy consumption, can be a valuable tool in tracking and optimizing energy usage. The Agency has recently initiated and partially implemented an energy sub-metering program.

Sub-metering involves the use of digital meters connected to the SCADA system as a resource to help monitor kW, kWh, amperes, load factor and other units of energy consumption. A combination of sub-meters and load profiling data can help staff understand operating patterns, increase operating efficiency, assist in identifying malfunctioning equipment and reduce energy demand charges. In addition, this electronic data can be brought into the RWRP control systems, which will enhance operational control of the facilities, reduce maintenance costs, and prolong equipment operating life.

The Agency has already implemented sub-metering at each of its recycled water pump stations, and has installed sub-metering for all high-power/high-use equipment at Agency facilities with the intent to complete the project during fiscal year 2013/14. Sub-metering will give the Agency visibility in energy usage and allow staff to effectively and efficiently select and participate in certain Demand Response programs.

Operational Optimization

A comprehensive energy audit allows a facility to identify energy demand from various facility operations. By determining the energy demands of the various processes and equipment at a RWRP, personnel can focus energy conservation measures on the most

energy-intensive processes. The objectives at most facilities are to lower energy consumption, demand, and costs. In some cases, life-cycle cost analyses and value engineering can be used to help assess and optimize the selection of individual components and systems.

To the extent allowed by currently available data, performance management tools (i.e., Key Performance Indicators (KPI) and Unit Production Costs (UPC)) are being used to monitor energy use and energy generation at the facilities. These tools are important components of an effective energy management program. As more data on energy use become available through sub-metering, the KPI and UPC tools will be expanded to take full advantage of the information collected from facility energy audits.

Along with sub-metering information data, an energy audit can determine the most energy-intensive operations. Energy usage can be compared across similar facilities to identify areas that should be examined further. Once the efficiencies of different pieces of equipment and process operations are determined, the facility can begin to develop energy conservation measures by answering the following questions for each piece of equipment and process:

- Does the process/equipment need to run at all?
- Is it possible to run the process/equipment for fewer hours?
- Is it possible to shift this activity to off-peak hours (for some auxiliary functions)?
- Will process optimization and modifications or equipment upgrades reduce energy usage?
- What equipment is most energy efficient for this process?

The answers to these questions will help determine which processes can be modified, or if equipment can either be operated more efficiently or replaced to save energy.

Capital Upgrades

Agency staff has already targeted a variety of processes that can be upgraded to improve energy efficiency. Nearly 40% of the energy demand at the treatment facilities is from aeration blowers and recycled water pumping. Increased energy efficiencies have been realized through the installation of high-efficiency pumps and motors, as well as extensive use of variable frequency drives (VFDs).

Energy usage by pump and blower motors typically accounts for more than 80% of a RWRP's energy costs. Since high-efficiency motors are up to 8% more efficient than standard motors, upgrading to high-efficiency motors can significantly reduce the facilities' energy costs. Design improvements and more accurate manufacturing tolerances are keys to the improved efficiencies with these motors. In addition, these motors typically have

greater bearing lives, lower heat output, and less vibration than standard motors. Although high-efficiency motors have a 10-15% higher initial cost, these motors are included as a standard requirement in all new purchases and replacements due to their lower energy consumption and lower failure rates.

Another major source of RWRP energy use, and therefore a focus area for demand reduction, is the aeration systems used to treat the wastewater. Fine bubble diffusion, which is inherently more effective than coarse bubble diffusion in improving oxygen transfer efficiency, has already been widely employed at Agency facilities. Performance optimization is key to maintaining the high efficiency of this energy-intensive process. This can be done, for example, by monitoring performance with sub-metering, which may result in more frequent maintenance to ensure that the system is functioning at optimal capacity.

During this planning period, the Agency will also evaluate dissolved oxygen control system enhancements through online ammonia and nitrate analyzers to optimize aeration blowers output. Staff will also evaluate the potential benefit of employing large bubble mixing rather than propeller mixing in the anoxic zones.

The Agency is currently planning improvements to the Central Plant responsible for heating and cooling the Headquarters buildings. The new electric chiller, heat exchangers, gas-fired hot water boilers, and high efficiency pumps are expected to reduce energy consumption from HVAC demands while enhancing operational reliability.

Additional anticipated capital projects over the next few years include: optimization of recycled water pumping and storage, lighting improvement at the IERCF, and evaluation of the aeration system.

Demand Response

Southern California Edison (SCE) offers a variety of Demand Response (DR) Programs that help curtail statewide electricity usage during the peak season (June to early October). From 2008 to 2010, the Agency has participated in one of these programs, designated as a Time-of-Use Base Interruptible Program (TOU-BIP). However, because of the financial risk associated with the participation in the BIP program, the Agency has terminated the TOU-BIP contract, and since July 2011, has participated in a Demand Response (DR) program through EnerNOC (a SCE authorized third-party DR provider).

Some of the benefits of the DR program compared to the BIP are:

- No penalties for under-performance or non-performance other than reduced future payments to reflect the actual delivered capacity;
- Curtailment capacity may be adjusted on a monthly basis;
- Real time electricity usage monitoring through a web based software; and

- Eligibility of SCE Technical Assistance and Technology Incentives (TA&TI) Program

The Agency has agreed to provide EnerNOC a total cumulative curtailment of 1,230 kW for all facilities enrolled in the program (RP-1, RP-2, RP-4/IERCF, RP-5 and CCWRF) at a value of approximately $74,000 per year.

Reduced energy import from the grid during demand response events is primarily achieved by shutting down some of the recycled water pump stations and through reduced ventilation at the IERCF. These temporary energy conservation techniques do not have any negative impact to the recycled water customers (operations staff was able to increase the reservoir level prior to the event) or to the indoor air quality at IERCF.

RENEWABLE ENERGY

Production of renewable energy has been a longstanding goal of the Agency. The traditional use of biogas-fueled internal combustion engines (ICE) has provided up to 25% of the peak energy demands of the Agency. Recent regulatory updates by the SCAQMD have resulted in significant restrictions for the future use of ICEs in southern California. In an effort to diversify and maximize renewable energy generation, the Agency pursued the installation of 3.5 MW of solar power in 2008, a 1 MW wind turbine in 2011 and a 2.8 MW biogas fuel cell in 2012. The combination of these renewable installations have provided more than 50% of peak energy demand Agency wide, while achieving net-zero energy consumption at RP-1 and RP-4 during winter months and net energy production at RP-2. Details of key renewable energy capital project activity are outlined below.

Solar Project

The Agency installed 3.5 MW of solar power at five Agency facilities: CCWRF, RP-5, IERCF and two arrays at RP-1. The project was financed through a power purchase agreement (PPA). The PPA provider designed and installed the entire project in 2008. The PPA provider operates and maintains the solar system, while the Agency purchases all the power generated by the solar PV arrays for a period of 20 years. The agreed power purchase price is fixed with a predefined escalation rate, which eliminates the effects of price swings by the local power utility. Since the solar arrays are designed to maximize energy generation during peak periods, the Agency anticipates reduced demand and costs, especially during the summer months.

Wind Power Project

A 1 MW wind turbine generator was commissioned at RP-4 in December 2011. The tower is 180 feet high, with a rotor diameter of 201 feet. Similar to the aforementioned projects, the facility was financed and developed through a PPA. The PPA provider worked to assess the wind resource, select equipment, manage installation, and secure construction financing and tax equity investment. The Agency will purchase the power generated from the wind turbine at the agreed upon price over the next 20 years.

Fuel Cell Project

Although the solar and wind projects are valuable diverse assets within the Agency's renewable portfolio, they are also weather-dependent technologies that do not provide baseload power for the facility. Moreover, the systems do not capitalize on the wastewater treatment plant's digester gas production, which is a fundamental component in the Agency's attainment of the 2020 goals. In 2010, the Agency signed a 20-year PPA to install, operate and maintain a 2.8 MW fuel cell system at RP-1 fueled primarily by renewable biogas. Under the agreement, the PPA provider was responsible for funding, design, construction, operation and maintenance of the system. The Agency purchases power generated from the fuel cell plant at an agreed upon price over the next 20 years, and uses the heat generated from the process to heat the anaerobic digesters. The fuel cell plant startup with natural gas occurred in June 2012; digester gas was introduced in October 2012; commercial operation date was January 2013.

More so than the wind or photovoltaic system agreements, the fuel cell public-private partnership greatly benefits the Agency by avoiding prohibitive capital investments and mitigating the inherent risks associated with biogas fuel cells. Previous digester gas fuel cell installations experiencing contaminant poisoning have suffered from long term operational interruptions due to disputes between the fuel cell and digester gas treatment system manufacturers. By placing the responsibilities of gas cleaning and stack performance on a single third party, the Agency hopes to avoid such interruptions, optimize equipment maintenance, and streamline necessary repairs. Key performance

indicators were written into the power purchase agreement to guarantee that both the facility (digester gas production, H2S and siloxane concentrations) and third party (digester gas usage, operational uptime) achieve a level of performance that is economically beneficial to both parties.

RP-5 Food Waste Project

In 2010, the Agency signed a multi-year agreement with a private company to lease the site and operate and maintain the RP-5 Solids Handling Facility (RP-5 SHF) for a ten-year term. The company will be processing food waste using the two existing vertical digesters at RP-5 SHF with the purpose of generating digester gas. The digester gas will be conveyed to RP-5 for power generation using two ICEs (1,500 kW each). The Agency will purchase the generated power and heat at a discounted rate. The company anticipates the completion of Phase I, which entails the full operation of one digester and one ICE, by 2014. Total food waste processed during Phase I will be approximately 300 tons per day. Phase II, which involves commissioning a second digester and ICE and an additional 300 tons per day of food waste processed is expected upon receiving the proper interconnection agreement from Southern California Edison.

RENEWABLE ENERGY PRICING

In addition to positively impacting the environment, the renewable energy installations command the potential to produce long-term benefits for the Agency through stable rate structures. Considering the large historical variation in grid pricing from year to year, establishing a fixed energy pricing forecast for much of the Agency's demand is a valuable planning tool for energy management.

Prospective cost savings depend on the negotiated electricity purchase price of each PPA, anticipated rate increases from the electrical grid, and expected power generation from the installations. The negotiated purchase pricing (Figure 4), on a $/kWh basis, generally compares favorably to grid purchase pricing. Current PPA purchase rates are slightly higher than the grid purchase rates, but the long-term benefits become apparent when comparing the annual escalating scales between the two costs. Based on energy industry forecasts, grid electricity costs are expected to increase between four and six percent, on average, over the next 20 years. Since each PPA's annual escalation rate is below four percent, the Agency anticipates that all PPA electricity purchase pricing will be lower than grid pricing within the next three to seven years depending on actual grid escalation.

FIGURE 4: RENEWABLE ENERGY UNIT PRICING

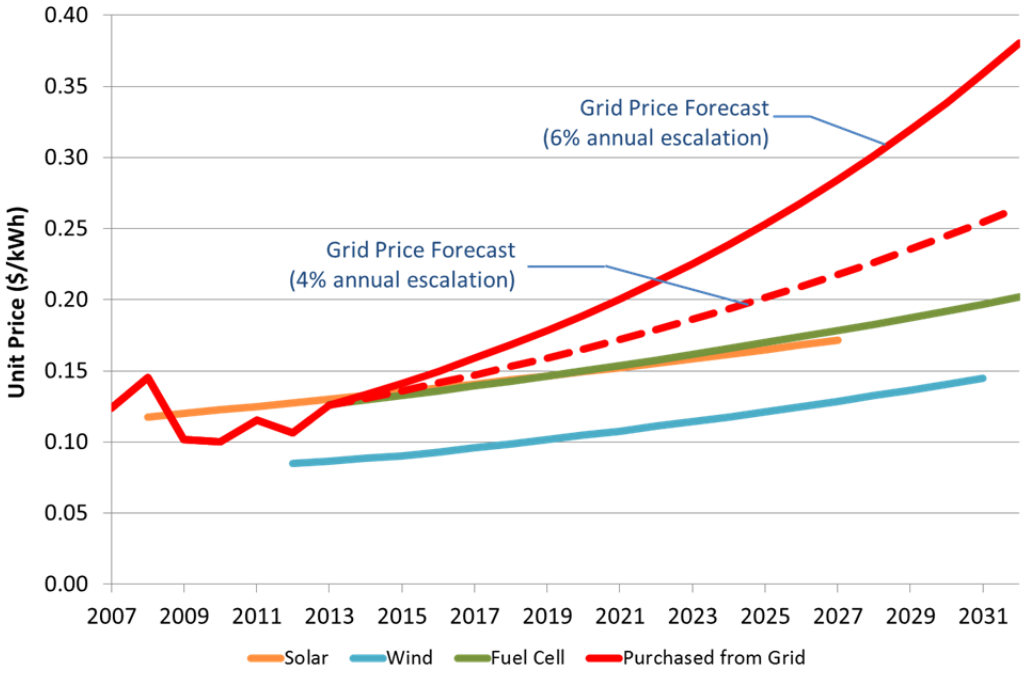
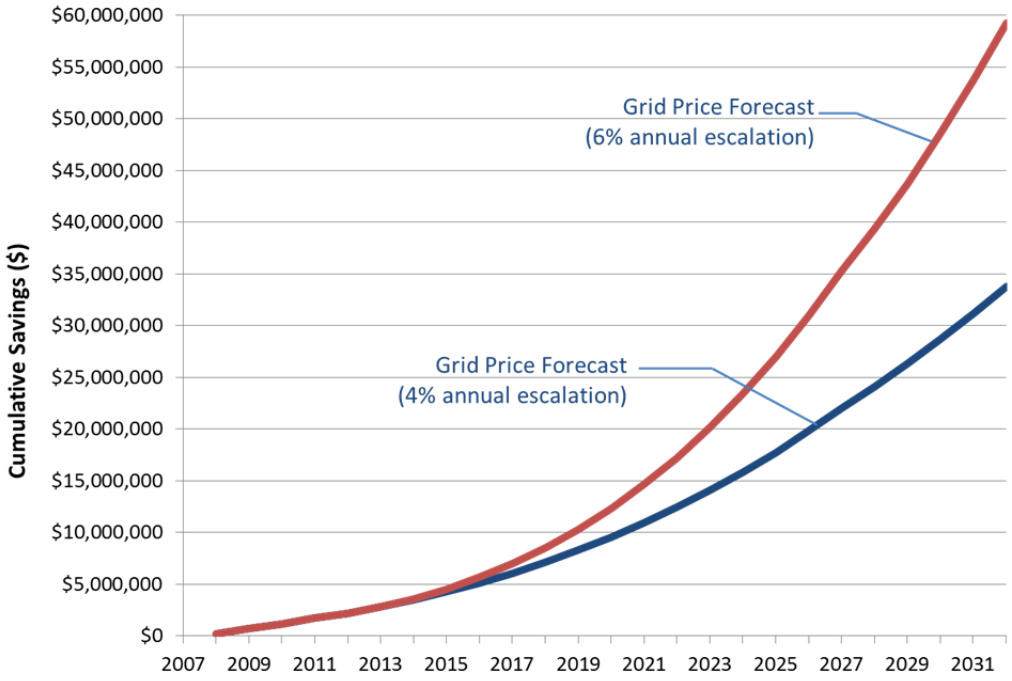


FIGURE 5: CUMULATIVE SAVINGS FROM ON-SITE RENEWABLE GENERATION



The Agency anticipates several different cost savings from implementing the energy management plan. In addition to lower long term energy purchase pricing, the renewable

PPAs are expected to provide cost savings through reduced grid demand during peak periods. The electrical utility's energy pricing structures are based on tiered pricing, with peak periods subject to the highest tariff schedules. Since the solar and fuel cell installations drastically reduce the Agency's reliance on the grid during peak times, energy costs on a $/kWh basis are lower due to a reduced average tariff.

When combined with future energy efficiency projects that are expected to further reduce energy demand on the grid, the Agency expects immediate cost savings. Cumulative savings (Figure 5) over the life of the power purchase agreements indicate significant long term benefits regardless of the utility's annual escalation rate.

Energy Purchasing: Electricity

The Agency has unbundled service, or Direct Access (DA) at four of its five largest accounts and bundled service to the remaining one. In the unbundled service, the Agency pays SCE for delivery costs, while the commodity is provided by an electricity service provider (ESP) rather than the local utility company. The current agreement provides cost stability, lower commodity prices and reduces the Agency's exposure to volatility within the energy market. In the bundled service, the Agency pays electricity and transmission costs to SCE. The Agency has realized considerable savings during the summer months utilizing direct access (DA) agreement.

PROJECT FINANCING

There are several federal and state incentive and rebate programs available for renewable energy projects in California (Table 5-2). The incentives, which are usually performance-based, are available to both public and private sectors at different rates. In order to receive the incentive, the public entity must finance, design, and construct the projects. The public sector also has the option to play host site to a renewable project and have the private entity finance, design, construct and perform the O&M. This type of arrangement is normally implemented through a Power Purchase Agreement. The energy produced by the privately funded power plant is then purchased by the host (the Agency) for an agreed upon price for a specified period, usually 20 years. The private sector is able to take advantage of tax credits and accelerated depreciation opportunities not available to the public sector, though these advantages are somewhat offset by lower performance incentive level rates than offered for public sector delivered projects.

As discussed in the prior section, the Agency has successfully used the PPA approach for its Solar, Wind, and Fuel Cell renewable projects. This approach has allowed the Agency to transfer the financing and other risks, including operations and maintenance, to the

contractor. The Agency has avoided more than $45 million in capital outlay through this process, and will continue to evaluate design-build and PPA options for upcoming projects.

There are significant incentives for implementation of energy conservation upgrades that reduce demand. This has been accomplished at the IERCF, where a substantial rebate was received from SCE to pay for approximately half of the capital cost of the upgrade. Similar opportunities are being evaluated and implemented as needed.

TABLE 5-2: ENERGY FINANCIAL INCENTIVES

Financial Incentive	Type
Federal	
Business Energy Investment Tax Credit (ITC)	Corporate Tax Credit
Renewable Electricity Production Tax Credit (PTC)	Corporate Tax Credit
Qualified Energy Conservation Bonds (QECBs)	Loan Program
U.S. Department of Energy - Loan Guarantee Program	Loan Program
State	
Property Tax Exclusion for Solar Energy Systems	Property Tax Incentive
California Solar Initiative - PV Incentives (CSI)	State Rebate Program
California Solar Initiative - Solar Thermal Program	State Rebate Program
Self-Generation Incentive Program (SGIP)	State Rebate Program
Feed-In Tariff	Performance Based Incentive
Energy Efficiency Financing for Public Sector Projects	State Loan Program
Southern California Edison	
Savings by Design	Utility Rebate Program
On-Bill Financing Program	Utility Loan Program
Non-Residential Energy Efficiency Programs	Utility Rebate Program
Southern California Gas Company	
On-Bill Financing Program	Utility Loan Program
Non-Residential Energy Efficiency Programs	Utility Rebate Program

In addition to well-funded State rebate programs like the California Solar Initiative (CSI) and Self-Generation Incentive Program (SGIP), several other agencies (Department of Energy, California Energy Commission, Air Quality Management District) provide grant opportunities for energy efficiency and renewable energy projects. However, these grants are very competitive, funding is limited, and usually only emerging technologies or demonstration projects are eligible.

REGULATORY AND LEGISLATION

Changes in environmental regulations and new legislation can significantly influence energy programs and costs. The revision of Rule 1110.2 by SCAQMD is an example of a regulatory change that significantly impacts the direction of the Agency's renewable energy

generation portfolio. Existing interconnection agreements rules and conditions represent a major roadblock to the Agency's energy management plan, limiting the opportunity of new distributed generation and efficiency projects, and reducing the Agency's participation in demand response events.

Due to the propensity for changes from new regulations and/or new legislation to have major impacts on the direction of the energy management plan and the cost of power, it is crucial that any changes in these areas are proactively tracked and impacted where appropriate in the best interest of the Agency. This important role is achieved through dedicated Agency staff in conjunction with trade organizations like Southern California Alliance of Publicly Owned Treatment Works (SCAP), California Association of Sanitation Agencies (CASA), and WateReuse.

CARBON FOOTPRINT

A key driver in the implementation of the energy management plan is carbon footprint reduction. From 2009 to 2013, the Agency's facilities generated approximately 51,600 MWh through renewable projects. In addition, 21,800 MWh of electricity was conserved through efficiency projects. Combined, these savings are equivalent to 51,800 metric tons of CO_2 greenhouse gas emission reduction, or 10,800 passenger vehicles off the road for an entire year[1].

[1] Source: USEPA Greenhouse Gas Equivalencies Calculator http://www.epa.gov/cleanenergy/energy-resources/calculator.html#results

GLOSSARY

Base Interruptible Program (BIP) – Program that pays an incentive to reduce facility's load to or below a pre-selected Firm Service Level (FSL).

Base Load – The minimum amount of electric power delivered or required over a given period of time at a steady rate.

Bundled Service - Customers who receive electric power, transmission, distribution, billing, metering and related services from SCE.

Carbon Footprint - The amount of carbon dioxide emitted through the combustion of fossil fuels. In case of a business organization is the carbon dioxide emitted either directly or indirectly as a result of its everyday operations.

California Public Utilities Commission (CPUC) - State agency that regulates the rates and services of privately owned utilities (electric, natural gas, telecommunications, water, railroad, rail transit, and passenger transportation companies).

Demand Charges – Reflect the cost of transmission and distribution facilities built to meet customers' peak power demands. Calculated on a per-kilowatt (kW) basis for a customer's maximum registered power demand.

Demand Response (DR) - Programs to help qualifying customers reduce their energy usage during peak times, while earning financial incentives.

Direct Access (DA) - Customers who purchase electricity from an Electric Service Provider (ESP), and receive distribution and transmission electric service from SCE.

Electric Power Grid (Grid) - A network of power lines and associated equipment used to transmit and distribute electricity over a geographic area.

Electric Service Provider (ESP) - A third party which provides electricity generation.

Energy (Usage) = Energy is the ability to do work (pump water, blow air, cooling, lighting)

- kWh = kilowatt hour
- MWh = Megawatt hour = 1,000 kWh

Feed in Tariffs (FIT) – Allows small renewable generators (1.5 MW or less) to sell power to the utility at predefined terms and conditions, without contract negotiations.

Firm Service Level (FSL) - The amount of electricity customer determines is necessary to meet their operational requirements during a curtailment event.

Greenhouse gases (GHGs) - Carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF6). CO2-equivalent (CO2-eq) is the universal unit of measurement to indicate the global warming potential (GWP) of each of the six greenhouse gases.

ICE = Internal Combustion Engine

Load - The amount of electric power delivered or required at any specified time at a facility.

Load Gap – The difference between the facility electric load and the electricity generated on site. Equivalent to the electricity purchased from the grid.

Net Energy Metering (NEM) - Allows a customer-generator to receive a financial credit for power generated by their onsite system and fed back to the utility (grid).

Non-Renewable Energy - An electricity-generating source that can only be used once, such as oil, coal, natural gas and nuclear energy.

Peak Load - The highest electrical demand within a particular period of time.

Power (Demand) = Rate at which energy is used, or work is performed (energy used for a given unit of time)

- kW = kilowatt
- MW = Megawatt = 1,000 kW

Renewable Energy (Green Power) - Sources of energy which can be generated from natural resources such as wind, solar, biomass, small hydropower and geothermal sources.

Renewable Energy Credit (REC) - Also known as green tags, green energy certificates, or tradable renewable certificates. RECs represent the technology and environmental attributes of electricity generated from renewable sources (1 REC = 1 megawatt-hour).

Self-Generator - A plant whose primary product is not electric power, but does generate electricity for its own use or for sale on the grid.

Single Family Home Electricity Usage[2] = 12,773 kWh/yr.

Standby - Standby demand represents the entire reserved capacity needed for SCE to serve the customer's loads regularly served by the customer's generating facility when such

[2] Source: EIA (2008). 2005 Residential Energy Consumption Survey. EPA (2011) eGRID2010 Version 1.1. U.S. Environmental Protection Agency, Washington, DC

facility experiences an outage. SCE's Rate Schedule S is mandatory for many customers who self-generate, with the exception of Net Energy Metering (NEM)-eligible generators.

Sub Metering - Meter connected after the main revenue meter typically used for information monitoring purposes.

Tariff - A published volume of rate schedules and general terms and conditions under which a product or service will be supplied.

Time of Use (TOU) - A rate in which predetermined electricity prices vary as a function of usage period, typically by time of day, by day of the week, and/or by season.

Transmission - The movement or transfer of electric energy over an interconnected group of lines and associated equipment between points of supply and points at which it is transformed for delivery to consumers or is delivered to other electric systems. Transmission is considered to end when the energy is transformed for distribution to the consumer.

Variable Frequency Drive (VFD) - A device that converts incoming power into other desired frequencies to allow for motor speed control.

Appendix D

CIP Proposed Project List

Regional Water Recycling Plant No.1 – Project Summary Table

Project Number	Project Name	Project Description	Fund	Fiscal Year Budget (Dollars)											Project Ranking	
				14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	Ten Year Total	Timing (immediate, intermediate, long-term)	Criticality (Critical, High, Medium, Low)
EN11039	TP-1 Disinfection Pump Improvements	Engineering project to upgrade dosing facilities at OES and NES to allow full post filtration chlorination.	RC	95,000	225,271	0	0	0	0	0	0	0	0	320,271	immediate	M
EN13046	RP-1 Flare System Improvements	Project to upgrade the flare control system and increase flare capacity. Direction from Exec Mgmt needed once Tech Serv evaluation is complete.	RC	0	0	1,550,000	1,850,000	0	0	0	0	0	0	3,400,000	intermediate	C
EN14001	Digester Cleaning & Rehab	Annual digester cleaning & rehab at RP-1 and RP-2 to provide digester cleaning & rehab on a 10 year cycle.	RO	420,000	420,000	420,000	420,000	420,000	420,000	420,000	420,000	420,000	420,000	4,200,000	annually recurring	M
EP14004	Cl2 Residual Analyzer Replacement	Maintenance project to replace all of the chlorine analyzers agency-wide that are no longer being supported by the manufacturer.	RC	160,000	0	0	0	0	0	0	0	0	0	160,000	immediate	H
EN14019	Headworks Rehab (aka Headworks Gate Replacement)	Engineering project to comprehensively rehab and upgrade the Preliminary Treatment Process. Start design in FY18/19.	RC	0	0	0	0	210,000	1,500,000	4,392,859	4,392,858	0	0	10,495,717	intermediate	M
EN14020	RP-1 Sludge Thickening Upgrades	Project to upgrade the sludge thickening processes for primary and secondary sludge. Start design in FY18/19.	RC	0	0	0	0	240,000	1,250,000	3,477,447	3,477,446	0	0	8,444,893	intermediate	M
EN14034	RP-1 Aeration Panels Condition Assessment	Project on hold pending evaluation of Agency aeration systems by Tech Serv. Close project and develop Agency wide aeration system improvement proj	RC	0	0	0	0	0	250,000	0	0	0	0	250,000	long-term	M
TBD	Plant 3 Primary Scum Well Upgrade	Potential project to address scum pumping capacity issues, as well as, evaluate MCC in primary pumping gallery.	RC	100,000	300,000	0	0	0	0	0	0	0	0	400,000	immediate	M
TBD	RP-1 IPS System Improvements	Project to address deficiencies in system (e.g., replace eddy clutches with VFDs)	RC	0	0	0	0	250,000	0	0	0	0	0	250,000	intermediate	M
TBD	Replacement of TWAS and Primary Effluent Piping 2014	Failures in the TWAS and primary effluent piping require pipe to be replaced.	RO	500,000	0	0	0	0	0	0	0	0	0	500,000	immediate	C
TBD	Septage Dump System	Provide septage dump system at RP-1 or RP-4	RC	0	0	100,000	800,000	0	0	0	0	0	0	900,000	intermediate	L
TBD	Second 12kV Feeder to TP-1	Potential Engineering project to provide a second 12kV feeder to TP-1. Start design after FY23/24. Cancel on continue with ex proj	RC	250,000	750,000	0	0	0	0	0	0	0	0	1,000,000	intermediate	M

RP-1 System Total		1,525,000	1,695,271	2,070,000	3,070,000	1,120,000	3,420,000	8,290,306	8,290,304	420,000	420,000	30,320,881
GG Fund Subtotal		-	-	-	-	-	-	-	-	-	-	-
RW Fund Subtotal		-	-	-	-	-	-	-	-	-	-	-
NC Fund Subtotal		-	-	-	-	-	-	-	-	-	-	-
WC Fund Subtotal		-	-	-	-	-	-	-	-	-	-	-
RO Fund Subtotal		920,000	420,000	420,000	420,000	420,000	420,000	420,000	420,000	420,000	420,000	4,700,000
RC Fund Subtotal		605,000	1,275,271	1,650,000	2,650,000	700,000	3,000,000	7,870,306	7,870,304	-	-	25,620,881

Regional Water Recycling Plant No.2 – Project Summary Table

Project Number	Project Name	Project Description	Fund	Fiscal Year Budget (Dollars)											Project Ranking	
				14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	Ten Year Total	Timing (immediate, intermediate, long-term)	Criticality (Critical, High, Medium, Low)
EN11042	RP-2 Boiler Replacement	Project to replace boilers at RP-1 and RP-2	RC	55,000	0	0	0	0	0	0	0	0	0	55,000	immediate	C
EN13049	RP-2 Digester #4 Dome Replacement	Project to modify dome from floating to fixed.	RO	400,000	0	0	0	0	0	0	0	0	0	400,000	immediate	C
EN14012	RP-2 Drying Beds Rehab	Rehab of drying to allow proper handling of vactor truck material, and more efficient air drying of biosolids	RO	1,110,000	0	0	0	0	0	0	0	0	0	1,110,000	immediate	M

RP-2 System Total		1,565,000	0	0	0	0	0	0	0	0	0	1,565,000
GG Fund Subtotal		-	-	-	-	-	-	-	-	-	-	-
RW Fund Subtotal		-	-	-	-	-	-	-	-	-	-	-
NC Fund Subtotal		-	-	-	-	-	-	-	-	-	-	-
WC Fund Subtotal		-	-	-	-	-	-	-	-	-	-	-
RO Fund Subtotal		1,510,000	-	-	-	-	-	-	-	-	-	1,510,000
RC Fund Subtotal		55,000	-	-	-	-	-	-	-	-	-	55,000

Carbon Canyon Water Recycling Facility – Project Summary Table

Project Number	Project Name	Project Description	Fund	Fiscal Year Budget (Dollars)											Project Ranking	
				14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	Ten Year Total	Timing (immediate, intermediate, long-term)	Criticality (Critical, High, Medium, Low)
EN13018	CCWRF Odor Control System Replacement	The project entails replacing the existing odor control systems and screens.	RC	1,000,000	1,880,095	0	0	0	0	0	0	0	0	2,880,095	immediate	H
EN14027	Secondary Clarifier #3 Rehabilitation	Rehab steel components and coat concrete of clarifier.	RO	910,000	0	0	0	0	0	0	0	0	0	910,000	immediate	M

CCWRF System Total		1,910,000	1,880,095	0	0	0	0	0	0	0	0	3,790,095
GG Fund Subtotal		-	-	-	-	-	-	-	-	-	-	-
RW Fund Subtotal		-	-	-	-	-	-	-	-	-	-	-
NC Fund Subtotal		-	-	-	-	-	-	-	-	-	-	-
WC Fund Subtotal		-	-	-	-	-	-	-	-	-	-	-
RO Fund Subtotal		910,000	-	-	-	-	-	-	-	-	-	910,000
RC Fund Subtotal		1,000,000	1,880,095	-	-	-	-	-	-	-	-	2,880,095

Regional Water Recycling Plant No.4 – Project Summary Table

Project Number	Project Name	Project Description	Fund	Fiscal Year Budget (Dollars)											Project Ranking	
				14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	Ten Year Total	Timing (immediate, intermediate, long-term)	Criticality (Critical, High, Medium, Low)
EN09021	RP-4 Headworks Retrofit	This project will include replacing both of the bar rack screens with fine screens, modifying the screening enclosure, repaving damaged concrete within the screening enclosure and replacing gates isolating the headworks screens.	RO	528,000	0	0	0	0	0	0	0	0	0	528,000	immediate	M
EN14018	RP-4 Process Improvements	The project may include various process improvements (RAS wasting piping, WAS station, lagoon pumps, chlorine system, alum dosing, blower cooling water, utility water flow meter).	RC	400,000	150,000	125,000	250,000	300,000	300,000	0	0	0	0	1,525,000	immediate	H

Rp-4 System Total		928,000	150,000	125,000	250,000	300,000	400,000	500,000	500,000	0	0	2,053,000
GG Fund Subtotal		-	-	-	-	-	-	-	-	-	-	
RW Fund Subtotal		-	-	-	-	-	-	-	-	-	-	-
NC Fund Subtotal		-	-	-	-	-	-	-	-	-	-	-
WC Fund Subtotal		-	-	-	-	-	-	-	-	-	-	-
RO Fund Subtotal		528,000	-	-	-	-	-	-	-	-	-	528,000
RC Fund Subtotal		400,000	150,000	125,000	250,000	300,000	300,000	-	-	-	-	1,525,000

Regional Water Recycling Plant No.5 – Project Summary Table

Project Number	Project Name	Project Description	Fund	Fiscal Year Budget (Dollars)											Project Ranking	
				14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	Ten Year Total	Timing (immediate, intermediate, long-term)	Criticality (Critical, High, Medium, Low)
EN11031	RP-5 Flow Equalization and Effluent Monitoring	The RP-5 Flow Equalization and Effluent Monitoring consist of modifications in the primary effluent splitter box. The 12' weir gate and automation of the slide gate to allow flow to the aeration basin will better optimize the flow equalization of plant treatment process	RC	1,363,186	100,000	0	0	0	0	0	0	0	0	1,463,186	immediate	M
EN13047	RP-5 Standby Generators Control Mods		RC	295,000	0	0	0	0	0	0	0	0	0	295,000	immediate	H
MM15002	Purchase & Installation of RP-5 Satellite Warehouse & MM Shop Steel Bldgs.		RC	0	0	0	0	0	200,000	50,000	0	0	0	250,000	long-term	M
TBD	RP-5 Expansion to 30 mgd	Expand existing RP-5 liquid treatment capacity from 15 to 30 mgd. Project cost estimated at $150M.	RC	0	0	0	0	100,000	0	0	0	0	0	100,000	intermediate	C
TBD	RP-5 SHF	Construct new solids handling facility at RP-5 to decommission RP-2.	RC	0	0	0	0	250,000	25,000,000	25,000,000	25,000,000	25,000,000	0	100,250,000	intermediate	C
TBD	RP-5 Biofilter Improvements	The RP-5 Biofilter Improvements consists of providing a new foul air distribution system at the base of the biofilter to match the other Agency biofilters.	RO	0	0	0	0	0	0	0	0	100,000	250,000	350,000	long-term	M

RP-5 System Total		1,658,186	100,000	0	0	350,000	25,200,000	25,050,000	25,000,000	25,100,000	250,000	102,708,186
GG Fund Subtotal		-	-	-	-	-	-	-	-	-	-	-
RW Fund Subtotal		-	-	-	-	-	-	-	-	-	-	-
NC Fund Subtotal		-	-	-	-	-	-	-	-	-	-	-
WC Fund Subtotal		-	-	-	-	-	-	-	-	-	-	-
RO Fund Subtotal		-	-	-	-	-	-	-	-	100,000	250,000	350,000
RC Fund Subtotal		1,658,186	100,000	-	-	350,000	25,200,000	25,050,000	25,000,000	25,000,000	-	102,358,186

Recycled Water Distribution and Ground Water Recharge System – Project Summary Table

Project Number	Project Name	Project Description	Fund	Fiscal Year Budget (Dollars)											Project Ranking	
				14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	Ten Year Total	Timing (immediate, intermediate, long-term)	Criticality (Critical, High, Medium, Low)
EN06025	Wineville Extension Pipeline Segment A	A new 24" recycled water pipeline along Wineville Ave. from Airport Dr. to Jurupa St. continuing with a new 36" recycled water pipeline to RP-3 Groundwater Recharge Basin. The project includes a recycled water turnout to feed RP-3 Basin and a turnout to feed Declez Basin.	WC	12,000,000	3,709,000	0	0	0	0	0	0	0	0	15,709,000	immediate	M
EN07010	CCWRF Pump Station Expansion	The pump station is being upgraded with five new, more efficient pumps: · (2) 300 hp vertical turbine, VFD driven, 2,585 gpm pumps · (3) 300 hp vertical turbine, constant speed, 2,585 gpm pumps	WC	50,000	0	0	0	0	0	0	0	0	0	50,000	immediate	H
EN09007	1630 East Reservoir & Segment B Pipeline	Construction of approximately 11,000 LF of 36" pipeline from the Segment A pipeline end to the new 1630 East Reservoir. Construction of an 8.0 MG recycled water reservoir at the Lloyd Michael's Water Treatment Plant.	WC	0	0	0	0	0	0	662,500	3,812,500	925,000	0	5,400,000	long-term	M
EN12014	1630 East Pipeline Relocation	The project will relocate the 1630 East Pipeline at Baseline Ave. and East Ave to allow for improvements to the 15 freeway off-ramp	WC	487,000	0	0	0	0	0	0	0	0	0	487,000	immediate	H
EN12016	North CIM Lateral		WC	210,000	0	0	0	0	0	0	0	0	0	210,000	immediate	M
EN12019	GWR & RW SCADA Communication System Upgrades	This project will upgrade the SCADA communication system for all GWR and RW facilities.	WC	1,095,000	70,000	0	0	0	0	0	0	0	0	1,165,000	immediate	H
EN13001	San Sevaine Improvements	Project will modify the San Sevaine Basin Turnout to extend the discharge location from San Sevaine Cell No. 5 to the furthest north Cell No. 1.	WC	150,000	990,000	810,000	0	0	0	0	0	0	0	1,950,000	immediate	H
EN13023	930 Pressure Zone Pipeline	Approximately 18,000 LF of 30" pipeline connects the CCWRF System Pipeline to the new 930 Reservoir.	WC	535,000	0	0	0	0	0	0	0	0	0	535,000	immediate	H
EN13040	Prado Dechlor Communication System		WC	162,038	0	0	0	0	0	0	0	0	0	162,038	immediate	M
EN13041	RP-5 RW PS Process Control Sys Migration		WC	0	0	280,000	0	0	0	0	0	0	0	280,000	immediate	H
EN13045	Wineville Extension Pipeline Segment B	A new 24" recycled water pipeline along Wineville Ave. from Airport Dr. to Jurupa St. continuing with a new 36" recycled water pipeline to RP-3 Groundwater Recharge Basin. The project includes a recycled water turnout to feed RP-3 Basin and a turnout to feed Declez Basin.	WC	10,000,000	1,794,000	0	0	0	0	0	0	0	0	11,794,000	immediate	M

Recycled Water Distribution and Ground Water Recharge System –*continued*

Project Number	Project Name	Project Description	Fund	Fiscal Year Budget (Dollars)											Project Ranking	
				14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	Ten Year Total	Timing (immediate, intermediate, long-term)	Criticality (Critical, High, Medium, Low)
EN13048	RP-1 930-Zone RW Pump Station Load Analysis		WC	928,982	0	0	0	0	0	0	0	0	0	928,982	immediate	H
EP14002	Cathodic Protection Maintenance Plan	This project involves a connectivity verification of existing CP test stations within the RW system, A pipe-to-soil potential survey, and installation and monitoring of cathodic protection system on identified corrosive locations.	WC	675,000	127,000	0	0	0	0	0	0	0	0	802,000	immediate	M
EN14007	Misc RW Projects		WC	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	2,000,000	annually recurring	M
EN14010	CM Misc RW Constr & Emergency Projects		WC	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	2,500,000	annually recurring	M
EN14028	Vulcan Pit Development	This project will convert the existing Vulcan mining pit into a functional 60 acre groundwater recharge basin.	WC	100,000	0	0	0	0	0	0	0	0	0	100,000	immediate	L
EN14040	Jurupa PS HVAC Improvements	VFD temperature control requires HVAC improvements.	RW	50,000	0	0	0	0	0	0	0	0	0	50,000	immediate	H
EN14041	RP-4 1158 and 1299 Pump Station Upgrades		WC	100,000	500,000	2,475,000	925,000	0	0	0	0	0	0	4,000,000	immediate	H
EN14042	RP-1 1158 Pump Station Improvements		WC	150,000	500,000	3,000,000	350,000	0	0	0	0	0	0	4,000,000	immediate	H
EN14043	RP-5 Pipeline Bottleneck	Evaluation of additional recycled water pipeline leaving RP-5 to allow more recycled water to be delivered from this facility into the 800 Pressure Zone.	WC	150,000	500,000	300,000	350,000	0	0	0	0	0		1,300,000	immediate	H
EN14044	RW Hydraulic Modeling		WC	107,755	0	0	0	0	0	0	0	0	0	107,755	immediate	H
EN14045	RW Program Strategy		WC	35,000	0	0	0	0	0	0	0	0	0	35,000	immediate	C
EN14047	GWR & RW SCADA Control Equipment Upgrades	This project will upgrade SCADA control system for all GWR and RW facilities.	WC	675,000	127,000	0	0	0	0	0	0	0	0	802,000	immediate	H
EN15002	1158 Reservoir Site Cleanup Project		WC	0	200,000	25,000	0	0	0	0	0	0	0	225,000	immediate	H

Recycled Water Distribution and Ground Water Recharge System –*continued*

Project Number	Project Name	Project Description	Fund	Fiscal Year Budget (Dollars)											Project Ranking	
				14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	Ten Year Total	Timing (immediate, intermediate, long-term)	Criticality (Critical, High, Medium, Low)
EN16009	CCWRF RW Flow Equalization		WC	0	0	500,000	0	0	0	0	0	0	0	500,000	intermediate	M
CW16014	RW OE Projects		WC	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	500,000	annually recurring	M
EN19002	800 Pressure Zone Reservoir	Construction of an 800 Pressure Zone Reservoir in the City of Chino Hills.	WC	0	0	0	0	0	500,000	2,500,000	400,000	0	0	3,400,000	immediate	M
EN19003	RP-1 Parallel Outfall Pipeline	This project will provide for a parallel pipeline following the TP-1 Out fall Pipeline from RP-1 to Edison Ave. to address the existing pipeline capacity issues.	WC	0	0	0	0	0	500,000	4,000,000	1,200,000	0	0	5,700,000	immediate	M
EN20001	Lower Day Basin Pipeline	Construction of a pipeline to provide recycled water to Lower Day Basin.	WC	0	0	0	0	0	300,000	2,000,000	200,000	25,000	0	2,525,000	long-term	M
EN20002	Etiwanda Debris		WC	0	0	0	0	0	200,000	300,000	0	0	0	500,000	long-term	M
EN20003	Montclair Basin Pipeline	Construction of a pipeline to provide recycled water to Lower Day Basin.	WC	0	0	0	0	0	200,000	1,000,000	300,000	0	0	1,500,000	long-term	M
EN20004	Brooks Basin Improvements		WC	0	0	0	0	0	200,000	700,000	300,000	350,000	0	1,550,000	long-term	M
EN20005	800 PZ-Bottleneck		WC	0	0	0	0	0	150,000	500,000	300,000	350,000	0	1,300,000	long-term	M
EN21001	Upland Basin		WC	0	0	0	0	0	0	500,000	300,000	2,200,000	0	3,000,000	long-term	M
TBD	RP-3 Basin Improvements	Groundwater Recharge Master Plan Update 2013 project #11. IEUA cost share= 50% total cost (committee approved 10/9/13; to board 10/16)	RW	400,000	2,245,000	0	0	0	0	0	0	0	0	2,645,000	immediate	M
TBD	Victoria Basin Improvements	Groundwater Recharge Master Plan Update 2013 project #22a. IEUA cost share= 50% total cost (committee approved 10/9/13; to board 10/16)	WC	12,000	63,000	0	0	0	0	0	0	0	0	75,000	immediate	M
TBD	GWR Asset Management	This is a general project for the rehab and replacement of general equipment including: pumps, motors, VFDs, valves, air reliefs, instruments, and PRVs.	WC	375,000	375,000	375,000	375,000	375,000	375,000	375,000	375,000	375,000	375,000	3,750,000	annually recurring	M
TBD	RW Asset Management	This is a general project for the rehab and replacement of general equipment including: pumps, motors, VFDs, valves, air reliefs, instruments, and PRVs.	RW	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	1,250,000	annually recurring	M

TBD	Napa Lateral		WC	200,000	3,000,000	2,800,000	0	0	0	0	0	0	0	6,000,000	immediate	M

Recycled Water/Groundwater Recharge System Total		29,272,775	14,825,000	11,190,000	2,625,000	1,000,000	3,050,000	13,162,500	7,812,500	4,850,000	1,000,000	88,787,775
GG Fund Subtotal		-	-	-	-	-	-	-	-	-	-	-
RW Fund Subtotal		575,000	2,370,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	3,945,000
NC Fund Subtotal		-	-	-	-	-	-	-	-	-	-	-
WC Fund Subtotal		28,697,775	12,455,000	11,065,000	2,500,000	875,000	2,925,000	13,037,500	7,687,500	4,725,000	875,000	84,842,775
RO Fund Subtotal		-	-	-	-	-	-	-	-	-	-	-
RC Fund Subtotal		-	-	-	-	-	-	-	-	-	-	-

Inland Empire Regional Composting Facility Project Summary

Project Number	Project Name	Project Description	Fund	Fiscal Year Budget (Dollars)											Project Ranking	
				14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	Ten Year Total	Timing (immediate, intermediate, long-term)	Criticality (Critical, High, Medium, Low)
RA11001	IERCF Capital Replacement	General project for facility/equipment repair and replacement, including replacement of front end loaders, and evaluation of the Baghouse.	RCA	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	5,000,000	annually recurring	M
RA11004	IERCF Process Improvements	The belt conveyance system will be modified to transfer material from Active to Curing, then from Curing to Screening. Currently, the system transfers material from Active to Screening and then Screening to Curing.	RCA	900,000	0	0	0	0	0	0	0	0	0	900,000	immediate	M
RA12009	IERCF Structure Protection		RCA	25,000	25,000	0	0	0	0	0	0	0	0	50,000	immediate	M
RA12011	IERCF Lighting Improvements	Additional lighting is going to be installed in all process areas to increase visibility for front end loader operators.	RCA	400,000	0	0	0	0	0	0	0	0	0	400,000	immediate	M
RA14003	Receiving Pit & Fan Corridor Drains	Installation of drains in the receiving pit and fan corridors for housekeeping purposes.	RCA	50,000	500,000	200,000	0	0	0	0	0	0	0	750,000	immediate	M
RA14004	Harmonic Filter AC Improvements		RCA	75,000	0	0	0	0	0	0	0	0	0	75,000	immediate	M
TBD	IERCF Trommel Screen Conversion to Compact Logix PLC	Replace remote I/O with local PLC	RCA	17,500	0	0	0	0	0	0	0	0	0	17,500	immediate	M
TBD	IERCF Baghouse Improvements	Based upon system evaluation, this project is to improve the existing Baghouse, install new blowers downstream of the Baghouse structure, and install a foam fire suppression system.	RCA	450,000	500,000	0	0	0	0	0	0	0	0	950,000	immediate	M

IERCF System Total		2,417,500	1,525,000	700,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	8,142,500
GG Fund Subtotal		-	-	-	-	-	-	-	-	-	-	-
RW Fund Subtotal		-	-	-	-	-	-	-	-	-	-	-
NC Fund Subtotal		-	-	-	-	-	-	-	-	-	-	-
WC Fund Subtotal		-	-	-	-	-	-	-	-	-	-	-
RO Fund Subtotal		-	-	-	-	-	-	-	-	-	-	-
RC Fund Subtotal		-	-	-	-	-	-	-	-	-	-	-
RCA Fund Subtotal		2,417,500	1,525,000	700,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	8,142,500

Agency Headquarters – Project Summary Table

Project Number	Project Name	Project Description	Fund	Fiscal Year Budget (Dollars)											Project Ranking	
				14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	Ten Year Total	Timing (immediate, intermediate, long-term)	Criticality (Critical, High, Medium, Low)
EN14002	CIPO Enhancements		RC	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	150,000	immediate	H
TBD	Water Softener Rebates	Rebate incentive for the removal of salt-bsaed water softeners to assist with water softener ordinance requirements.	WC	125,000	125,000	125,000	125,000	125,000	0	0	0	0	0	625,000	immediate	C
TBD	Chino Creek Wetlands and Educational Park Upgrades	Grant dependent project to facilitate the education program and increase community involvement the Park needs three ramadas (pavilions) with educational signage, a restroom/storage facility and the construction of a pervious parking lot with additional signage.	RO	0	0	0	0	0	0	900,000	957,400	0	0	1,857,400	long-term	L
System Total				140,000	140,000	140,000	140,000	140,000	15,000	915,000	972,400	15,000	15,000	2,632,400		
GG Fund Subtotal				-	-	-	-	-	-	-	-	-	-	-		
RW Fund Subtotal				-	-	-	-	-	-	-	-	-	-	-		
NC Fund Subtotal				-	-	-	-	-	-	-	-	-	-	-		
WC Fund Subtotal				125,000	125,000	125,000	125,000	125,000	-	-	-	-	-	625,000		
RO Fund Subtotal				-	-	-	-	-	-	900,000	957,400	-	-	1,857,400		
RC Fund Subtotal				15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	15,000	150,000		

Agency Laboratory – Project Summary Table

Project Number	Project Name	Project Description	Fund	Fiscal Year Budget (Dollars)											Project Ranking	
				14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	Ten Year Total	Timing (immediate, intermediate, long-term)	Criticality (Critical, High, Medium, Low)
EN08009	New Operations Laboratory	This project will replace the existing operation laboratory at RP-1. A possible site location will be south of Headquarters at RP-5.	RC	0	1,100,000	10,000,000	6,000,000	0	0	0	0	0	0	17,100,000	immediate	M
TBD	New Lab Equipment	New lab equipment (GCMS, Liquid Chromatography) dependent on new lab construction.	RC	0	0	0	650,000	0	0	0	0	0	0	650,000	intermediate	M
System Total				0	1,100,000	10,000,000	6,650,000	0	0	0	0	0	0	17,750,000		
GG Fund Subtotal				-	-	-	-	-	-	-	-	-	-	-		
RW Fund Subtotal				-	-	-	-	-	-	-	-	-	-	-		
NC Fund Subtotal				-	-	-	-	-	-	-	-	-	-	-		
WC Fund Subtotal				-	-	-	-	-	-	-	-	-	-	-		
RO Fund Subtotal				-	-	-	-	-	-	-	-	-	-	-		
RC Fund Subtotal				-	1,100,000	10,000,000	6,650,000	-	-	-	-	-	-	17,750,000		

Regional Program & Sewerage System Capital Projects

Project Number	Project Name	Project Description	Fund	Fiscal Year Budget (Dollars)											Project Ranking	
				14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23	23/24	Ten Year Total	Timing (immediate, intermediate, long-term)	Criticality (Critical, High, Medium, Low)
EN11035	Philadelphia Pump Station Upgrades	Repair and replacement of section of the force mains in the pump dry sump. Miscellaneous instrumentation and facility improvements will be made. A redundant PLC will also be supplied to provide control system reliability.	NC	1,974,000	0	0	0	0	0	0	0	0	0	1,974,000	immediate	M
EN12020	Chino Creek Invert Repair	Repair of Chino Creek invert near CCWRF where differential settling occurred.	RC	288,000	0	0	0	0	0	0	0	0	0	288,000	Immediate	M
EN13016	SCADA Enterprise System	SCADA Enterprise System. Replacing the DCS over the next five years.	RO	1,625,000	2,000,000	3,000,000	3,000,000	0	0	0	0	0	0	9,625,000	immediate	M
EN13040	Prado Dechlor Communication System	Installation of a monopole, radios, microwave dishes, communications panel and other equipment to allow the station to effectively communicate with the rest of the IEUA network.	WC	162,000	0	0	0	0	0	0	0	0	0	162,000	immediate	M
EN13042	Philadelphia Pump Station Communication System	Installation of a monopole, radios, microwave dishes, communications panel and other equipment to allow the station to effectively communicate with the rest of the IEUA network.	NC	165,000	0	0	0	0	0	0	0	0	0	165,000	immediate	M
EN13043	Montclair Lift Station Communication System	Installation of a monopole, radios, microwave dishes, communications panel and other equipment to allow the station to effectively communicate with the rest of the IEUA network.	RC	165,000	0	0	0	0	0	0	0	0	0	165,000	immediate	M
EN13054	Montclair Lift Station Upgrades	Replacement of all three lift pumps as well as replacement and improvements of the control and instrumentation system and the electrical distribution system.	RO	2,915,000	0	0	0	0	0	0	0	0	0	2,915,000	immediate	M
EN13056	Agency-Wide HVAC Improvements - Pckg No. 2		RC	700,000	200,000	0	0	0	0	0	0	0	0	900,000	Immediate	M
EP14004	Cl2 Residual Analyzer Replacement	Maintenance project to replace all of the chlorine analyzers agency-wide that are no longer being supported by the manufacturer.	RC	160,000	0	0	0	0	0	0	0	0	0	160,000	immediate	H
EN14006	Misc RC Constr & Emergency Proj FY13/14	Miscellaneous emergency construction under RC fund.	RC	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	2,500,000	annually recurring	M
EN14008	NRWS Conn & Emergency Projects FY13/14	NRWS Conn & Emergency Projects FY13/14	NC	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	1,000,000	annually recurring	M
EN14009	CM Misc RC Constr & Emergency Proj FY13/14	Construction Management miscellaneous emergency construction under RC fund.	RC	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	2,500,000	annually recurring	M
EN14011	CM Misc NRWS Constr & Emergency Proj FY13/14	CM Misc NRWS Constr & Emergency Proj FY13/14	NC	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	2,500,000	annually recurring	M
EN14024	CM Misc RO Constr & Emergency Proj FY13/14	Construction Management miscellaneous emergency construction under RO fund.	RO	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	2,500,000	annually recurring	M
EN14026	Misc RO O&M Emergency Proj FY13/14	Miscellaneous emergency O&M work under RO fund.	RO	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	250,000	2,500,000	annually recurring	M

Regional Program & Sewerage System Capital Projects –*continued*

EN14037	Fontana Interceptor Relief Sewer Manholes Rehab	Fontana Interceptor Relief Sewer Manholes Rehab	RC	860,000	350,000	0	0	0	0	0	0	0	0	1,210,000	immediate	M
EN14035	22-inch Manholes Along NRW North System North Trunk (NSNT) Rehab	22-inch Manholes Along NRW North System North Trunk (NSNT) Rehab	NC	613,000	0	0	0	0	0	0	0	0	0	613,000	immediate	M
EN14050	Collection System Repairs Phase V, Westside Interceptor	Collection System Repairs Phase V, Westside Interceptor	RC	500,000	0	0	0	0	0	0	0	0	0	500,000	immediate	C
EN16011	Whispering Lakes LS Improvements	Complete rehab of lift station.	RC	0	0	0	0	300,000	2,700,000	0	0	0	0	3,000,000	intermediate	C
TBD	Haven LS SCADA Improvements	Connect to the SCADA enterprise system and potential sewer construction	RC	0	0	0	0	300,000	2,700,000	0	0	0	0	3,000,000	intermediate	C
TBD	NRW East End Flowmeter Replacement	Flowmeter replacement required by NRWS Agreement.	NC	0	0	0	0	0	0	0	0	45,000	255,000	300,000	long-term	C
TBD	Biofilter Media Replacement	Agencywide annual biofilter media replacement	RO	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	2,000,000	annually recurring	M
TBD	Tertiary Facility Rehab	Agencywide annual rehab to the tertiary facilities (e.g., Sedimentation Basin, Filters, and Chlorine Contact Basiins)	RO	100,000	100,000	100,000	1,500,000	1,500,000	100,000	100,000	100,000	100,000	100,000	3,800,000	annually recurring	M
TBD	Septage Dump System	Provide septage dump system at the most appropriate location within the Agency.	GG	0	0	100,000	800,000	0	0	0	0	0	0	900,000	intermediate	L
TBD	Facility Access Improvements	Provide FOB access where keys and cipher locks are currently employed.	GG	300,000	300,000	300,000	0	0	0	0	0	0	0	900,000	Immediate	M
TBD	Aeration Systems Rehab	Agencywide annual rehab (e.g., diffuser rehab) of aeration systems.	RO	300,000	300,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	2,200,000	annually recurring	M
TBD	Aeration System Improvements	Agencywide aeration system improvements	RC	0	0	250,000	3,000,000	3,000,000	0	0	0	0	0	6,250,000	intermediate	M
TBD	Clarifier Rehab	Agencywide annual rehab of clarifiers	RO	350,000	350,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	1,500,000	annually recurring	M
TBD	Major Equipment Rehab/Replace	Agencywide annual R&R of major equipment (pumps, heat exchangers, compressors, etc)	RO	700,000	500,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	4,400,000	annually recurring	M
TBD	Major Asset Rehab/Replace	Agencywide annual R&R of major assets (buildings, vehicles, etc)	GG	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	2,000,000	annually recurring	M
TBD	Agency Wide Coatings and Paving	Agencywide annual maintenance for coatings and paving	RO	200,000	200,000	200,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	1,300,000	annually recurring	M
TBD	Energy Efficiency Improvements	Agencywide upgrades to the lighting systems and process equipment systems to improve efficiency. Start design in FY18/19.	RO	0	100,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	1,700,000	annually recurring	M
TBD	Underground Piping Rehab	Annual underground piping rehab Agency wide within facilities.	RO	500,000	500,000	500,000	500,000	1,000,000	400,000	400,000	400,000	400,000	400,000	5,000,000	annually recurring	M
TBD	RP-4 Foundation Field Bus Link Device	Replace existing FFLD with current equipment replacement from Rockwell.	RO	42,000	0	0	0	0	0	0	0	0	0	42,000	immediate	M
TBD	Philly LS Licensed Radio Upgrade	Replace 5.4 ghz with licensed 18 ghz radio	NC	10,000	0	0	0	0	0	0	0	0	0	10,000	immediate	M
TBD	Records Mgmt Scanner Replacement	Replace failed scanner in Records Mgmt	GG	7,000	0	0	0	0	0	0	0	0	0	7,000	immediate	M
TBD	Telephone System Upgrade	Workstation Replacement for the PAC Network	GG	46,000	0	0	0	0	0	0	0	0	0	46,000	immediate	M
TBD	PAC- L55 Processor Replacement / Redundancy Modules	Replace ethernet (EN2T) North/South (2 year project)	RO	45,000	45,000	0	0	0	0	0	0	0	0	90,000	immediate	M
TBD	RP-4 ControlNet Replacement	Replace ControlNet with Ethernet	RO	112,000	0	0	0	0	0	0	0	0	0	112,000	immediate	M
TBD	Replace Remote I/O Scanners at RP-4 - MCC1, RTU1, and RTU2	Replace remote I/O scanners with Ethernet	RO	26,000	0	0	0	0	0	0	0	0	0	26,000	immediate	M
TBD	Server Replacement - Business Network	Server Replacement - Business Network	GG	102,000	0	0	0	0	0	0	0	0	0	102,000	immediate	M

Regional Program & Sewerage System Capital Projects –*continued*

TBD	Server Replacement - Process Automation and Controls Network	Server Replacement - Process Automation and Controls Network	RO	10,000	0	0	0	0	0	0	0	0	0	10,000	immediate	M
TBD	PAC- Veeam Virtual Machine Backup/Recovery Software - GG	PAC- Veeam Virtual Machine Backup/Recovery Software - GG	GG	17,000	0	0	0	0	0	0	0	0	0	17,000	immediate	M
TBD	PAC- Veeam Virtual Machine Backup/Recovery Software - RO	PAC- Veeam Virtual Machine Backup/Recovery Software - RO	RO	17,000	0	0	0	0	0	0	0	0	0	17,000	immediate	M
TBD	ERP Improvements	Annual improvements for Enterprise Resource Program	GG	744,000	825,000	504,000	360,000	400,000	250,000	250,000	250,000	250,000	250,000	Immediate	immediate	M
TBD	Busniness Network IT Improvements	Annual business network improvements	GG	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	2,000,000	annually recurring	M
TBD	Process Automation Controls IT Improvements	Annual PAC network improvements.	RO	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	3,000,000	annually recurring	M
TBD	Agency Wide HVAC Improvement Package Number 3	Agency Wide HVAC Improvement Package Number 3	RC	150,000	900,000	150,000	0	0	0	0	0	0	0	1,200,000	immediate	M

Regional Program & Sewerage System Capital Projects		16,155,000	8,920,000	8,254,000	12,410,000	9,750,000	9,400,000	4,000,000	4,000,000	4,045,000	4,255,000	77,106,000
GG Fund Subtotal		1,616,000	1,525,000	1,304,000	1,560,000	800,000	650,000	650,000	650,000	650,000	650,000	5,972,000
RW Fund Subtotal		-	-	-	-	-	-	-	-	-	-	-
NC Fund Subtotal		3,112,000	350,000	350,000	350,000	350,000	350,000	350,000	350,000	395,000	605,000	6,562,000
WC Fund Subtotal		162,000	-	-	-	-	-	-	-	-	-	162,000
RO Fund Subtotal		7,942,000	5,095,000	5,700,000	7,000,000	4,500,000	2,500,000	2,500,000	2,500,000	2,500,000	2,500,000	42,737,000
RC Fund Subtotal		3,323,000	1,950,000	900,000	3,500,000	4,100,000	5,900,000	500,000	500,000	500,000	500,000	21,673,000

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