



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.

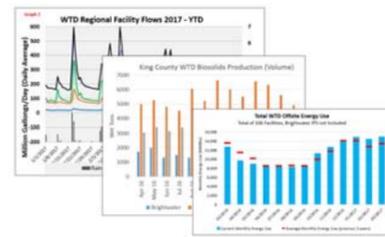
This information:

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

Contact us

If you have questions regarding this information, please contact:

Olivia Robinson at Olivia.Robinson@kingcounty.gov, 206-477-3566



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

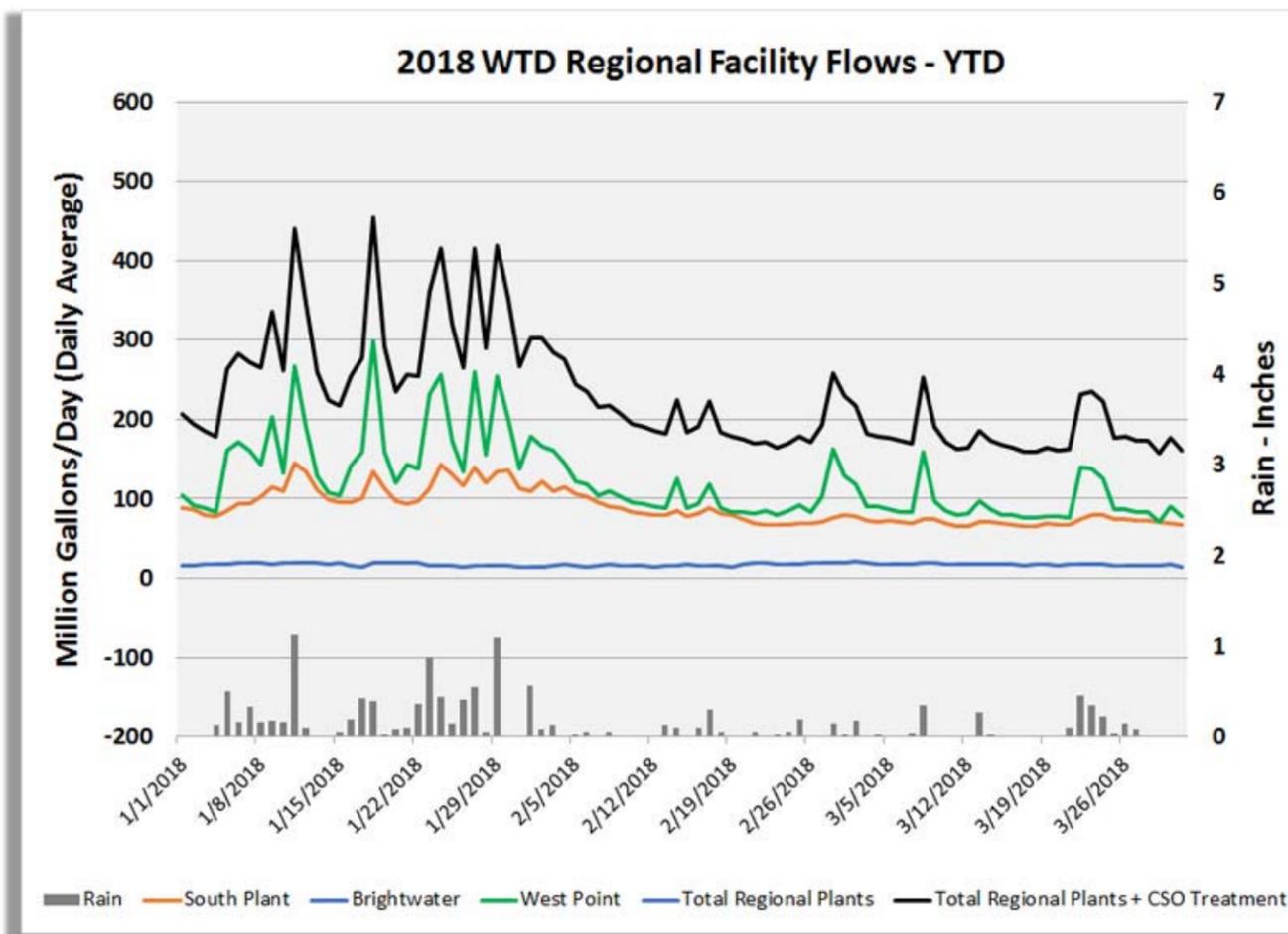
Operational performance (March 2018)

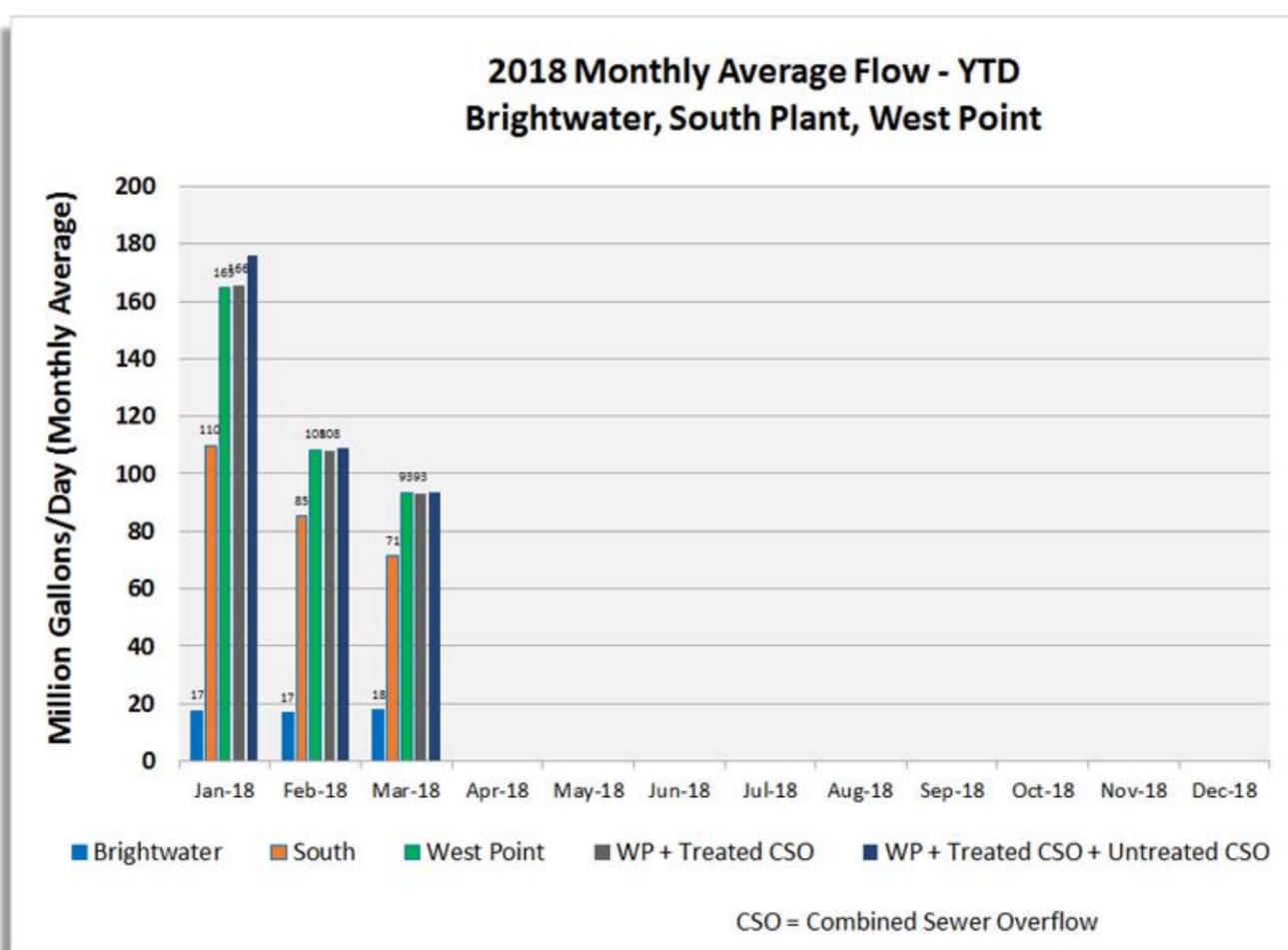
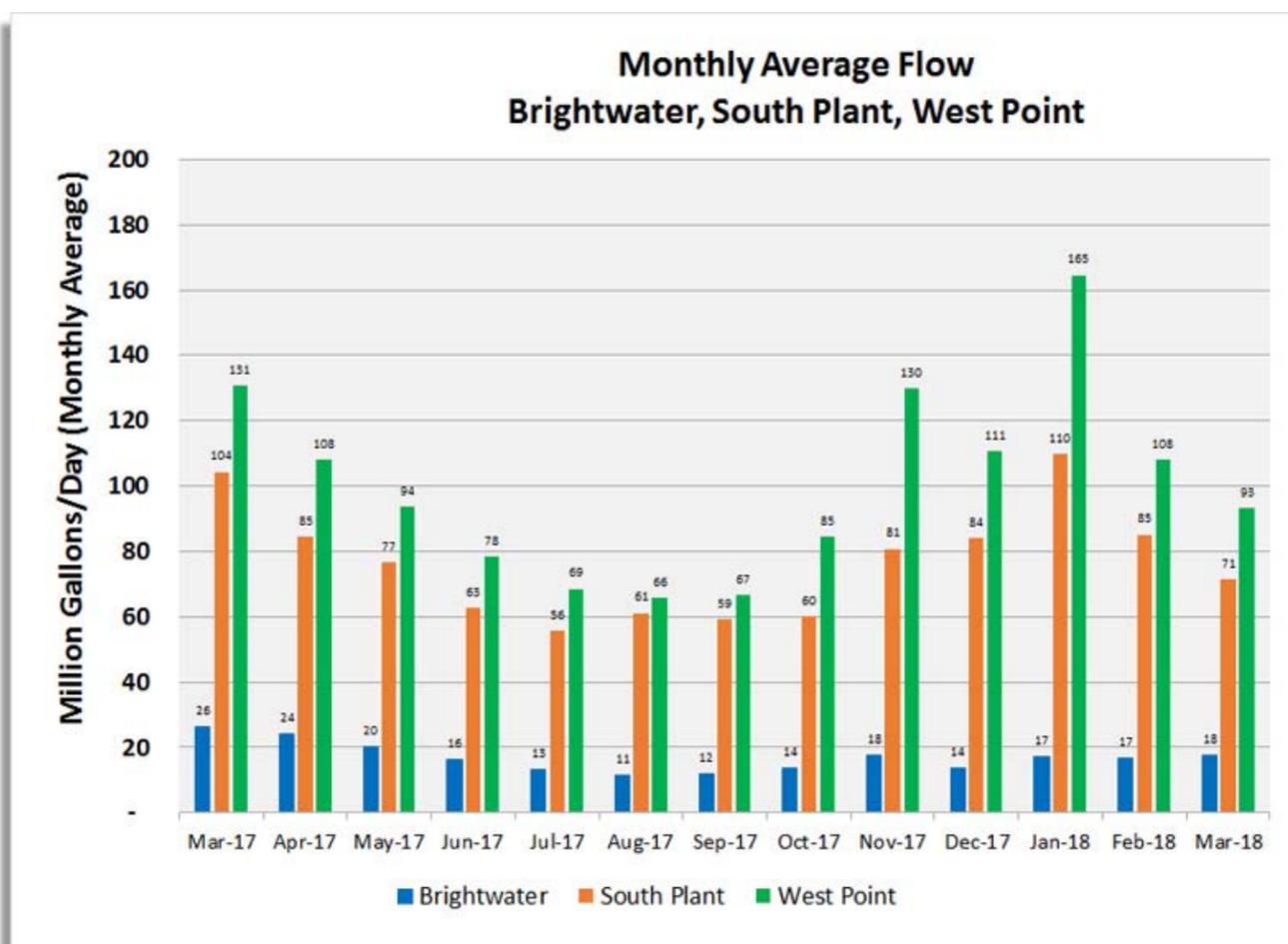
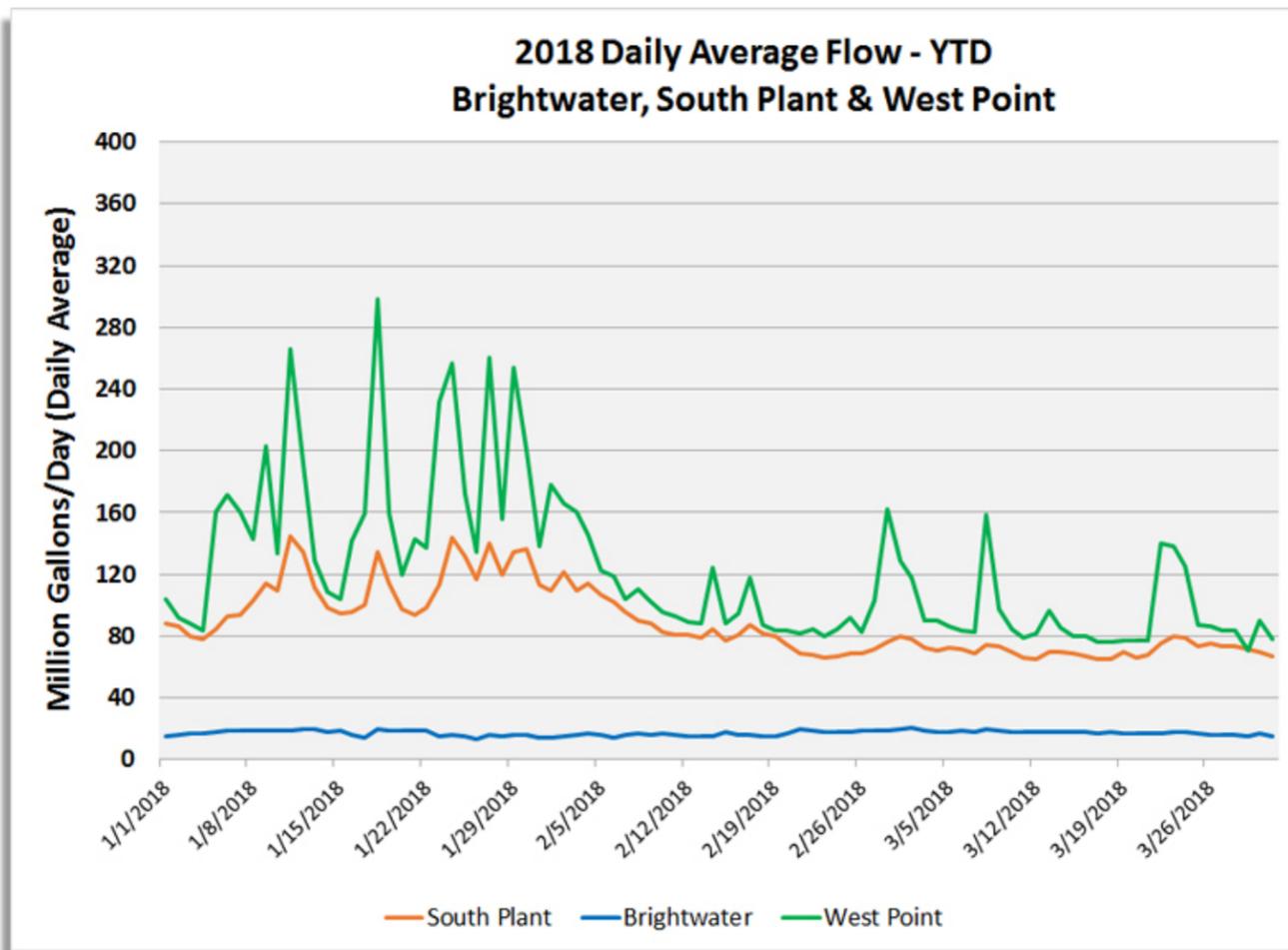
1. Flow volumes at regional plants and key points in the system



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.





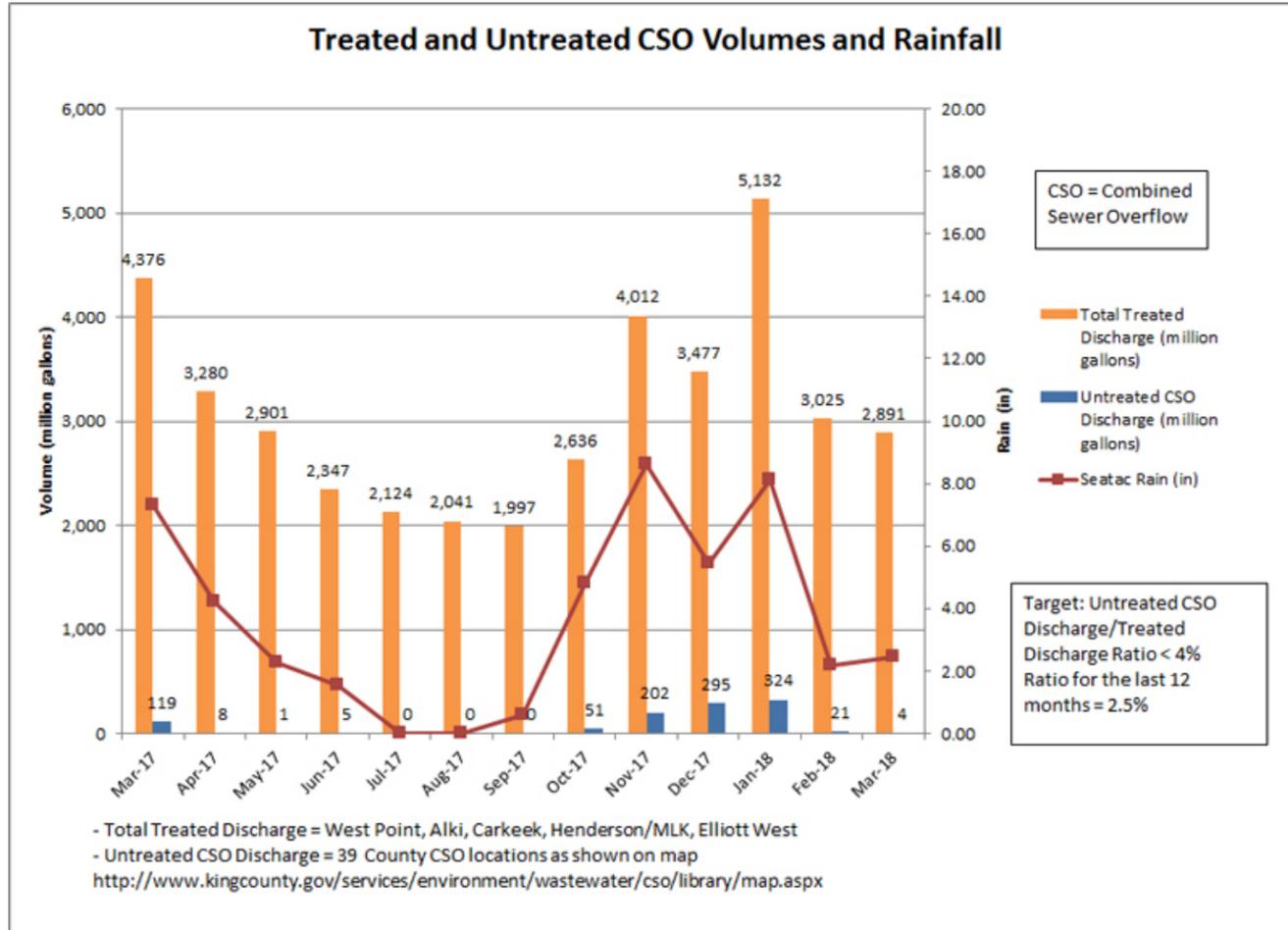
2. Combined Sewer Overflow (CSO) discharge volumes throughout the system



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. Here is the link that shows our CSO locations:

<https://www.kingcounty.gov/services/environment/wastewater/cso/library/map.aspx>



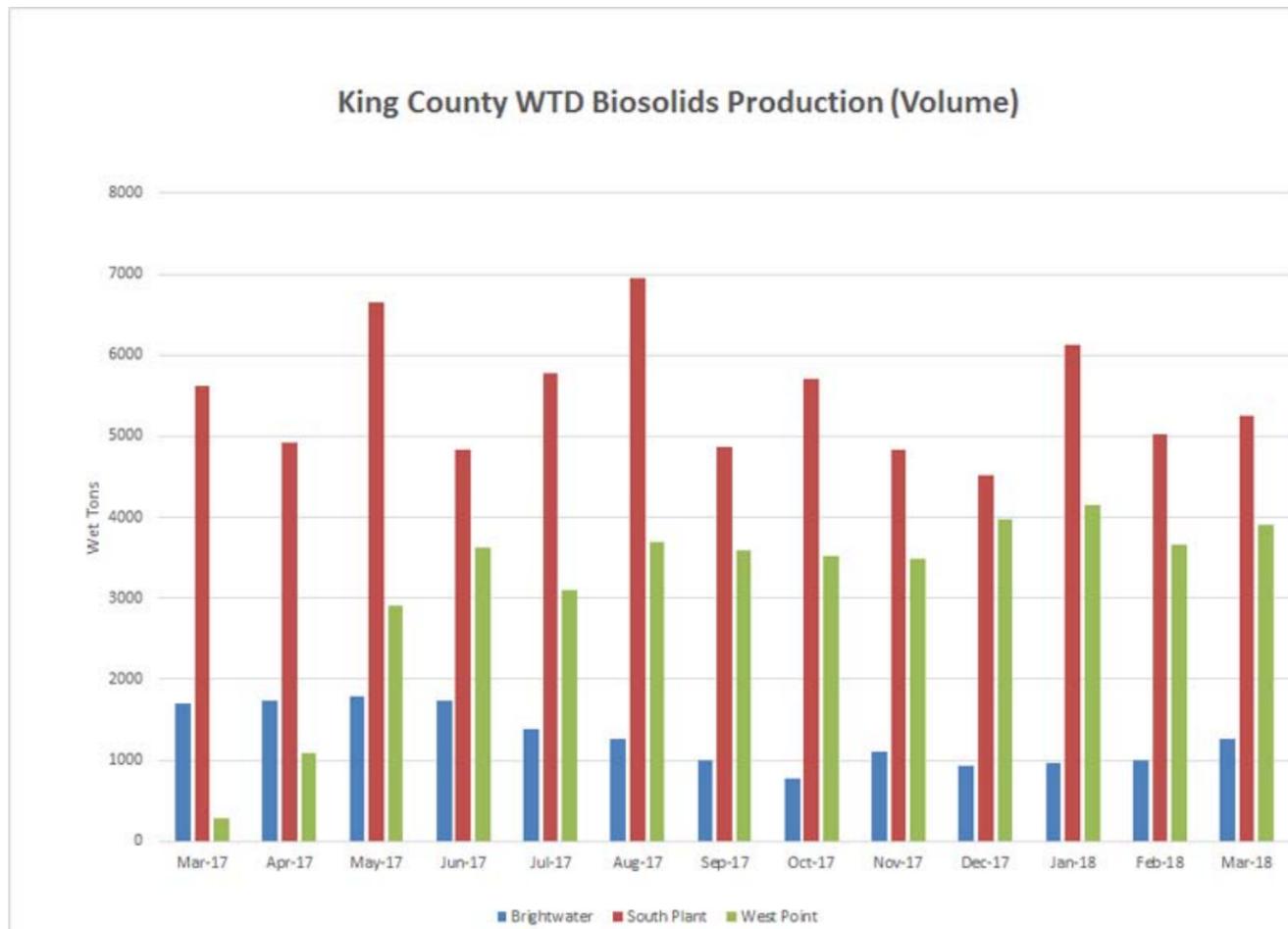
3. Production and distribution of LOOP Biosolids

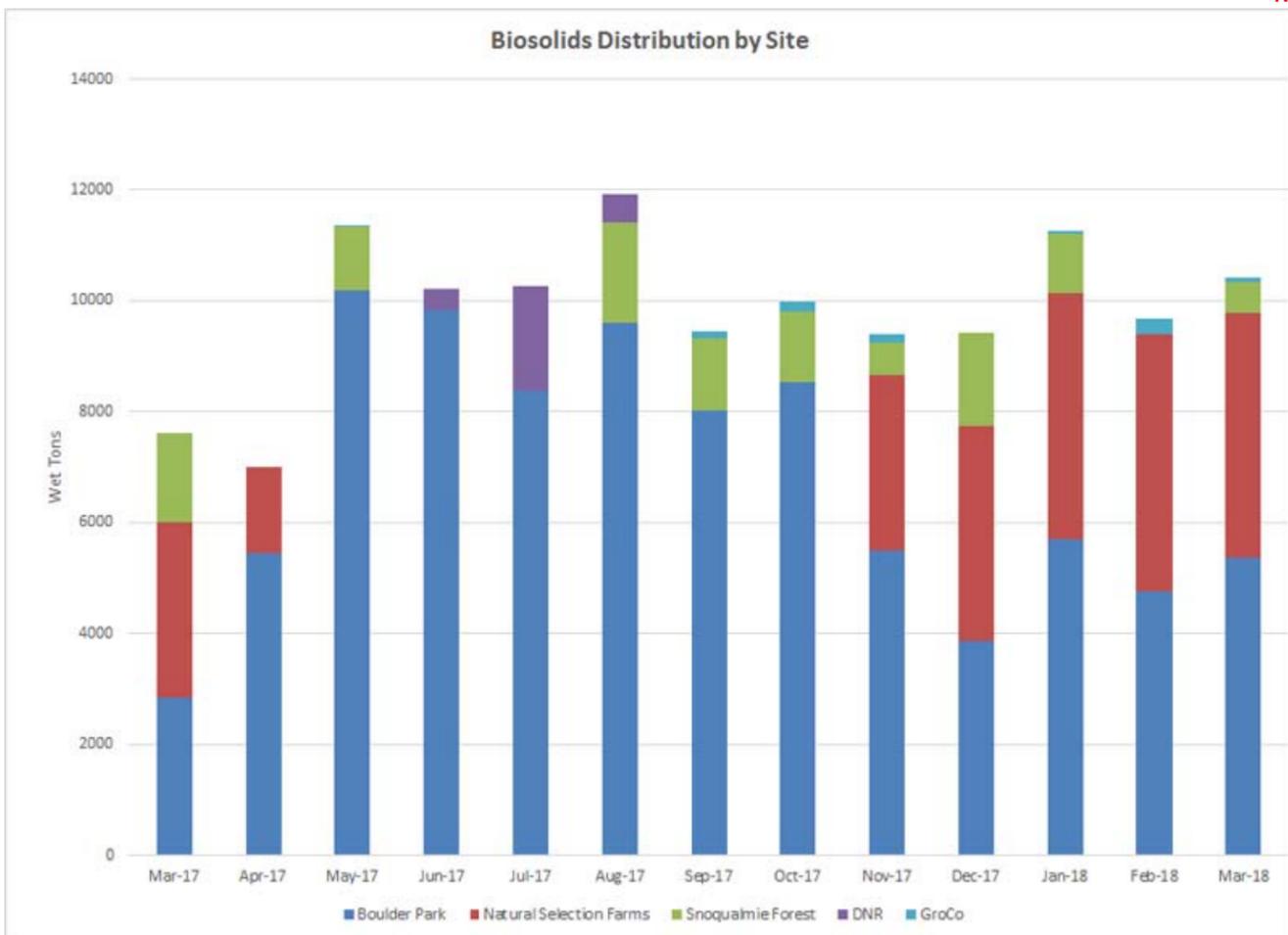


Production and distribution of LOOP Biosolids

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.



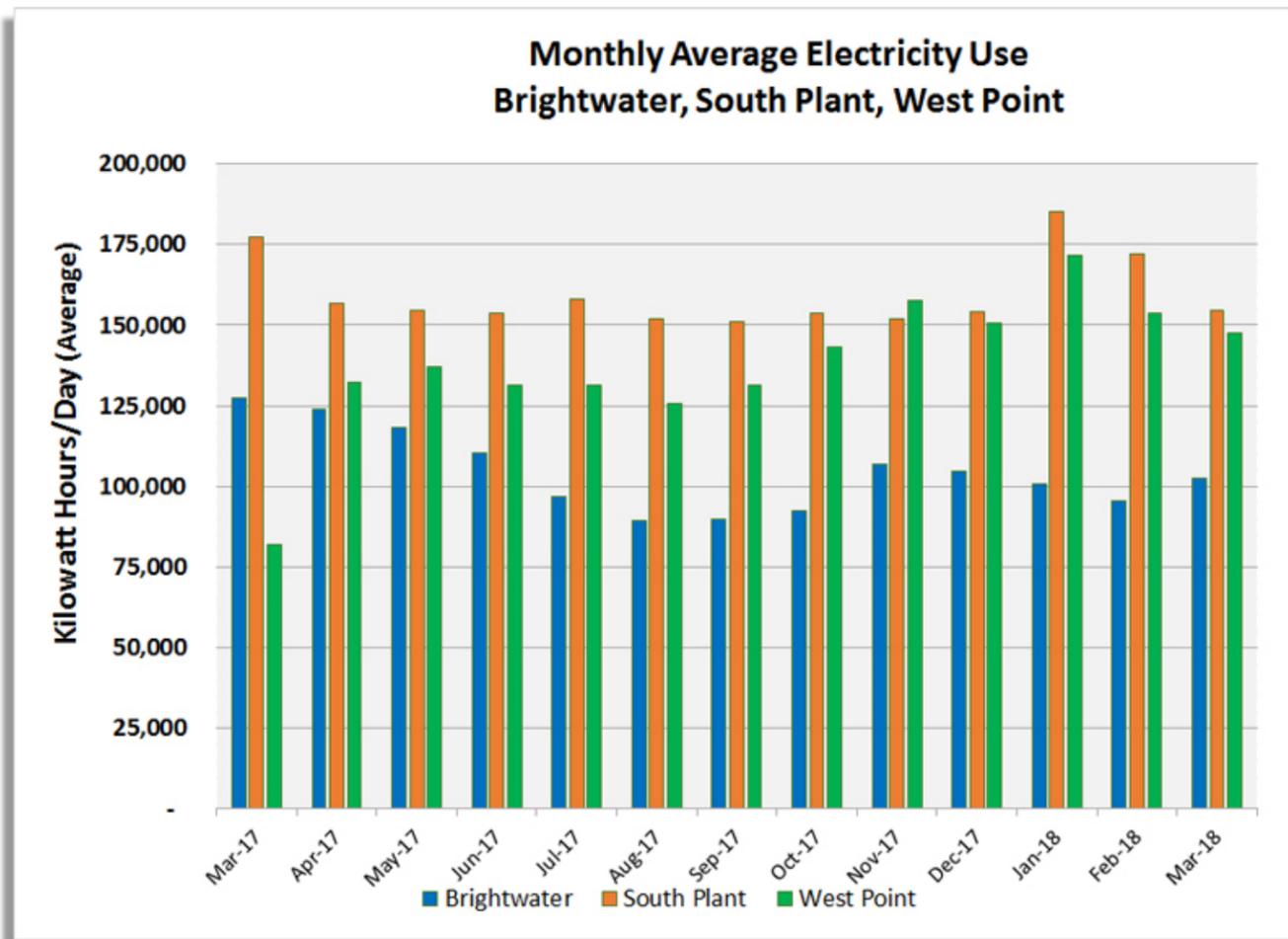


4. Electrical energy usage at each regional treatment plant and conveyance system +

Electrical energy usage at each regional treatment plant and conveyance system

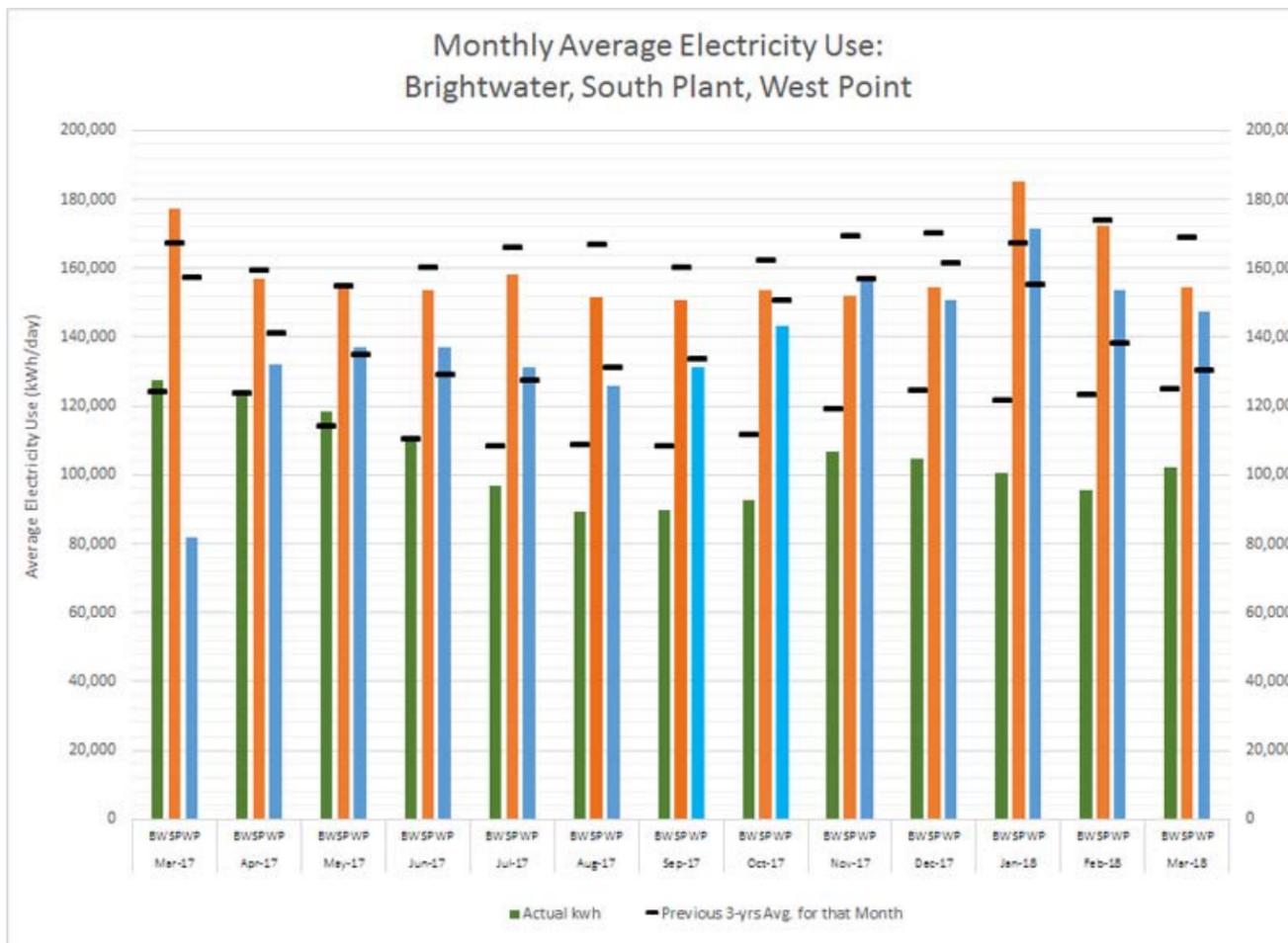
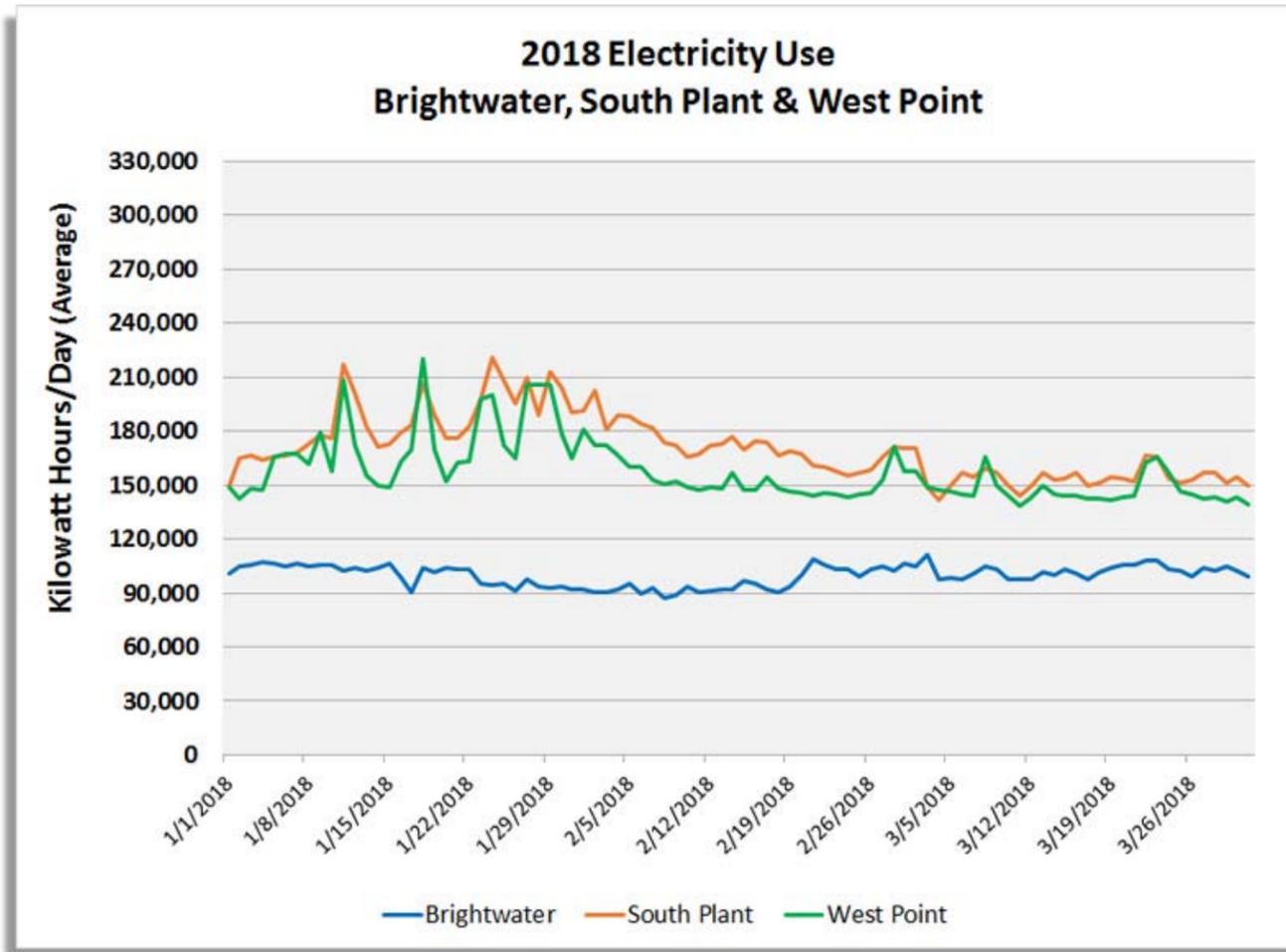
Monthly Average Electricity Use at Brightwater, South Plant and West Point:

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.



2017 Electricity Use at Brightwater, South Plant and West Point:

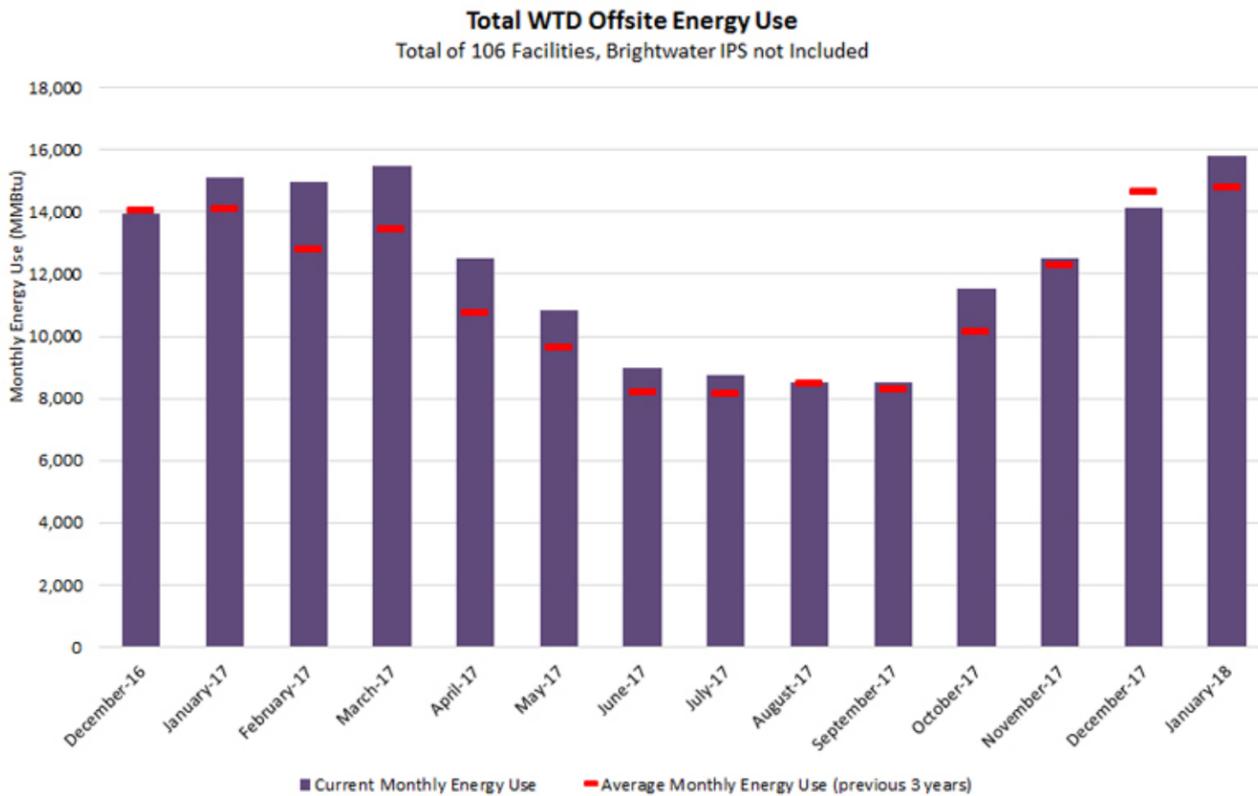
This diagram shows daily electricity use for each treatment plant. It highlights how electricity use can double with high flow volumes at West Point.



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.

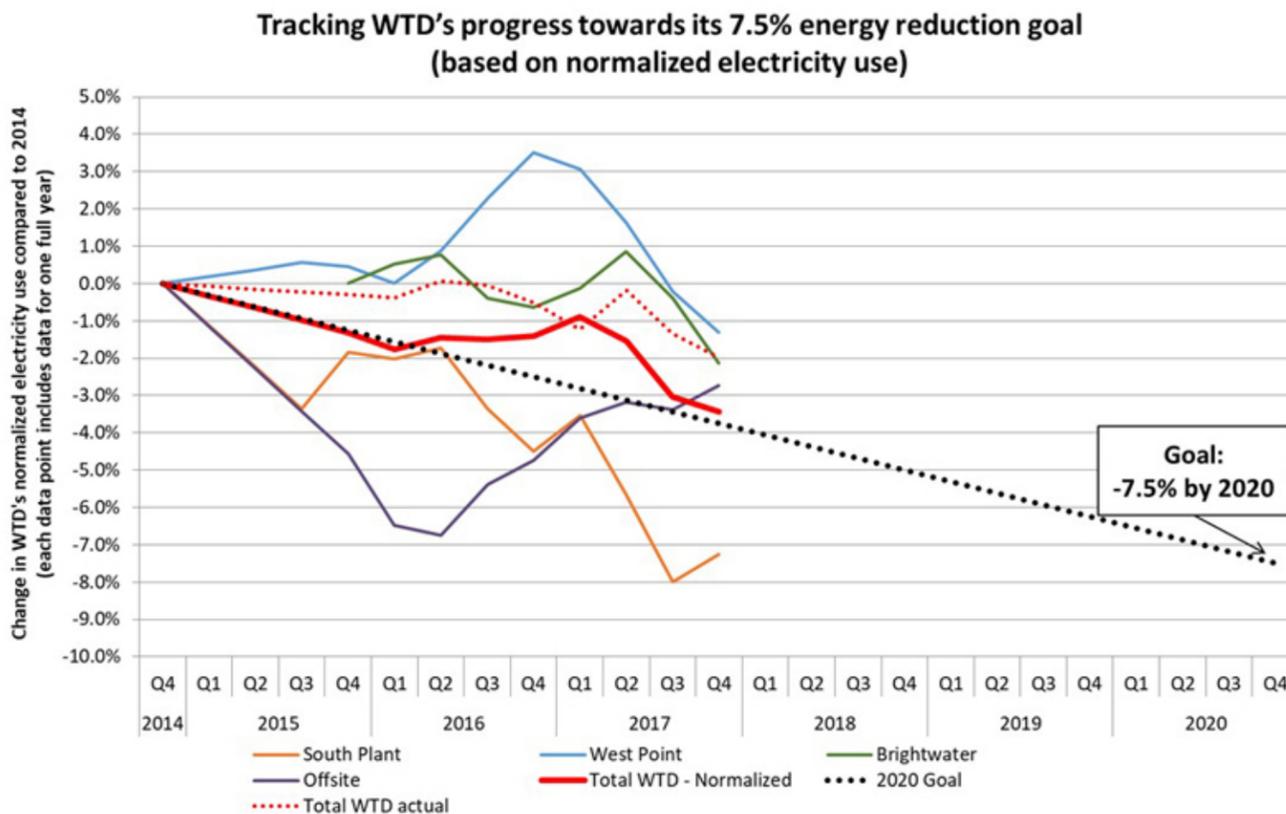
Please note: This information is updated monthly and will have a three-month lag when all of the data becomes available.



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

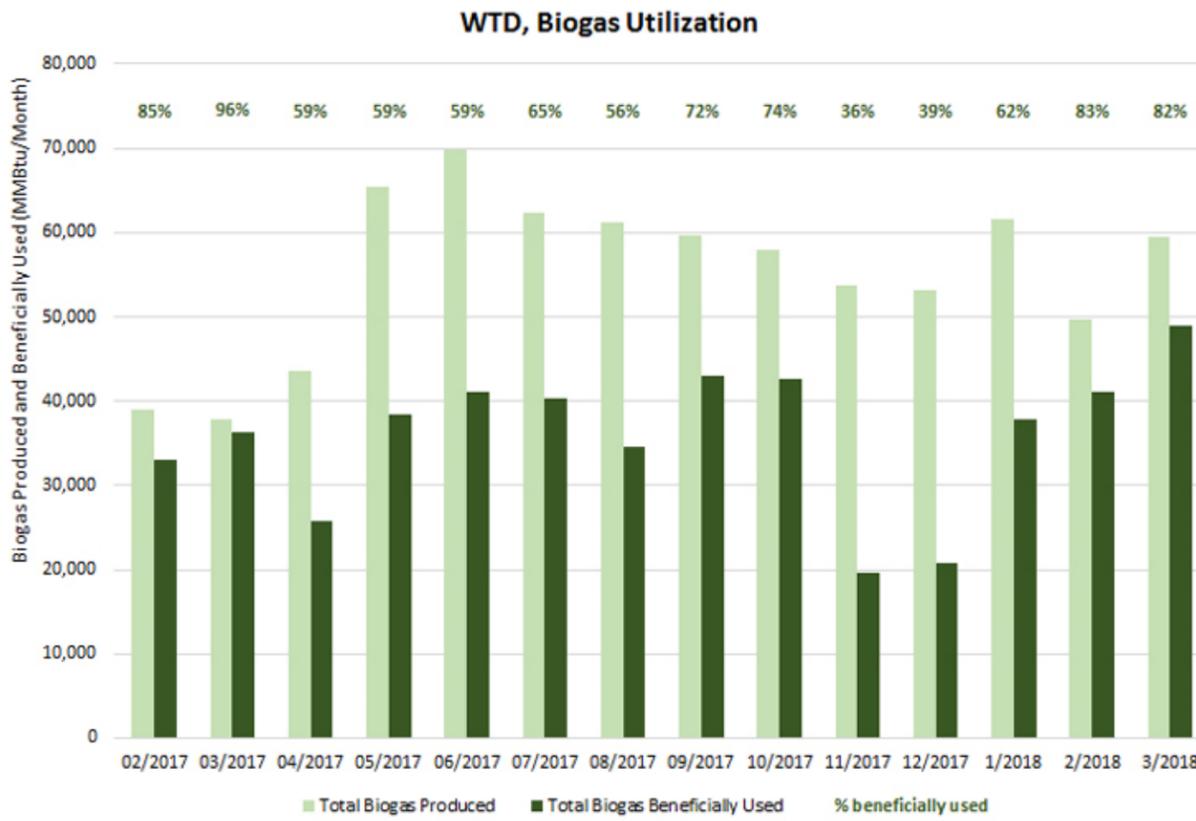


Production and usage of biogas

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 (March 2018)

6. Significant power disruption events



Significant power disruption events

Update

On Saturday, May 19, there was a brief equipment problem at the intermediate pump station at the West Point Treatment Plant. Plant Operators were able to respond quickly and there were no emergency bypasses or overflows. Full primary treatment and disinfection continued to operate and no water quality violations occurred. All systems, including the secondary system, were back on line and full treatment restored in 21 minutes. As required, the incident was reported to the Department of Ecology.

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	2017									2018		
	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Wastewater Treatment Plants (e.g., effluent limit exceedance, unpermitted discharges)												
West Point		<i>a</i>									<i>b</i>	
South Plant												
Brightwater												
Vashon												
Carnation												
CSO Treatment Facilities (e.g., effluent limit exceedance, disinfection failure)												
Henderson/MLK CSO	*	*	*	*	*	*						
Alki CSO			*	*	*	*						
Carkeek CSO			*	*	*	*						
Elliott West CSO				*	*	*						
West Section Conveyance System												
CSO Exacerbated Overflow												
CSO Dry Weather Overflow												
Sanitary Sewer Overflow												
East Section Conveyance System												
Sanitary Sewer Overflow				1								

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 West Point secondary treatment processes were restored by the end of April, and other processes at West Point and the ability to comply with all effluent limitations resumed on May 10th.

b A temporary power disruption at West Point on January 20th resulted in a secondary diversion event (i.e., blending of primary and secondary treated effluent); however, no effluent limitations were exceeded.

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	2017									2018		
	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Wastewater Treatment Plants (e.g., effluent limit exceedance, unpermitted discharges)												
West Point	a	b					c	c				
South Plant												
Brightwater												
Vashon												
Carnation												
CSO Treatment Facilities (e.g., effluent limit exceedance, disinfection failure)												
Henderson/MLK CSO	*	*	*	*	*	*					*	*
Alki CSO			*	*	*	*					*	*
Carkeek CSO			*	*	*	*					*	*
Elliott West CSO	d			*	*	*	d	d	d	d	*	*
West Section Conveyance System												
Unpermitted Overflows												
East Section Conveyance System												
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** Following the West Point flooding incident on February 9th, exceedances of effluent limitations continued primarily as a result of ongoing process disruption.
- b** West Point secondary treatment processes were restored by the end of April, and other processes at West Point and the ability to comply with all effluent limitations resumed on May 10th.
- c** A failed tidal flap gate allowed seawater entry to the sewer adversely affecting solids removal at West Point, and exceedance of the weekly permit limitation. The flap gate was repaired in December.
- d** Effluent exceedances at Elliott West associated with process control performance; a phased planning and facility improvements process is underway.

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.

MARCH 2018

NPDES Permit Exceedances (Reportable Events Subject to Potential Penalties) – Wastewater Treatment Facilities or Conveyance System												
Facility	2017									2018		
	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Effluent Limitations Exceedances at Wastewater Treatment Facilities												
West Point	a	b					c	c				
South Plant												
Brightwater												
Vashon												d
Carnation												
Effluent Limitations Exceedances at CSO Treatment Facilities												
Henderson/MLK CSO	*	*	*	*	*	*					*	*
Alki CSO			*	*	*	*					*	*
Carkeek CSO			*	*	*	*			e		*	*
Elliott West CSO	f			*	*	*	f	f	f	f	*	*
Conveyance System Overflow Events in Combined or Separated Basins												
West Section – Dry Weather Overflows at CSO Outfalls												
West Section – Sanitary Sewer Overflows												
East Section – Sanitary Sewer Overflows	g								g	g	g	

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.
*	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** All West Point exceedances of effluent limitations as a result of the West Point flooding incident.
- b** West Point secondary treatment processes were restored by the end of April, and other processes at West Point and the ability to comply with all effluent limitations resumed on May 10th.
- c** A failed tidal flap gate allowed seawater entry to the sewer adversely affecting solids removal at West Point, and exceedance of the weekly permit limitation. The flap gate was repaired in December.
- d** Line power disruption on 3/15/18 resulted in loss of disinfection at Vashon for 12 minutes (1,700 gal) due to failure of backup system to rapidly start.
- e** Exceeded monthly fecal coliform bacteria limit during the only event; cause known and resolved.
- f** Phased planning and facility improvements process is underway for Elliott West.
- g** Wet weather sanitary sewer overflows associated with North Creek Interceptor capacity limitations; a conveyance capacity improvement project is underway.

9. Water quality monitoring

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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.

MARCH 2018

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/wgreports/DischargeMonitoringData.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://www.kingcounty.gov/depts/dnrp/wtd/system/west/west-point-restoration/environmental-monitoring.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://www.kingcounty.gov/depts/dnrp/wtd/system/west/west-point-restoration/marine-monitoring.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://www.kingcounty.gov/services/environment/wastewater/sediment-management/plan.aspx>

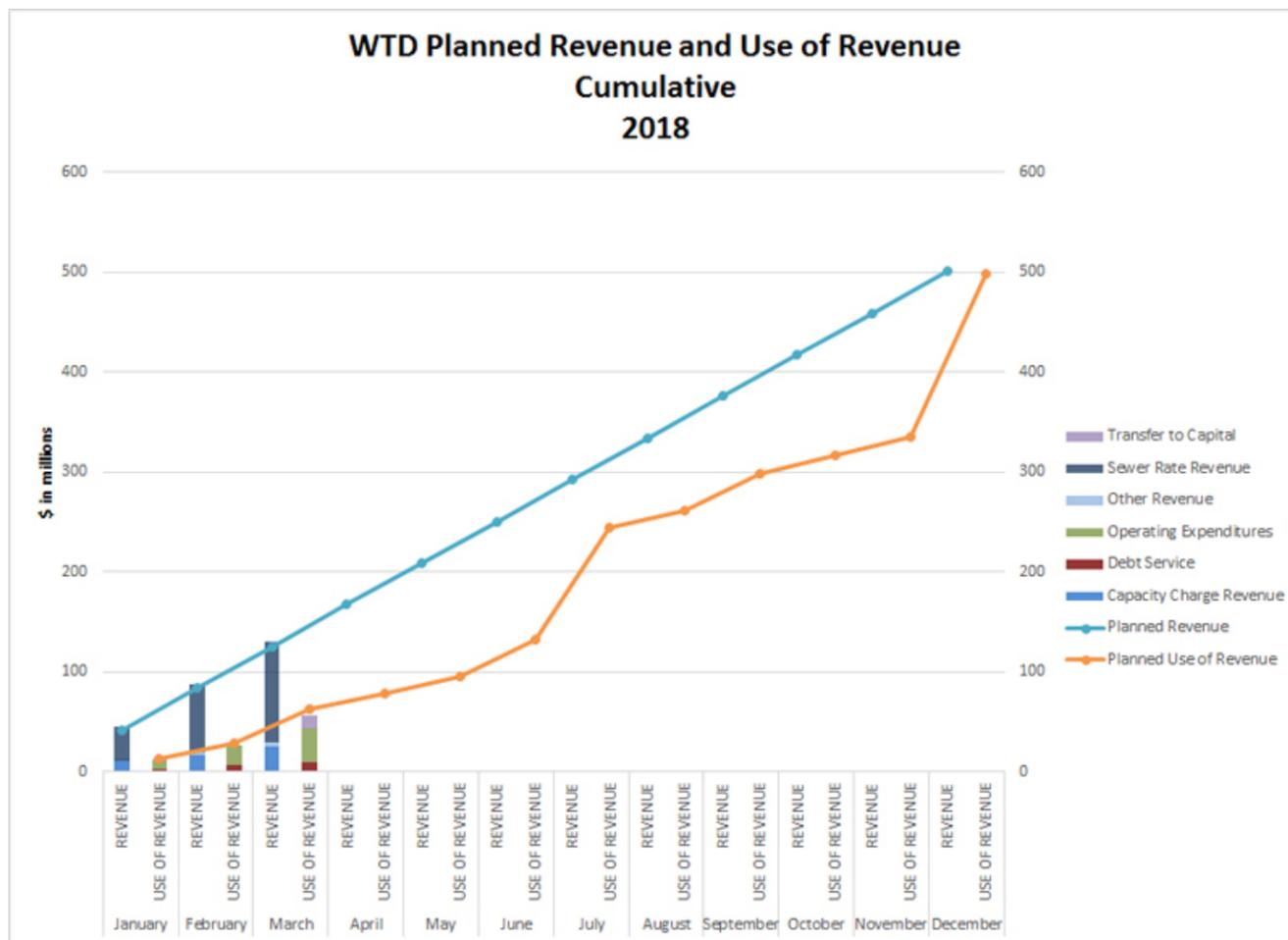
Financial performance (March 2018)

10. Wastewater planned revenue and use of revenue



Wastewater planned revenue and use of revenue 2018

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.

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
1038122	WTC SUNSET HEATH PS FM UPGRADE	●	●	3/31/2020	1,813	1,813	0	0%	▲	\$69,754,491	\$75,286,722	\$5,532,231	7%	Q1 2018
1038124	WTC WP DIGESTER FLOATING LIDS	●	●	9/28/2018	1,503	2,216	713	47%	●	\$3,820,277	\$1,646,892	(\$2,173,386)	-56%	Q1 2018
1048077	WTC ENVIR LAB ENERGY IMPROVMENT	●	●	2/14/2019	566	856	290	51%	●	\$5,850,874	\$7,527,230	\$1,676,356	28%	Q1 2018
1113260	WTC PRIMARY SED TNK GATE WPTP	●	●	9/15/2018	402	767	365	90%	●	\$2,450,826	\$1,327,023	(\$1,123,804)	-45%	Q1 2018
1114368	WTC SOUTH PLANT ETS PEAKING PUMPS VFDS, ASSESS & REPLACE	●	●	3/30/2018	1,086	1,389	303	27%	▲	\$3,941,503	\$4,398,117	\$456,614	11%	Q1 2018
1114373	WTC REFURBISH/REPLACE DUTY PUMPS VFDS AT SOUTH PLANT ETS	●	●	3/30/2018	1,086	1,389	303	27%	▲	\$4,138,186	\$4,203,505	\$65,319	1%	Q1 2018
1114382	WTC NORTH CREEK INTERCEPTOR	●	●	2/27/2018	1,604	2,052	448	27%	●	\$56,590,659	\$82,416,738	\$25,826,078	45%	Q1 2018
1116796	WTC SP RECLAIMED H2O FAC MODS	●	●	4/30/2018	925	930	5	0%	●	\$3,914,248	\$4,183,141	\$268,893	6%	Q1 2018
1116800	WTC N MERCER ENATAI INT PAR	●	●	4/3/2023	2,121	2,120	-1	0%	▲	\$116,035,624	\$116,024,352	(\$11,272)	0%	Q1 2018
1116801	WTC LK HILLS&NW LK SAM INTCP	●	●	10/13/2023	1,995	2,222	227	11%	●	\$119,342,432	\$119,342,432	(\$0)	0%	Q1 2018
1116802	WTC HANFD AT RAINIER & BVUE N	●	●	5/31/2018	1,287	1,479	192	14%	▲	\$33,107,404	\$35,839,853	\$2,732,449	8%	Q1 2018
1117514	WTC WEST POINT C-1 RESERVOIR ACCESS	●	●	5/28/2019	623	623	0	0%	●	\$1,926,396	\$1,921,048	(\$5,348)	0%	Q1 2018
1117516	WTC BEULAH COVE DRIP FIELD	●	●	9/29/2017	333	1,110	777	233%	●	\$744,575	\$1,221,294	\$476,719	64%	Q1 2018
1117748	WTC WP INTERMEDIATE, EPS VFD & DEWATERING ENERGY	●	●	8/31/2019	1,142	2,573	1,431	125%	●	\$33,541,919	\$23,862,036	(\$9,679,884)	-28%	Q1 2018
1120861	WTC MOBILE OC UNIT REPLACEMENT	●	●	6/10/2019	696	937	241	34%	●	\$3,171,445	\$3,123,070	(\$48,375)	-1%	Q1 2018
1121402	WTC GEORGETOWN WET WEATHER TREATMENT STATION	●	●	1/8/2022	2,141	2,090	-51	-2%	●	\$260,713,113	\$241,454,461	(\$19,258,653)	-7%	Q1 2018
1121403	WTC SP DIGESTER ROOF EQ REPL	●	●	9/6/2017	897	1,331	434	48%	●	\$5,752,015	\$4,262,284	(\$1,489,731)	-25%	Q1 2018
1121404	WTC SP RSP MEDIUM VOLT SG REPL	●	●	12/3/2019	658	658	0	0%	●	\$8,038,164	\$8,038,164	\$0	0%	Q1 2018
1122412	Eastgate Interceptor Rehabilitation Phase III	●	●	11/20/2018	996	1,015	19	1%	●	\$7,353,124	\$9,152,201	\$1,799,078	24%	Q1 2018
1122515	WTC WP CAPACITOR BANK	●	●	8/30/2017	481	450	-31	-6%	●	\$1,171,980	\$1,091,525	(\$80,455)	-6%	Q1 2018
1123517	WTC E FLEET MAINT FAC REPLCMNT	●	●	11/11/2019	750	1,126	376	50%	●	\$9,999,584	\$11,915,292	\$1,915,708	19%	Q1 2018
1123625	WTC SP HYPO CAUSTIC CHEM STORE	●	●	6/22/2018	786	710	-76	-9%	●	\$6,574,030	\$3,815,512	(\$2,758,518)	-41%	Q1 2018
1123626	WTC SP BIOGAS HEAT SYS IMPROVE	●	●	4/20/2021	1,410	1,470	60	4%	●	\$59,897,304	\$56,040,337	(\$3,856,966)	-6%	Q1 2018
1123632	WTC KENT ALBURN PHASE B	●	●	6/8/2019	1,369	1,369	0	0%	●	\$40,861,397	\$40,119,149	(\$742,248)	-1%	Q1 2018
1124339	WTC BW SECONDARY FOAM MGMT	●	●	10/6/2017	345	746	401	116%	●	\$724,621	\$1,090,654	\$366,032	50%	Q1 2018
1125202	WTC EW RELOCATE SAMPLING SYS	●	●	4/27/2018	720	990	270	37%	●	\$1,908,206	\$2,719,499	\$811,292	42%	Q1 2018
1125316	WTC VASHON LIFT STATION UPGRAD	●	●	3/9/2018	694	731	37	5%	●	\$3,385,078	\$3,898,123	\$513,044	15%	Q1 2018
1125460	WTC BW FF LINKING DEVICE UPGRD	●	●	3/1/2019	466	466	0	0%	●	\$1,203,778	\$1,174,541	(\$29,237)	-2%	Q1 2018
1126030	WTC BW IPS AIR BALANCING&HVAC	●	●	8/1/2017	324	658	334	103%	▲	\$1,333,132	\$1,403,529	\$70,397	5%	Q1 2018
1126048	WTC BW IPS WETWELL CORR REPAIR	●	●	8/1/2017	324	658	334	103%	▲	\$1,485,985	\$1,651,742	\$165,757	11%	Q1 2018
1127059	WTC WP REPLC INCINERATOR FLARE	●	●	12/24/2018	559	769	210	37%	●	\$4,825,164	\$4,772,434	(\$52,731)	-1%	Q1 2018
1128127	WTC WP DRY POLYMER FEEDER REPL	●	●	6/27/2019	453	885	432	95%	●	\$1,100,769	\$1,092,717	(\$8,052)	0%	Q1 2018
1129093	WTC HENDERSON/MLK JR WWTS IMPROVEMENTS	●	●	2/5/2019	391	574	183	46%	▲	\$1,810,658	\$1,815,737	\$5,079	0%	Q1 2018
1129531	WTC SP C2/C3 PIPE REPLACEMENT	●	●	10/25/2019	659	745	86	13%	●	\$5,307,059	\$5,306,317	(\$742)	0%	Q1 2018
1131919	WTC BW MEMBRANE FEED PUMP VFD	●	●	11/12/2019	617	617	0	0%	●	\$1,765,063	\$1,765,063	\$0	0%	Q1 2018
1132584	WTC LK HLS SOUND TRANSIT COORD	●	●	9/30/2018	286	286	0	0%	●	\$2,409,382	\$1,830,958	(\$578,424)	-24%	Q1 2018

● 0% or less over schedule or budget. Scope is consistent with baseline.
 ▲ Up to 15% over schedule or budget. Scope changes may be necessary.
 ● Over 15% over schedule or budget. Scope requires significant changes.

Safety performance (March 2018)

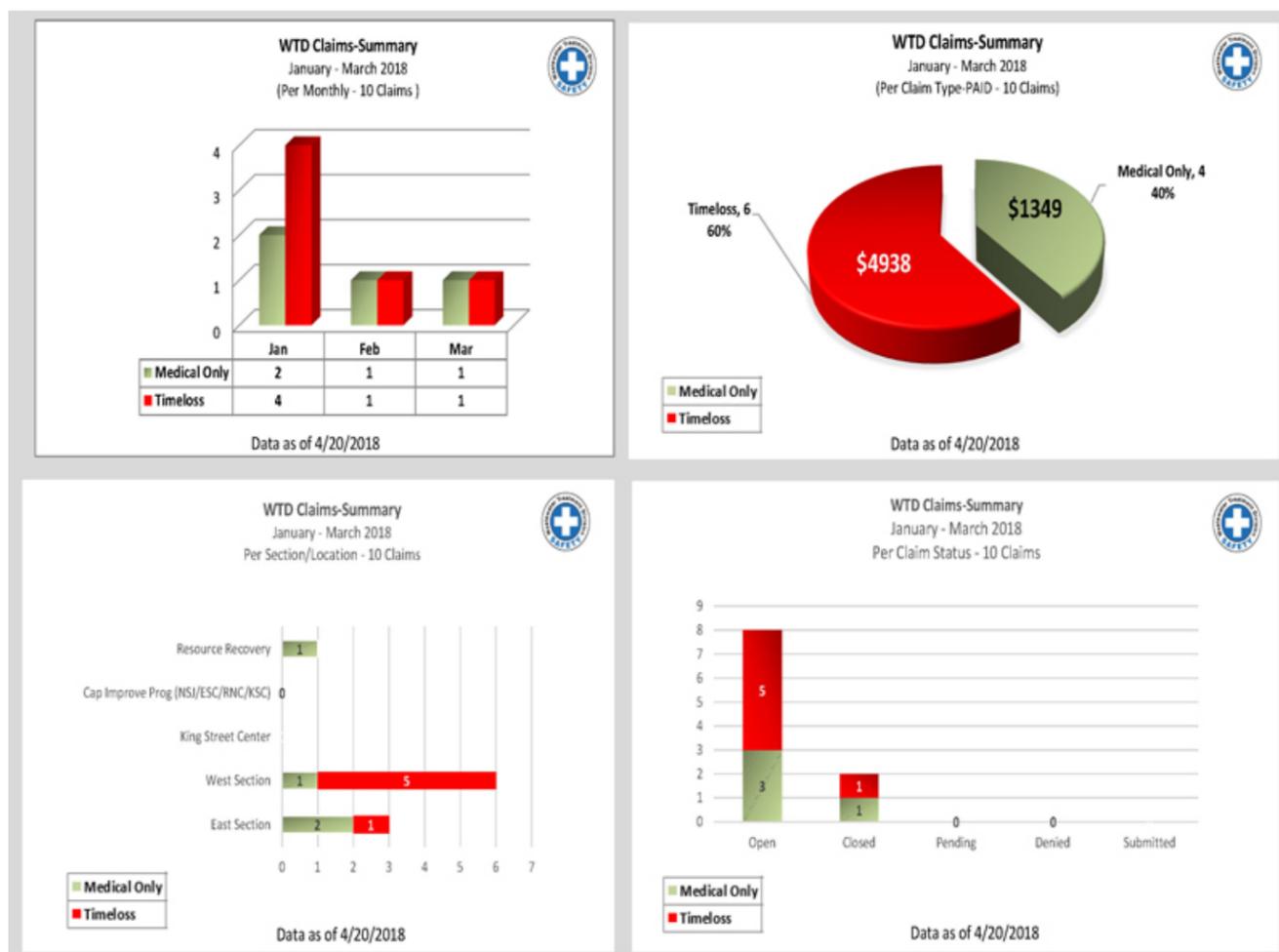
12. WTD accident (claim) summary

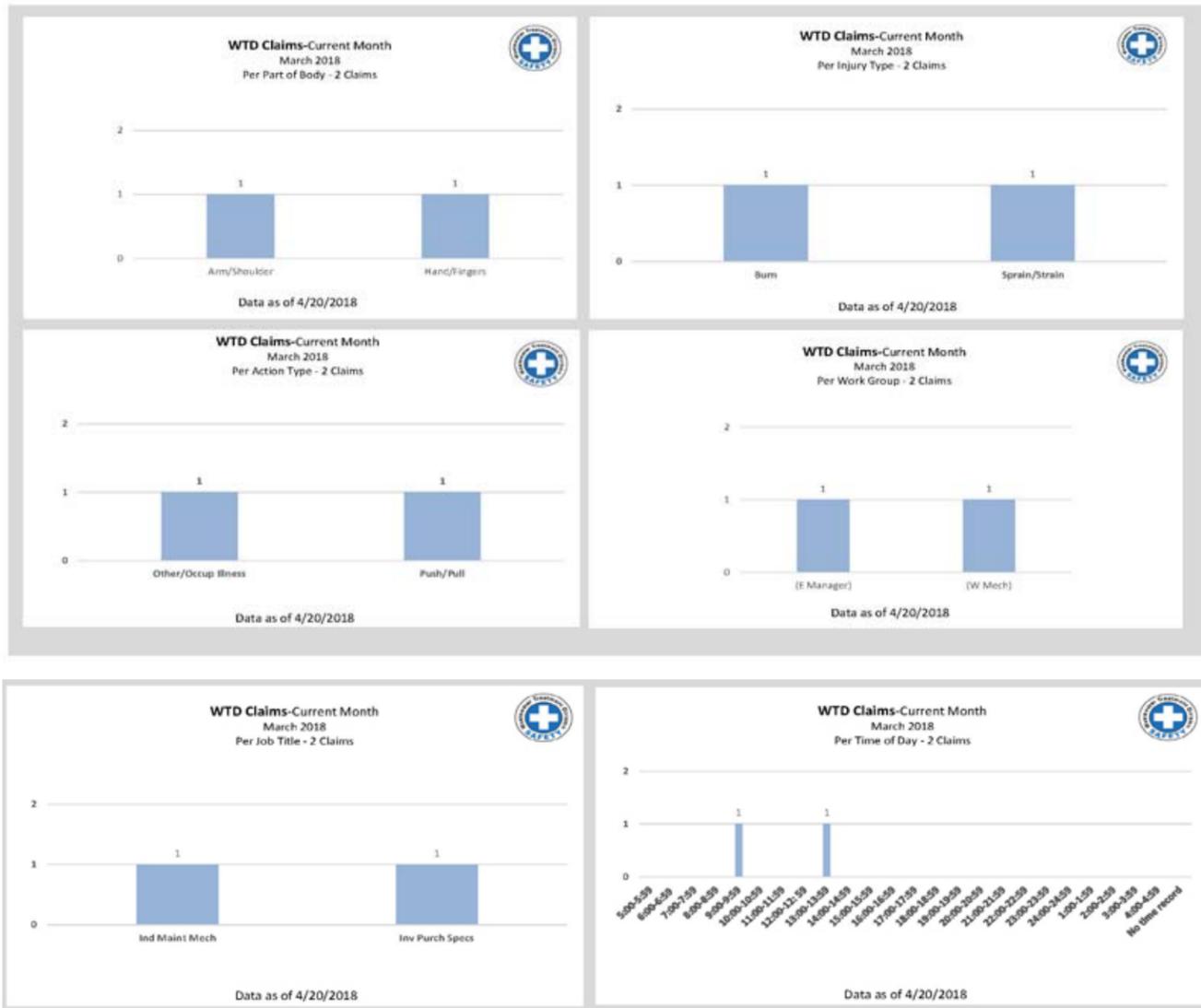


WTD accident (claim) summary

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](#) (March 2018)





- 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.

Monthly archives

Past performance metrics are posted by month in portable document format [📄](#).

- [February 2018](#)
- [January 2018](#)
- [December 2017](#)
- [November 2017](#)
- [October 2017](#)
- [September 2017](#)
- [August 2017](#)
- [July 2017](#)

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