

# Operational performance metrics

The King County Wastewater Treatment Division (WTD) provides relevant information on operational, financial, regulatory and safety performance of the utility. Much of this information is updated monthly.

This information:

- Shares an overview of the system
- Presents operational patterns
- Illustrates system dynamics
- Identifies approaching challenges

## Operational metrics

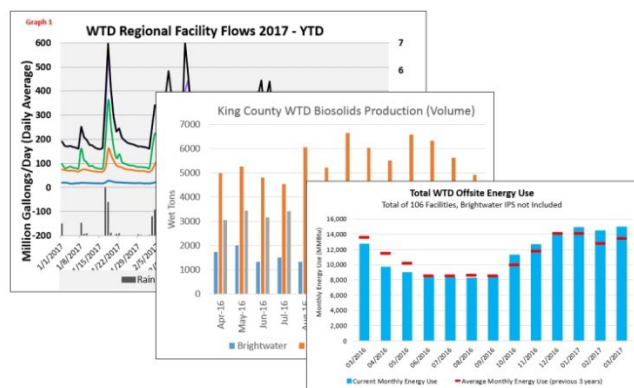
The following metrics represent the performance of the King County Wastewater Treatment Division in four key performance areas:

- Operational performance
- Regulatory performance
- Financial performance
- Safety performance

## Contact us

If you have questions regarding this information, please contact:

Olivia Robinson at [Olivia.Robinson@kingcounty.gov](mailto:Olivia.Robinson@kingcounty.gov), 206-477-3566

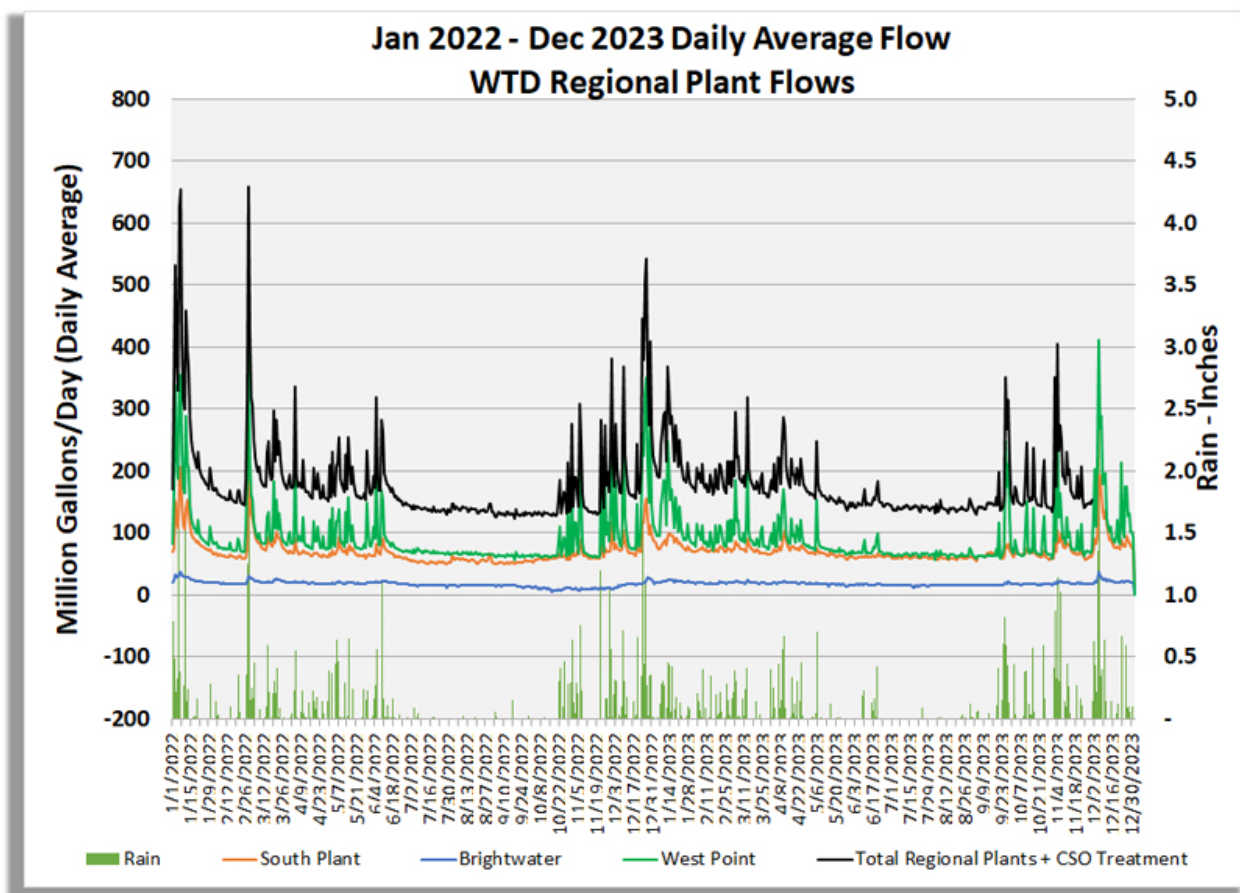


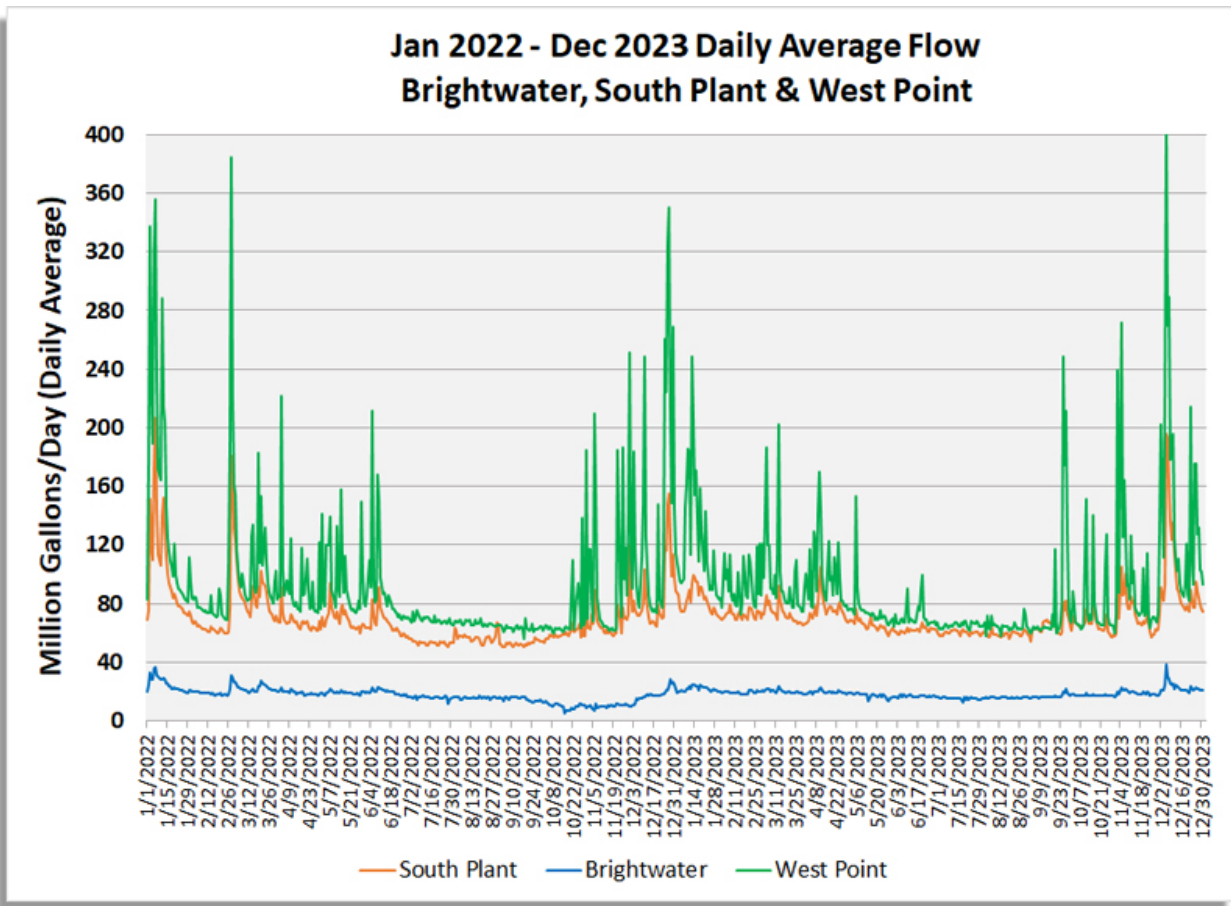
## Operational performance (December 2023)

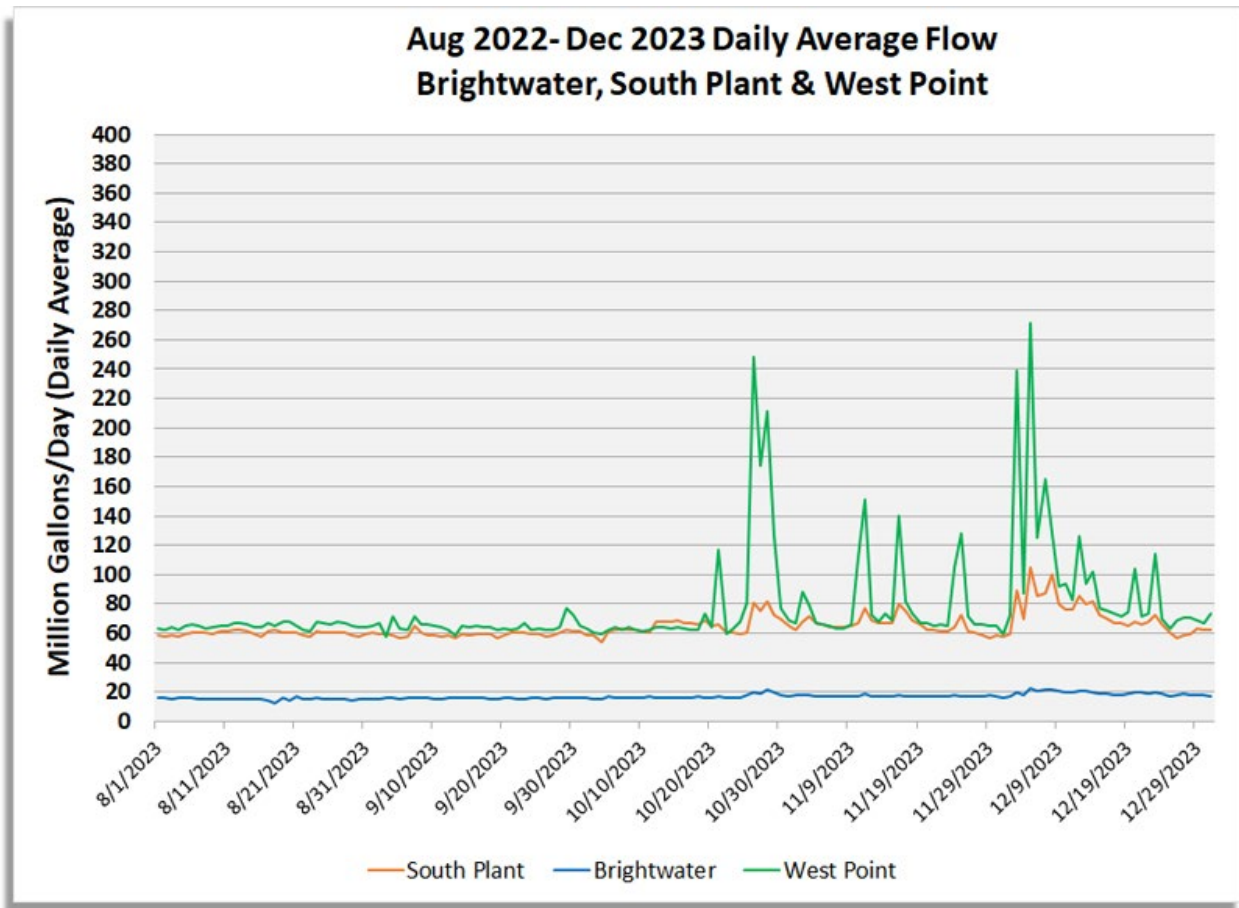
### 1. Flow volumes at regional plants and key points in the system

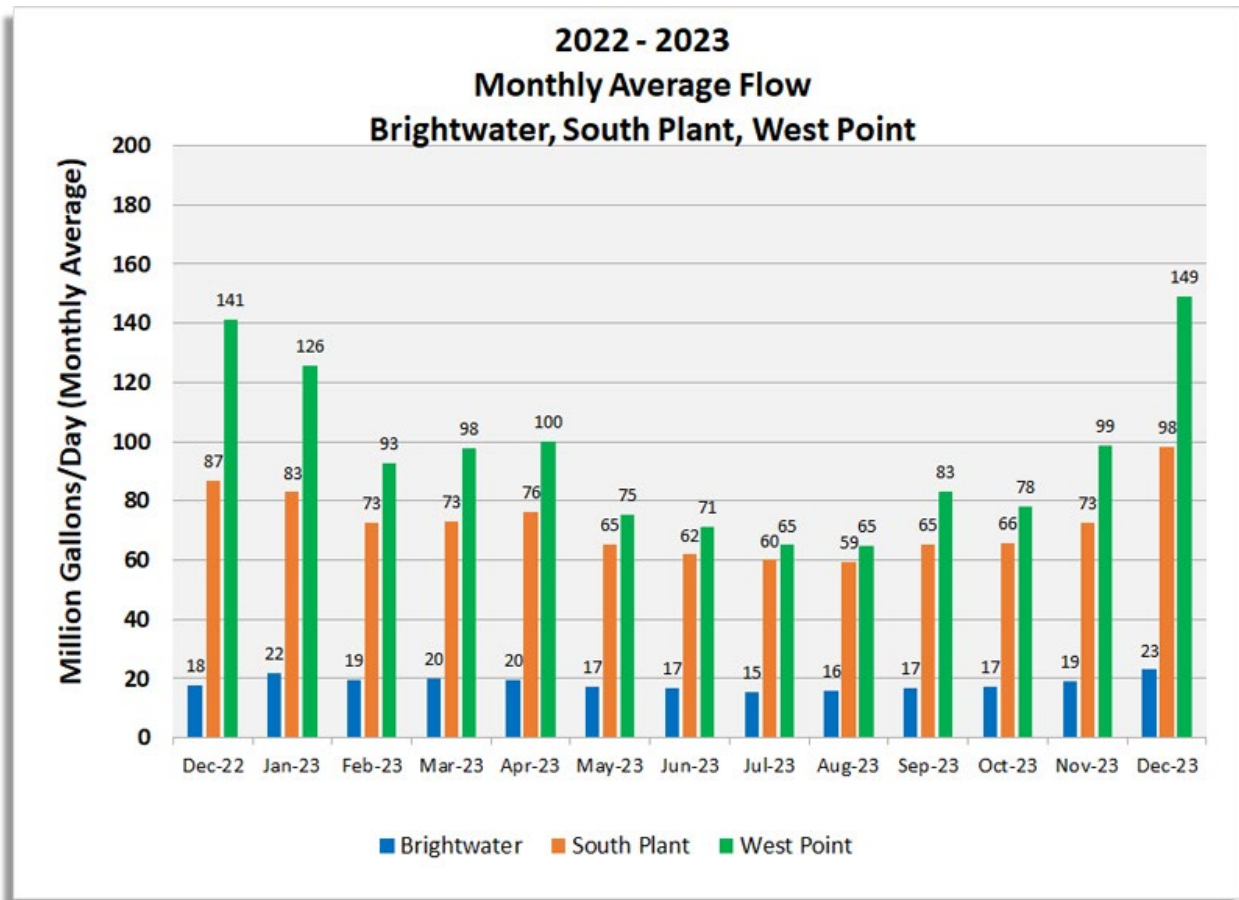
#### Flow volumes at regional plants and key points in the system

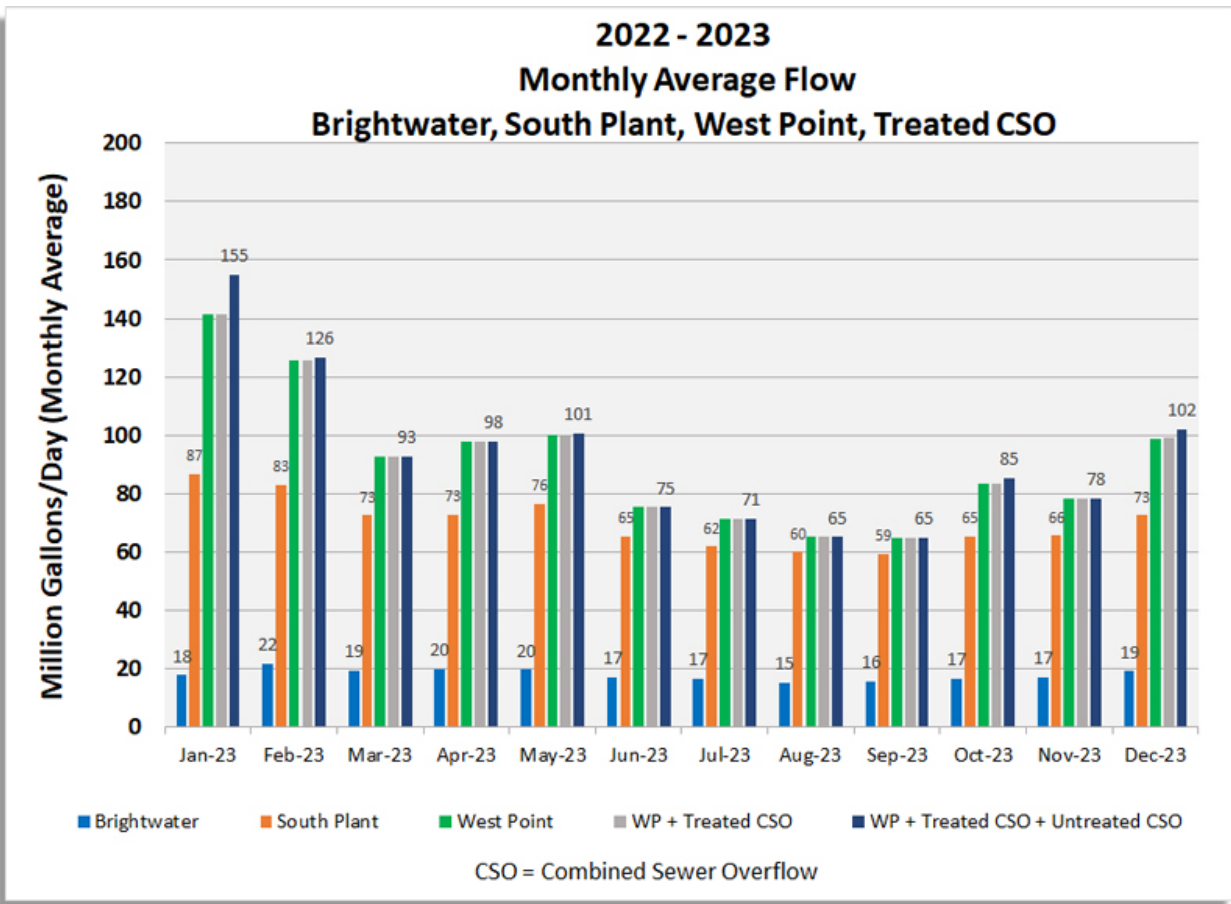
The following graphs illustrate the total amount of flow to each of our regional treatment plants over various periods of time including flows through the Combined Sewer Overflow system. The bars at the bottom of the first graph illustrate the impact that rainfall has on our system.







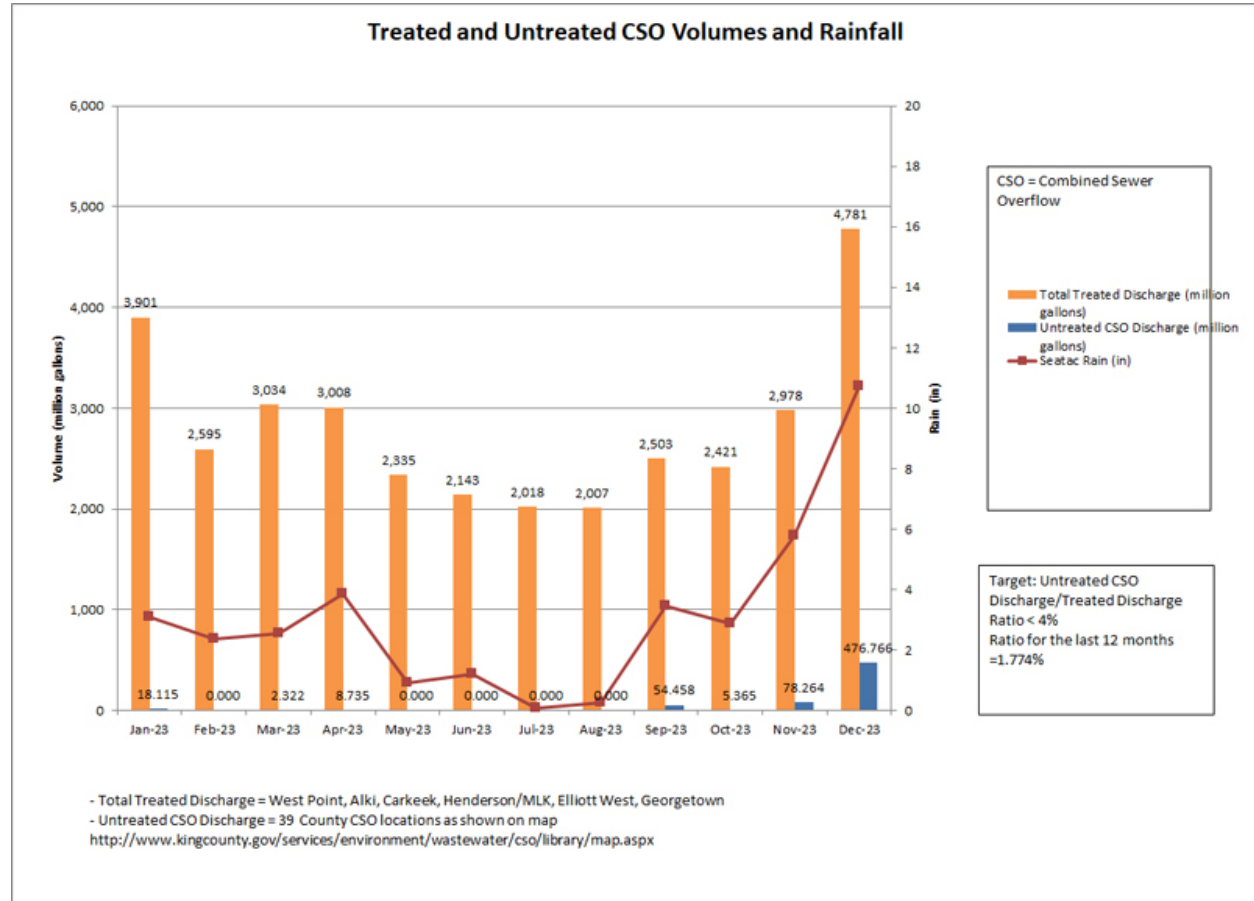




## 2. Combined Sewer Overflow (CSO) discharge volumes throughout the system

### Combined Sewer Overflow (CSO) discharge volumes throughout the system

The following graph illustrates the total amount of flow that is handled through the regional Combined Sewer Overflow system. View [King County CSO locations](#).

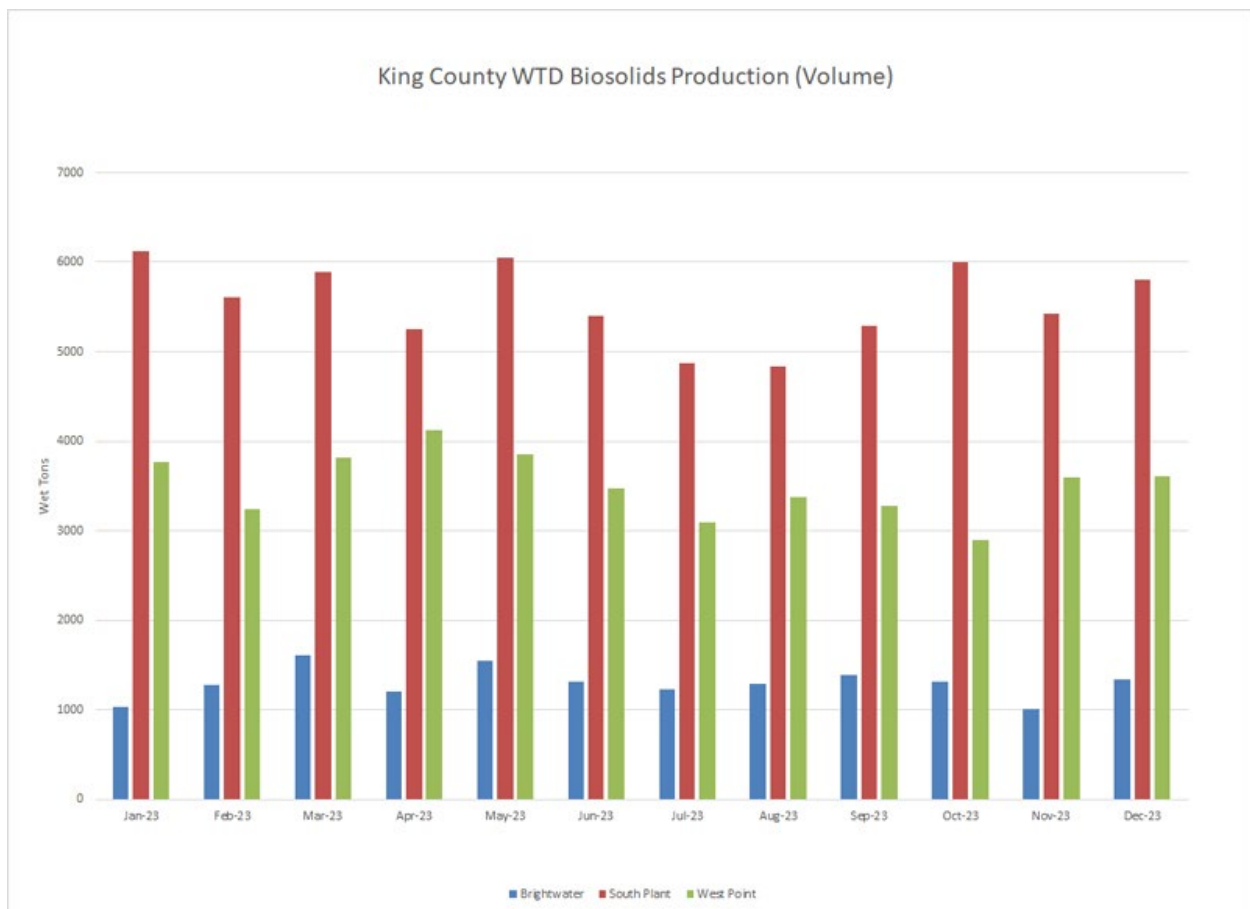


### 3. Production and distribution of Loop biosolids

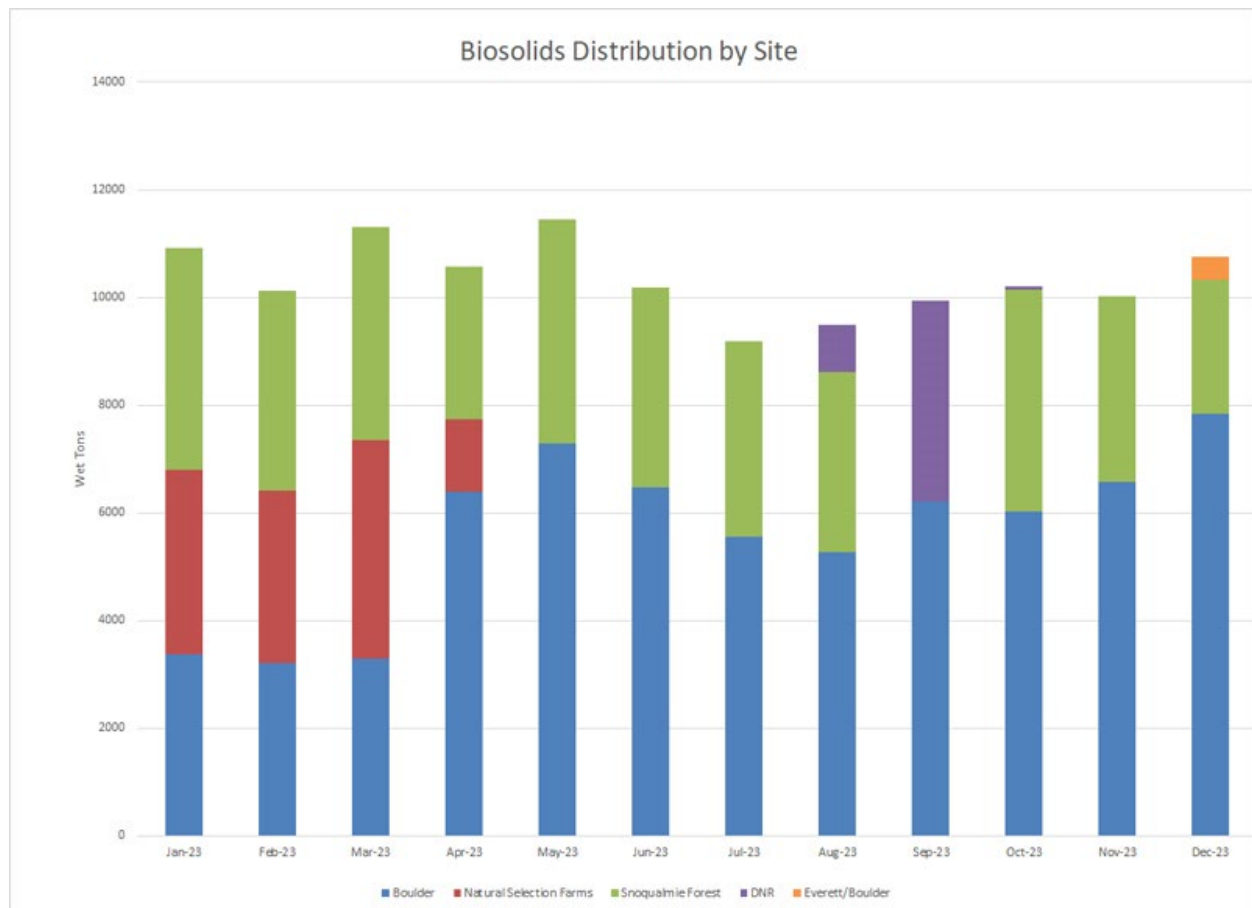
#### Production and distribution of Loop biosolids

Biosolids are the nutrient-rich product of the wastewater treatment process. Biosolids improve soil fertility and enhance plant growth and crop yield. Loop® is the brand name for biosolids produced by King County. Loop is used as fertilizer and soil amendment for commercial forestry and agriculture, and as an ingredient in compost for landscaping and home gardening.

King County's biosolids program is responsible for managing Loop recycling, including transportation and delivery, permitting and managing Loop applications, research and monitoring, and public outreach. Since 1973, we have worked with local organizations, farm groups, and university scientists to develop an award-winning program that serves as a model for safe, sustainable biosolids recycling.





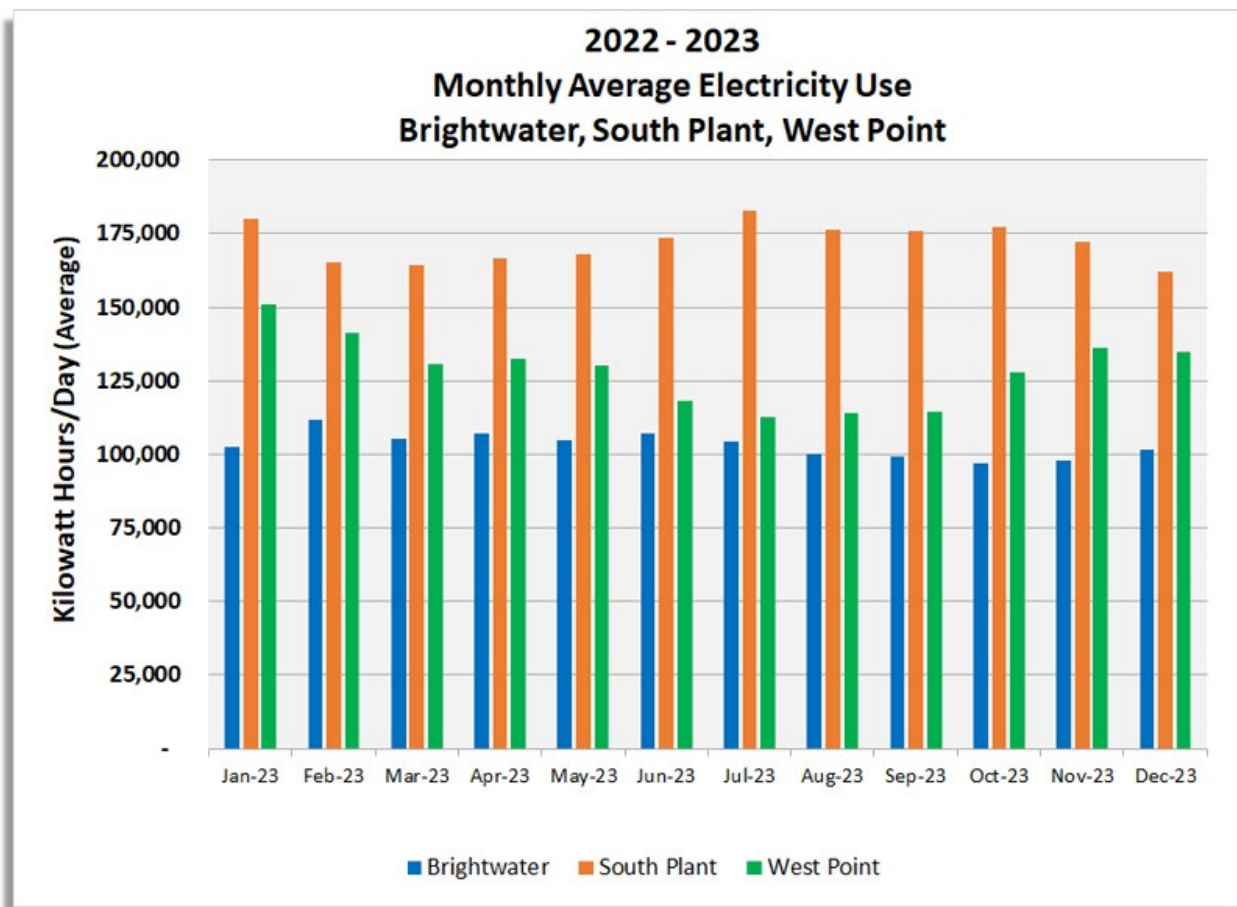


#### 4. Electrical energy usage at each regional treatment plant and conveyance system

### Electrical energy usage at each regional treatment plant and conveyance system

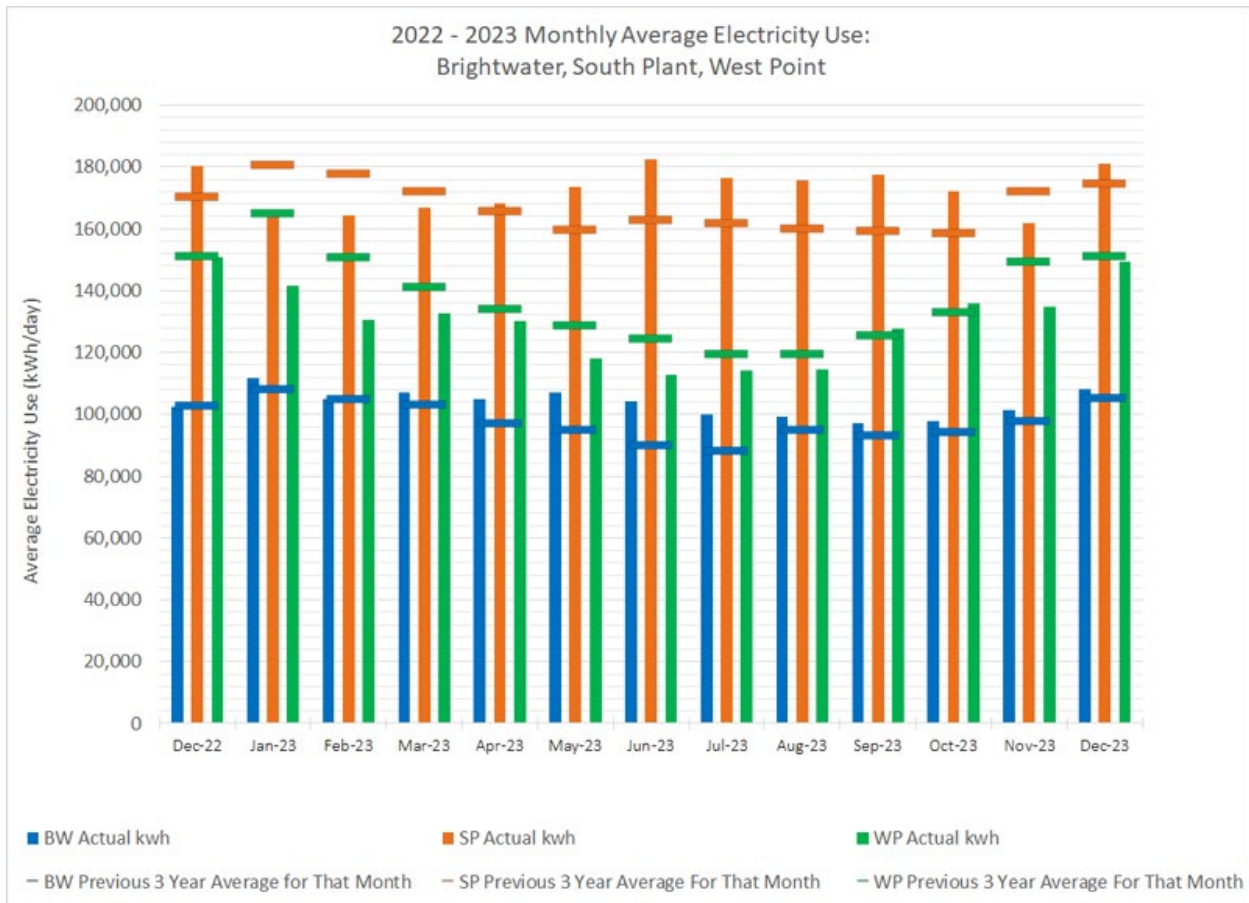
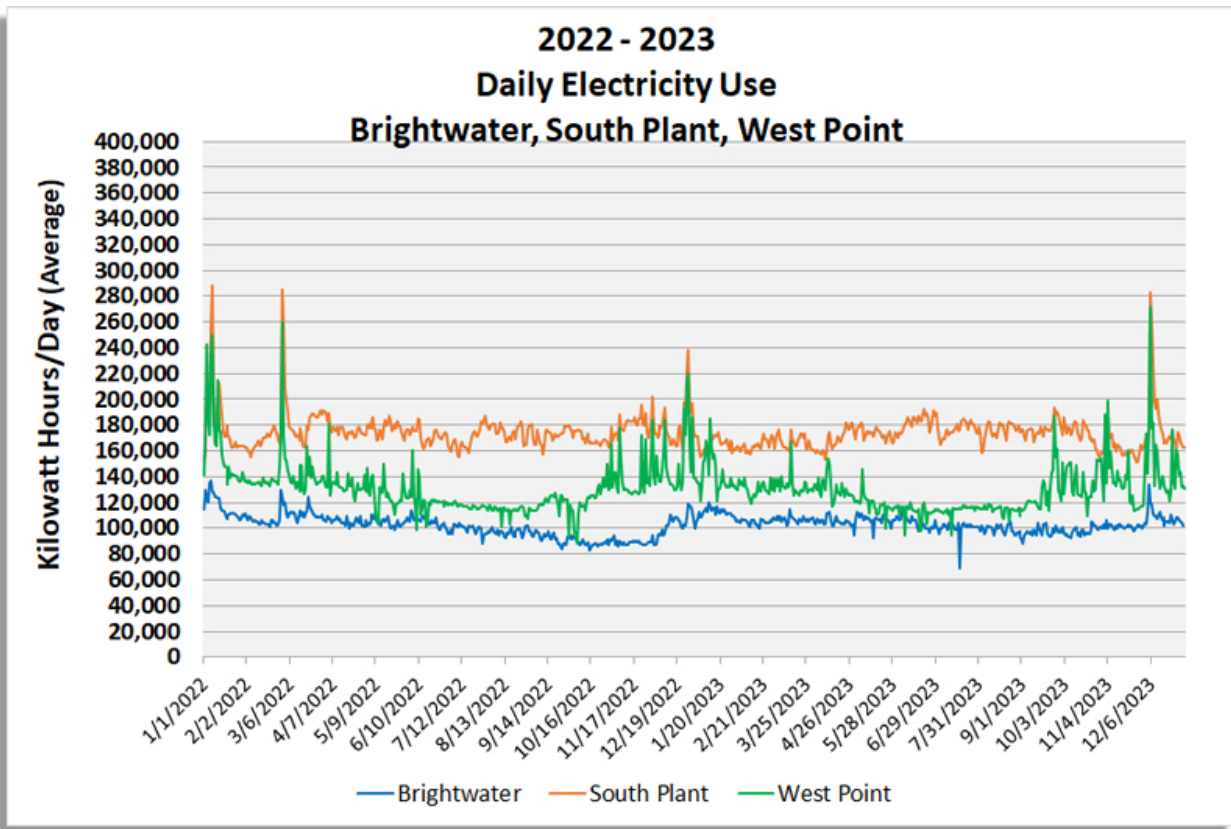
#### ***Monthly Average Electricity Use at Brightwater, South Plant and West Point:***

This diagram shows the average daily electricity use for the past 13 months for each of King County's three main treatment plants. West Point's electricity use depends mainly on treated volume. South Plant's electricity use is driven by influent flow and oxygen demand for nitrification. Brightwater's energy use is higher per gallon treated because of its elevated location, which requires more pumping, higher treatment standards, and stringent odor control requirements.



#### **Electricity Use at Brightwater, South Plant and West Point:**

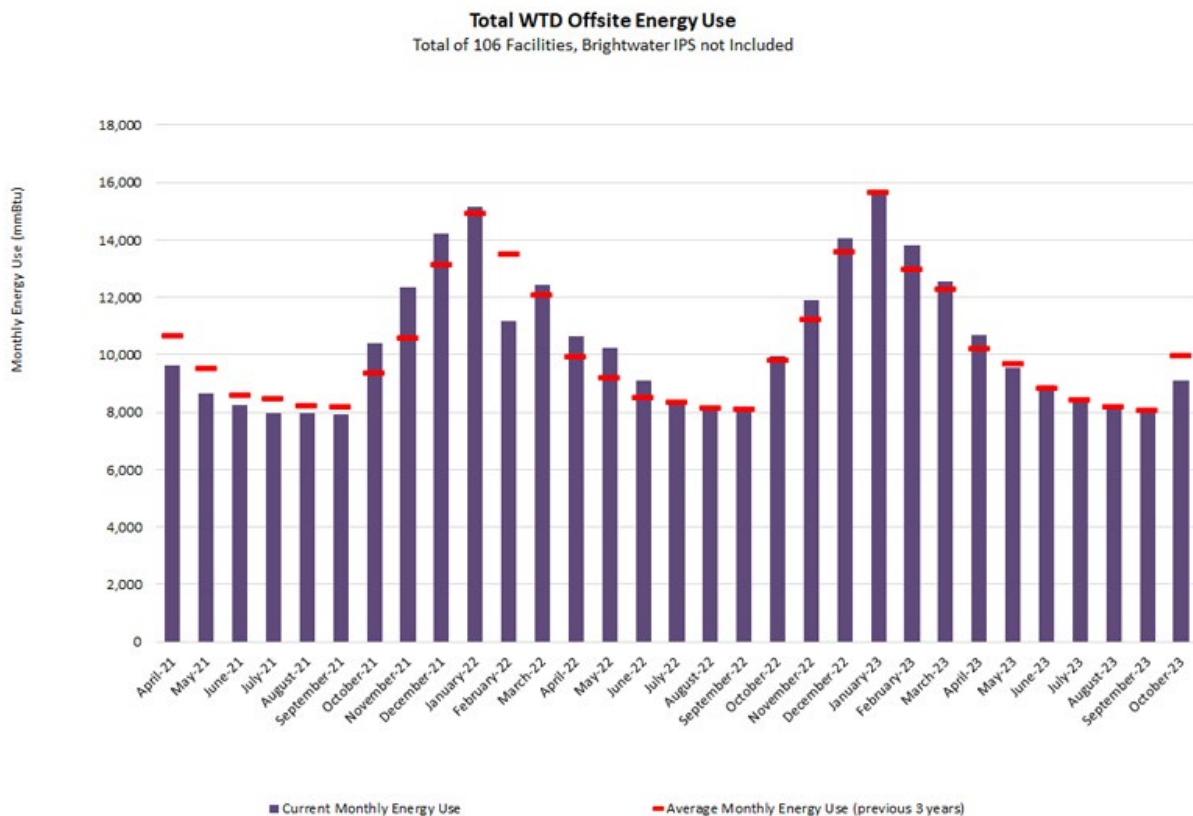
This diagram shows daily electricity use for each treatment plant. It highlights how electricity use can double with high flow volumes at West Point.



## Total WTD Offsite Energy Use

This diagram shows the combined energy use of WTD's more than one hundred offsite facilities. Energy use at offsite facilities is driven by flow volumes and outside air temperatures.

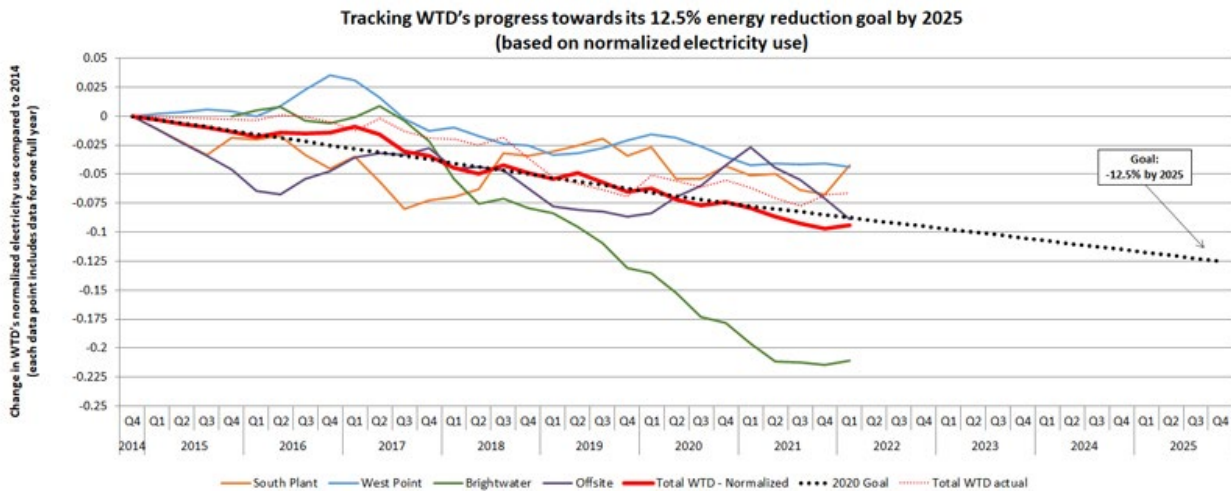
**Please note:** This information is updated monthly and will have a three-month lag when all of the data becomes available.



## Tracking WTD's progress towards its 7.5% energy reduction goal.

Normalized electricity use describes the amount of electricity a facility would have used if the general conditions had been the same as they were in the baseline year (2014). Normalizing energy use allows us to track changes in energy use independent of factors we do not control such as air temperatures or flow volumes. This diagram shows the change in normalized electricity use for each treatment plant, offsite facilities and WTD in total and how these changes compare to the County wide 2020 energy reduction goal.

**Please note:** This normalized electricity use information is updated once a quarter with a lag time of about three months.



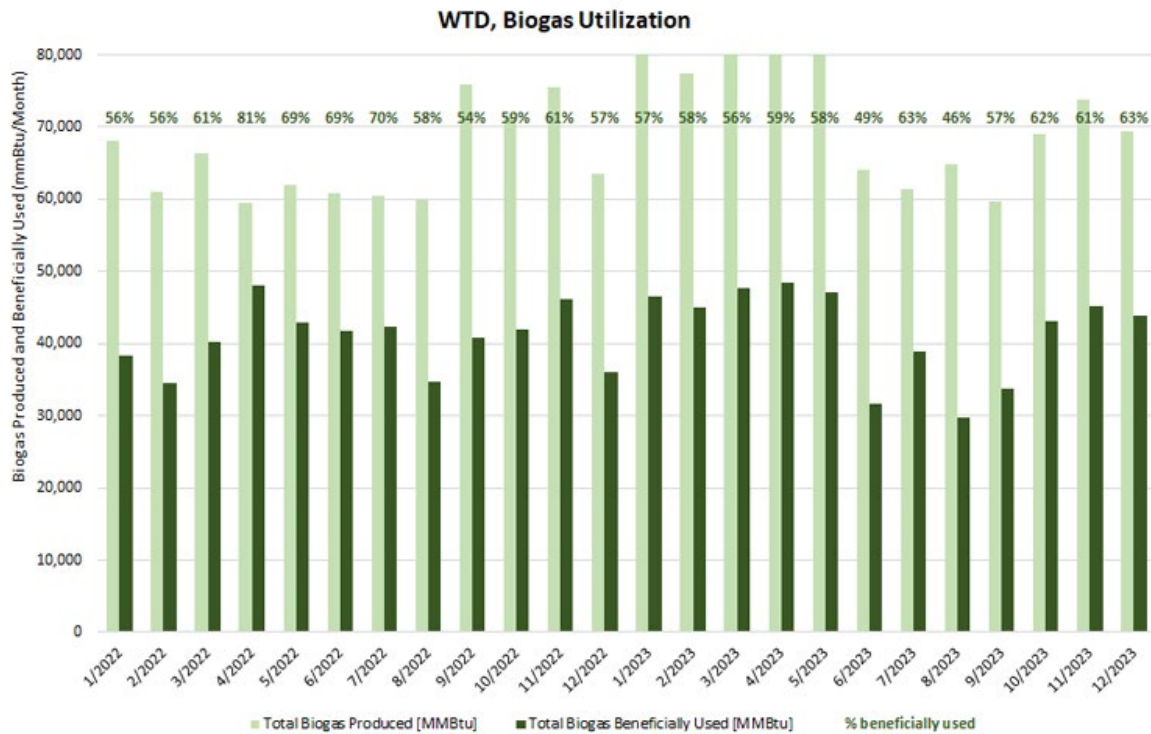
## 5. Production and usage of biogas

### Production and usage of biogas

#### ***WTD, Biogas Utilization***

Biogas is used differently at each of the three treatment plants.

- At South Plant excess biogas can be fed into PSE's natural gas pipeline.
- At Brightwater and West Point biogas usage is limited to the equipment on site. At both of these plants there is a higher demand for biogas in winter when flows are higher and temperatures lower. The total amount of biogas beneficially used therefore tends to be higher in winter than in summer.



## Regulatory performance (December 2023)

### 6. Significant power disruption events

#### Significant power disruption events

The following table conveys information on the performance of the County's wastewater treatment facilities and conveyance system for any monthly exceedances of permit requirements that are caused by power disruption, or involve events with backups of the conveyance system and need for substantial responsive actions (e.g., cleanup of sanitary sewer overflows).



Wastewater Treatment and Conveyance System Compliance Events - Permit Requirement Exceedances Involving Power Disruption or Sewer Backup												
Facility	2023											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Wastewater Treatment Plants (e.g., effluent limit exceedance, unpermitted discharges)</b>												
West Point												
South Plant												
Brightwater												
Vashon												
Carnation												
<b>CSO Treatment Facilities (e.g., effluent limit exceedance, disinfection failure)</b>												
Henderson/MLK CSO	*	*	*	*	*	*	*	*	*	*	*	
Alki CSO	*	*	*	*	*	*	*	*	*	*	*	
Carkeek CSO	*	*	*	*	*	*	*	*	*	*	*	
Elliott West CSO	*	*		*	*	*	*	*		*		
<b>West Section Conveyance System</b>												
CSO Exacerbated Overflow												
CSO Dry Weather Overflow	<i>a</i>											
Sanitary Sewer Overflow		<i>b</i>										
<b>East Section Conveyance System</b>												
Sanitary Sewer Overflow												

## Notes:

1	Number of power disruption/backup events in any month where exceedances occur.
	Represents any month where no events occurred, or if any non-compliance occurred it was unrelated to power disruption, or backups in the conveyance system.
	Non-compliance occurred and involved power disruption or conveyance system backup; however, repair/solution is known and the incident response and correction was immediate.
	Non-compliance involving power disruption or conveyance system backup, and evaluation and corrective action includes substantial effects on residents and businesses, level of effort and time to resolve, or costs to system operations.
*	Monitoring period characterized by sufficiently low flow conditions that the CSO treatment facility did not operate with a discharge to the outfall at any time in the month.

*a* A large storm on January 12-13, 2023 resulted in peak wastewater and combined stormwater flows along with widespread power outages and disturbances. The storm event was accompanied electrical- and telemetry-related disturbances at pump station facilities. Overflows occurred at separated system pump stations in the West section service area (Richmond Beach) and East section (Medina), and at a CSO pump station (East Pine).

*b* During a February 13, 2023 storm, power disruptions at the Barton Pump Station caused two instances of faults involving both pumps, resulting in an overflow that exited to the outfall and Puget Sound. Staff responded immediately and arrived onsite to reset the drives.

## 7. Significant system process disruptions

### Significant system process disruptions

The following table conveys information on the performance of the County's wastewater treatment facilities and conveyance system for any monthly exceedances of permit requirements that are caused by, or involve, process disruption (not power related) such as major equipment or biological treatment process failures, or industrial discharges.

Wastewater Treatment and Conveyance System Compliance Events - Permit Requirement Exceedances Involving Process Disruption												
Facility	2023											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Wastewater Treatment Plants (e.g., effluent limit exceedance, unpermitted discharges)</b>												
West Point												
South Plant												<i>a</i>
Brightwater												
Vashon												
Carnation												
<b>CSO Treatment Facilities (e.g., effluent limit exceedance, disinfection failure)</b>												
Henderson/MLK CSO	*	*	*	*	*	*	*	*	*	*	*	
Alki CSO	*	*	*	*	*	*	*	*	*	*	*	
Carkeek CSO	*	*	*	*	*	*	*	*	*	*		<i>b</i>
Elliott West CSO	*	*		*	*	*	*	*		*		<i>c</i>
<b>West Section Conveyance System</b>												
Unpermitted Overflows												
<b>East Section Conveyance System</b>												
Sanitary Sewer Overflow												

Notes:

1	Number of process disruption events in any month where exceedances occur.
	Represents any month where no events occurred, or if any non-compliance occurred it was unrelated to process disruption.
	Non-compliance occurred and involved process disruption; however, repair/solution is known and the incident response and correction was immediate.
	Non-compliance involving process disruption, and evaluation and corrective action includes substantial effects on residents and businesses, level of effort and time to resolve, or costs to system operations.
*	Monitoring period characterized by sufficiently low flow conditions that the CSO treatment facility did not operate with a discharge to the outfall at any time in the month.

- a* In responding to a number of factors during a large storm and high inflow event that occurred on December 5-6, 2022, including the effects on process control, operations at South Plant initiated a partial bypass of primary treated flow for about 6hrs and 40min. Approximately 6.6 million gallons of primary treated wastewater was blended with the secondary treated flow and all permit discharge limits were achieved.
- b* The Carkeek wet weather treatment station experienced an intermittent disinfection failure during a December 5-6, 2023 treatment event, and attributed to a faulty pressure relief valve which was repaired following the event.
- c* The Carkeek wet weather treatment station experienced an intermittent disinfection failure during a December 5-6, 2023 treatment event, and attributed to a faulty pressure relief valve which was repaired following the event.



## 8. Regulatory compliance and performance

### **Regulatory compliance and performance**

The following table conveys information on the performance of King County's wastewater treatment facilities and conveyance system for any monthly exceedances of permit requirements that involve compliance with effluent limitations at the County's five wastewater treatment plants or four CSO treatment facilities, or unpermitted overflow events in the separated sanitary or combined stormwater-sewer conveyance system.

NPDES Permit Exceedances (Reportable Events Subject to Potential Penalties) – Wastewater Treatment Facilities or Conveyance System												
Facility	2023											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Effluent Limitations Exceedances at Wastewater Treatment Facilities</b>												
West Point												
South Plant												<i>a</i>
Brightwater												
Vashon												
Carnation												
<b>Effluent Limitations Exceedances at CSO Treatment Facilities</b>												
Henderson/MLK CSO	*	*	*	*	*	*	*	*	*	*	*	
Alki CSO	*	*	*	*	*	*	*	*	*	*	*	
Carkeek CSO	*	*	*	*	*	*	*	*	*	*		<i>b</i>
Elliott West CSO	*	*		*	*	*	*	*		*		<i>c</i>
<b>Conveyance System Overflow Events in Combined or Separated Basins</b>												
West Section – Dry Weather Overflows at CSO Outfalls												
West Section – Sanitary Sewer Overflows												
East Section – Sanitary Sewer Overflows												

## Notes:

Compliance goal for all events is “zero”, and all exceedances have potential to be assessed penalties.

	No ongoing non-compliance; or events with known cause and immediate correction.
	Ongoing compliance issue; but repairs/solution is known and underway for timely correction.
	Substantial ongoing compliance issue with ongoing corrective actions, or response and/or planning for corrective action is underway.

**\*\* West Point Bypass and Secondary Diversion Events:** Power disturbances at West Point contributed to a secondary diversion (i.e., unauthorized blending of primary and secondary treated flow) on January 9<sup>th</sup>, 2021 and a bypass of untreated wastewater from the emergency bypass outfall to Puget Sound during a large storm event on January 12-13 totaling about 11 million gallons. Ecology subsequently issued Administrative Order #19477 on February 2, 2021 that requires King County to plan for, and implement, power reliability strategies and improvements to minimize the potential for secondary diversions and bypasses. This footnote identifies and summarizes any bypass and secondary diversion events following the issuance of the administrative order.

- Summary of 2021 events: February 2, 2021 (secondary diversion, 3.5 million gallons over 39 minutes); April 29, 2021 (untreated bypass, 900,000 gallons over 29 minutes); Jun 13, 2021 (exacerbated secondary diversion while plant was at reduced capacity for scheduled construction work).
  - Summary of 2022 events: June 7, 2022 (secondary diversion, 400,000 gallons over 109 minutes).
  - Summary of 2023 events: No unauthorized events.
- a* In responding to a number of factors during a large storm and high inflow event that occurred on December 5-6, 2022, operations at South Plant initiated a partial bypass of primary treated flow for about 6hrs and 40min. Approximately 6.6 million gallons of primary treated wastewater blended with the secondary treated flow and all permit discharge limits were achieved.
- b* The Carkeek wet weather treatment station experienced a disinfection failure during a December 5-6, 2023 treatment event. The hypochlorite disinfection was not working intermittently during approximately 9 hrs and 30min of the 27 event (i.e., 3.2 million gallons [MG] of the total 8.2 MG discharge). The failure was attributed to a faulty pressure relief valve failed, and operators responded and repaired the equipment following the event.
- c* Effluent limits were exceeded during the month. The design process for facility improvements is underway for Elliott West.

## 9. Water quality monitoring

### **Water quality monitoring**

King County WTD conducts routine effluent water quality monitoring for compliance with the NPDES permit requirements at the County's five wastewater treatment plants, and at the four CSO treatment facilities. Additionally, WTD (in conjunction with scientists in King County Water and Land Resources Division [WLRD]) conducts specific sediment and water quality monitoring studies required for compliance with the NPDES permit as well as the Post Construction Monitoring Program for the County's 2012 Long-term CSO Control Plan Amendment. The following sections further describe these monitoring programs and provide information on the status of currently available monitoring efforts and data reports.

### ***Effluent Monitoring Data***

WTD monitors treated wastewater (effluent) at each of the five main treatment plants (West Point, South Plant, Brightwater, Vashon, and Carnation) for a variety of conventional chemical and biological water quality properties which are used to track performance of the physical and biological treatment processes, and to ensure compliance with effluent limitations that are specified in the NPDES permit for the purposes of protecting the aquatic environment where the wastewater is discharged. WTD also conducts required effluent monitoring at the four CSO treatment facilities (Carkeek, Elliott West, Alki, and Henderson/Martin Luther King [H/MLK]) whenever wet weather storm events result in these facilities operating and discharging to their designated CSO outfalls. The majority of the routine effluent data that is collected to comply with applicable NPDES permit requirements is compiled and submitted to Ecology electronically as Discharge Monitoring Reports (DMRs) on a regular monthly basis.

The key parameters that are monitored for NPDES permit compliance with effluent limitations consist of biochemical oxygen demand (BOD), total suspended solids (TSS), settleable solids, pH, chlorine residual, and fecal coliform bacterial. The compliance with the effluent limitations is a primary method used by Ecology and WTD of evaluating routine and ongoing performance of the treatment processes. Accordingly, the reader is directed to review information presented above under "#8 –Regulatory Compliance and Performance" which provides a simplified summary of monthly plant performance that incorporates and interprets the diverse set of effluent monitoring data and information on any significant non-compliance events.

The effluent monitoring data and reports submitted to Ecology in monthly DMRs address many additional parameters that are not necessarily directly attributable to treatment process performance or NPDES regulatory compliance. However, the following attached files are the cover letters submitted for the most recent DMRs for each of the five wastewater treatment plants. The cover letters characterize each facility during the monitoring period including such items as flows, compliance with NPDES permit requirements, and any other important process performance events, news, or

significant events. The facility DMR cover letters for the most recent monthly monitoring period follow:

- Brightwater (Permit No. WA0032247)
- Carnation (Permit No. WA0032182)
- South Plant (Permit No. WA0029581)
- Vashon (Permit No. WA0022527)
- West Point (Permit No. WA0029181)

Finally, the entire body of effluent monitoring data and reports that are submitted to Ecology as part a DMR package are available on Ecology's "PARIS" database by searching on the Permit No. for each plant (identified above) at the following:

<https://fortress.wa.gov/ecy/paris/PermitLookup.aspx>

WTD also conducted additional effluent monitoring during the restoration process for the West Point treatment plant following the February 9, 2017 flooding and damage incident. WTD established a dedicated temporary website to post the collected effluent data, summaries of the data, and other reports and information. With the restoration of the majority of treatment processes and equipment completed in May 2017, and West Point's return to its normal status of routine compliance with permit requirements, the additional monitoring was discontinued and WTD now intends to maintain the temporary website indefinitely until such time it is determined to no longer be necessary. The dedicated website for the environmental monitoring data is:

<https://kingcounty.gov/en/legacy/depts/dnrp/wtd/system/west/west-point-restoration/restoration.aspx>

### ***Water Quality Monitoring Data***

The County's Water, Resources, and Land Division (WRLD) – Science Section, with assistance from the King County Environmental Laboratory (KCEL), conducts a variety of water quality monitoring programs in the Puget Sound, and the regions rivers and lakes that indirectly contribute to an understanding of the effects of County activities on environmental resources. However, with the exception of limited periodic and specific discharge event conditions, the County is not required under the NPDES permits for the wastewater treatment plants to conduct receiving water quality monitoring at our discharge outfall locations. Consequently, the reader is directed to the WLRD Science Section website where available information on the ambient marine water quality monitoring programs in Puget Sound can be found:

<https://green2.kingcounty.gov/marine>

Additionally, WTD in conjunction with WLRD Science Section staff, temporarily expanded and increased the frequency of the routine marine water quality monitoring in Puget Sound at sites near the West Point outfall while the restoration process for the West Point treatment plant was underway following the February 9, 2017 flooding and damage incident. WTD established a dedicated temporary website to post bi-weekly

summary reports of Puget Sound water quality conditions during this period, and with West Point's return to a state of compliance with NPDES permit requirements, the additional monitoring was discontinued in June 2017. Furthermore, WTD and WLRD Science Section are involved in conducting supplemental environmental analyses to characterize conditions in Puget Sound resulting from the West Point incident to determine if any changes in contaminants of concern may have occurred in sediments or marine aquatic organisms. The dedicated website where information from the marine water quality monitoring, and the supplemental sediment and marine organism contaminant investigations, can be found at:

<https://kingcounty.gov/en/legacy/depts/dnrp/wtd/system/west/west-point-restoration/restoration.aspx>

### ***Sediment Monitoring Data***

WTD, with assistance from the WLRD Science Section, conducts extensive sediment quality monitoring and analysis for compliance with the NPDES permits for the West Point, South Plant, and Brightwater treatment plants. A large amount of the County's required sediment analysis work is conducted at CSO outfall locations to implement the Post Construction Monitoring Program for the County's 2012 Long-term CSO Control Plan Amendment under the West Point NPDES permit. The CSO program is focused on ensuring that the CSO outfalls meet Washington's sediment quality standards as hydraulic control of each outfall is achieved (i.e., not more than one overflow event per year on a 20-year average). The West Point NPDES permit also requires the County to prepare an update of the 2009 Sediment Data Report by December 1, 2018 to provide a comprehensive summary of information for each CSO outfall and its status with respect to compliance with sediment quality standards. Finally, the County is implementing, and periodically updates, a Sediment Management Program that provides the overarching direction for all of the CSO discharge locations, summarizes ongoing and previously performed sediment cleanup work, summarizes the results of CSO discharge modeling, provides the status of existing sediment quality, and assigns an appropriate sediment management strategy for each CSO. In general, the sediment investigations and development of sediment management strategies at any given CSO outfall is a complex and lengthy process involving multiple actions and participants, and summary information on the status of each project is not readily summarized. Consequently, the reader is directed to the County's dedicated Sediment Management Plan website where available information, reports, news, and status of the program can be obtained:

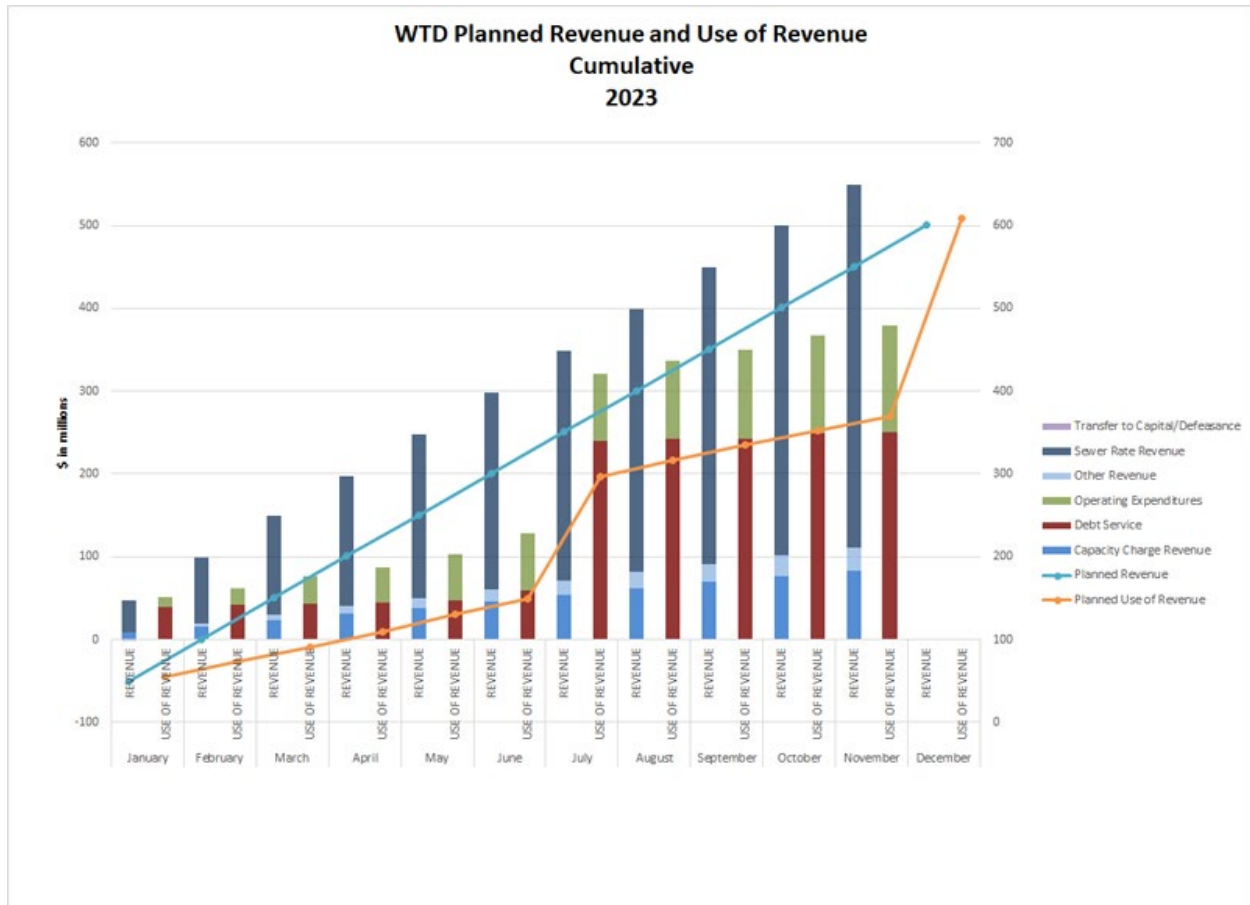
<https://kingcounty.gov/en/dept/dnrp/waste-services/wastewater-treatment/programs/sediment-management/management-plan>

## Financial performance (December 2023)

### 10. Wastewater planned revenue and use of revenue

#### Wastewater planned revenue and use of revenue

This chart compares WTD planned revenue and use of revenue with monthly actual revenue and use of the revenue collections. Monthly actuals highlight total revenue collected by the sewer rate, capacity charge and other sources, and total use of the revenue collected by operating expenditures, debt service and transfer to capital.



## 11. Cost and schedule of baselined major capital projects

**Cost and schedule of baselined major capital projects**

This table represents budget and schedule performance of projects with greater than \$1M expected cost. Performance is measured relative to the baseline point which is established at approximately 30% design completion per established King County Project Management Standards.

**Q4 2023 Baseline Report**

Agency: Wastewater Treatment, Fund: All, Year: 2023, Qtr: 4th Quarter, Cost Status: All, Schedule Status: All, Scope Status: All, Project: All

Project Number	Project Name	Scope Status	Schedule Status	Current Substantial Completion Date	Baseline Duration	Current Duration	Variance at Completion (VAC)	% VAC	Cost Status	Baseline Budget at Completion (BAC)	Current Estimate At Completion (EAC)	Cost Variance At Completion (CVAC)	% CVAC	Report Date
<b>3611 WATER QUALITY CONSTRUCTION - Wastewater Treatment</b>														
1116797	Jameson/Arcweld Buildings Replacement	▲	●	1/31/2024	1,663	1,563	-100	-6 %	●	\$71,290,311	\$22,357,665	(\$48,932,646)	-68 %	Q4 2023
1116800	North Mercer Island & Enatai Interceptors Upgrade	●	◆	8/22/2025	2,121	2,992	871	41 %	◆	\$116,035,624	\$179,841,791	\$63,806,167	54 %	Q4 2023
1116801	Lake Hills and NW Lake Sammamish Interceptor Upgrade	▲	◆	11/7/2029	1,995	4,439	2,444	122 %	◆	\$119,342,432	\$165,613,129	\$46,270,697	38 %	Q4 2023
1120861	Mobile Odor Control Unit Replacement	▲	◆	6/6/2024	696	2,760	2,064	296 %	●	\$3,171,445	\$3,100,860	(\$70,585)	-2 %	Q4 2023
1121402	Georgetown Wet Weather Treatment Station	●	▲	10/14/2022	2,141	2,369	228	10 %	●	\$260,713,113	\$240,470,622	(\$20,242,491)	-7 %	Q4 2023
1121409	West Duwamish CSO Control	●	◆	2/4/2028	1,833	2,173	340	18 %	●	\$107,117,981	\$107,117,982	\$1	0 %	Q4 2023
1123624	Coal Creek Siphon & Trunk Parallel	●	◆	12/31/2029	2,432	3,744	1,312	53 %	●	\$132,310,569	\$126,526,492	(\$5,784,077)	-4 %	Q4 2023
1123626	SP Biogas and Heat Systems Improvements	▲	◆	12/18/2026	1,410	3,538	2,128	150 %	●	\$59,897,304	\$48,581,819	(\$11,315,485)	-18 %	Q4 2023
1127489	West Point Primary Sedimentation Area Roof Structure	▲	◆	9/12/2025	1,387	2,438	1,051	75 %	◆	\$37,658,373	\$50,066,806	\$12,408,434	32 %	Q4 2023
1128354	Interbay Force Main & Odor Control	●	◆	11/5/2027	1,414	2,466	1,052	74 %	◆	\$5,386,868	\$67,897,180	\$62,510,312	1,160 %	Q4 2023
1129156	Juanita Bay PS RSP Protection System Upgrade	●	◆	1/31/2023	407	574	167	41 %	▲	\$1,776,188	\$1,893,557	\$117,369	6 %	Q4 2023
1129526	WPTP LSG Piping Replacement	●	●	10/4/2024	2,634	1,816	-818	-31 %	▲	\$24,920,340	\$27,303,826	\$2,383,486	9 %	Q4 2023
1129529	WPTP PE and RAS Pipe Restoration/Replacement	●	◆	9/14/2027	1,471	1,820	349	23 %	●	\$30,574,092	\$30,574,087	(\$5)	0 %	Q4 2023
1129532	BW Aeration Basin Optimization	●	◆	8/5/2024	927	1,399	472	50 %	▲	\$21,193,113	\$22,436,568	\$1,243,455	5 %	Q4 2023
1134063	WPTP Power Monitoring Upgrades	●	◆	10/10/2023	596	924	328	55 %	◆	\$3,840,813	\$8,262,262	\$4,421,449	115 %	Q4 2023
1134064	WPTP Admin/Ops Center Seismic Upgrades	●	◆	9/26/2025	1,001	1,179	178	17 %	●	\$17,253,831	\$17,253,827	(\$4)	0 %	Q4 2023
1134065	SPTP Influent Pump Station Seismic Upgrades	●	●	2/12/2027	1,368	1,368	0	0 %	●	\$31,364,101	\$31,364,101	\$0	0 %	Q4 2023
1134068	Alki Permanent Standby Generator	●	◆	8/12/2026	931	2,248	1,317	141 %	●	\$14,812,683	\$14,812,653	(\$31)	0 %	Q4 2023
1134069	WPTP Raw Sewage Pump Replacement	●	◆	9/30/2029	2,639	2,651	12	0 %	▲	\$216,305,529	\$227,806,985	\$11,501,456	5 %	Q4 2023
1134070	WTD CMMS Upgrade	●	◆	10/15/2024	437	1,043	606	138 %	●	\$12,464,036	\$12,464,036	\$0	0 %	Q4 2023
1134071	WTD Ovation Control Systems Upgrades	●	◆	10/29/2024	975	2,008	1,033	105 %	◆	\$15,547,968	\$18,815,736	\$3,267,768	21 %	Q4 2023
1134072	WPTP Passive Weir for Emergency Bypass	●	●	9/30/2025	1,408	1,393	-15	-1 %	●	\$10,747,594	\$10,747,590	(\$4)	0 %	Q4 2023

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## Q4 2023 Baseline Report

Agency: Wastewater Treatment, Fund: All, Year: 2023, Qtr: 4th Quarter, Cost Status: All, Schedule Status: All, Scope Status: All, Project: All

Project Number	Project Name	Scope Status	Schedule Status	Current Substantial Completion Date	Baseline Duration	Current Duration	Variance at Completion (VAC)	% VAC	Cost Status	Baseline Budget at Completion (BAC)	Current Estimate At Completion (EAC)	Cost Variance At Completion (CVAC)	% CVAC	Report Date
<b>3611 WATER QUALITY CONSTRUCTION - Wastewater Treatment</b>														
1134075	Lake Hills Interceptor Rehabilitation Phase II	●	●	12/6/2023	682	673	-9	-1 %	●	\$29,601,534	\$26,657,376	(\$2,944,157)	-9 %	Q4 2023
1134301	PIMS Replacement	◆	◆	9/30/2024	371	1,917	1,546	416 %	◆	\$1,844,892	\$2,940,743	\$1,095,851	59 %	Q4 2023
1134438	SP Division Control Building Fire Protection and Alarm System Upgrades	●	●	9/4/2024	939	904	-35	-3 %	●	\$3,225,278	\$3,225,277	\$0	0 %	Q4 2023
1137181	Richmond Beach PS MCC and Switchboard Replacement	●	◆	10/18/2023	769	1,289	520	67 %	●	\$6,492,547	\$4,572,442	(\$1,920,105)	-29 %	Q4 2023
1137640	Small Generators Replacement - Group 1	●	◆	12/31/2025	1,305	1,575	270	20 %	●	\$5,401,119	\$5,338,114	(\$63,005)	-1 %	Q4 2023
1137751	SP Essential Services Standby Generator Replacement	●	◆	1/17/2025	616	1,585	969	157 %	◆	\$2,211,228	\$2,984,315	\$773,087	34 %	Q4 2023
1138085	WP Warning System Upgrade	●	◆	7/17/2024	468	757	289	61 %	▲	\$2,446,898	\$2,696,898	\$250,000	10 %	Q4 2023
1138496	Denny Way Regulator Erosion Control	●	◆	9/19/2024	456	1,298	842	184 %	●	\$1,106,000	\$1,106,000	\$0	0 %	Q4 2023
1138499	SP Dewatering Building Truck Loading Bay Ventilation Improvements	●	◆	11/12/2025	924	1,149	225	24 %	●	\$2,389,260	\$2,389,261	\$0	0 %	Q4 2023
1138543	System-wide Arc Flash Hazard Assessment	●	●	7/8/2025	1,256	1,257	1	0 %	▲	\$2,490,193	\$2,640,160	\$149,967	6 %	Q4 2023
1138777	BW Influent Structure Wash-down System	●	◆	9/30/2024	367	1,028	661	180 %	▲	\$935,206	\$1,064,699	\$129,493	13 %	Q4 2023
1139037	Lakeland Hills Install Generator	▲	◆	4/22/2024	859	1,662	803	93 %	◆	\$5,386,868	\$6,342,068	\$955,200	17 %	Q4 2023
1139038	Medina PS MCC & Generator Replacement	●	◆	3/22/2024	727	1,270	543	74 %	▲	\$6,099,315	\$6,600,742	\$501,427	8 %	Q4 2023
1139044	Loop Biosolids Compost Pilot at SP	●	◆	9/4/2024	657	1,723	1,066	162 %	◆	\$3,325,570	\$4,859,910	\$1,534,340	46 %	Q4 2023
1139601	SP Fire Control Panel Upgrade	●	◆	1/11/2024	504	667	163	32 %	◆	\$753,461	\$3,556,643	\$2,803,181	372 %	Q4 2023
1139645	West Point PE and FE Flowmeter Replacement	●	◆	9/30/2024	606	972	366	60 %	◆	\$960,000	\$1,375,857	\$415,857	43 %	Q4 2023
1139673	York FM Cathodic Protection	●	◆	3/31/2024	437	712	275	62 %	●	\$1,410,210	\$1,371,758	(\$38,452)	-2 %	Q4 2023
1141028	Offsite Fuel Storage Tank Monitoring Upgrade	●	◆	3/29/2024	118	226	108	91 %	●	\$1,286,069	\$1,286,069	\$0	0 %	Q4 2023
1141030	WP Power Quality Improvements	●	●	7/5/2024	1,142	892	-250	-21 %	▲	\$159,066,642	\$167,517,635	\$8,450,993	5 %	Q4 2023
1141881	SP DAFT Tank Rehabilitation	●	●	3/7/2029	1,968	1,968	0	0 %	●	\$68,616,517	\$68,616,517	\$0	0 %	Q4 2023
1141884	WPTP Grit Classifier Replacement	●	●	9/25/2025	982	982	0	0 %	●	\$11,280,589	\$11,280,589	\$0	0 %	Q4 2023
1142896	Lakeland Hills PS Elevator Replacement	●	◆	6/26/2024	357	631	274	76 %	●	\$1,054,231	\$1,054,231	\$0	0 %	Q4 2023

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## Q4 2023 Baseline Report

Agency: Wastewater Treatment, Fund: All, Year: 2023, Qtr: 4th Quarter, Cost Status: All, Schedule Status: All, Scope Status: All, Project: All

Project Number	Project Name	Scope Status	Schedule Status	Current Substantial Completion Date	Baseline Duration	Current Duration	Variance at Completion (VAC)	% VAC	Cost Status	Baseline Budget at Completion (BAC)	Current Estimate At Completion (EAC)	Cost Variance At Completion (CVAC)	% CVAC	Report Date
<b>3611 WATER QUALITY CONSTRUCTION - Wastewater Treatment</b>														
1142898	Medina PS Pump Room Header Replacement	●	▲	10/31/2023	423	476	53	12 %	●	\$2,605,131	\$2,605,131	\$0	0 %	Q4 2023
1143277	WTP Fire Suppression System Supply Line RPBA & PRV Installation	●	▲	11/6/2024	619	687	68	10 %	▲	\$2,132,060	\$2,295,948	\$163,888	7 %	Q4 2023
1143278	WTP Uninterruptible Power Supply (UPS) Replacement 2022-2023	●	●	12/15/2023	402	395	-7	-1 %	▲	\$1,577,079	\$1,766,647	\$189,568	12 %	Q4 2023
1143480	WP IPS Pump Refurbishment #2 and #3	●	●	10/31/2023	549	224	-325	-59 %	●	\$10,396,282	\$10,396,282	\$0	0 %	Q4 2023
1143539	Juanita Bay PS RSP 1-4 Suction Valves Replacement	●	●	8/20/2024	273	273	0	0 %	●	\$2,213,129	\$2,213,129	\$0	0 %	Q4 2023
1143839	Carkeek CSO Dechlorination System Modifications	●	◆	2/5/2025	745	1,583	838	112 %	◆	\$1,953,306	\$6,851,927	\$4,898,621	250 %	Q4 2023
1144135	Carnation TP UV Disinfection System	●	◆	3/31/2024	193	481	288	149 %	▲	\$1,269,129	\$1,348,832	\$79,702	6 %	Q4 2023
1144964	Richmond Beach RSP and Motor Replacement	●	●	7/25/2024	586	534	-52	-8 %	●	\$2,106,318	\$2,106,318	\$0	0 %	Q4 2023
1145319	South Plant Alkalinity Addition	●	◆	2/9/2024	73	206	133	182 %	●	\$1,328,361	\$1,328,361	\$0	0 %	Q4 2023

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● Scope requires significant changes. The Project Substantial Completion has a variance of greater than 15%. Budget is over by more 15%.

▲ Scope changes may be needed. The Project Substantial Completion has a variance of less than 15%. Budget is over by up to 15%.

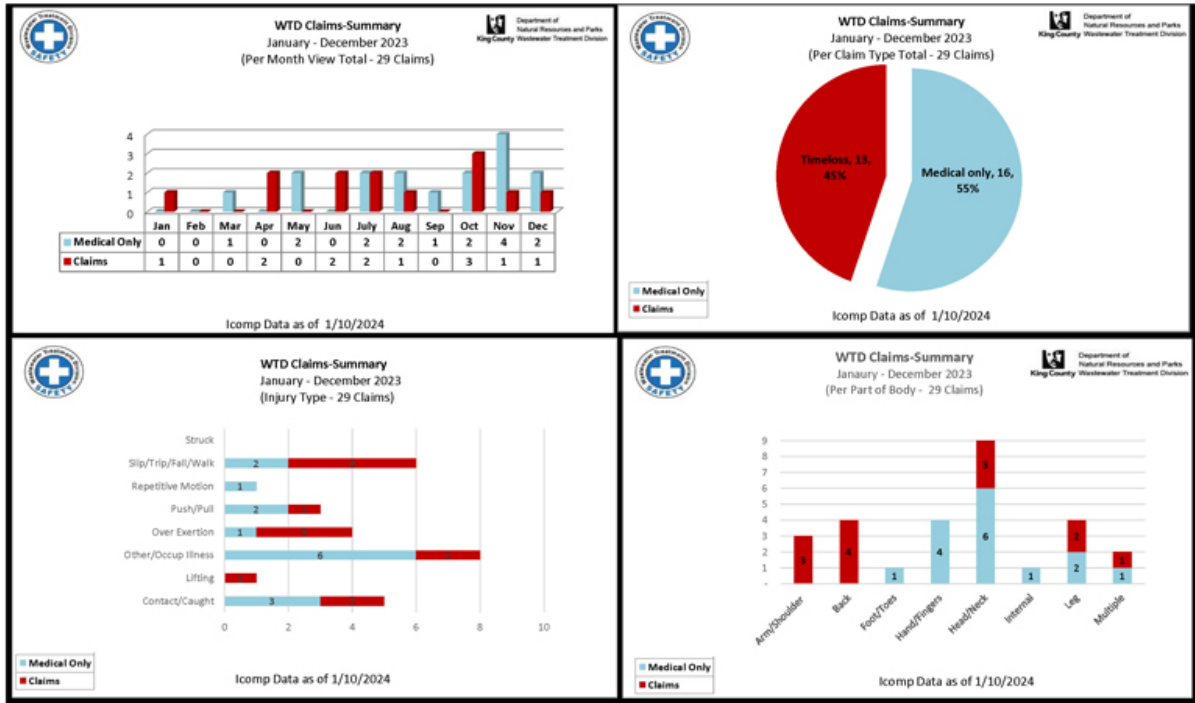
● Scope is consistent with baseline. The Project Substantial Completion is on track or ahead. Budget on track or under.

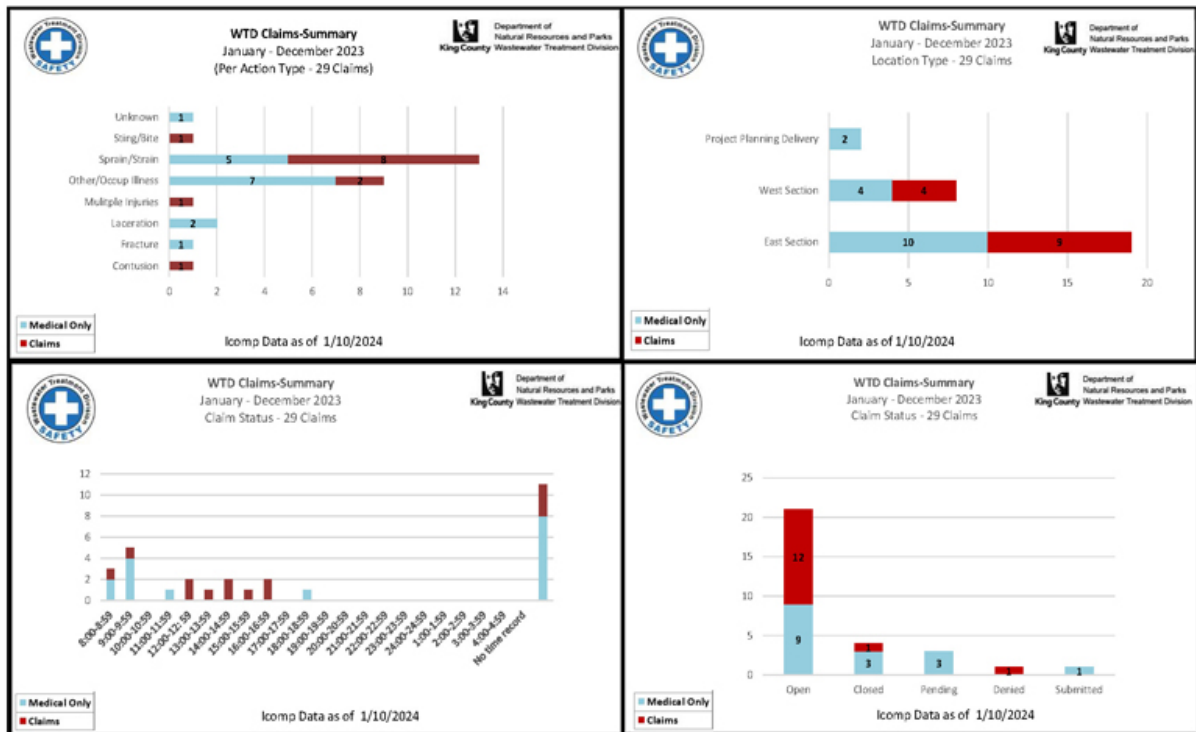
## Safety performance (December 2023)

### 12. WTD accident (claim) summary

#### WTD accident (claim) summary

- The following summary graphs illustrate employee accident and job injury claim experience (for current month and year to date) for the Wastewater Treatment Division.
- WTD Claims Summary





- The term **Medical Only Claim** refers to employee accident that requires attention from a healthcare provider. The injured worker may be released completely after treatment or released with work restrictions requiring work accommodation.
- The term **Timeloss Claim** refers to claims that are serious enough to warrant the doctor taking the injured worker off his regular duty for a period of time. The injured worker may be released to modified (light) duty during his recovery period. As long as the employer accommodates the doctor's restrictions on the injured worker's activity during the light duty period, the claim may remain as medical only – if the injured worker returns to light duty before the elimination period lapses.