IEUA's Ten-Year Sewer Capital Forecast

2025

Contents

ABBREVIATIONS

AF: Acre Feet

CCRA: Capital Capacity Reimbursement Account

CCWRF: Carbon Canyon Water Reclamation Facility

CVWD: Cucamonga Valley Water District

EDU: Equivalent Dwelling Unit

FY: Fiscal Year

IEUA: Inland Empire Utilities Agency

IERCF: Inland Empire Regional Composting Facility

MGD: Million Gallons per Day

MWD: Metropolitan Water District of Southern California

O&M: Operation and Maintenance

RC: Regional Wastewater Capital Improvement Fund

TYSCF: Ten-Year Sewer Capital Forecast

RP-1: Regional Water Recycling Plant 1

RP-2: Regional Water Recycling Plant 2

RP-4: Regional Water Recycling Plant 4

RP-5: Regional Water Recycling Plant 5

SCAs: Sewer Collection Agencies

WWFMPU: 2015 Wastewater Facilities Master Plan Update

SECTION 1: BACKGROUND

Inland Empire Utilities Agency Overview

The Inland Empire Utilities Agency (IEUA/Agency) is a regional wastewater treatment Agency and wholesale distributor of imported water to approximately 935,000 people throughout western San Bernardino County. Under the leadership of a directly elected five-member Board of Directors, the Agency is committed to supporting the needs of its service area and safeguarding public health through significant investments in a diverse water supply portfolio, reliable municipal/industrial wastewater collection and treatment services, and other related utility services in a regionally planned and cost-effective manner.

As a member agency of the Metropolitan Water District of Southern California (Metropolitan), IEUA provides supplemental water supplies, primarily via the State Water Project (SWP) to the cities of Chino, Chino Hills, Fontana via Fontana Water Company and portions of West Valley Water District, Montclair via Monte Vista Water District, Ontario, Rancho Cucamonga via Cucamonga Valley Water District, and Upland (including San Antonio Water Company). IEUA also replenishes local groundwater supplies with captured rainwater and recycled water produced by IEUA that is later extracted by local water agencies for use as a drinking water supply.

Water recycling is a critical component of the water resources management strategy for IEUA and the Chino Basin. The Agency is responsible for treating 50 million gallons per day of wastewater, on average, received from seven sewerage agencies including the cities of Chino, Chino Hills, Fontana, Montclair, Ontario, and Upland, and the Cucamonga Valley Water District. This water is treated to Title 22 regulations set forth by the State Division of Drinking Water and distributed to its retailers for agriculture, municipal irrigation, industrial uses, and groundwater replenishment.

IEUA currently operates five regional wastewater treatment plants: RP-1 (Ontario), RP-2 – Solids (Chino), RP-4 (Rancho Cucamonga), Carbon Canyon Water Recycling Facility (Chino), and RP-5 (Chino).

In conjunction with these facilities, IEUA also maintains and operates:

- The Chino Desalter I (located in Chino) on behalf of the Chino Basin Desalter Authority, which uses reverse osmosis technology to remove salt and nitrates from groundwater pumped from 14 wells throughout the Chino Basin. It produces 10.9 MGD of high-quality drinking water, serving the water needs of approximately 35,000 people.
- The Inland Empire Regional Composting Facility (located in Rancho Cucamonga) on behalf of the Inland Empire Regional Composting Authority, which uses biosolids

from the wastewater treatment process to produce over 230,000 cubic yards of high-quality compost each year for local landscaping and horticultural use, marketed under the name SoilPro.

- 46 groundwater recharge basins across 19 recharge sites designed to hold stormwater run-off, imported water, and IEUA recycled water to replenish alluvial aquifers and groundwater supply. Through partnership with the Chino Basin Water Conservation District and the San Bernardino Flood Control District, IEUA's groundwater recharge framework enhances the current reliability of local supplies for a rapidly growing population and is an integral part of the Agency's local water supply planning efforts.

The Agency also prioritizes initiatives that enhance and preserve the quality of life throughout the region, which include investments in local water resources, conservation programs, and renewable energy sources. IEUA advocates for environmental stewardship and offers several free educational resources and outreach programs to inform students and the community on ecological preservation, water awareness, and sustainability.

Formation & Purpose

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

Agency Vision

To become a world class leader in water management and environmental stewardship, including water quality, water-use efficiency, recycled water, and renewable energy, in order to enhance and preserve the quality of life throughout the region.

Mission Statement

Inland Empire Utilities Agency is committed to meeting the needs of the region by providing essential services in a regionally planned and cost-effective manner while safeguarding public health, promoting economic development, and protecting the environment. Key areas of service:

- Securing and supplying imported water;
- Collecting and treating wastewater;

- Producing high-quality renewable products such as recycled water, compost, and energy; and
- Promoting sustainable use of groundwater and development of local water supplies.

Agency Values

Leading the way. Planning for the future. Protecting the resources of the communities we serve. The Inland Empire Utilities Agency is committed to:

- Applying ethical, fiscally responsible, transparent and environmentally sustainable principles to all aspects of business and organizational conduct;
- Working with integrity as one team, while celebrating the region's diversity; and
- Staying in the forefront of the industry through education, innovation, efficiency, and creativity.

Governance

IEUA is a special district governed by five publicly elected Board of Directors. Each director is assigned to one of the five divisions which generally serve the following regions: Division 1- Upland/Montclair; Division 2- Ontario; Division 3- Chino/Chino Hills; Division 4- Fontana; and Division 5- Rancho Cucamonga. Monthly meetings are also held with the Regional Technical and Policy Committees comprised of representatives from each of IEUA's Regional Sewer Service Contracting Agencies. These Committees discuss and provide recommendations on various technical and policy issues affecting IEUA.

Sewage Collection Agencies

As a regional wastewater treatment Agency, IEUA provides wastewater utility services to seven sewage collection agencies (SCAs) under the Chino Basin Regional Sewage Service Contract (Regional Contract) or Regional Sewage Service Ordinance No. 114: the cities of Chino, Chino Hills, Fontana, Montclair, Ontario, and Upland along with Cucamonga Valley Water District (CVWD). Figure 1 depicts boundaries within IEUA's service area.

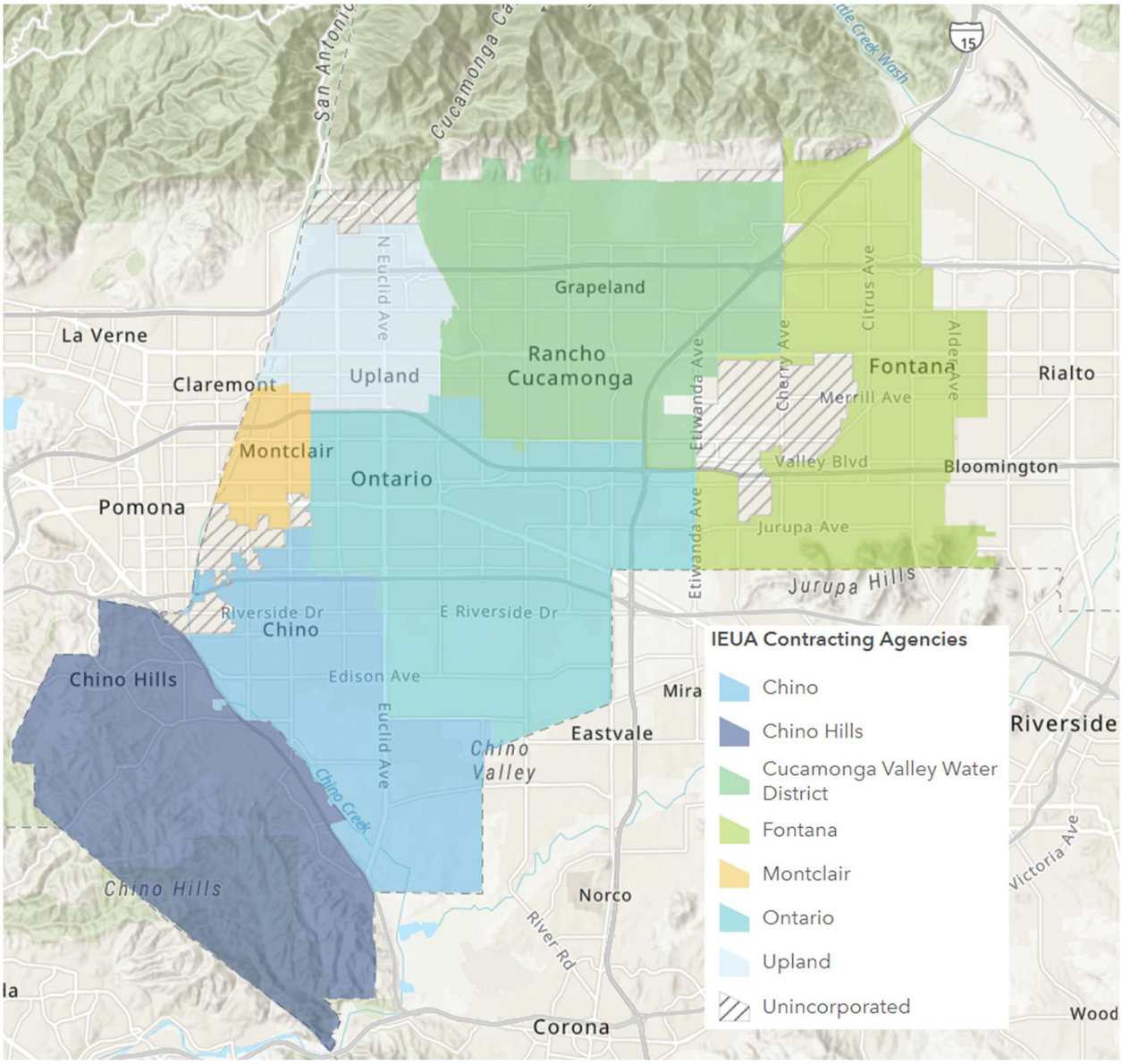

Figure 1 – IEUA Sewage Collection Agencies

SECTION 2: INTRODUCTION TO THE TEN-YEAR SEWER CAPITAL FORECAST

Ten-Year Sewer Capital Forecast Purpose

The Board of Directors of the Inland Empire Utilities Agency adopts a Ten-Year Sewer Capital Forecast (TYSCF) based on the growth and regulatory requirements, existing asset management needs, and recommendations from the Regional Technical and Policy Committees, pursuant to the terms of the Regional Sewage Service Contract and Regional Sewage Service Ordinance No.114. The purpose of the TYSCF is to catalog and schedule capital improvement projects necessary to enable the regional wastewater system to meet forecasted demands for all the Sewage Collection Agencies (SCAs) over a multi-year period. Pursuant to Section 9 of the Regional Contract, IEUA submits a TYSCF of capacity demands and capital projects to the Regional Technical and Policy Committees. This TYSCF identifies projects for the Fiscal Year (FY) 2024/2025 through FY 2033/2034.

Projects identified in the TYSCF are important to ensure regional reliability and safety while meeting all regulatory requirements based on the physical conditions of assets and the forecasted regional projection of wastewater needs. According to these projections, the TYSCF proposes a schedule for implementing projects based on necessity. The timing of the projects identified in the TYSCF are further refined during the Capital Budget process, based on the availability of financial resources.

Definition of a Capital Project

The TYSCF is composed of a list of capital projects, which are projects that involve the purchase, improvement, or construction of major fixed assets, such as the expansion of treatment plants, the construction of pipeline and pump stations, and the replacement of equipment. Capital projects do not include funds spent on standard operation and maintenance (O&M).

Regional Sewage Service Contract Requirements and Plan Adoption

The Regional Sewage Service Contract is the guiding document that defines the terms of the services and facilities in IEUA's regional wastewater system. The Regional Contract was originally signed in January 1973, amended in 1984 and 1994, and was due for renewal in January 2023, 50 years after it was originally executed. Currently, three SCAs are under Regional Sewage Service Ordinance 114 (The Cities of Chino, Ontario, and Montclair) and four SCAs are under the Regional Contract (The Cities of Chino Hills, Upland, CVWD, and Fontana).

As required by the Regional Contract, the TYSCF includes wastewater flow forecasts, a description of planned capital projects, capital project expenditures, plant capacities, and

available funding of the Regional Wastewater Capital Improvement (RC) fund. After detailed review, comments, and recommendations from the Regional Technical and Policy Committees and the Agency's Board of Directors, the TYSCF is adopted.

SECTION 3: REGIONAL WATER RECYCLING INFRASTRUCTURE

Regional Wastewater Recycling Plants

The Agency has four regional water recycling plants which produce recycled water from treated wastewater. Recycled water from all four plants meets Title 22 standards and it is used for agriculture, landscaping, industrial processing, and groundwater recharge. 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 forementioned plants have primary, secondary, and tertiary treatment and recycled water pumping facilities that are interconnected in a regional network. Agency staff use wastewater bypass and diversion facilities, such as the San Bernardino Lift Station, Montclair Diversion Structure, Etiwanda Trunk Line, and Carbon Canyon bypass, to optimize IEUA's flows and capacity utilization. In general, flows are routed between regional plants to maximize recycled water deliveries while minimizing overall pumping and treatment costs. IEUA also has three facilities where the biosolids are processed: RP-1, Regional Water Recycling Plant No.2 (RP-2), and the Inland Empire Regional Composting Facility (IERCF). RP-1 processes biosolids generated within the regional plant, as well as biosolids generated at RP-4, and RP-5 and CCWRF biosolids are processed at RP-2. All biosolids are dewatered and trucked to IERCF for further treatment.

Regional Wastewater System

The regional pipeline system that connects the plants can be used to send sewer flow from one water recycling plant to another to balance and optimize the use of treatment capacity. Currently, the regional interceptors can send partially treated flows from RP-4 to RP-1 and RP-2 to RP-5 and raw influent from CCWRF to RP-5. In addition, primary effluent can be sent from the RP-1 equalization basins to RP-5.

IEUA also has four regional wastewater lift stations. These are used to shift flows that would naturally flow from one portion of the service area to a different treatment plant. This balancing of flows keeps water in the northern portion of the service area, maximizing potential recycled water use. Figure 2 illustrates the regional wastewater network that connects the treatment plants. The lift stations are:

- Montclair Lift Station – pumps wastewater from portions of Montclair, Upland, and Chino to RP-1.
- Preserve Lift Station – pumps wastewater from the Prado Regional Park and the Preserve community in the City of Chino to RP-5.
- 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.

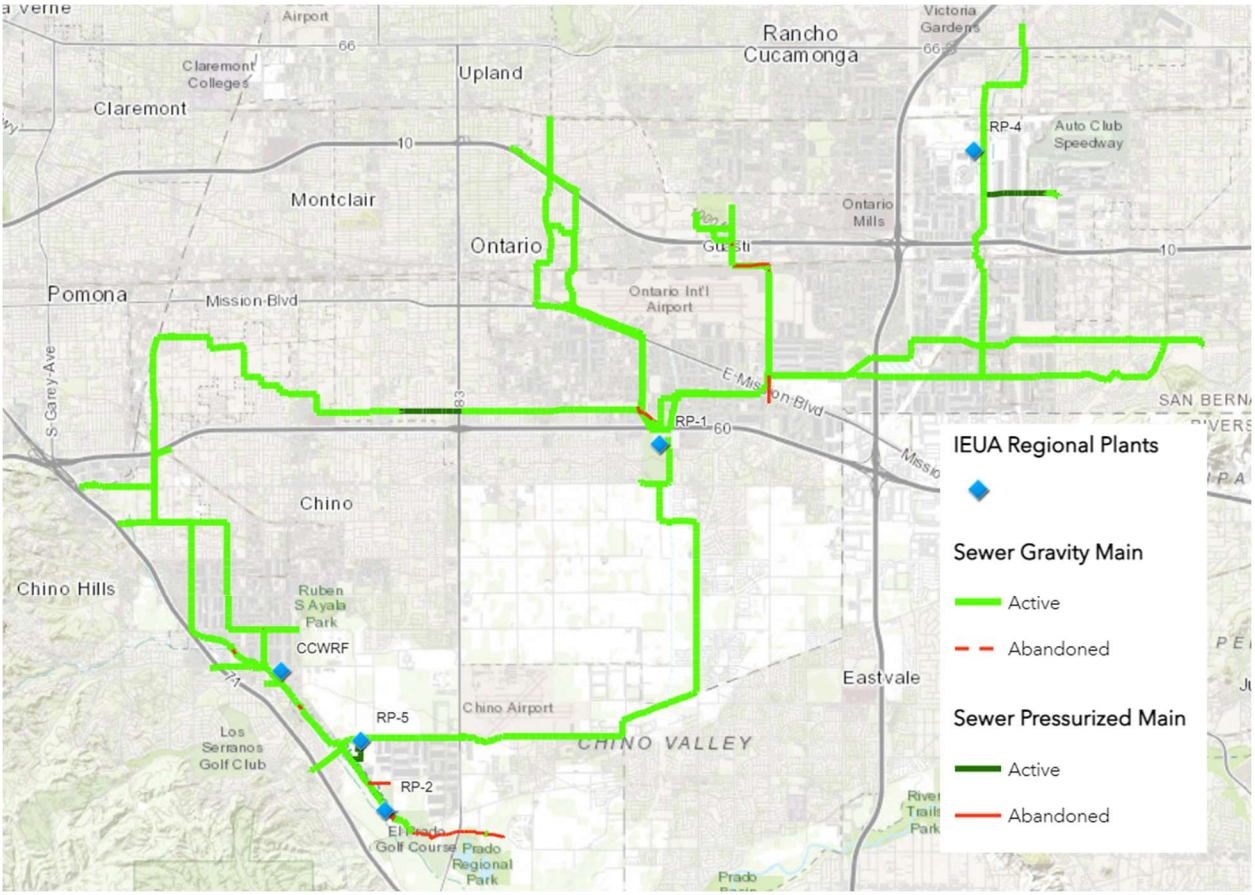

Figure 2 – IEUA Regional Wastewater System

Carbon Canyon Water Reclamation Facility

CCWRF is 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 wastewater flow are pumped to RP-2 for processing. The CCWRF is designed to treat an annual average flow of 12 MGD and treats approximately 8.2 MGD.

Regional Water Recycling Plant No. 1

RP-1 is 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 hydraulic capacity to approximately 44 MGD, based on the wastewater characteristics at the time of the expansions. However, the current design wastewater liquids treatment loading capacity is 32 MGD. A Flow and Loading Study is expected to be completed in Fiscal Year 2025. The first phase of the study of the Regional Sewer System will provide insight into the current wastewater flows and loading

characteristics throughout the service area. A second phase of the study, will gather flow and loading data from direct dischargers into IEUA's sewerage system. RP-1 solids treatment process includes gravity thickening and dissolved air floatation thickening, anaerobic digestion for stabilization, and dewatering by either centrifuge. RP-1 serves the areas of Ontario, Upland, Fontana, Chino, Montclair, and Rancho Cucamonga, and currently treats approximately 26.5 MGD. A future project, RP-1 Liquids Treatment Recovery, is anticipated to start FY 28/29, pending the completion of the second phase of the Flow & Loading Study. This project may be pushed out beyond the current TYCIP; the project will recover liquids treatment capacity to 40 MGD. The RP-1 Solids Thickening & Acid Phase Digesters project will replace the gravity thickener and dissolved air floatation thickeners that are beyond their useful life; the project's substantial completion is anticipated to be June 30, 2028.

Regional Water Recycling Plant No. 2

RP-2 in the City of Chino has been in operation since 1960. RP-2 was both a liquid and solid treatment facility until 2004, when RP-5 was constructed to handle the liquids portion. Since then, RP-2 treats only the biosolids from CCWRF and RP-5. 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 recently redefined 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 will relocate the solids handling from RP-2 to RP-5. The relocation of solids handling is expected to be substantially completed by July 2026.

Regional Water Recycling Plant No. 4

RP-4 is in Rancho Cucamonga and has been in operation treating wastewater and producing recycled water since 1997. The RP-4 facility capacity was doubled in 2009 from 7 MGD to 14 MGD. 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 Rancho Cucamonga, treating approximately 8.8 MGD.

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, which will be relocated to RP-5 around 2025. RP-5 serves areas of Chino, Chino Hills, and Ontario, treating approximately 11.4 MGD.

The RP-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 (now Inland BioEnergy) 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. As of August 2017, Inland BioEnergy stopped regular Operations of the facility. Due to the regional benefits of such a waste handling facility and the reduced energy costs, the Agency is exploring lease opportunities for future use of the RP-5 SHF. The RP-5 Liquids Expansion to 30 MGD and Biosolids Facility will be substantially completed by June 30, 2026. At which point all biosolids generated at RP-5 and solids generated at CCWRF will be processed at RP-5.

Regional Wastewater Recycling Plant Capacity

The regional wastewater recycling plants utilized capacity is calculated based on a 12-month average of influent flows measured in million gallons per day (MGD) as seen in Table 1.

Table 1 - Regional Plant Capacity Utilization (MGD)

Regional Plant	Total Capacity	Average FY 22/23 Used Capacity	Capacity Remaining	Scheduled Expansions
CCWRF	12.0	8.0	4.0	N/A
RP-1	32.0*	26.2	5.8	+8.0
RP-2**	N/A	N/A	N/A	N/A
RP-4	14.0	8.8	5.2	N/A
RP-5	16.3	8.7	7.6	+6.2
Total Influent	**74.3**	**51.7**	**22.6**	**+14.2**

**RP-1 total hydraulic capacity without loading treatment limitations is 44 MGD*

***RP-2 liquid treatment facilities have been relocated to RP-5*

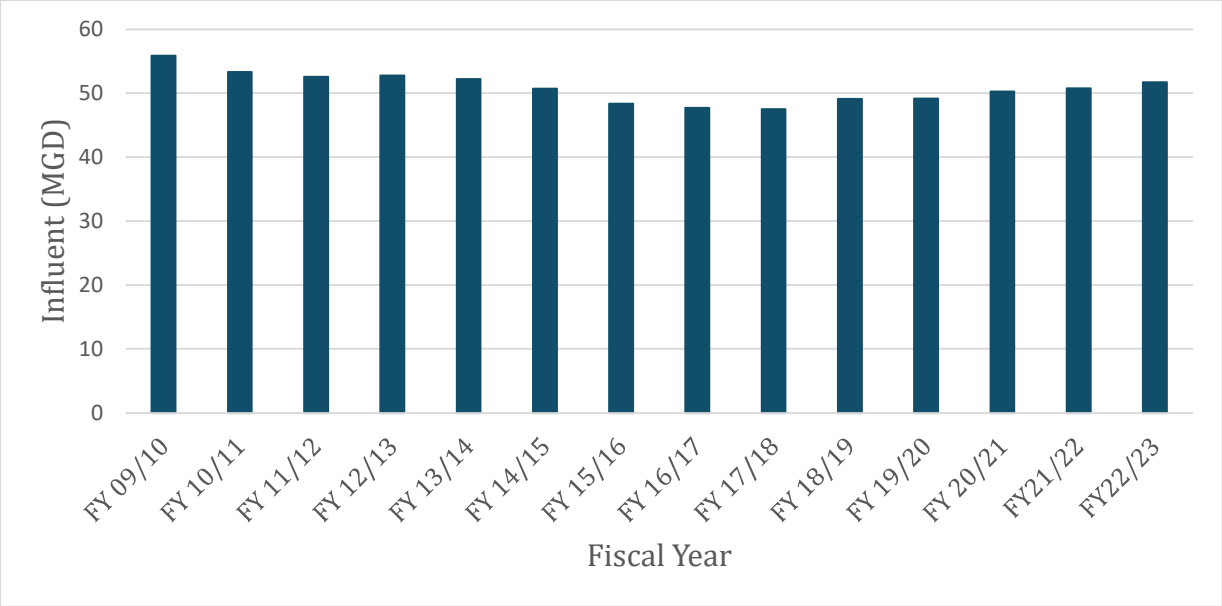

Figure 3 – Historical Regional Influent Flows

Capacity Expansion

Wastewater flow forecasts are conducted annually and are based on four main components: (1) historical wastewater flow trends; (2) per dwelling unit wastewater generation factors, based on the 2015 Wastewater Facilities Master Plan Update (WWFMPU) projections; (3) actual influent flows measured at the treatment plants; and (4) expected future growth numbers provided by the SCAs. These projections are used to determine future demands on the Agency's facilities and help anticipate the need for modifications to treatment plants and solids handling facilities.

The WWFMPU identified the projected flows to the treatment plants in 2035 through 2060. The WWFMPU estimates that there will be a regional flow of 73.5 MGD by 2035 and an ultimate/build-out flow of 80 MGD by 2060. Capacity projects to address increasing demands within the 10-year window include expansions at RP-5, the relocation of RP-2 solids handling to RP-5, and the beginning of the RP-1 liquid capacity recovery and solids treatment expansion.

The expansion at RP-5 set for completion in 2025 will increase the plant capacity to 22.5 MGD, up 6.2 MGD from its current capacity of 16.3 MGD.

The RP-1 Liquid Treatment Recovery project is set to recover 8 MGD of capacity lost due to system loading. While RP-1 has a hydraulic capacity of 44 MGD, only 32 MGD of capacity is usable due to loading treatment constraints. After the recovery project is completed, the total usable capacity will be increased to 40 MGD, still 4 MGD below the plant's hydraulic capacity.

System Loading

Over the past decade the IEUA service area has experienced an increase in indoor water use efficiency as a direct result of drought, shifting public policy, more efficient building and plumbing codes, and effective conservation program campaigns. This increased efficiency has decreased the total influent volume of wastewater flows received by IEUA treatment plants by approximately 10% since 2010. While the flows have decreased, the regional population has continued to grow. The combination of an increased population but reduced wastewater flow has resulted in an increase in the strength of the wastewater coming into IEUA's treatment facilities. This trend of increased wastewater strength is expected to continue as both the population and regional water efficiency continue to increase. Current and future wastewater treatment plant expansions are largely driven by the increased strength of wastewater flows to the facilities, rather than the volume of flows to the facilities.

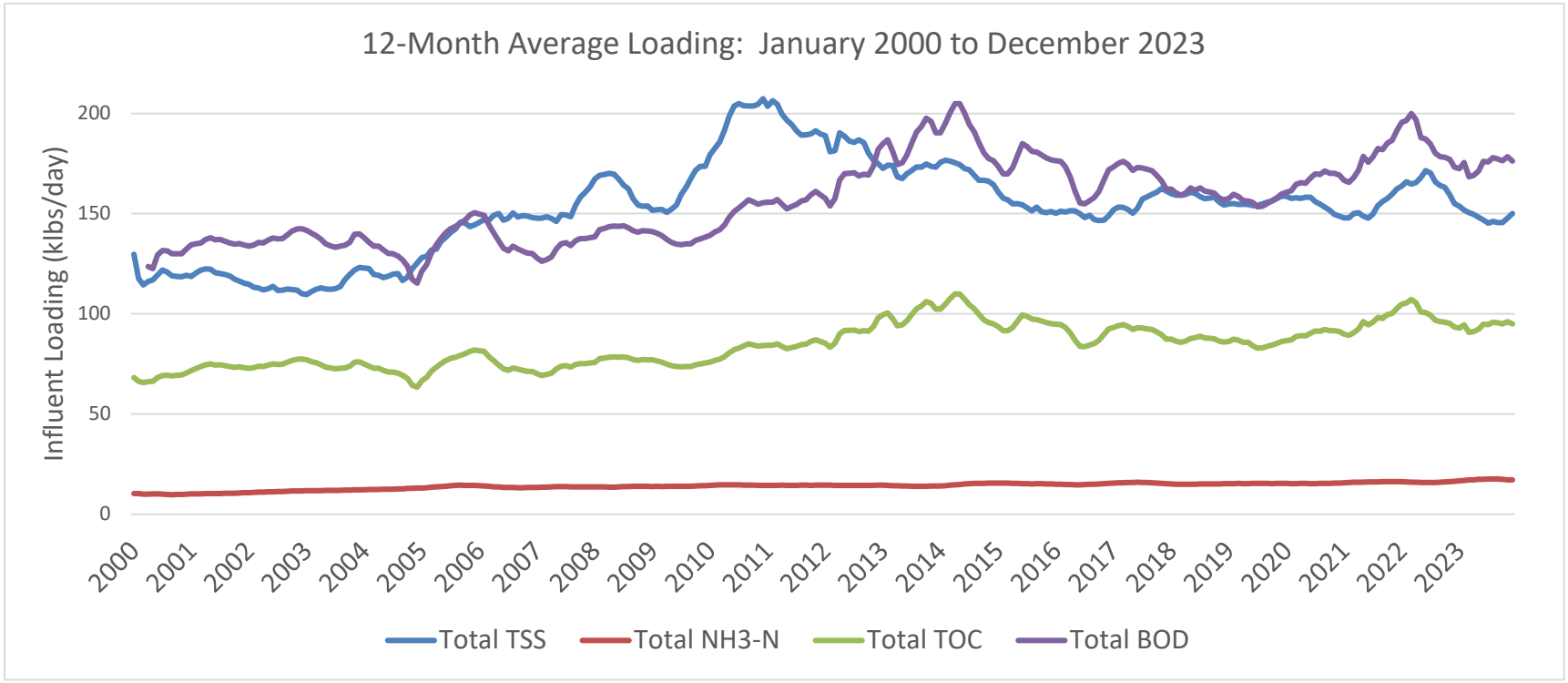

Figure 4 – Influent Loading (12-Month Average): January 2000 – December 2023

SECTION 4: EQUIVALENT DWELLING UNITS

One equivalent dwelling unit (EDU) is an approximate measure of the daily wastewater flow in quantity and strength of an average single-family household as determined in Exhibit "J" of the Regional Contract. This unit of measurement enables IEUA and the SCAs to uniformly track past and projected connections to the regional wastewater system.

Historical EDU Activity

EDU activity has decreased from FY 21/22 to FY 22/23 with the addition of 3,494 EDUs to the region compared to the addition of 5,104 EDUs the previous fiscal year. The additional EDUs added in FY 22/23 are 4,565 EDUs lower than the SCAs projections of 8,059 EDUs and 506 EDUs less than the IEUA Budgeted Projections of 4,000 EDUs. Two sets of projections exist to allow for conservative estimates. The SCAs' projections are required under the Regional Contract and Regional Sewage Service Ordinance No.114 and serve as a planning tool for plant treatment capacity and loading. Under the Regional Contract and Regional Sewage Service Ordinance, SCAs who report EDU projections that are lower than what the region experiences may have building moratoriums imposed. For this reason, the SCAs may make projections conservatively high. Budgeted projections are used by IEUA to project future wastewater treatment needs and fund availability. To ensure adequate fund availability, budgeted projections are conservatively low. The result of both sets of projections is the assumption that projections are conservative, ensuring the regional plants can safely and effectively treat the additional wastewater while also ensuring the Agency does not over-project fund availability. Table 2 outlines the building activity in the region along with both sets of EDU projections.

Table 2 - Building Activity for Last Five Fiscal Years (FY 17/18 through FY 22/23)

Year	Building Activity (EDUs)	Budgeted Projections (EDUs)	SCAs Projections (EDUs)
FY 17/18	5223	4,000	5,442
FY 18/19	3459	4,000	6,149
FY19/20	3489	4,000	6,390
FY 20/21	5287	4,000	9,013
FY 21/22	5104	4,000	9,144
FY 22/23	3494	4,000	8,059

Projected EDU Activity

In accordance with the Regional Contract and Regional Sewage Service Ordinance No.114, the SCAs completed a survey of their 10-year capacity demand forecast. The results of the 10-year capacity demand forecast survey are summarized in Table 3. For FY 2023/24, the forecasted activity was 7,778 additional EDUs. Over the next ten years, activity was projected to total 60,272 EDUs added region wide. Approximately 69% of this projected activity is a result of new development in the service areas of Ontario and Fontana. Over the next ten years, building activity is projected to be approximately 79% residential and 21% commercial/industrial. Figure 5 highlights the breakdown between residential and commercial/industrial projected EDUs.

Table 3 – 10 Year Projected SCAs EDU Activity

Fiscal Year	Chino* EDUs	Chino Hills* EDUs	CVWD EDUs	Fontana EDUs	Montclair EDUs	Ontario EDUs	Upland EDUs	Total EDUs
FY 23/24	404	356	2,000	1,186	338	3,382	112	7,778
FY 24/25	668	559	2025	1,297	638	3,382	214	8,783
FY 25/26	663	672	890	1,384	308	3,382	337	7,636
FY 26/27	400	740	490	1,479	34	2,660	318	6,121
FY 27/28	286	242	950	1,479	34	2,520	346	5,857
FY 28/29	286	61	490	1,479	34	2,410	205	4,965
FY 29/30	286	33	490	1,479	34	2,410	75	4,807
FY 30/31	286	5	490	1,479	34	2,410	75	4,779
FY 31/32	286	0	490	1,479	34	2,410	75	4,774
FY 32/33	286	0	490	1,479	34	2,410	75	4,774
TOTAL	**3,851**	**2,668**	**8,805**	**14,218**	**1,522**	**27,376**	**1,832**	**60,272**

**Per the request from the Cities of Chino and Chino Hills, forecasts have been extended from last Fiscal Year.*

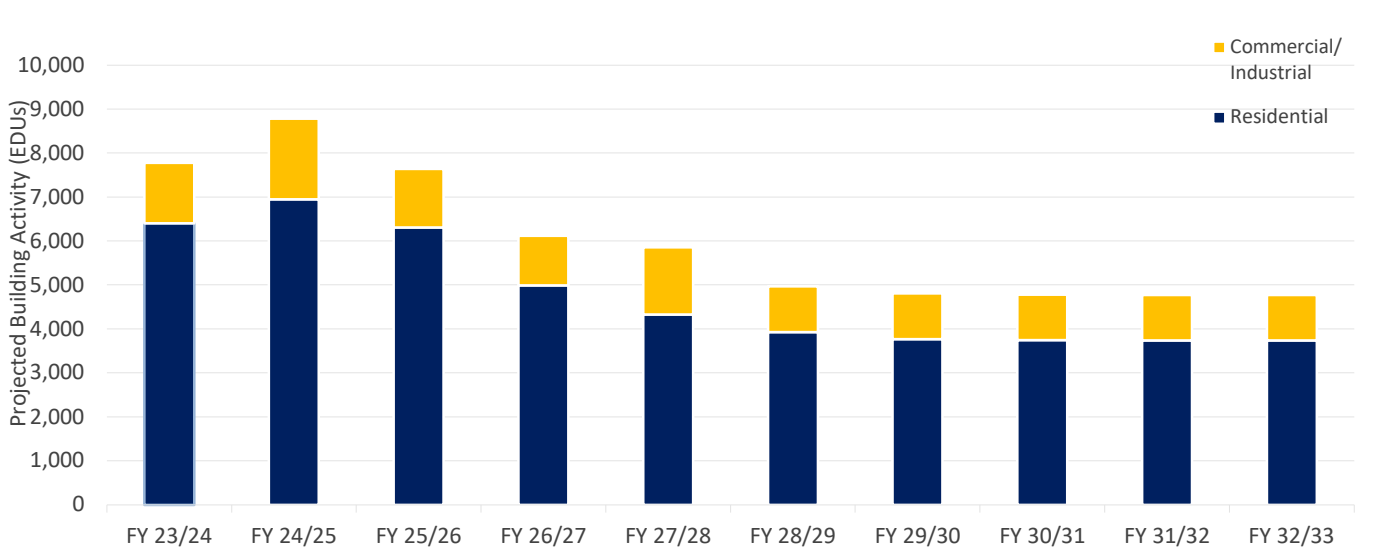

Figure 5 – FY 23/24 10-Year Growth Forecast

Estimated CCRA account contributions in 2024 dollars are calculated by taking the SCAs EDU projections and multiplying them by the current adopted EDU rate of $8,620. Projected CCRA contributions are estimated at roughly $67 million at the start of the ten-year period and steadily dropping year after year to around $41 million.

Capital Capacity Reimbursement Accounts

IEUA levies a fee on all new connections to its regional wastewater system. Connection fees are restricted to finance capital acquisition, construction, equipment, and process improvement costs for the IEUA's regional wastewater system. Pursuant to the Regional Contract and Regional Sewage Service Ordinance, new EDU connection fees are collected by each of IEUA's SCAs and held in trust in a Capital Capacity Reimbursement Account (CCRA) until requested, or "called", by IEUA. Capital calls, or connection fee payments of CCRA funds, are based on the identified and projected capital needs of IEUA over the ensuing nine months, as calculated and reported by IEUA each quarter. Connection fee rates were evaluated as part of IEUA's FY 2019/2020 Rate Study. Capital calls are calculated based on the proportionate share of each Contracting Agency's CCRA account balance relative to the aggregate amount. The current balance of the CCRA accounts can be found in Table 4 below.

Table 4 – Contracting Agencies CCRA Balance as of June 30th, 2023

Regional Contracting Agency	CCRA Balance
City of Chino	$14,426,451.55
City of Chino Hills	$3,454,377.91
Cucamonga Valley Water District	$14,664,298.42
City of Fontana	$24,168,429.85
City of Montclair	$5,084,427.86
City of Ontario	$40,977,538.74
City of Upland	$4,938,855.17
Total	**$107,714,379.50**

SECTION 5: WASTEWATER CAPITAL IMPROVEMENT PROJECTS

Regional Wastewater Capital Improvement Fund

The TYSCF evaluates capital improvement projects necessary to meet wastewater forecasted demands. IEUA categorizes these projects into the Regional Wastewater Capital Improvement (RC) Fund. Expenses charged to the RC Fund include capital projects that are required to meet regional growth in the forms of flow, loading, capacity, or other factors. The RC Fund's primary sources of revenue include new EDU connection fees and property taxes but also include debt proceeds, loans, and grants. An estimated breakdown of the RC founding sources over the next 10-years can be found in Appendix B.

Ten-Year Sewer Capital Forecast Project List

The TYSCF contains projects which were identified by IEUA staff and include expansion projects to provide additional treatment capacity to meet future growth. Drivers used to determine the timeframe and necessity of projects include regulatory and permitting requirements, wastewater flow projections, asset age, performance, efficiency, and grant or funding availability. Total wastewater capital spending over the next ten-years is projected to be $1,028,911,598. The TYSCF project list represents IEUA's capital projects forecast based on existing planning documents and anticipated funding sources. The full list of TYSCF projects can be found in Appendix A.

APPENDIX A: TEN-YEAR SEWER CAPITAL FORECAST PROJECT LIST

Project Number	Project Name	FY 24/25	FY 25/26	FY 26/27	FY 27/28	FY 28/29	FY 29/30	FY 30/31	FY 31/32	FY 32/33	FY 33/34	Total TYCIP FY 2025-2034	Total Project Budget
RC - Regional Wastewater Capital Improvement Fund													
EN11039	RP-1 Disinfection Pump Improvements	$ 455,000										$ 455,000	$ 12,997,043
EN17006	CCWRF Asset Management and Improvements	$ 10,000,000	$ 6,875,000									$ 16,875,000	$ 31,750,000
EN18006	RP-1 Flare Improvements	$ 289,000										$ 289,000	$ 9,650,000
EN19001	RP-5 Expansion to 30 mgd	$ 28,000,000	$ 7,000,000	$ 10,000,000								$ 45,000,000	$ 245,030,000
EN19006	RP-5 Biosolids Facility	$ 17,000,000	$ 2,000,000	$ 2,000,000								$ 21,000,000	$ 218,623,667
EN19025	Regional Force Main Improvements	$ 500,000										$ 500,000	$ 5,727,327
EN21045	Montclair Force Main Improvements	$ 4,903,000	$ 4,800,000									$ 9,703,000	$ 10,801,406
EN22006	RC Asset Managment						$ -	$ -	$ -	$ 8,000,000	$ 8,000,000	$ 16,000,000	$ 66,900,000
EN22022	RP-1 Air Compressor Upgrades	$ 1,500,000	$ 2,700,000									$ 4,200,000	$ 6,927,944
EN22039	RP-4 SCADA Performance Improvement	$ 300,000	$ 350,000	$ 270,000								$ 920,000	$ 1,012,000
EN22044	RP-1 Thickening Building & Acid Phase Di	$ 20,000,000	$ 65,000,000	$ 55,000,000	$ 5,500,000							$ 145,500,000	$ 160,565,672
EN23025	Agency Power Monitoring		$ 499,457									$ 499,457	$ 530,000
EN24001	RP-1 Liquid Treatment Capacity Recovery					$ 3,000,000	$ 12,000,000	$ 15,000,000	$ 15,000,000	$ 35,000,000	$ 50,000,000	$ 130,000,000	$ 182,050,000
EN24002	RP-1 Solids Treatment Expansion	$ 500,000	$ 4,000,000	$ 4,000,000	$ 10,000,000	$ 20,000,000	$ 8,249,000					$ 46,749,000	$ 48,050,000
EN24022	IEUA SCADA Master Plan	$ 750,000										$ 750,000	$ 750,000
EN24027	Fall Protection and Prevention Solutions at specified wastewater locations	$ 996,000	$ 2,000,000	$ 2,000,000	$ 2,000,000	$ 500,000						$ 7,496,000	$ 9,600,000
EN24028	RP-1 Utility Water Piping Asset Management Phase I		$ 120,000	$ 1,500,000	$ 700,000							$ 2,320,000	$ 2,500,000
EN24030	Headquarter B additional Office Space	$ 90,000										$ 90,000	$ 300,000
EN24031	RP-4 Manhole Surcharge Remediation	$ 600,000										$ 600,000	$ 800,000
EN24052	Sewer Improvements at Union Pacific Crossings	$ 3,885,000	$ 15,000									$ 3,900,000	$ 3,978,562
EN25025	REEP Return to Service Capital	$ 2,800,000	$ 4,300,000	$ 500,000								$ 7,600,000	$ 7,600,000
EN25041	Collection System Upgrades FY 24/25	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 500,000	$ 5,000,000	$ 5,000,000
EN25042	Regional Capital PDR FY 24/25	$ 300,000	$ 300,000	$ 300,000	$ 300,000	$ 300,000	$ 300,000	$ 300,000	$ 300,000	$ 300,000	$ 300,000	$ 3,000,000	$ 3,000,000
EN25064	Agency Wide Remote Vibration Project	$ 200,000	$ 150,000	$ 150,000								$ 500,000	$ 500,000
EN25067	Caltrans IEUA Collections Sewer I-10 Relocation	$ 75,000	$ 130,000	$ 1,580,000	$ 200,000							$ 1,985,000	$ 1,985,000
EN25069	CCWRF Process Improvements Phase II	$ 200,000	$ 325,000	$ 400,000	$ 1,500,000	$ 5,750,000	$ 3,250,000					$ 11,425,000	$ 11,425,000
EN25070	Development and Early Design - Compliance for Wastewater Facilities	$ 4,500,000	$ 13,700,000	$ 12,000,000	$ 15,000,000							$ 45,200,000	$ 45,200,000
EN25071	San Bernardino Lift Station Containment	$ 150,000	$ 250,000									$ 400,000	$ 400,000
EN26003	Regional System Siphon Barrel Gate Improvements		$ 325,000	$ 610,000								$ 935,000	$ 935,000
EN26008	RP-1 Centrate Line Struvite Prevention		$ 250,000	$ 500,000								$ 750,000	$ 750,000
EN26010	RP-4 Process Improvements Phase III		$ 500,000	$ 2,000,000	$ 7,500,000	$ 1,500,000						$ 11,500,000	$ 11,500,000
EN26012	RP-5 Emergency Overflow Pond Lining		$ 1,000,000									$ 1,000,000	$ 1,000,000
EN26013	RP-5 Low Pressure DG holder		$ 1,000,000									$ 1,000,000	$ 1,000,000
EN26014	CCWRF Secondary Clarifier Weir Covers		$ 1,050,000									$ 1,050,000	$ 1,050,000
EN27006	Chino Interceptor Diversion Pipe Repair			$ 500,000	$ 2,100,000	$ 500,000						$ 3,100,000	$ 3,100,000
EN27007	Montclair Diversion Structure Enhancements			$ 250,000	$ 250,000							$ 500,000	$ 500,000
EN28002	RP-1 Centrate Treatment				$ 1,600,000	$ 3,300,000	$ 3,300,000					$ 8,200,000	$ 8,200,000
EN28005	Cucamonga Interceptor Pipe Repair				$ 400,000	$ 750,000						$ 1,150,000	$ 1,150,000
EN28006	RP-2 Decommissioning				$ 500,000	$ 1,000,000	$ 1,500,000	$ 1,500,000	$ 4,500,000	$ 8,000,000	$ 8,000,000	$ 25,000,000	$ 25,000,000
EN28007	Advanced Water Purification Facility				$ 12,000,000	$ 20,000,000	$ 63,000,000	$ 65,000,000	$ 63,000,000			$ 223,000,000	$ 223,000,000
EN28008	RP5 O&M Building				$ 3,000,000	$ 20,000,000	$ 20,000,000	$ 5,000,000				$ 48,000,000	$ 48,000,000
EN29008	RP-1 Equilization Basin #1 Access Ramp					$ 35,000	$ 106,500	$ 300,000				$ 441,500	$ 441,500
EN29009	RP-1 Operations and Maintenance Building Rehabilitation/Modernization					$ 50,000	$ 450,000	$ 1,000,000	$ 8,000,000	$ 7,000,000		$ 16,500,000	$ 16,500,000
EN30025	RP-1 Dump Station						$ 750,000	$ 1,100,000				$ 1,850,000	$ 1,850,000
EN31001	Freeway Trunk Pipe Repair							$ 1,000,000	$ 4,000,000	$ 4,000,000	$ 4,000,000	$ 13,000,000	$ 13,000,000
EN31002	Riverside Drive Trunk Pipe Repair							$ 1,000,000	$ 1,850,000	$ 1,400,000		$ 4,250,000	$ 4,250,000
FM25012	New Guard Shack at RP-1	$ 200,000										$ 200,000	$ 200,000
FM25014	RP-4 Scissor Lift	$ 70,000										$ 70,000	$ 70,000
IS22006	SCADA Network Infrastructure Replacement	$ 300,000	$ 300,000	$ 300,000	$ 300,000	$ 300,000	$ 300,000	$ 300,000	$ 300,000	$ 300,000	$ 300,000	$ 3,000,000	$ 4,300,000
IS25010	Operation Technology Infrastructure for New Assets	$ 105,000	$ 105,000	$ 105,000	$ 105,000	$ 105,000	$ 105,000	$ 105,000	$ 105,000	$ 105,000	$ 105,000	$ 1,050,000	$ 1,050,000
IS25011	SCADA Infrastructure Asset Replacement	$ 450,000	$ 450,000	$ 450,000	$ 450,000	$ 450,000	$ 450,000	$ 450,000	$ 450,000	$ 450,000	$ 450,000	$ 4,500,000	$ 4,500,000
PL17002	HQ Solar Photovoltaic Power Plants Ph. 2			$ 300,000	$ 1,100,000							$ 1,400,000	$ 1,400,000
PL19001	Purchase Existing Solar Installation			$ 3,500,000								$ 3,500,000	$ 7,500,000
Total		**$ 99,618,000**	**$ 119,994,457**	**$ 98,715,000**	**$ 65,005,000**	**$ 78,040,000**	**$ 114,260,500**	**$ 92,555,000**	**$ 98,005,000**	**$ 65,055,000**	**$ 71,655,000**	**$ 902,902,957**	**$ 1,473,900,121**
RO - Regional Wastewater Operations and Maintenance Fund													
AM23001	Old VFD Replacement (Wastewater)	$ 1,100,000										$ 1,100,000	$ 4,800,000
EN13016	SCADA Enterprise System	$ 6,295,000	$ 6,000,000									$ 12,295,000	$ 38,000,000
EN17042	Digester 6 and 7 Roof Repairs	$ 2,200,000										$ 2,200,000	$ 12,450,161
EN18025	RP-1 Secondary System Rehabilitation	$ 500,000	$ 2,000,000	$ 7,000,000	$ 2,000,000							$ 11,500,000	$ 11,500,000
EN19009	RP-1 Energy Recovery	$ 1,000,000	$ 500,000									$ 1,500,000	$ 4,325,000
EN20044	RP-1 Plant 3 Primary Cover Replacement		$ 400,000									$ 400,000	$ 600,000
EN20045	RP-1 TP-1 Level Sensor Replacement		$ 500,000									$ 500,000	$ 543,521
EN20051	RP-1 MCB and Old Lab Building Rehab	$ 1,404,000	$ 860,000									$ 2,264,000	$ 2,750,058
EN20057	RP-4 Process Improvements Phase II	$ 2,200,000	$ 4,300,000	$ 2,800,000								$ 9,300,000	$ 10,321,000
EN21053	RP-1 Old Effluent Structure Rehabilitati	$ 450,000	$ 1,450,000									$ 1,900,000	$ 2,600,000
EN21056	RP-1 Evaporative Cooling for Aeration Bl	$ 1,311,000										$ 1,311,000	$ 1,871,732
EN22027	RP-1 Repurpose Lab	$ 1,500,000	$ 754,000									$ 2,254,000	$ 2,661,081
EN22031	RP-1 Intermediate Pump Station Electrica	$ 500,000	$ 3,000,000	$ 3,000,000								$ 6,500,000	$ 9,237,147

Project Number	Project Name	FY 24/25	FY 25/26	FY 26/27	FY 27/28	FY 28/29	FY 29/30	FY 30/31	FY 31/32	FY 32/33	FY 33/34	Total TYCIP FY 2025-2034	Total Project Budget
EN23000	RP1 Device Net Replacement	$ 1,000,000	$ 1,000,000									$ 2,000,000	$ 4,246,416
EN23004	CCWRF Aeration Basins 1-6 Drain Valves	$ 766,000	$ 250,000	$ 600,000	$ 185,000							$ 1,801,000	$ 2,059,000
EN23024	RP-1 TP-1 Stormwater Drainage Upgrades	$ 57,000	$ 300,000	$ 904,500	$ 6,416							$ 1,267,916	$ 1,394,353
EN23035	CCWRF RAS Header Replacement	$ 250,000										$ 250,000	$ 628,307
EN23036	San Bernardino Ave LS Reliability Improv	$ 500,000	$ 2,300,000									$ 2,800,000	$ 3,259,752
EN23038	CWRF HVAC System Ugrade	$ 250,000										$ 250,000	$ 416,428
EN23074	CCWRF Influent Box Rehab at the Primary	$ 480,000										$ 480,000	$ 910,000
EN23111	RP1 Headworks Bar Screen System Improvem	$ 900,000										$ 900,000	$ 3,905,000
EN23114	RP1 Instrumentation and Control Enhancem		$ 200,000	$ 1,000,000								$ 1,200,000	$ 1,369,876
EN24020	RP-1 Dewatering Centrate Pumps	$ 1,550,000										$ 1,550,000	$ 2,894,353
EN24023	RP3 Regional Sewer Diversion Structure Rehab	$ 635,000										$ 635,000	$ 800,000
EN24029	RP-1 Tertiary Asset Manager Phase I		$ 500,000	$ 2,500,000	$ 989,000							$ 3,989,000	$ 4,000,000
EN24032	RP-1 Primary Clarifier #1 and #10 Rehabilitation	$ 1,210,000	$ 1,000,000									$ 2,210,000	$ 2,700,000
EN24033	Annular Seals			$ 1,000,000								$ 1,000,000	$ 1,380,000
EN24059	Chino Hills Trunk-014 Sewer Siphon CIPP Repair	$ 1,000,000	$ 150,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,150,000	$ 1,297,518
EN25002	SSI Aeration Disk Replacement		$ 100,000	$ 550,000	$ 200,000	$ 1,200,000		$ 250,000	$ 1,200,000		$ -	$ 3,500,000	$ 3,500,000
EN25006	CCWRF Primary Clarifier Coating	$ 140,000	$ 1,260,000									$ 1,400,000	$ 1,400,000
EN25010	RSS - Collection System Pipe Rehabilitation and Lining	$ -				$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 6,000,000	$ 6,000,000
EN25020	RP-1 Digester Cleaning Lagoon (DCL) Lini								$ 100,000	$ 600,000		$ 700,000	$ 700,000
EN25044	Asset Management Software	$ 200,000	$ 500,000	$ 50,000								$ 750,000	$ 750,000
EN25045	CCWRF Electrical Improvements	$ 500,000	$ 750,000	$ 2,725,000	$ 2,725,000							$ 6,700,000	$ 6,700,000
EN25046	Regional Operation Project PDR's FY 24/25	$ 200,000	$ 200,000	$ 200,000	$ 200,000	$ 200,000	$ 200,000	$ 200,000	$ 200,000	$ 200,000	$ 200,000	$ 2,000,000	$ 2,000,000
EN26004	Agency Wide VFD Upgrades (Wastewater) FY25/26	$ -	$ 960,000	$ 960,000	$ 960,000	$ 960,000	$ 960,000	$ 960,000	$ 960,000	$ 960,000	$ 960,000	$ 8,640,000	$ 8,640,000
EN26005	RP-1 Plant Air Expansion Tank Replacement		$ 250,000									$ 250,000	$ 250,000
EN29003	Replace Aeration Basin Influent / RAS, Step feed Gates		$ 3,800,000									$ 3,800,000	$ 4,100,000
EN29006	RP-1 Dewatering Silos Levelers Relocation					$ 500,000	$ 1,400,000					$ 1,900,000	$ 1,900,000
EN30002	CCWRF Outfall Discharge Structure and Culvert Rehab		$ 520,000									$ 520,000	$ 700,000
EN30003	Regional Operation Asset Management						$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 5,000,000	$ 5,000,000
EP24001	Agency Wide Major Facilities O&M Repair/Replacement	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000	$ 1,000,000		$ 9,000,000	$ 9,908,000
IS20007	Control System Ent Historian Enhancement	$ 741,725	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 741,725	$ 1,000,000
IS28001	Operational AI and Machine Learning		$ -	$ -	$ -	$ 300,000	$ 300,000					$ 600,000	$ 600,000
Total		**$ 29,839,725**	**$ 34,804,000**	**$ 24,289,500**	**$ 8,265,416**	**$ 5,160,000**	**$ 5,860,000**	**$ 4,410,000**	**$ 5,460,000**	**$ 4,760,000**	**$ 3,160,000**	**$ 126,008,641**	**$ 186,068,703**

APPENDIX B: REGIONAL WASTEWATER CAPITAL IMPROVEMENT FUNDING SOURCES

Table 5 - Regional Wastewater Capital Improvement Funding Sources												
	FY 2022/23	FY 2023/24	FY 2024/25	FY 2025/26	FY 2026/27	FY 2027/28	FY 2028/29	FY 2029/30	FY 2030/31	FY 2031/32	FY 2032/33	FY 2033/34
	Actual	Projected Actual	Proposed Budget	Proposed Budget	Forecast							
REVENUES AND OTHER FINANCING SOURCES												
Interest Revenue	3,040,873	3,000,000	3,144,500	3,000,000	2,000,000	1,800,000	1,500,000	1,500,000	1,500,000	1,500,000	1,300,000	1,300,000
TOTAL REVENUES	**$3,040,873**	**$3,000,000**	**$3,144,500**	**$3,000,000**	**$2,000,000**	**$1,800,000**	**$1,500,000**	**$1,500,000**	**$1,500,000**	**$1,500,000**	**$1,300,000**	**$1,300,000**
OTHER FINANCING SOURCES												
Property Tax - Debt and Capital	51,587,012	51,373,000	53,347,600	54,193,700	55,054,600	55,930,500	56,821,600	57,728,200	58,650,700	59,589,300	60,544,400	61,516,200
Regional System Connection Fees	26,544,482	24,395,731	25,859,475	26,894,150	27,969,916	28,809,014	19,782,190	20,375,655	20,986,925	21,616,533	22,265,029	22,932,979
Debt Proceeds		11,689,728	47,763,705	48,430,016	12,117,530	58,800,000						
State Loans	55,742,420	20,114,225	13,450,844									
Capital Reimbursement	56,500											
Other Revenues	77,934	55,763	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Loan Transfer from Internal Fund	2,000,000	6,000,000	5,500,000	5,000,000	5,105,000							
TOTAL OTHER FINANCING SOURCES	**$136,008,348**	**$113,628,447**	**$145,922,624**	**$134,518,866**	**$100,248,046**	**$143,540,514**	**$76,604,790**	**$78,104,855**	**$79,638,625**	**$81,206,833**	**$82,810,429**	**$84,450,179**