

Notice and Agenda

REGULAR MEETING — BOARD OF DIRECTORS — COUNTY SANITATION DISTRICT NO. 28

To be held at the OFFICE OF THE DISTRICT
1955 Workman Mill Road, Whittier, California

In response to concerns about the Novel Coronavirus (COVID-19), and in accordance with the Governor's Executive Order N-29-20 and N-08-21, Directors will attend these meetings via teleconference. To join the meeting, click <https://us02web.zoom.us/j/8091438308> or enter the Meeting ID 809 143 8308 into the Zoom app on your smartphone or computer. Alternatively, you may join by phone by calling (669) 900-9128 and entering the Meeting ID. You may find further information at: www.lacsd.org/aboutus/governance/agenda_and_minutes/default.asp

THE DISTRICT MAY TAKE ACTION ON ANY AGENDA ITEM LISTED BELOW

WEDNESDAY		August 25, 2021		At 1:30 P.M.
CURTIS	EICH	DAVITT (Chairperson)	GUNTER	WALKER

1. Public Comment
2. Approve Minutes of Regular Meeting Held July 28, 2021
3. Approve June 2021 Expenses in Amount of \$47,218.58

Summary: Local District expenses represent costs incurred for operations, maintenance, and capital projects that are the sole responsibility of the individual District. Allocated expenses represent the District's proportionate share of expenses made by District No. 2, the administrative District, on its behalf pursuant to either the Joint Administration Agreement or the Joint Outfall Agreement. These Agreements provide for the joint administration, technical support and management of the operations, maintenance, and capital costs associated with all of the shared facilities for all of the signatory Districts, along with the methodology for determining the proportionate costs for each District. A listing of Districts' payments and previously approved budgets can be found on the Districts' websites at lacsd.org/financial-documents. This item is consistent with the Districts' Guiding Principle of commitment to fiscal responsibility and prudent financial stewardship.

Local District Expenses:	
Operations & Maintenance (O & M)	\$ 7,534.10
Allocated Expenses:	
Joint Administration	8,904.86
Technical Support	7,731.43
Joint Outfall	<u>23,048.19</u>
Total Expenses	<u>\$47,218.58</u>

4. Re: Joint Outfall System (JOS) Director Ad Hoc Committee Report and Recommendations

Summary: The JOS is comprised of 17 Districts in the Los Angeles basin that share in the ownership and operation of a system of sewers, water reclamation plants, and the Joint Water Pollution Control Plant, which is the final treatment plant for all of the wastewater in the JOS. In September 2020, a recommendation was made to the Personnel Committee that a Director Ad Hoc Committee be formed to explore opportunities to improve how sharing of ownership and costs of the JOS are managed. The Ad Hoc Committee met five times, and the results of the Committee's work are presented in the attached report. In July, the Personnel Committee concurred with the Ad Hoc Committee's recommendations. The Chief Engineer and General Manager will brief the Board.

Adjourn

Status Report: Prior to or during the meeting session, the Chief Engineer and General Manager may update the Directors on various matters concerning the Districts that may be of current interest to the Directors.

Public Comment: Members of the public may address the Board of Directors on any item shown on the agenda or matter under the Board's authority. A "Request to Address Board of Directors" form is available. In compliance with the Americans with Disabilities Act, if you require special assistance to participate in this meeting, please contact the Secretary to the Boards' Office (562) 908-4288, extension 1100. Notification of 48 hours prior to the meeting will enable staff to make reasonable arrangements to ensure accessibility to this meeting. (28CFR 35.101 et seq. ADA Title II).

Document Requests: Links to supporting documents are available online at the time of posting. Agendas and supporting documents or other writings that will be distributed to Board members in connection with matters subject to discussion or consideration at this meeting that are not exempt from disclosure under the Public Records Act are available for inspection following the posting of this agenda at the office of the Secretary to the Boards of Directors located at the Districts' Joint Administration Building, 1955 Workman Mill Road, Whittier, California, 90601, or at the time of the meeting at the address posted on this agenda.



**LOS ANGELES COUNTY
SANITATION DISTRICTS**
Converting Waste Into Resources

Report and Recommendations

Joint Outfall System Ad Hoc Committee Sanitation Districts of Los Angeles County

June 2021

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LIST OF ACRONYMS

AV	Ad Valorem
CIF	Capital Improvement Funds
CIP	Capital Improvement Plan
FY	Fiscal Year
IEUA	Inland Empire Utilities Agency
IW	Industrial Waste
JO	Joint Outfall
JOS	Joint Outfall System
JPA	Joint Powers Agreement
JWPCP	Joint Water Pollution Control Plant
PP	Pumping Plant
SC	Service Charge
SU	Sewage Unit
WCS	Wastewater Collection System
WRP	Water Reclamation Plant
FY	Fiscal Year

LIST OF AD HOC COMMITTEE MEMBERS

Cathy Warner
Mayor Pro Tem, City of Whittier
Chairperson, District No. 2
Director, Districts Nos. 15 and 18

Rick Barakat
Councilmember, City of Bradbury
Chairperson, District No. 15
Director, District No. 22

Pat Furey
Mayor, City of Torrance
Chairperson, District No. 5 and
South Bay Cities Sanitation District

Lori Y. Woods
Councilmember, City of Signal Hill
Director, District No. 29

Michael Davitt
Mayor, City of La Cañada Flintridge
Chairperson, Districts Nos. 28 and 34

SANITATION DISTRICTS' PARTICIPATING STAFF

Robert Ferrante
Chief Engineer and General Manager

Chuck Boehmke
Assistant Chief Engineer and
Assistant General Manager

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Financial Management Department Head
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Andrew Hall
Financial Mgt. Assistant Dept. Head

Sam Espinoza
Engineering Department Head

Ray Tremblay
Facilities Planning Department Head

Rechelle Asperin
Secretary to the Chief Engineer and
General Manager

EXECUTIVE SUMMARY

Background

The Los Angeles County Sanitation Districts are a public agency focused on converting waste into resources including recycled water, energy and recycled materials. The agency consists of 24 independent special districts serving about 5.6 million people in Los Angeles County. The service areas in the map below cover approximately 850 square miles and encompass 78 cities and unincorporated areas in the county.

A subset of seventeen of the Districts comprise the Joint Outfall System (JOS), which manages an interconnected system of sanitary sewers, pumping plants, water reclamation plants (WRPs), and the Joint Water Pollution Control Plant (JWPCP). The JOS provides wastewater collection, treatment and reuse for approximately 5 million people in all or portions of 73 cities and unincorporated Los Angeles County in the southeastern portion of the County.

The JOS Districts' finances are inherently interconnected as they share in the cost of constructing, operating and maintaining wastewater system facilities, and they share certain revenue streams collected by the JOS. The sharing and administrations of these expenses and revenues is determined by a number of agreements, ordinances, policies, and state law.

In recent years, staff has identified several issues related to JOS administration and finances that should be evaluated for updating and improvement. In part, these issues developed as the system infrastructure and operational philosophy of the JOS evolved over the last 50 years, but financial administration practices did not change in step with the infrastructure changes. One of the more significant factors was that certain rate changes could have been adjusted more rapidly based on changing revenue streams and reserve levels. In evaluating these issues, staff identified opportunities that could improve how financial administration, sharing of system ownership, and distribution of revenues and expenses of the JOS are managed.

Formation of the Ad Hoc Committee

At the Personnel Committee meeting on September 23, 2020, these issues were considered, and a recommendation was made to form a director ad hoc committee to examine the issues in more detail and to recommend improvements. The Personnel Committee endorsed formation of the JOS ad hoc committee.

Goals for the Committee

The overarching goals for the committee were to:

- Evaluate financial differences between Districts and how user rates are set.
- Establish and/or modify certain practices to:
 - Ensure appropriate and equitable rates are assessed to users.

- Accurately structure ownership of assets and other financing practices.
- Ensure continued compliance with requirements of Propositions 26 and 218, the Sanitation District Act, and other laws.
- Provide direction on the principles and practices for future JOS rate-setting.

Four specific subject areas were identified as being key to understanding JOS finances and improving financial administration going forward:

1. District-owned vs. JOS-owned Wastewater System Assets
2. Industrial Waste Facilities' Revenue and Rates
3. Ad Valorem Tax Revenues
4. Reserve Fund Levels

Findings and Recommendations of the Committee

Issue 1: District-owned vs. JOS-owned Wastewater System Assets

The original concept for the JOS system was that the individual Districts would construct, own and operate the sewers within their District, and the JOS would construct, own and operate a centralized treatment plant and the sewers and pumping plants required to convey sewage from the boundary of each District to the plant. With a small number of JOS Districts and a straightforward “tree-like” system of sewers, this concept was easy to administer for many decades early in the history of the JOS.

As the system expanded and became more complex and interwoven over the succeeding decades, the distinction between JOS facilities and District-owned facilities became more difficult. Judgments were made to decide if a particular sewer or facility served more than one District to a meaningful extent; or if a facility benefited the system even if it only managed flow from one District; or if a sewer should be considered part of the system because it conveyed certain type of wastewater, such as source water to a water reclamation plant for recycling or industrial waste from both within the JOS Districts and from outside the Districts treated under contract.

While each JOS-owned versus District-owned decision was made using reasonable criteria and analysis, as the system became more complex it became more apparent there were flaws and inconsistencies in the ownership classification of a large number of assets. Options were evaluated and presented to the committee for resolving these issues.

The most fair and reasonable solution is to reclassify all facilities within the JOS Districts (whether currently a District-owned facility or a JOS-owned facility) as a JOS-owned asset. The reclassification would result in no significant change in rates; provide more rate stability over time; and provide more consistency in costs from District to District. One exception would be for District

No. 29 which has a unique arrangement whereby the District maintains the small local sewers that would normally be city sewers. This arrangement would continue.

**Recommendation for Issue 1: Reclassify all facilities within the
JOS Districts as JOS-owned assets.**

Issue 2: Industrial Waste (IW) Facilities' Revenue and Rates

A portion of each District's revenue is derived from user charges (also known as a surcharge) placed on industrial dischargers. Unlike residential and commercial rates that use estimated wastewater discharges, IW facilities' flow and strength (solids and oxygen demand) are measured and are the basis for the charge. The charge is the same on a prorated, per unit basis as residential and commercial customers. IW fees are not collected on property tax roll – they are directly billed.

When surcharge for IW facilities was originally established, it was recognized that in the JOS there were two factors that needed to be considered:

1. The impacts of IW would primarily be on the JOS treatment plants, not on the District-specific sewers and pumping plants.
2. IW facilities had the potential to use the surcharge rate as a factor in locating, or re-locating, within the JOS; unlike residential and commercial dischargers.

As a result, it was determined that IW rates should be the same for each JOS District, and IW facilities were generally required to discharge to JOS (vs. District-owned) sewers.

However, instead of the revenue going to the JOS, the revenue was collected by each District, which led to skewed impacts on certain Districts' revenue streams. If the IW rate is greater than District service charge, the residential and commercial users benefit. Conversely, if the IW rate is less than District service charge, the residential and commercial users pay a higher rate to compensate.

In order to remedy the issues described above, it is recommended that all IW revenue in the JOS Districts instead be treated as JOS revenue. JOS revenue will be applied to JOS expenses, and therefore will offset the JOS expenses charged to each District.

The recommendation will result in no change in IW rates. There will be no change in total JOS costs or average residential and commerce service charge rate. Overall, it will have a stabilizing and equalizing effect on rates.

Recommendation for Issue 2: Reclassify Future IW Revenue as JOS Revenue.

Issue 3: Ad Valorem (AV) Tax Revenue

Every property in the State pays an annual tax equivalent to 1% of assessed value, and that tax is distributed to the county, city, K–12 schools, community college districts, and special districts by the county auditor. The amount a parcel pays, and the distribution of that tax to each of the taxing agencies can vary significantly. For the JOS Districts, this means that there can be significant variations in AV tax revenue not only from parcel to parcel, but also from District to District.

If the recommendations discussed in Issue 1 (Assets) and Issue 2 (IW Revenue) are implemented, the total operating cost on a per SU basis will be similar between Districts. With a large variation in AV tax revenue, the resulting service charge may continue to vary significantly from District to District even if the total amount of service charge and AV tax on a per SU basis will be the same.

For this issue, there is no decision to be made or changes that can be implemented. The purpose of evaluating the role of AV taxes in the JOS Districts' revenue is to understand the important connection to amount of service charges.

Recommendation for Issue 3: Acknowledge that variations in AV tax revenue between Districts can lead to significant variance in a JOS District's service charge rates even when overall expenses are similar.

Issue 4: Reserve Fund Levels

The Financial Reserve Policy for each District provides guidance for the appropriate level of reserves, which in turn impacts rate-setting and to some extent capital planning. Before formal reserve policies were adopted in 2018, informal targets were used to guide rate-setting.

In most cases, rates were set high enough to ensure reserves met the targets. For a few Districts that required higher than average rates, past decisions on rate increases were made that resulted in rates that did not allow reserves to build up in order to meet the targets. In some other Districts, reserve levels were well above targets, but rates were not reduced to a level that would allow reserves to decline closer to target over time. As a result, there is currently a disparity in reserve levels relative to target.

In order to ensure reserve funds are at appropriate levels consistent with the targets in the Reserve Policy, it was recommended to the ad hoc committee that principles used for rate-setting should include reaching targeted reserve fund levels in 10 years. The committee concurred with the recommendation.

Recommendation for Issue 4: Principles used for rate-setting should include reaching reserve fund targets in 10 years.

Impact of the Recommendations on Rates

If implemented, the recommendations are expected to result in the following service charge rate-related impacts:

- Modest rate increases over the next 10 years.
- More similar capital, operational and overhead costs from District to District, which in turn leads to the amount paid toward District services by a typical homeowner in AV taxes and Service Charge becoming more similar across the Districts.
- Service charge rates will be more stable over time.

The following table shows expected annual single-family home cost immediately after the recommendations are implemented, and the costs after 10 years.

District	Year 1 Typical Revenue from a Single-Family Home (AV Taxes + Service Charge), \$/year	Year 10 Typical Revenue from a Single-Family Home (AV Taxes + Service Charge), \$/year
District 1	223	274
District 2	223	278
District 3	217	283
District 5	225	276
District 8	241	275
District 15	213	277
District 16	215	267
District 17	207	264
District 18	223	276
District 19	219	278
District 21	217	275
District 22	215	258
District 23	156	157
District 28	165	216
District 29 ⁽¹⁾	369	420
South Bay Cities	200	248

Note 1: In District No. 29 (Signal Hill), the District maintains local sewers under special agreement that will not change.

Next Steps

Implementation of the recommendations will require the following steps:

- Revising the Joint Outfall Agreement.
- Adopting new Wastewater Financial Reserve Policies for each District.
- Adopting new Industrial Waste Surcharge Ordinances, Master Service Charge Ordinances and Service Charge Rate Ordinances.
- If Approved, the New Rates and Financial Administration Practices to Take Effect July 1, 2022

It is anticipated these steps would begin after concurrence from the Personnel Committee and presentations to the boards in the fall of 2021. Approval would be taken to the boards in late 2021 or early 2022.

REPORT AND RECOMMENDATIONS

Need, Formation, and Goals of the Joint Outfall System (JOS) Ad Hoc Committee

Need for the Committee

In recent years, staff has identified a number of issues related to JOS administration and finances that were in need of updating. In part, these issues developed as the physical infrastructure and operational philosophy of the JOS evolved, but changes to financial administration practices did not keep up. In evaluating these issues, staff identified opportunities that could improve how financial administration, sharing of ownership, and distribution of revenues and expenses of the JOS are managed.

In addition, staff wanted to ensure that best practices were being followed. While there are no other systems of wastewater districts that are similar in structure to the JOS to compare to, it is important that agencies of all types ensure financial administration practices are fair and efficient. This includes managing shared assets and revenue streams in a logical, equitable manner; ensuring reserve targets are appropriate and followed; and that rates are set such that they properly take into account other revenue streams and the desired financial objectives.

At the Personnel Committee meeting on September 23, 2020, these issues were presented, and a recommendation was made to form a director ad hoc committee to examine the issues in more detail and to consider possible solutions. The Personnel Committee endorsed formation of the ad hoc committee.

Goals for the Committee

The overarching goals for the committee were to:

- Understand differences between JOS Districts and how rates are set.
- Establish and/or modify certain practices to achieve the following general objectives:
 - Ensure appropriate and equitable charges are assessed to users.
 - Accurately structure ownership of assets and other financing practices.
 - Comply with requirements of Propositions 26 and 218, the Sanitation District Act, and other laws.
- Provide direction on principles for future rate-setting.

Four specific subject areas were identified as being key to understanding JOS finances and improving financial administration going forward:

1. District-owned vs. JOS-owned Wastewater System Assets
2. Industrial Waste Facilities' Revenue and Rates
3. Ad Valorem Tax Revenues
4. Reserve Fund Levels

Background on the Joint Outfall System

Sanitation Districts Overview

The Los Angeles County Sanitation Districts are a public agency focused on converting waste into resources including recycled water, energy and recycled materials. The agency consists of 24 independent special districts serving about 5.6 million people in Los Angeles County. The service areas in the map below cover approximately 850 square miles and encompass 78 cities and unincorporated areas in the county.

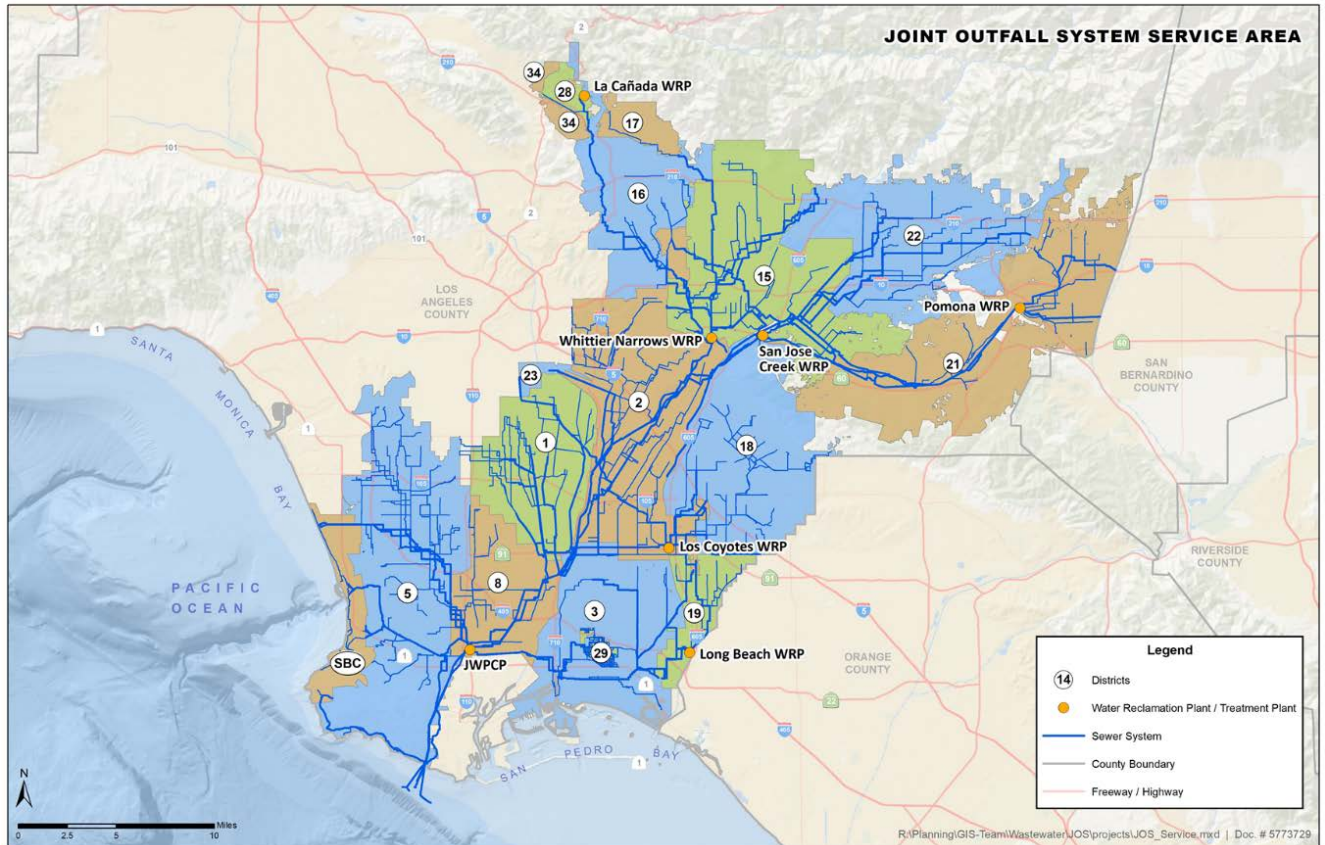


The Sanitation Districts were created in 1923 to construct, operate, and maintain facilities that collect and treat domestic and industrial wastewater (sewage). The agency operates and maintains the regional wastewater collection system, which now includes approximately 1,400 miles of sewers, 48 pumping plants, and 11 wastewater treatment plants that transport and treat about half the wastewater in Los Angeles County. Collectively, the Sanitation Districts treat about 400 million gallons of water per day, which is enough to fill the Rose Bowl nearly five times a day. Over the last 50 years, the Sanitation Districts have been the nation's largest producer of recycled water.

To maximize efficiency and reduce costs, the 24 Sanitation Districts work cooperatively with one administrative staff headquartered near the City of Whittier. Each Sanitation District has a Board of Directors consisting of the mayor of each city served, and the Chair of the County Board of Supervisors for unincorporated territory. Each Sanitation District pays its proportionate share of administrative costs.

Joint Outfall System Overview

A subset of 17 of the Districts comprise the Joint Outfall System (JOS), which manages an interconnected system of sewers, pumping plants, water reclamation plants (WRPs), and the Joint Water Pollution Control Plant (JWPCP). The JOS provides wastewater collection, treatment and reuse for approximately five million people in all or portions of 73 cities and unincorporated Los Angeles County in the southeastern portion of the County.



Joint Outfall System History

The JOS was first formed in November 1924 when the original JOS Agreement¹ was entered into by four Districts – 1, 2, 3, and 5. These Districts recognized that although each District planned to construct their own trunk sewers within their District, joining together to construct joint trunk sewers to convey relative large flows of wastewater from the end of their individual sewers at their District boundaries, and convey the wastewater to a central treatment facility for discharge to the ocean, would be “for the interest and advantage of each of such sanitation districts”. Between 1925 and 1967, additional Districts were formed and added to the JOS (with some Districts merging or dissolving at various points).

Beginning with the original JOS agreement and continuing through the present, costs for the joint facilities have been allocated among the member Districts based on their proportion of sewage discharged into the joint facilities.

¹ DMS 314477

The major JOS facilities were placed in operation the following years:

1925	Start of construction of JOS sewers
1928	Joint Water Pollution Control Plant (JWPCP)
1937	First tunnel from JWPCP and ocean outfalls
1958	Second tunnel from JWPCP
1962-1973	Water Reclamation Plants constructed

History of Joint Outfall System Rates and Revenue

Before 1972, the Districts' revenue consisted almost entirely of ad valorem taxes. In 1970, staff had realized there was a discrepancy between the AV taxes paid by industrial users compared to the cost of treatment for those users.² Industrial waste generators at the time paid about 11% of the AV tax revenue received, but accounted for 35% of the costs of conveyance and treatment. In 1972 a new Industrial Waste Ordinance was passed effective July 1, 1972 mandating that industrial waste generators pay a user charge, or surcharge.

In 1978, Proposition 13 was passed, fundamentally changing how the Districts funded its operations. It capped the property tax rate at 1% of assessed value; allowed a limited increase in assessed value for inflation; only allowed reassessments on sale of property; and required a supermajority vote in the legislature for state taxes and a vote of the people on local tax increases. In order to replace the revenue lost as a result of proposition 13, the Districts implemented a service charge program, billing each discharger based on its estimated usage of the sewerage system. The service charge was placed on the property tax bill, virtually assuring payment and minimizing delinquencies while also representing a lower billing cost than any other alternative.

Recent Joint Outfall System Efforts

A multi-year planning and environmental review effort began in 2006 to evaluate the adequacy and future of the JOS facilities. The evaluation identified the need for a new tunnel to ensure the reliability of the JOS and provide sufficient future capacity. In 2012, the Sanitation Districts' Board of Directors approved the Clearwater Project Master Facilities Plan, which will protect local waterways by addressing aging infrastructure. A major component of this project is a new 7-mile long tunnel that will be constructed almost entirely underneath public right-of-way. Tunnel construction began in 2020.

Starting in 2019, District staff began a review of the connection fee structure for all of the Districts. The methodology in place at the time for determining connection fee amount was based on the incremental cost of expanding facilities on a per unit of usage basis. While this method was historically appropriate, it relied on continued increases in the amount of discharge and associated

² The Industrial Waste Surcharge Program of the Sanitation Districts of Los Angeles County, DMS 479839

expansion of the wastewater facilities serving the new users. In reality, total growth combined with water conservation efforts meant that most expansion needs, in particular in the JOS, had slowed or ended in the mid-1990s. The new proposed connection fees were approved in 2020 and were based on a buy-in model.

In 2015, the Districts entered into an agreement with the Metropolitan Water District of Southern California (MWD) to potentially develop a regional recycled water program utilizing the wastewater currently discharged from JWPCP to the ocean. At full-scale, this advanced water treatment project could produce up to 150 million gallons per day of purified water from the JWPCP and conveyance systems could deliver this water to various locations for groundwater recharge. In spring 2019, a 500,000 gallons per day advanced water treatment demonstration facility began operation at the JWPCP. In 2020, both agencies' Boards of Directors approved starting the environmental and planning studies for full-scale facilities. As a result of this program, the JOS will likely be producing recycled water from all of its wastewater treatment plants, furthering our mission to turn waste into resources and continuing the evolution of the JOS system into a consolidated system.

Joint Outfall System Financial Structure

Background and Introduction to Existing Joint Outfall System Agreement

As mentioned previously, 17 of the 24 Districts are signatory to the Amended Joint Outfall Agreement. This is the agreement that provides for the coordinated operation and maintenance (O&M) and capital construction of facilities for the conveyance, treatment, and disposal of wastewater generated within the Joint Outfall System. It also defines the responsibilities of each of the Districts regarding payment for joint expenses incurred on their behalf and for ownership of any jointly owned facilities.

Expenses are defined as the cost of constructing, operating, and maintaining any facilities jointly owned by the Joint Outfall Districts, including the compensation of all employees working for the direct benefit of the Joint Outfall System. If any of the expenses can be readily segregated and allocated, they are charged directly to the District that benefited from those expenses. All other expenses which cannot be readily segregated shall be apportioned and charged to the respective Districts using the applicable following methods:

- Capital and O&M expenditures which are attributable to the JOS shall be apportioned to each District in the ratio that the number of equivalent users (sewage units or SUs) attributable to that District bears to the aggregate number of sewage units attributable to all of the Districts who are members of the JOS.
- All District specific costs (those that are specific to only one District) shall be paid by the District for whose benefit such costs were incurred and shall not be allocated to any other of the Joint Outfall Districts.

The distribution of revenue derived under the Industrial Wastewater Ordinance is handled in two separate ways. All revenue, except for the revenue obtained from the peak flow charge in the wastewater treatment surcharge formula, shall be distributed to the District from which the wastewater originated. The peak flow revenue shall be apportioned to each District in the ratio that the number of sewage units attributable to that District bears to the aggregate number of sewage units attributable to all of the Districts who are members of the JOS.

All other revenues (e.g. revenue arising from the sale of biosolids, effluent, electrical power, or other byproducts) shall be apportioned to each District in the ratio that the number of sewage units attributable to that District bears to the aggregate number of sewage units attributable to all of the Districts who are members of the JOS.

Pursuant to the Master Connection Fee Ordinance of each District, connection fees are levied whenever an added burden is imposed upon the sewerage system. The Joint Outfall Capital Fund has been officially designated as the repository for the portion of the connection fee that is related to the Joint Outfall System facilities. All amounts paid into the Joint Outfall Capital Fund shall be apportioned to each District in the ratio that the number of sewage units attributable to that District

bears to the aggregate number of sewage units attributable to all of the Districts who are members of the Joint Outfall System.

Sources of Revenue other than Service Charge

Ad Valorem Taxes — The Districts receive a pro rata share of the general 1% ad valorem (property tax) levy. The 1% is assessed based on current value of the parcel and improvements. The pro rata share is based upon the percentage of the total tax levy each District received prior to the implementation of Proposition 13 in fiscal year 1978-79. Accordingly, the amount received per equivalent user varies from District to District.

Contracts — The Districts generate additional revenue through disposal contracts when the District provides sewerage services to certain facilities located outside of the Districts' boundaries. Disposal contracts are designed to recover the total cost of services rendered to these facilities. The Districts also receive revenue from the sale of reclaimed water to various water purveyors throughout the service area; sale of energy and biofuels; and sale of biosolids.

Grants & Loans — Starting in 1972, federal programs made grant funding available for projects, covering up to 87½% of the eligible project cost. In addition, the grant program made another 10% award for projects that were classified as Innovative or Alternative. After July 1, 1989, the grant program became a low-interest revolving loan program. Under the loan program, funds are made available for up to 30 years at an interest rate equal to one-half the state's general obligation (GO) bond rate. Some limited amounts of grants are still available under California's various water bond acts (e.g. Proposition 84).

Industrial Wastewater Surcharge — In 1972, the Districts instituted a user charge program for industrial wastewater discharges in accordance with the Clean Water Act. It requires industrial dischargers to pay for O&M and upgrade capital according to their usage of the sewerage system. Usage is measured in terms of three parameters: flow, chemical oxygen demand, and suspended solids. In addition, dischargers with excessive peak flows must pay a supplemental peak flow charge. The method for determining the industrial wastewater surcharge rates is similar to that for determining the service charge rate as discussed later.

Investment Income — This refers to interest received during the fiscal year. This source of revenue is variable and depends on the cash balance maintained by each District as well as the prevailing interest rate. All funds are invested in conformance with the Investment Policy.

Annexation Fees — Annexation fees are paid by each property owner annexing into a District. The annexation fee program is in conformance with the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000, Government Code of 56000. The revenue received from annexation fees varies considerably and unpredictably. Since each annexation fee solely covers the cost of processing each annexation request, this revenue source is not relied upon during budget preparation.

Service Charge Structure for Residential and Commercial Users

The service charge is calculated by dividing each District's budgetary shortfall (expenses minus all revenue sources other than user charges) by the total discharge to determine unit rates, and then multiplying any given user's discharge by those unit rates to determine that particular user's charge. As simple as this appears, this process does involve many other steps: determining the mass loading for each discharger; combining the disparate mass loadings into a single comparable unit of measure; calculating the total discharge from each District; and developing each District's budget. Each of these steps is discussed below.

For residential and commercial users, each user is placed in a user category. Each category is assigned a standard loading (flow and strength) per unit of usage (e.g., number of units, square footage) that reflects the expected discharge from that category. Given the number of units of usage for a given parcel, the total loadings from each parcel can be determined. The units of usage are typically referred to as a number of sewage units, or SUs, with one SU being equivalent to the discharge from an average single-family home as further described below.

This method relies upon assuming standard loadings for user categories. The installation of individual wastewater meters and sampling devices would be the only way to eliminate these assumptions; however, the cost associated with such a system is prohibitive, especially for residential users.

The tax roll information from the county assessor is used for determining the user category and size (e.g. number of units in an apartment building) for each parcel, as well as billing users for the charge.

The Districts use a combination of actual field studies, literature surveys, and water consumption analysis to establish the average values for flow, chemical oxygen demand (COD), and suspended solids for the various user categories.

Using the appropriate user category and the associated assumed loadings, the total discharge from any given user can be calculated. A formula is used to determine a single factor, the sewage unit (SU) with one SU representing the quantity and strength of wastewater discharged from a single-family home. The charge for users other than single-family homes is scaled up or down from one SU.

Illustration of How Revenue and Expenses Affect Each Other

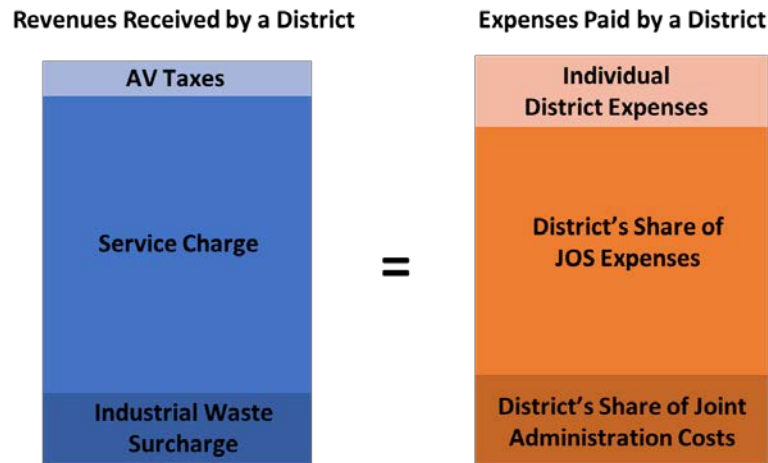
Each District is a stand-alone legal entity with its own revenue, expenses and reserves. One component of each District's expense is its share of net expenses of joint operations, such as those related to the JOS or Joint Administration overhead expenses.

Each year each District's operating budget is evaluated to ensure there is adequate revenue to cover expenses. Service charges can be adjusted as need in order for total revenue to match expenses, although due to the effort involved in adjusting service charges, the charges are normally set for a

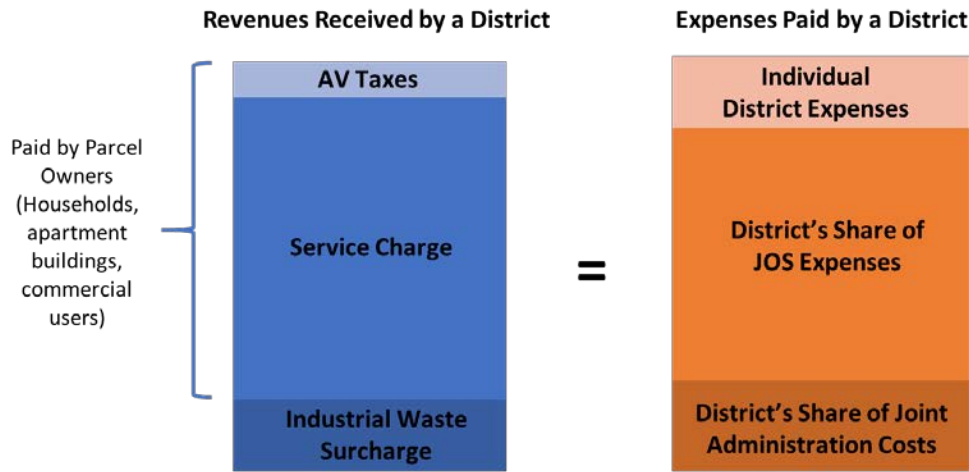
multi-year period. To some extent, expenses, in particular capital expenses, can be reduced or delayed to balance the budget. Reserves can also be used to make up any shortfall in revenue or can be built up for future needs if there is excess net revenue.

To illustrate in simple terms how a District’s revenues and expenses interconnect, the graphics below show each of the three major components of revenues and three major components of expenses. These illustrations ignore draws from, or deposits into, reserves.

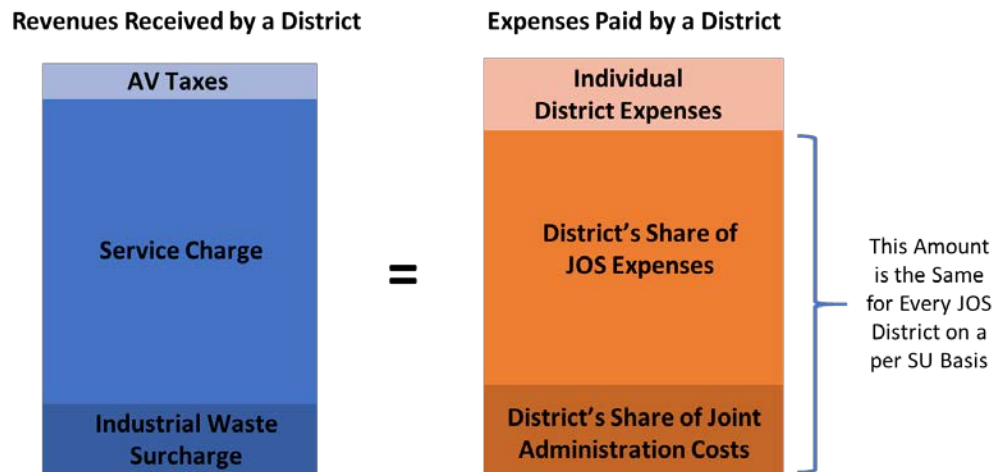
The first illustration below shows the three major components of revenue and the three major components of expenses. The sizes of the individual blocks are representative of a typical JOS District, but it can vary significantly. As described above, ignoring draws from reserves or deposits into reserves, the total revenues equal total expenses:



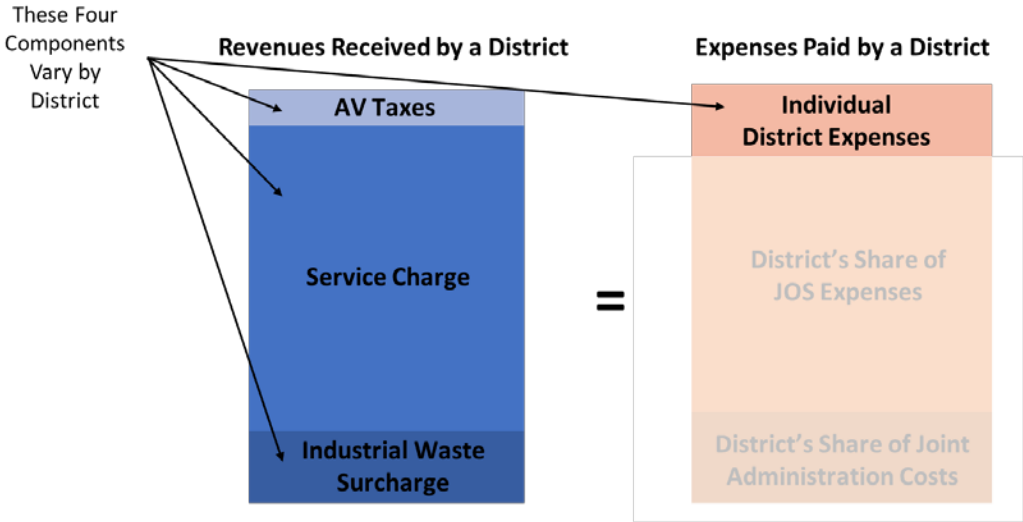
Two of the revenue components - AV taxes and Service Charge- in total represent what parcel owners pay:



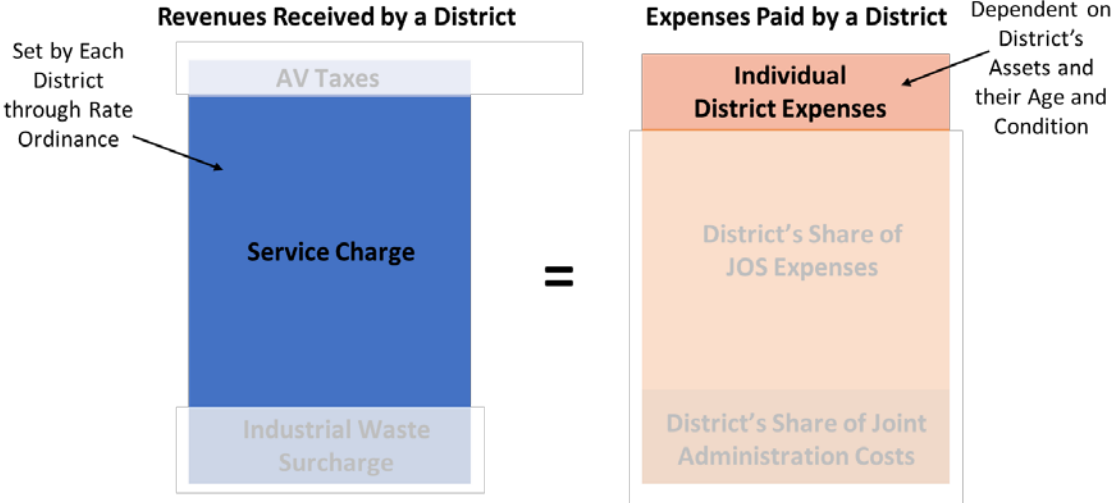
Two of the expense components – the District’s share of JOS expenses and Joint Administration Costs – are the same for every District on a per SU basis:



This means that four of the six components of revenues and expenses vary from District to District:



Of the four components that vary by District, only two are under the “control” of the District. The remainder are set by the manner in which AV taxes are assessed and distributed by the county or are set by the provisions of the JOS and Joint Administration agreements.



Introduction to the Current Issues

In recent years, staff has identified four key issues related to JOS administration and finances. In part, these issues have come into focus as the physical infrastructure and operational philosophy of the JOS evolved, but financial administration practices did not. Another factor was that certain rate changes did not adjust rapidly enough to changing revenue streams and reserve levels. While each of the practices that have been put into place have had reasonable justification and were intended to be logical and fair, this current effort is an attempt to further improve on administration and financial practices.

The four issues are:

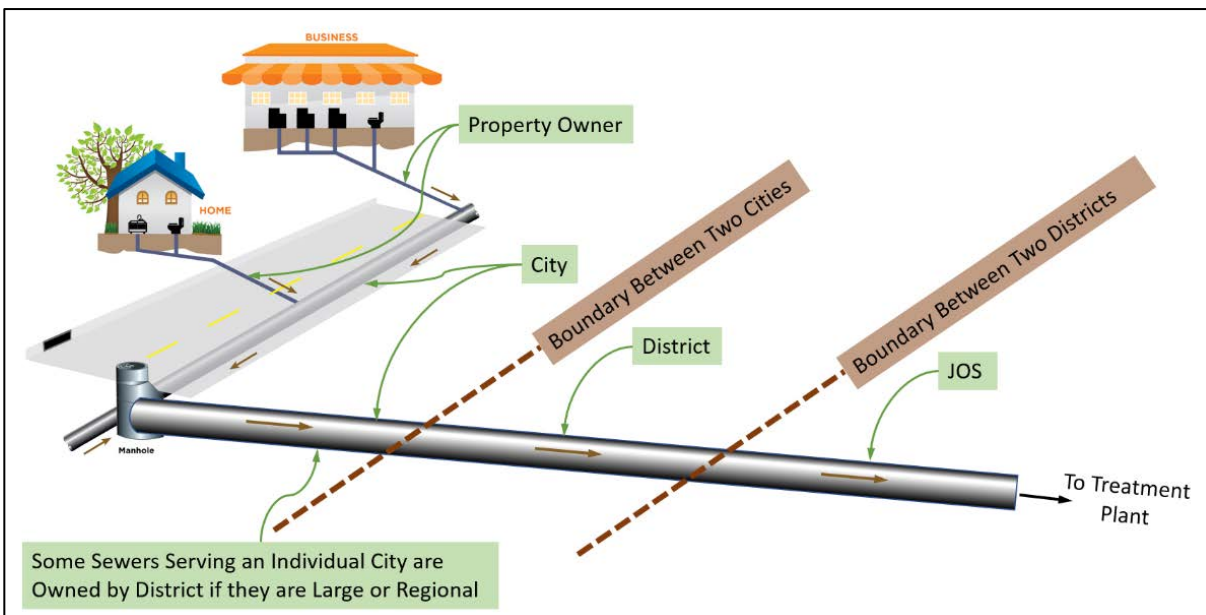
1. District-owned vs. JOS-owned Wastewater System Assets
2. Industrial Waste Facilities' Revenue and Rates
3. Ad Valorem Tax Revenues
4. Reserve Fund Levels

In the following sections describe each issue and the proposed resolutions.

Issue 1: District-owned vs. JOS-owned Assets

Past Practices for Determining Asset Ownership

A sanitary sewer system consists of a series of pipes where wastewater predominantly flows by gravity, but also includes pumping plants and force mains, connecting each discharger to a treatment plant. The initial length of relatively small diameter sewer running from the home or business into the street is normally owned and maintained by the property owner. The property owner's sewer discharges into a sewer pipe in the street, which is typically owned by the city or the county (in unincorporated areas). The city or county is responsible for all operations and maintenance of those sewers and pumping plants. As the wastewater travels downgrade, it combines with flow from other sources and the sewer pipes generally get larger in diameter and carry more flow. When the sewer crosses into another jurisdiction (another city or to/from unincorporated areas), or begins conveying flow from another jurisdiction, or becomes large enough to be considered a regional trunk sewer, a Sanitation District takes over ownership. Finally, if and when the sewer passes through the boundary between two Districts within the JOS, it becomes a JOS sewer. In practice, it can be difficult to accurately determine the transition in ownership based on these principles, in particular as the system develops and evolves into a more complex, interconnected network.

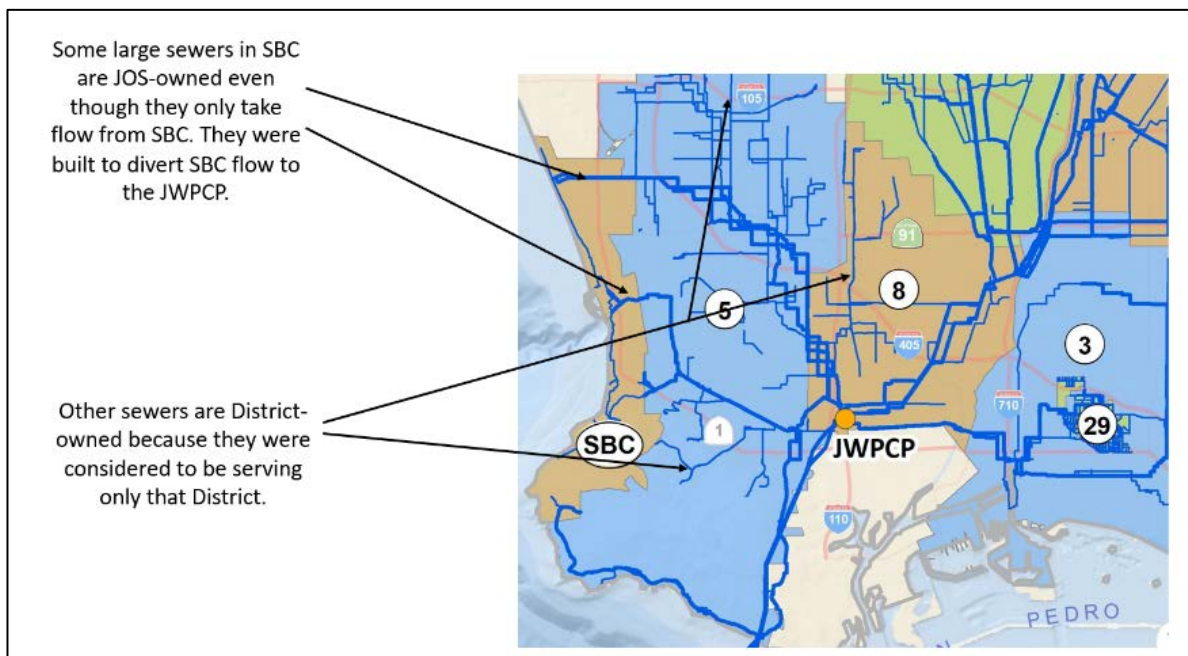


As discussed in the previous section on the JOS background, the original concept for the JOS system was that the individual Districts would construct, own and operate the sewers within their District, and the JOS would construct, own and operate a centralized treatment plant and the sewers and pumping plants required to convey sewage from the boundary of each District to the plant. With few Districts and a straightforward “tree-like” system of sewers, this concept was easy to administer for many decades early in the history of the JOS.

As the system expanded and became more complex and interwoven over the succeeding decades, the distinction between JOS facilities and District-owned facilities became more difficult.

Additionally, as recycling water became a priority for the agency, flows were redirected between WRPs, as needed, to operate as a cohesive system to maximize recycled water production as a benefit to the JOS service area. As a result, the ownership concept was subsequently expanded and clarified. The current JOS Agreement³ dated July 1, 2020 provides this direction: "...a sewerage facility [that] either provides a benefit to two or more Signatory Districts or otherwise advances the collective objectives of the Signatory Districts... shall become part of the Joint Outfall System." This principle means that a judgment must be made in many cases. Some examples include:

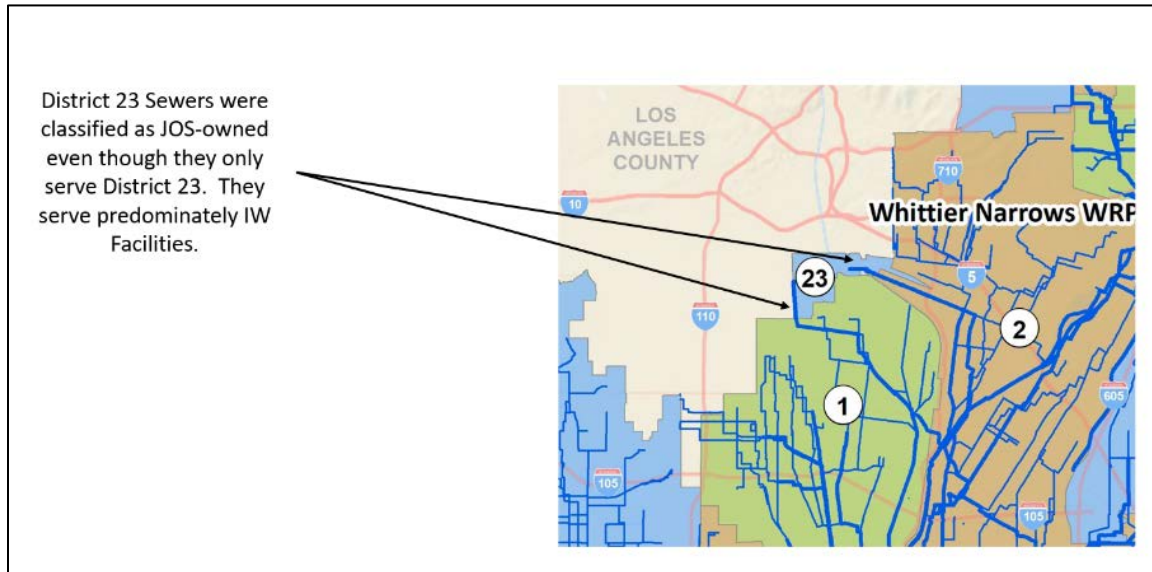
- Sewers were constructed within a District that had two purposes: conveyed sewage from the boundary of a neighboring District and served that District. The proportion of wastewater within the sewer (and in various sections of that sewer) from each District could vary. In some cases, virtually all of the wastewater would be from one or the other. Judgment calls were made to determine whether that sewer should be District-owned or JOS-owned. Some pumping plants fit this description also.
- Large, regional sewers in some cases were determined to be JOS-owned due to the potential to serve multiple Districts, when in some cases they only actually conveyed wastewater from one District.



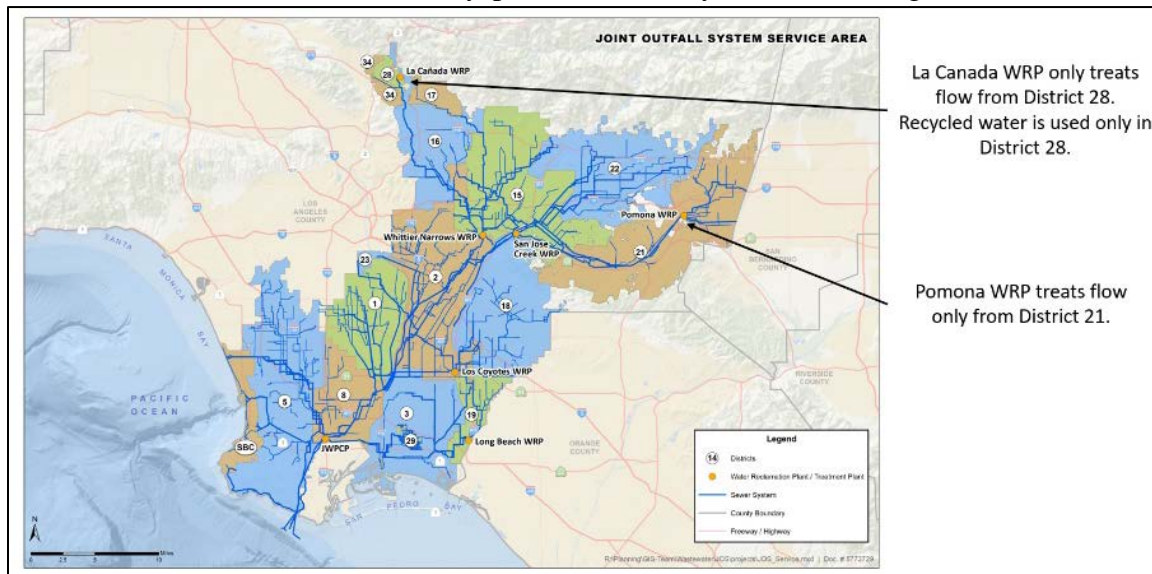
- Upstream WRPs were constructed with the goals of providing recycled water for the region and reducing flows on downstream sewers and the JWPCP.

³ DMS 5562795

- Sewers that predominately conveyed industrial waste were classified as JOS-owned even when they only serve one District.



- Two WRPs (Pomona and La Cañada) that each only serve one District were incorporated into the JOS due to the benefit they provide to the system and to regional water reuse.



- Sewers were constructed to interconnect other sewers and WRPs in order to provide flexibility in the operation of the collection system and the WRPs.

As facilities were constructed and modified, reasonable judgment calls were made in order to determine the appropriate ownership. However, the resulting classifications in many cases did not keep up with the expanding system. Additionally, as JOS moved to increase recycle water

production at each of its treatment plants, sewers represented a source of recycled water not just a means of disposing of waste. Recycled water production, in turn, is a benefit to all of the JOS Districts.

Description of Current Facilities and Ownership

The JOS individual District assets and JOS system assets currently include:

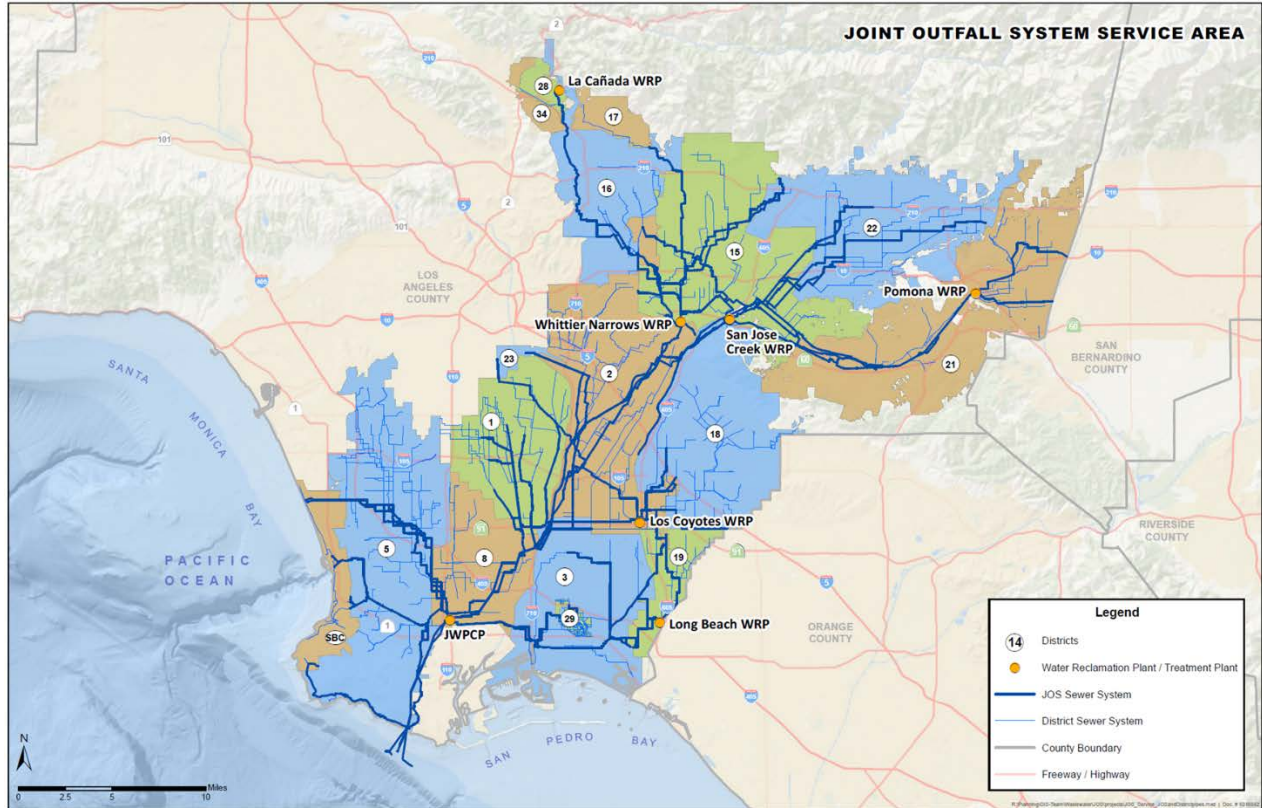
- Approximately 1,255 miles of sewer.
- 47 pumping plants.
- Six WRPs.
- The JWPCP and the tunnels and ocean outfall.

The WRPs and the JWPCP are owned by the JOS because they clearly serve the JOS system, not any individual District.

The sewers and pumping plants are owned by either the individual District or the JOS as follows:

District	Miles of Sewers	Pumping Plants
1	68	1
2	129	2
3	31	5
5	120	7
8	39	2
15	62	2
16	24	0
17	5	0
18	67	0
19	15	1
21	52	4
22	66	0
23	0	0
28	2	0
29	33	2
SBC	19	8
Total District-Owned	732	34
JOS	523	13

While the individual Districts own more miles of sewers and more pumping plants, it is important to realize that the diameter of the sewers and size of the pumping plants of the individual District-owned assets are on average significantly smaller than the JOS-owned facilities. Below is a map showing the sewers and treatment plants:



Recommendation: Re-Classify all JOS District Facilities as JOS Facilities

Several classification systems were considered that would resolve the asset ownership issues that developed as the JOS was being built out.

Options that were ruled out include:

- Use the amount of wastewater conveyed by that sewer or pumping plant and allocate ownership in proportion to the flow.
- Determine which District is the source of the largest proportion of flow in a sewer or pumping plant and assign the asset to that District.
- Make any facility with flow from more than one District a JOS asset, regardless of amount; conversely, any facility with flow from only one District would be owned by that District.
- Assign a certain cutoff (e.g. 75%) and if a sewer or pumping has more than that proportion of flow from one District, it would be owned by that District.

While each of these methods has the potential to resolve some of the issues described above, they continue to involve judgement calls and the likelihood that the classifications will become inaccurate over time.

The fairest method for resolving the ownership issue was determined to be re-classification of all facilities within the JOS Districts as JOS-owned assets, other than the smaller local sewers in District No. 29.

The rationale and benefits of such a reclassification include:

- Better reflects that the collection system and treatment plants act as one system, both in terms of wastewater treatment and water recycling.
- All planning and coordination work by District staff assume that all JOS Districts operate as one system. No consideration is given to the possibility that a District could do anything other than be part of the JOS (for example treat its own flow or send it to another jurisdiction).
- Maximizing water recycling is dependent on all flow in the system being managed in a centralized, coordinated manner.
- Eliminates inconsistencies and difficult judgment calls on ownership structure.

Impacts and other Aspects of the Recommended Asset Re-Classification

The re-classification of assets will have no impact on total JOS District operation or total costs.

There will be some small impact on rates, but in almost every District it will add less than 1% to upcoming rate increases, if any, in combination with the other recommended changes. It will have a smoothing effect on each Districts' costs and rates over time. It will also tend to levelize costs and rates across Districts.

Both the current practices for administering District and JOS asset ownership and the recommended re-classification of District-owned assets are consistent with state law.

The JOS agreement, which defines and provides guidance for ownership, will require revision to accomplish this.

District No. 29 maintains the City's local sewers under separate agreement and this relationship will continue. The re-classification is not intended to apply to this unique arrangement.

The recommended re-classification is not intended to affect payment for, nor any other aspects of, construction of new sewers serving new developments or unsewered areas.

Fee title to real property will continue to be held in the name of the District in which it is located even with the reclassification of ownership.

Issue 2: Industrial Waste (IW) Facilities' Revenue and Rates

Introduction to Industrial Waste Rates

Collection of Industrial Waste user charges, or surcharge, began in 1972 when it was determined that industrial users were not paying their share of costs through AV taxes, which was the primary source of revenue for the Districts.

Unlike residential and commercial rates that use assumed factors for wastewater discharge, IW facilities' flow and strength (solids and oxygen demand) are measured and are the basis for their charge. The charge is the same on a prorated, per unit basis as residential and commercial customers. There is also a peak flow component that is assessed for facilities discharging a large amount of flow during the Districts' highest flow periods each day, which is intended to encourage facilities to discharge during the night when flows are lower and the treatment plants can accommodate the flow with less impact. The fees are not collected on property tax roll – they are directly billed.

Current Practices for Allocating IW Revenue and Determining Rates

When surcharge for IW facilities was originally established, it was recognized that in the JOS there were two factors that needed to be considered:

1. The impacts of IW would primarily be on the JOS treatment plants, not on the District-specific sewers and pumping plants.
2. IW facilities had the potential to use the surcharge rate as a factor in locating, or re-locating, within the JOS. Unlike homes and commercial businesses, and IW facility's location was less important to its business.

As a result, it was determined that rates should be the same for each JOS District. In addition, IW Facilities were generally required to discharge to JOS sewers. Both practices were consistent with the two points above. However, instead of the revenue going to the JOS (used to offset JOS expenses charged to each District), the revenue was collected by each District which led to skewed impacts on certain Districts revenue streams.

If the IW rate is greater than District service charge, the residential and commercial users benefit. Conversely, if the IW rate is less than District service charge, the residential and commercial users pay a higher rate to compensate.

To illustrate, assume the JOS IW Rate is \$175 per SU, and a District has 50% IW users and 50% residential & commercial users. The following table illustrates how the residential and commercial users are impacted by the requirement for that District's IW to be fixed:

	District A	District B	District C
Average Revenue from All Users Needed to Balance Budget	\$150 per SU	\$175 per SU	\$200 per SU
IW Rate (Fixed)	\$175 per SU	\$175 per SU	\$175 per SU
Required Residential and Commercial Rate	\$125 per SU	\$175 per SU	\$225 per SU

As with the methodology used for classifying assets described in the previous section, the original rationale for the IW rate and revenue practices was reasonable and fair. Several factors have led to the need to improve these practices. The two primary factors are 1) a significant shift in the amount of IW facilities in certain Districts; and 2) the divergence between Districts of their service charge rates.

Recommendation: IW Revenue Should be Treated as JOS Revenue

In order to remedy the issues described above, it is recommended that all IW revenue in the JOS Districts be treated as JOS revenue. This is the same practice used for contract revenue and the IW peak flow revenue. It reduces the net JOS expenses charged to each JOS District.

This change will better reflect that it was always intended for IW Facilities to be part of the system, not District-specific. It also eliminates the issue where there are significantly different IW rates and Service Charge in a District.

The recommendation will result in no change in IW rates. There will be no change in total JOS costs or average residential and commerce service charge rate. Overall it will have a stabilizing and equalizing effect on rates.

This change will result in no significant change in net costs and service charge rates for any Districts except Districts Nos. 8 and 23. For Districts Nos. 8 and 23, this recommendation if implemented on its own would have significant impacts, but combined with previous asset reclassification recommendation, results in minimal change net costs and no increase in rates.

This change will result in a "re-sizing" of each District for purposes of allocating JOS and other overhead costs. Currently the District proportion.

There could be some relatively minor negative impacts. First, the pool of rate payers for local cost shrinks significantly in some Districts. Without reclassifying assets as JOS (as discussed in the previous section), this leaves some Districts susceptible to high local costs on per residential and

commercial SU basis. Second, in some Districts, especially District No. 23, it results in high AV tax revenue on a per residential and commercial SU basis.

Issue 3: Ad Valorem (AV) Tax Revenue

Introduction and Background on Ad Valorem Tax Revenue

Until 1978, Districts' wastewater operations were funded primarily with AV taxes; essentially whatever was needed was collected. In 1978, Proposition 13 fixed the total AV tax for each parcel at 1% of assessed value.

Since Proposition 13, every property in the state pays an annual tax equivalent to 1% of assessed value, and that tax is distributed to the county, city, K–12 schools, community college districts, and special districts by the county auditor under formulas and methods dictated by AB8. As AV tax revenue increases over time, the share of the increase that is distributed to each agency is tied to the relative proportion of AV tax revenue received by that agency in 1978 when Proposition 13 was passed.

As agencies with boundaries that include a certain parcel are added or dissolved, the District's share of a particular parcel's AV tax revenue can shift. As a result, a District's share of AV taxes may not be the same from parcel to parcel. The overall average share is not the same from District to District. Because there can be a large difference in assessed value, in addition to these two factors, the total AV Tax revenue on a per SU basis can vary significantly from District to District.

AV taxes cannot be given to another District or combined with other Districts. When AV taxes are one of the revenue sources used to pay for joint costs (such as the JOS or Joint Administration overhead), the District can only pay those joint costs in proportion to its burden or size. In other words, the District cannot pay more simply because it has more AV tax revenue.

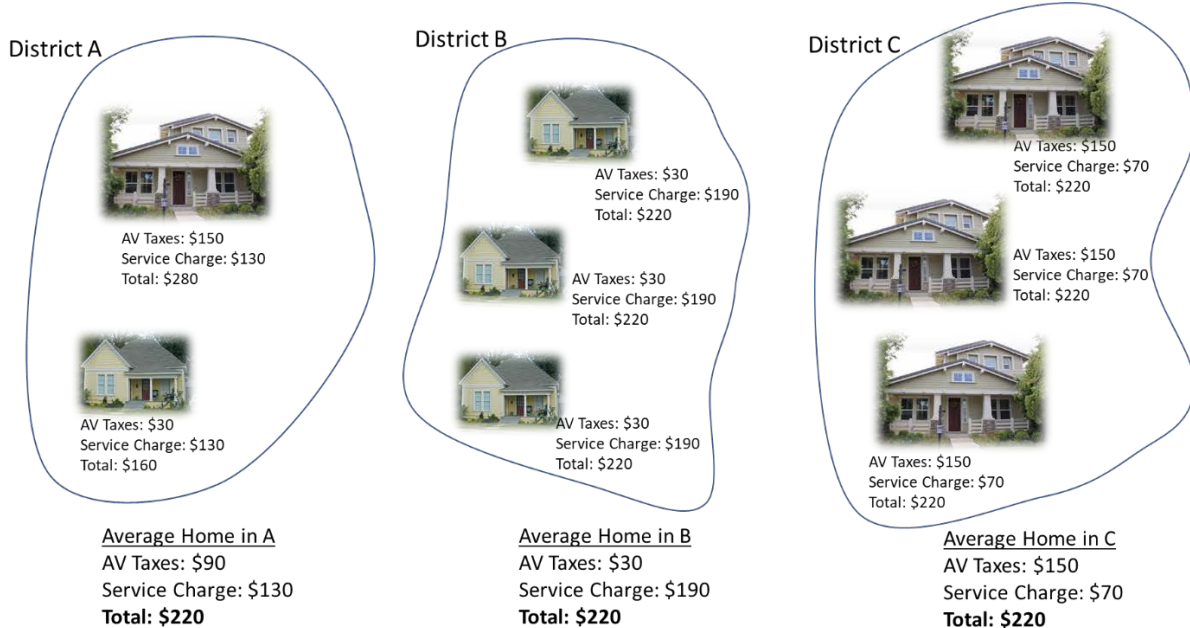
Impacts of AV Taxes on Service Charge

If the recommendations discussed in Issue 1 (Assets) and Issue 2 (IW Revenue) are implemented, the total operating cost on a per SU basis will be similar between Districts. However, with a large variation in AV tax revenue, the resulting service charge will vary significantly from District to District. Nevertheless, on average, the total amount of service charge and AV tax on a per SU basis will be the same.

In addition, even though the amount of service charge paid by a type of user (for example a single-family home) will be the same within a District, each parcel will pay a different amount of AV tax both because the assessed value may be different and the proportion the District receives may be different. Therefore, the total amount (service charge and AV tax) each parcel pays within a District will vary.

The graphic below illustrates these variations for three hypothetical Districts. In each District, the total operational cost on a per SU basis is similar: \$220 per SU. That is the total amount that needs to be collected through service charge and AV taxes. In District A, the average AV tax collected is \$90 per SU, so the service charge is \$130 per SU, but there is significant variation within the District so each parcel owner of the same type (for example single family home), may not pay the

same amount in total to the District. In District B, the average AV tax collected is \$30 per SU, so the service charge needs to be \$190 per SU. In this District, there is some consistency among taxes collected on a per SU basis, so each parcel owner pays about the same total amount of \$220 per SU. In District C, the average AV tax collected is \$150 per SU, so the service charge is only \$70 per SU. As with District B, there is some consistency among taxes collected on a per SU basis, so each parcel owner pays about the same total amount of \$220 per SU.



For these scenarios, it is important to realize that the District has no control over AV tax received, and it is dependent not only on assessed value, but also on the District’s share of the 1% tax received for each parcel.

Discussion of the AV Tax Issue

For this issue, there is no decision to be made or changes that can be implemented. The purpose of evaluating the role AV Taxes play in the Districts’ finances is to highlight the connection to service charges. It is important to ensure that it is understood that service charge rates will vary from District to District within the JOS due to the AV tax variations that are beyond the Districts’ control. It is likely that attempts to divert AV taxes in order to equalize service charge between Districts would violate laws governing use of the Districts’ funds.

Issue 4: Reserve Fund Levels

Introduction and Background of Reserve Funds

The Financial Reserve Policy for each District provides guidance for the appropriate level of reserves, which in turn should drive rate-setting and to some extent capital planning. The categories of the significant reserves and their targets are:

- Unrestricted:
 - Operating Fund – target to provide cash for the coming year.
- Designated:
 - Operations and Maintenance (O&M) Financial Stability Fund – target is 6 months of O&M expenses plus one year of debt service.
 - Capital Projects Financial Stability Fund – target is enough to provide planned cash funding for capital projects over next 10 years.
- Restricted:
 - Capital Fund – no specific target. It is used to accumulate connection fees and is limited to capital projects.

Before formal reserve policies were adopted in 2018, informal targets were used to guide rate-setting. The key target was to have available reserves equivalent to six months of O&M and one year of debt service. In most cases, rates were set high enough to ensure reserves met those targets. For a few Districts that required higher than average rates, compromises were made that resulted in rates somewhat too low to meet the targets. In some other Districts, reserve levels were well above targets, but there was no effort made to reduce rates to a level that would allow reserves to return closer to target over time. As a result, there is currently a wide range in reserve levels relative to target.

Since the adoption of formal reserve policies, the actual reserves compared to target have been more closely analyzed and monitored. The table below summarizes two indicators of reserve levels: Percent of Target and Days of Cash. Days of Cash is used by ratings agencies to evaluate creditworthiness of issuers of debt, and for agencies with AAA bond rating, the average is 529 days.

District	Percent of Reserve Target	Days of Cash
District 1	103%	728
District 2	90%	687
District 3	95%	694
District 5	79%	582
District 8	40%	318
District 15	123%	898
District 16	159%	1199
District 17	188%	1371
District 18	86%	712
District 19	123%	850
District 21	115%	884
District 22	142%	1115
District 23	228%	1492
District 28	633%	4590
District 29	242%	2029
South Bay Cities	223%	1613

As can be seen in the table, there is large range in reserves:

- District No. 8's reserve levels are 40% of target, and days of cash are well below AAA bond rating average. This District's rates should have been increased more than they actually were for a number of years.
- Districts Nos. 5 and 18 are slightly below target. They could reach their target with modest rate increases.
- Districts Nos. 1, 2, 3, 15, 16, 19, 21 and 22 are near target.
- Districts Nos. 17, 23, 29, and SBC are near double their targets. These Districts have rates that have been too high and may require lowering of rates to come back in line over the next 10 years.
- Finally, District No. 28 is at 6 times its target and has over 10 years of cash. In order to get reserves back to target, their rate will need to be near zero for many years.

Note that the preceding table does not consider the recommended changes described regarding Districts and JOS assets and the IW revenue modification.

Recommendation: Principles for Rate-Setting Should Include Reaching Targeted Reserve Fund Levels in 10 Years

In order to ensure reserve funds are at appropriate levels consistent with the targets in the Reserve Policy, the principles used for rate-setting should include reaching targeted reserve fund levels in 10 years. Once at targeted levels, rates should continue to be set such that reserves remain close to target levels.

The recommendation ensures compliance with board-adopted reserve policies.

Other changes to reserve fund structure and targets may be needed if the asset ownership and IW revenue reclassification recommendations described in the previous section are implemented. More detail is provided in the following section.

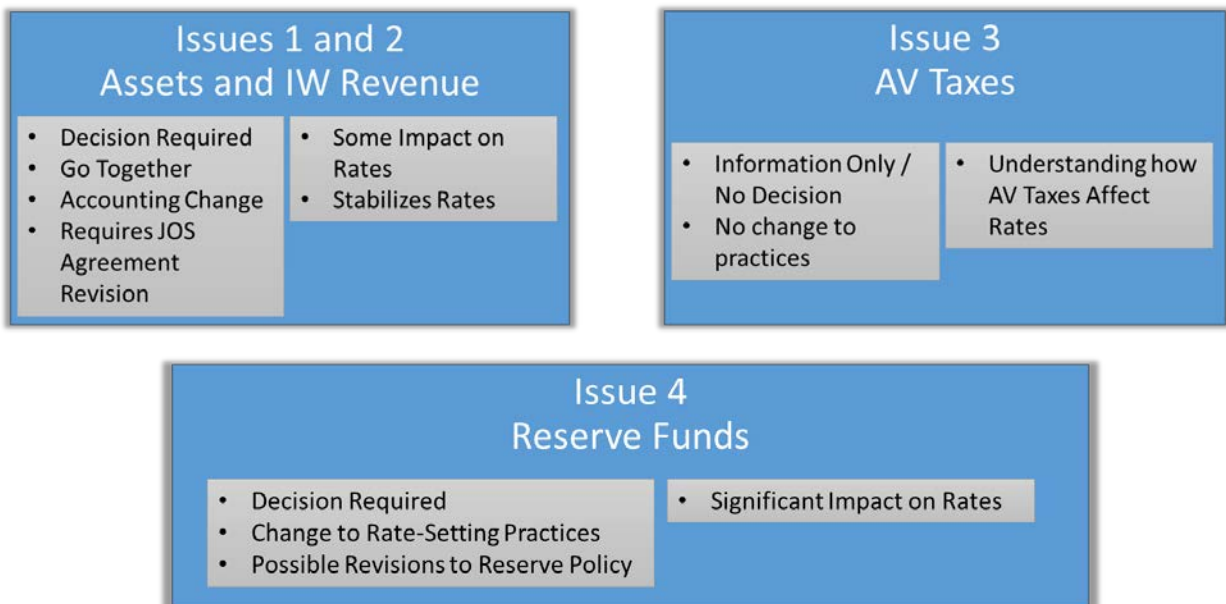
Summary and Impact of the Recommendations

Summarizing the Four Issues

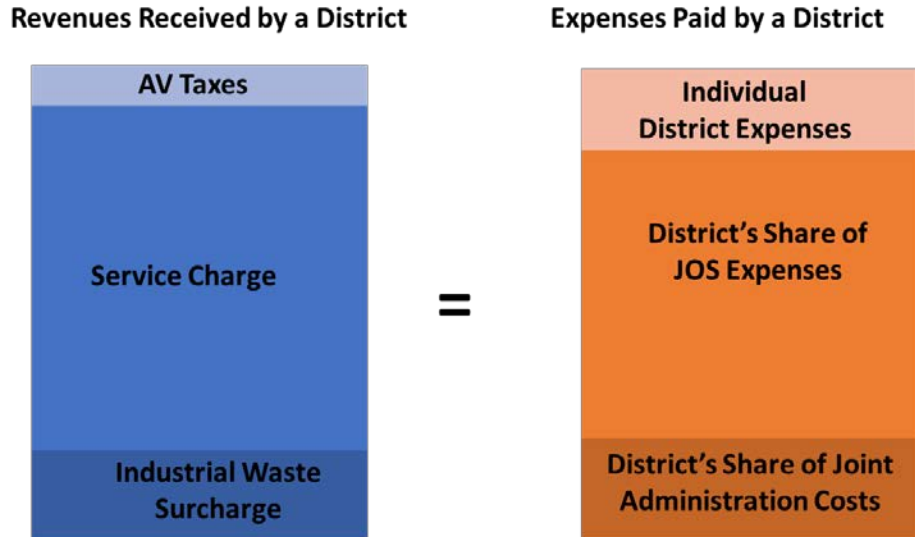
The four issues described in this report are:

1. District-owned vs. JOS-owned Assets
2. Industrial Waste Facilities' Revenue and Rates
3. Ad Valorem Tax Revenues
4. Reserve Fund Levels

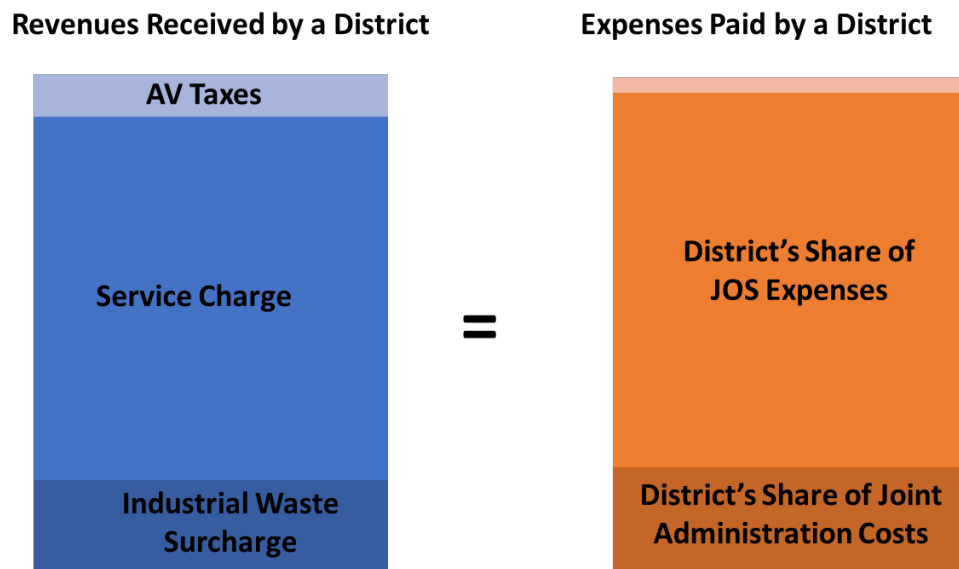
The issues can be grouped into three categories as shown in the graphic below. The first two, the asset and IW revenue classification issues, require specific action be taken to implement, but will have relatively small impact on rates. Issue 3, AV tax revenues, is presented to provide context for rate-setting and why rates vary between the Districts. The final issue, reserve funds, involve altering of rate-setting practices to better comply with the reserve policies and will have a significant impact on rates in some Districts, especially in the next 5-10 years.



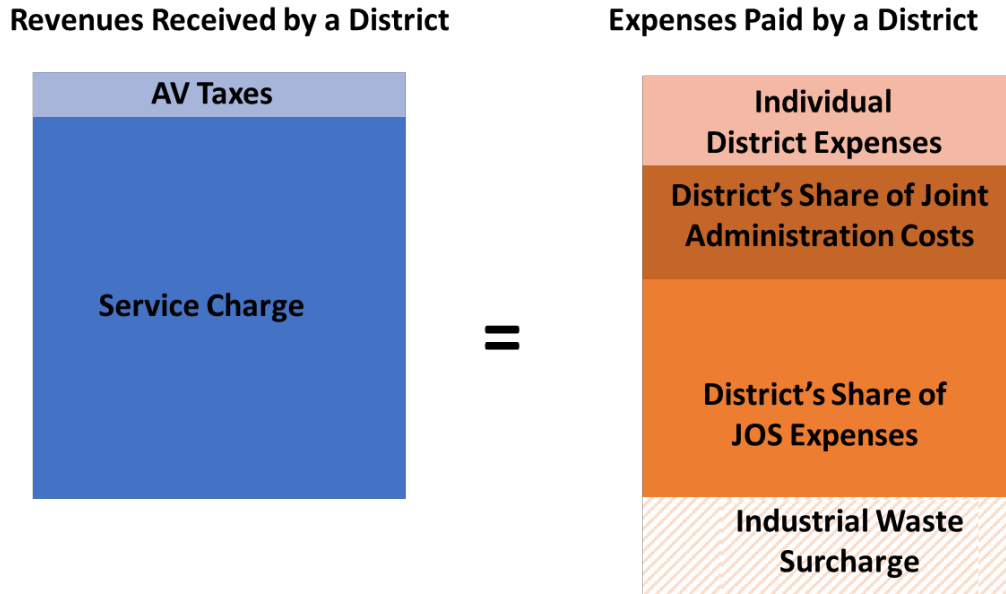
To illustrate how these issues, affect rates, the following graphics show the components of revenue and expense for each Districts and how the recommendations will shift each of them. Existing revenue and expenses can be shown as two blocks each with three components:



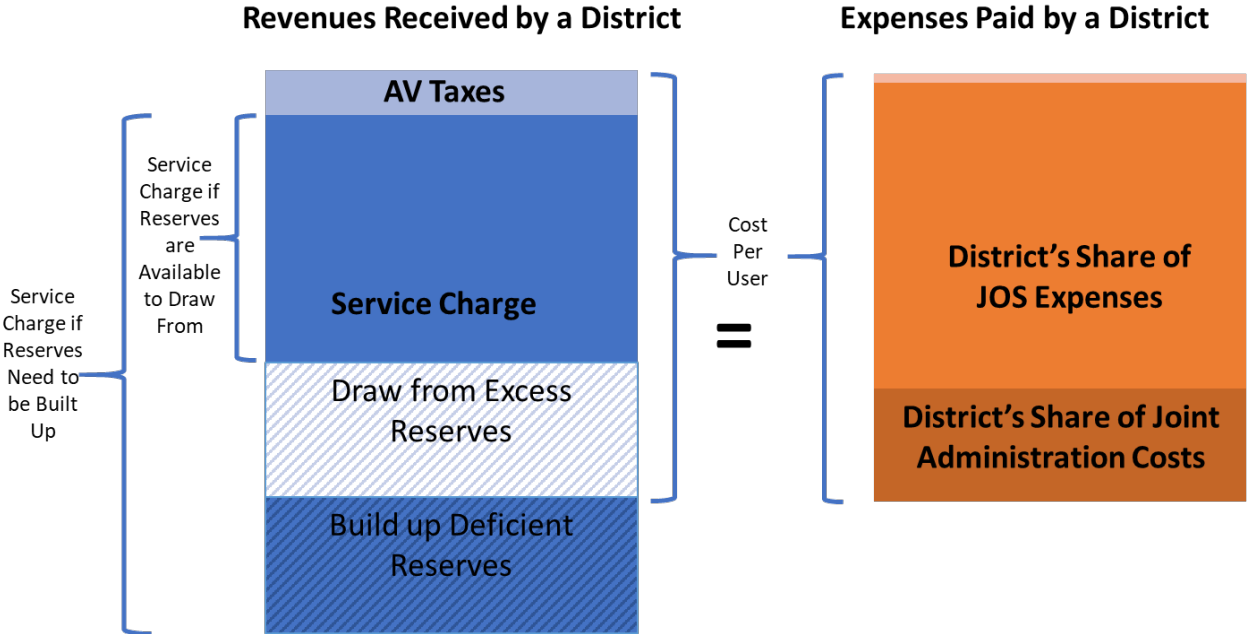
Reclassifying individual District-owned assets as JOS assets would reduce the individual Districts' expenses to near zero and would increase their share of JOS expenses by a similar amount. The resulting expenses components of its cash flow is shown in the graphic below:



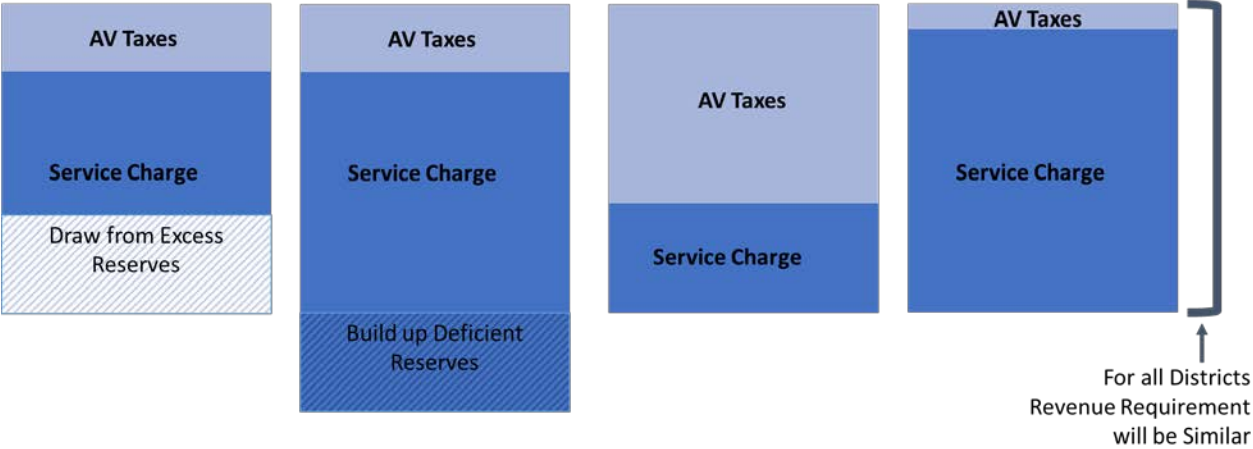
Reclassifying IW Revenue as JOS revenue, as was recommended in the discussion of Issue 2, would shift the Industrial Waste Surcharge block of revenue from individual District revenue to JOS revenue, which would offset some of the JOS Expenses paid by the District. The resulting revenue and expenses would be as follows with the “Industrial Waste Surcharge” block shown in light shading to illustrate how it reduces the District’s share of JOS expenses:



The graphics above illustrate a steady-state situation with no revenues being used to build up or draw down reserves. For those Districts with deficient or excess reserves, the reserves will in fact impact the service charge. The graphic below shows that for Districts with deficient reserves, the service charge rate will need to be set such that total revenue is greater than total expenses so that funds can be available to build up into reserves. Conversely, the light shaded block shows that for Districts with excess reserves, the total revenue can be less than total expenses, and as a result the service charge rate can be reduced.



Finally, to illustrate the combined effect of differing AV tax revenues between Districts and the effect of deficient or excess reserves, the blocks below illustrate four different types of Districts in various situations. With the recommended asset and IW reclassifications, all JOS Districts will have similar total expenses on a per SU basis. However, the service charge rate may vary significantly due to differences in AV tax revenue received and whether reserves are available to draw from, or if reserves need to be built up.



District-by-District Analysis of Impact of Recommendations

A detailed analysis was done to determine the impact of the four issues on service charge rates. The analysis assumed:

- Individual District facilities become JOS facilities.
- District IW revenue becomes JOS revenue.
- Districts are “re-sized” for purposes of determining share of JOS and overhead costs: only Residential and Commercial SUs are used to determine share. Currently IW is also used to determine a Districts size and proportionate share of costs.
- Rates were calculated to return to targeted reserve level in 10 years when possible.
- JOS reserves are created to manage year-to-year fluctuations and to manage cash flow. Individual District reserves are used to fund the JOS reserves.

The estimated service charge rate after implementing the recommendations in each District is shown in the table below. As the table indicates, District No. 5 will require the largest first year increase of 4%. It is estimated that District 3 will require the highest average increase over the next 10 years of 3.8%. Most Districts' increases will be in the 2% to 3% range, which is close to assumed inflation. For three Districts (23, 28 and SBC) a significant reduction in service charge rate will be needed to ensure their reserves trend closer to target.

District	Current Service Charge Rate, \$ per SU per year	Estimated Initial Rate with Recommendations, \$ per SU per year	Approximate Annual Increase over 10 Years
District 1	193	195	2.4%
District 2	181	185	2.5%
District 3	175	182	3.8%
District 5	167	174	2.5%
District 8	198	203	1.8%
District 15	163	166	3.1%
District 16	160	160	2.5%
District 17	161	161	2.5%
District 18	182	182	2.3%
District 19	173	176	2.8%
District 21	179	183	3.0%
District 22	174	174	1.8%
District 23	132	0	0.0%
District 28	144	0	0.0%
District 29	339.75	339.75	1.3%
South Bay Cities	136	79	0.5%

The following table compares current reserve level to the reserve level in ten years, assuming the recommended changes are made. While most Districts are able to achieve 100% of target reserve level, Districts Nos. 23, 28 and SBC will continue to have higher than target reserves even with significant service charge rate reductions. Not that although District No. 29 is shown as having a high level of reserves, this District’s target will need to be modified to account for work needed on the small local sewers that District No. 29 will continue to own.

District	Year 1 Percent of Reserve Target	Year 10 Percent of Reserve Target
District 1	153%	100%
District 2	88%	100%
District 3	80%	101%
District 5	80%	101%
District 8	80%	100%
District 15	270%	100%
District 16	422%	101%
District 17	592%	100%
District 18	107%	100%
District 19	192%	99%
District 21	237%	101%
District 22	531%	104%
District 23	11011%	8933%
District 28	3769%	1851%
District 29	1566%	612%
South Bay Cities	861%	244%

The table below shows that by year 10, the amount paid by a typical single-family home will be similar from District to District, compared to a much larger range today. For the two Districts with significantly lower than average amounts in year 10, they will be continuing to draw from reserves that will still be above target in 10 years.

District	Year 1 Typical Revenue from a Single-Family Home (AV Taxes + Service Charge), \$/year	Year 10 Typical Revenue from a Single-Family Home (AV Taxes + Service Charge), \$/year
District 1	223	274
District 2	223	278
District 3	217	283
District 5	225	276
District 8	241	275
District 15	213	277
District 16	215	267
District 17	207	264
District 18	223	276
District 19	219	278
District 21	217	275
District 22	215	258
District 23	156	157
District 28	165	216
District 29	369	420
South Bay Cities	200	248

Next Steps

The JOS Ad Hoc Committee recommended proceeding with the three recommended changes:

- 1) Reclassify wastewater assets within each JOS District from District-owned to JOS-owned, other than small local sewers in District No. 29.
- 2) Reclassify Industrial Waste Surcharge revenue from individual District revenue to JOS revenue.
- 3) Each District should set rates to meet reserve targets in 10 years.

Implementation of the recommendations will require the following steps:

- Revise the Joint Outfall System Agreement.
- Adopt new Wastewater Financial Reserve Policies for each District.
- Adopt new Industrial Waste Surcharge Ordinances, Master Service Charge Ordinances and Service Charge Rate Ordinances.
- If Approved, Rates and New Financial Administration Practices to Take Effect July 1, 2022

It is anticipated these steps would begin after concurrence from the Personnel Committee and presentations to the boards in the fall of 2021. Approval would be taken to the boards in late 2021 or early 2022.

Implementation of the new ordinances would include public outreach, including Proposition 218 notices and information meetings, for those Districts with rate increases. Information mailers could be sent to property owners in those Districts without rate increases.

Appendix A – Reference Documents

The following documents maybe be helpful for reference and are available upon request:

- Current Joint Outfall Agreement Dated 7/1/2020 (DMS 5562795)
- Original Joint Outfall Agreement 11/19/1924 among Districts Nos. 1, 2, 3, and 5 (DMS 314477)
- PowerPoint presented to Personnel Committee on 9/23/2020 (DMS 5879549)

Appendix B – District Data

District Data

All Districts including non-JOS Districts shown

District	Date of Formation	Placed in Operation	Area (Sq.Miles)	Population 2020	Cities/ Partial Cities	Miles of District Sewers 2020	Pump Stations	Wastewater Management
1	11/17/1924	2/13/1928	41.3	578,445	11	105.4	1	Joint Outfall System
2	2/25/1924	2/13/1928	76.1	691,806	19	219.1	2	Joint Outfall System
3	5/19/1924	5/20/1948	52.3	510,478	4	77.1	6	Joint Outfall System
4	3/17/1924	12/9/1926	1.9	36,940	2	6.3	0	L.A. City Sewerage System
5	3/31/1924	2/13/1928	87.8	742,800	15	181.0	10	Joint Outfall System
8	9/21/1925	2/13/1928	31.3	142,014	4	88.5	3	Joint Outfall System
9	8/16/1926	5/10/1927	0.2	2,331	1	0.0	0	L.A. City Sewerage System
14	8/31/1938	12/2/1941	59.0	199,321	2	75.4	0	Lancaster Sewerage System
15	1/2/1945	2/27/1948	77.6	587,113	20	145.5	2	Joint Outfall System
16	1/2/1946	2/27/1948	37.4	273,311	5	42.4	0	Joint Outfall System
17	1/2/1946	11/23/1949	7.7	56,214	1	5.2	0	Joint Outfall System
18	11/23/1948	7/1/1950	60.1	340,094	11	83.6	3	Joint Outfall System
19	3/28/1950	5/19/1951	14.2	91,845	5	34.4	2	Joint Outfall System
20	8/7/1951	9/8/1952	41.3	129,733	1	44.9	0	Palmdale Sewerage System
21	11/13/1951	8/21/1954	84.7	415,018	9	86.9	4	Joint Outfall System
22	9/22/1953	12/6/1954	64.1	335,153	12	101.8	0	Joint Outfall System
23	7/10/1956	7/14/1959	2.5	50	1	2.1	0	Joint Outfall System
27	4/20/1961	4/2/1962	0.2	2,259	0	0.4	0	L.A. City Sewerage System
28	9/14/1961	11/2/1962	4.1	11,399	1	4.1	0	Joint Outfall System
29	9/20/1962	11/12/1964	2.2	11,712	1	36.8	3	Joint Outfall System
34	10/31/1967	Inactive	4.0	7,674	1	0.0	0	Inactive
NR	6/14/2006	Inactive	18.7	4	0	0.0	0	Inactive
SBC	12/24/1923	9/12/1926	14.6	115,745	8	25.0	11	Joint Outfall System
SCV	1/2/1961	5/10/1962	63.3	269,170	1	43.1	1	Santa Clarita Valley Sewerage System
TOTAL			846.6	5,550,629	135	1,409.0	48	

JOS Wastewater Treatment Plants

Facility	Operational	Permitted Capacity (MGD)	Area in Acres
JWPCP	2/4/1928	400.0	381
Long Beach	5/22/1973	25.0	17
Los Coyotes	10/14/1970	37.5	36
Whittier Narrows	7/27/1962	15.0	27
San Jose Creek	6/29/1971	100.0	51
Pomona	4/15/1954	15.0	12
La Cañada	11/2/1962	0.2	0

Joint Outfall District Sewage Units (SUs)

District	IW not Including IEUA Contract	IEUA Contract Distributed Among Districts	Total IW Including IEUA	Residential and Commercial	Contract In	Contract Out	Net of Contracts	Total	Allocation of JOS Net Expenses
District 1	22,884	9,723	32,607	144,490	0	0	0	177,097	8.97%
District 2	33,643	14,410	48,053	214,412	0	0	0	262,465	13.37%
District 3	11,973	10,961	22,934	176,709	0	0	0	199,643	10.24%
District 5	17,206	16,291	33,497	263,231	0	-2,404	-2,404	294,324	15.08%
District 8	36,324	5,397	41,721	56,587	0	0	0	98,308	5.03%
District 15	22,941	12,174	35,115	186,635	0	0	0	221,750	11.11%
District 16	85	6,530	6,615	112,317	1	-1,222	-1,221	117,711	6.03%
District 17	0	874	874	15,037	0	0	0	15,911	0.79%
District 18	10,480	7,395	17,875	116,816	260	-849	-589	134,102	6.98%
District 19	-394	2,294	1,900	39,889	212	-675	-463	41,326	2.12%
District 21	16,822	9,472	26,294	146,231	1,786	0	1,786	174,311	8.88%
District 22	12,874	7,762	20,636	120,736	151	0	151	141,523	7.15%
District 23	18,966	1,278	20,244	3,037	0	0	0	23,281	1.00%
District 28	0	261	261	4,489	0	0	0	4,750	0.24%
District 29	317	338	655	5,494	0	0	0	6,149	0.31%
South Bay Cities	82	2,927	3,009	50,306	0	0	0	53,315	2.70%
Total	204,203	108,085	312,288	1,656,416	2,410	-5,150	-2,740	1,965,964	100.00%