



FALLBROOK PUBLIC UTILITY DISTRICT
MEETING OF THE ENGINEERING & OPERATIONS COMMITTEE

AGENDA

OCTOBER 22, 2019
1:30 P.M.

FALLBROOK PUBLIC UTILITY DISTRICT
990 E. MISSION RD., FALLBROOK, CA 92028
PHONE: (760) 728-1125

If you have a disability and need an accommodation to participate in the meeting, please call the Secretary at (760) 999-2704 for assistance so the necessary arrangements can be made.

Writings that are public records and are distributed during a public meeting are available for public inspection at the meeting if prepared by the local agency or a member of its legislative body or after the meeting if prepared by some other person.

I. PRELIMINARY FUNCTIONS

CALL TO ORDER / ROLL CALL

PUBLIC COMMENT

II. INFORMATION------(ITEMS A–B)

A. INTRODUCTIONS TO ENGINEERING AND OPERATIONS SUPERVISORS

B. KEY PERFORMANCE INDICATORS OVERVIEW

III. ACTION / DISCUSSION------(ITEMS C–H)

C. PIPELINE AND VALVE REPLACEMENT PROGRAM UPDATE

D. SCADA OVERVIEW – HISTORY, CURRENT STATUS, AND LONG-TERM GOALS

E. SEWER SERVICE CONNECTION REQUIREMENTS

F. HEAVY EQUIPMENT REPLACEMENT PROGRAM UPDATE

G. REQUEST TO EXERCISE SECOND YEAR OPTION – PAVING CONTRACT

H. BLOWER MAINTENANCE SERVICE PLAN

IV. ADJOURNMENT OF MEETING

* * * * *

DECLARATION OF POSTING

I, Mary Lou West, Secretary of the Board of Directors of the Fallbrook Public Utility District, do hereby declare that I posted a copy of the foregoing agenda in the glass case at the entrance of the District Office located at 990 East Mission Road, Fallbrook, California, at least 72 hours prior to the meeting in accordance with Government Code § 54954.2.

I, Mary Lou West, further declare under penalty of perjury and under the laws of the State of California that the foregoing is true and correct.

October 18, 2019
Dated / Fallbrook, CA


Secretary, Board of Directors

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M E M O

TO: Board of Directors Engineering & Operations Committee
FROM: Jason Cavender, Operations Manager
DATE: October 22, 2019
SUBJECT: Key Performance Indicators Overview

Description

This memo serves for informational purposes only as an overview of the District's Key Performance Indicators (KPIs). A summary of the current Engineering and Operations KPIs is attached, and staff will be reviewing these with the Committee.

Purpose

A KPI is a measurable value that demonstrates how effectively the District is meeting a predetermined goal. Examples of KPIs include:

- Water system regulatory compliance
- Preventative maintenance work order completion
- Number of valves replaced

Effective KPIs act as a compass, helping the staff understand whether or not the District is on the right path toward our strategic goals.

A summary of the current Engineering and Operations KPIs is attached

Budgetary Impact

There is no budgetary impact.

Recommended Action

Informational only, no recommended action.



Fallbrook Public Utility District

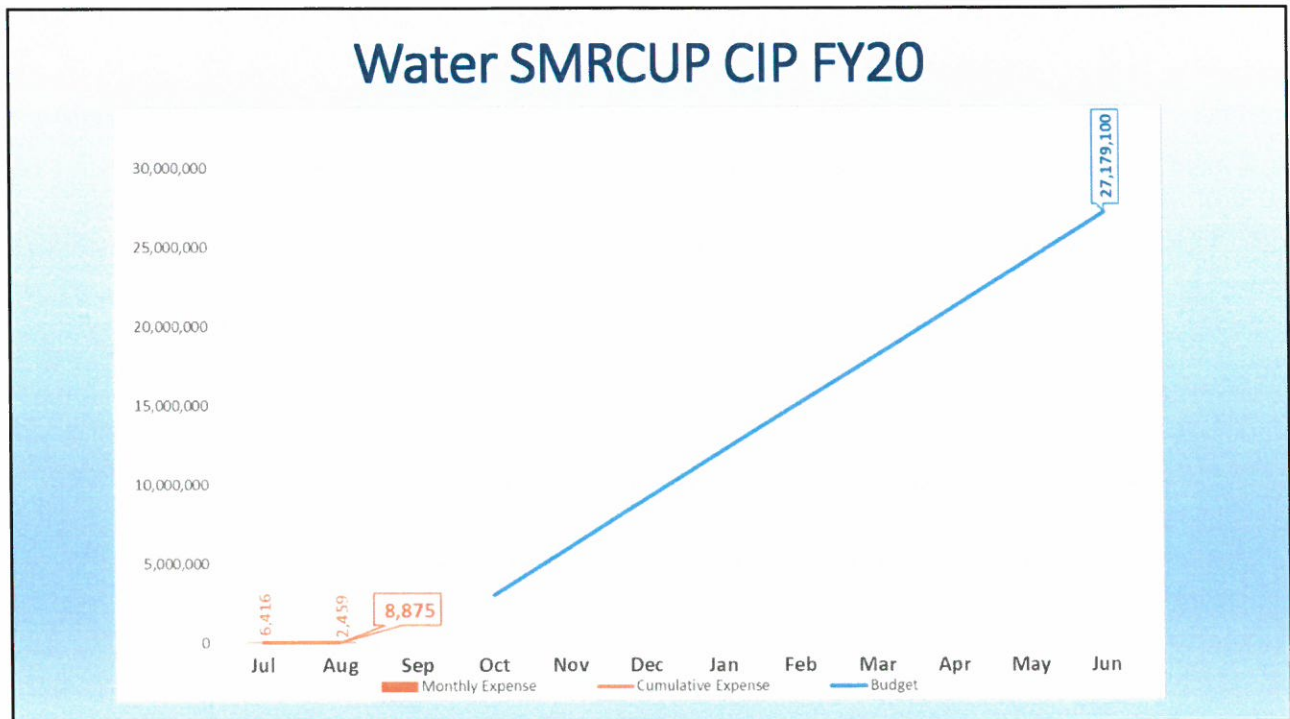
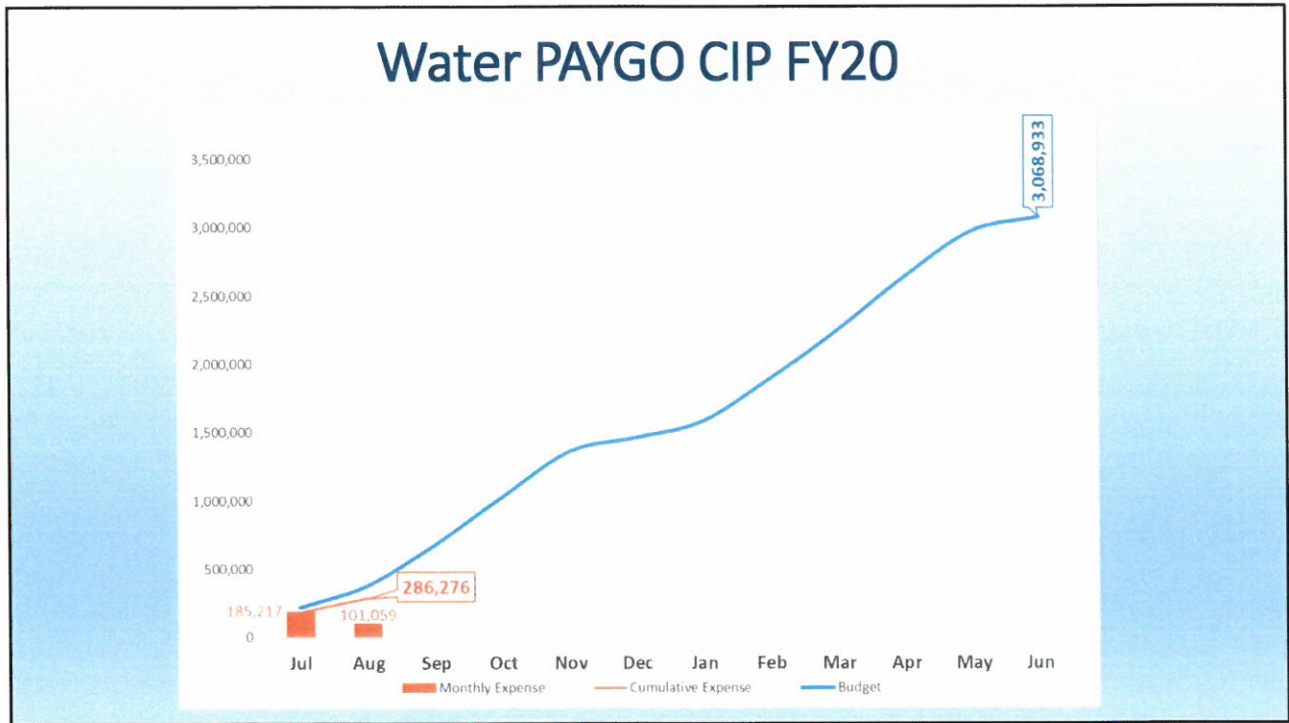
Key Performance Indicators Overview

Engineering and Operations FY20

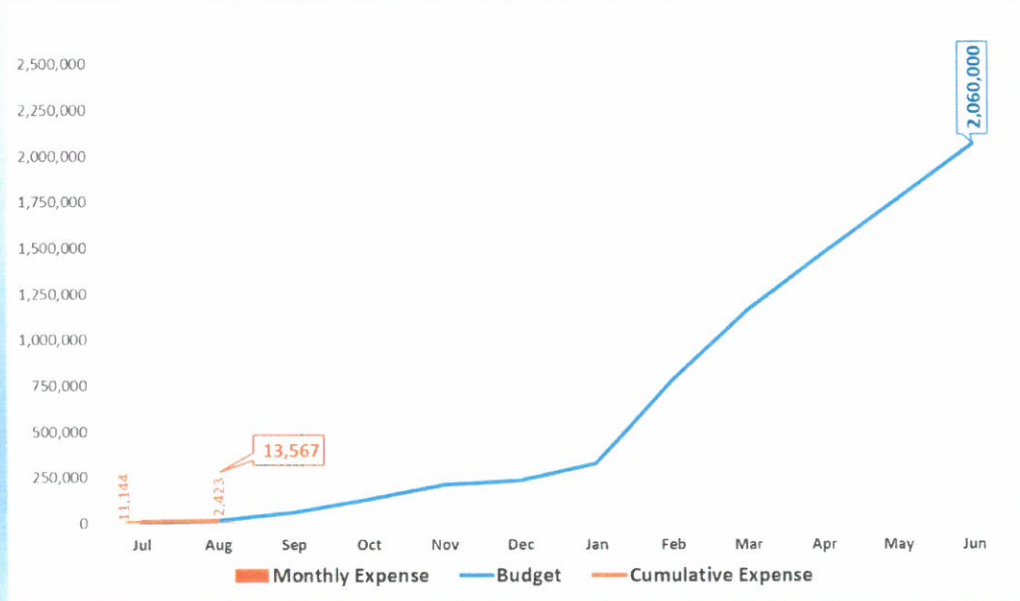
E&O Committee October 22, 2019

Key Performance Indicators (KPI)

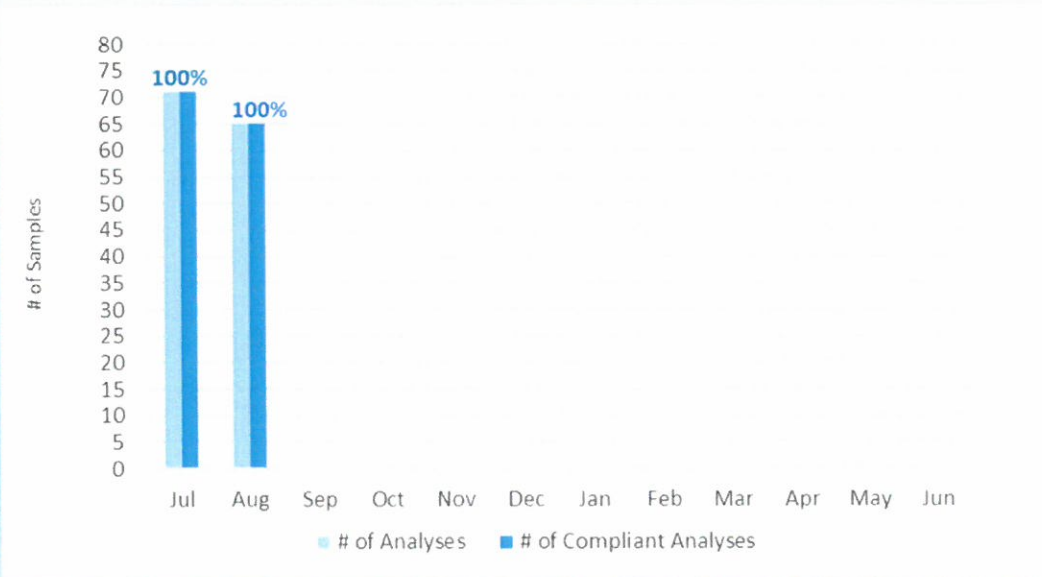
- Performance measurement is an essential management tool used to help set a course to improve the District.
- A KPI is a measurable value that demonstrates how effectively the District is meeting a specific predetermined goal.
- KPIs must be tracked on a consistent basis, and the results must be regularly evaluated to determine progress.
- The District can use this data to determine how our performance compares to other water and wastewater utilities.



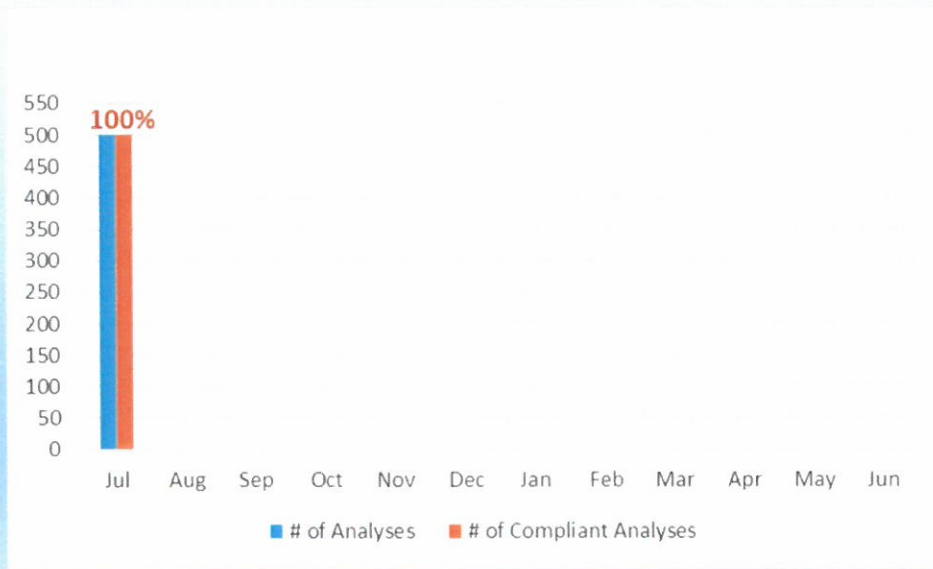
Wastewater System CIP FY20



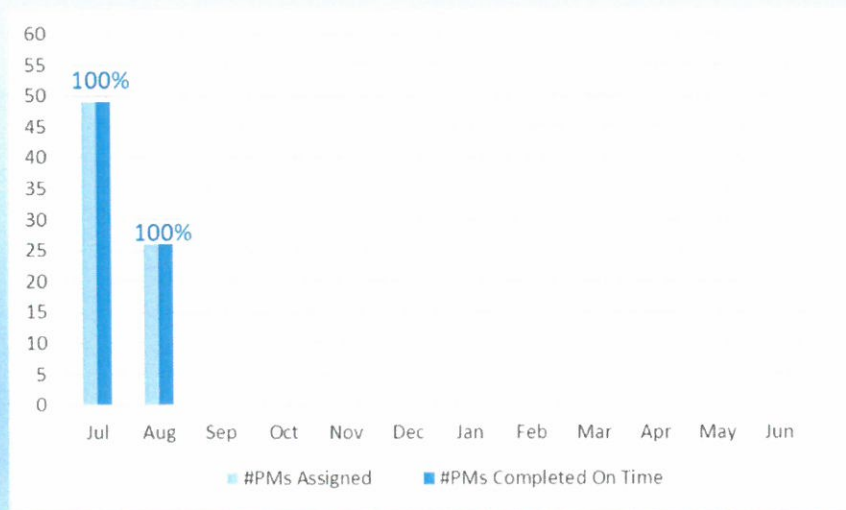
Water System Regulatory Compliance

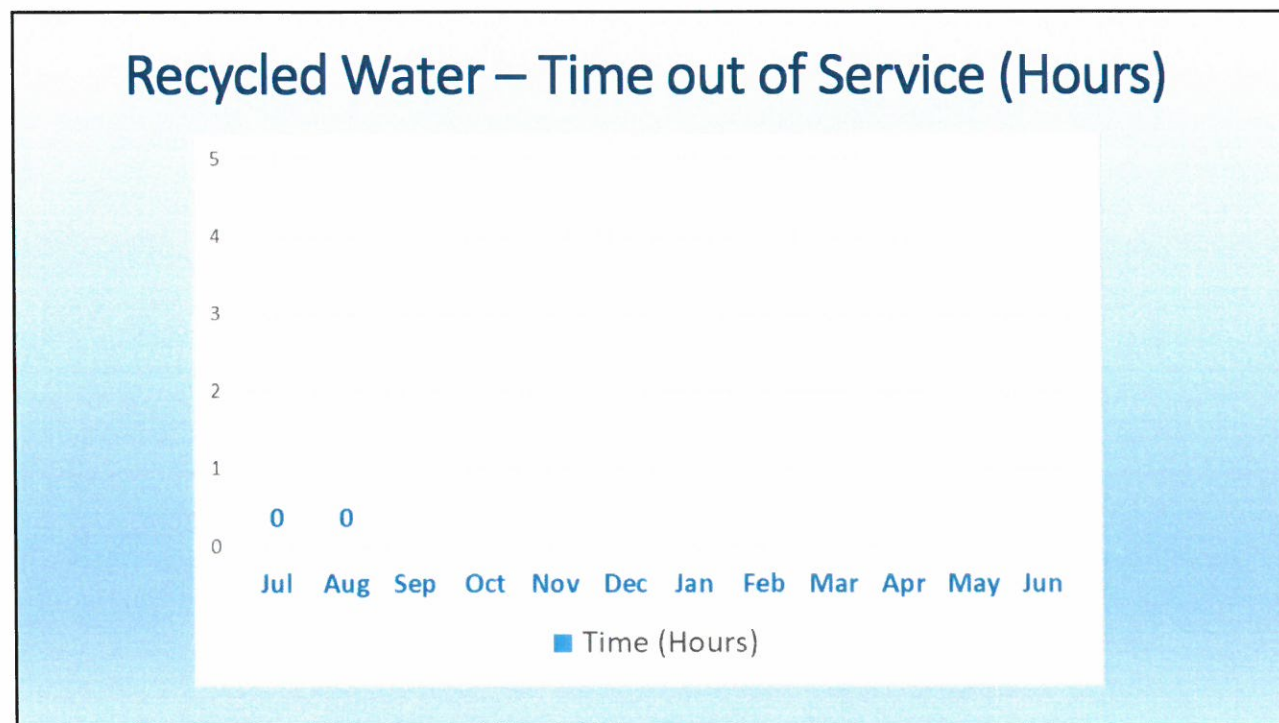
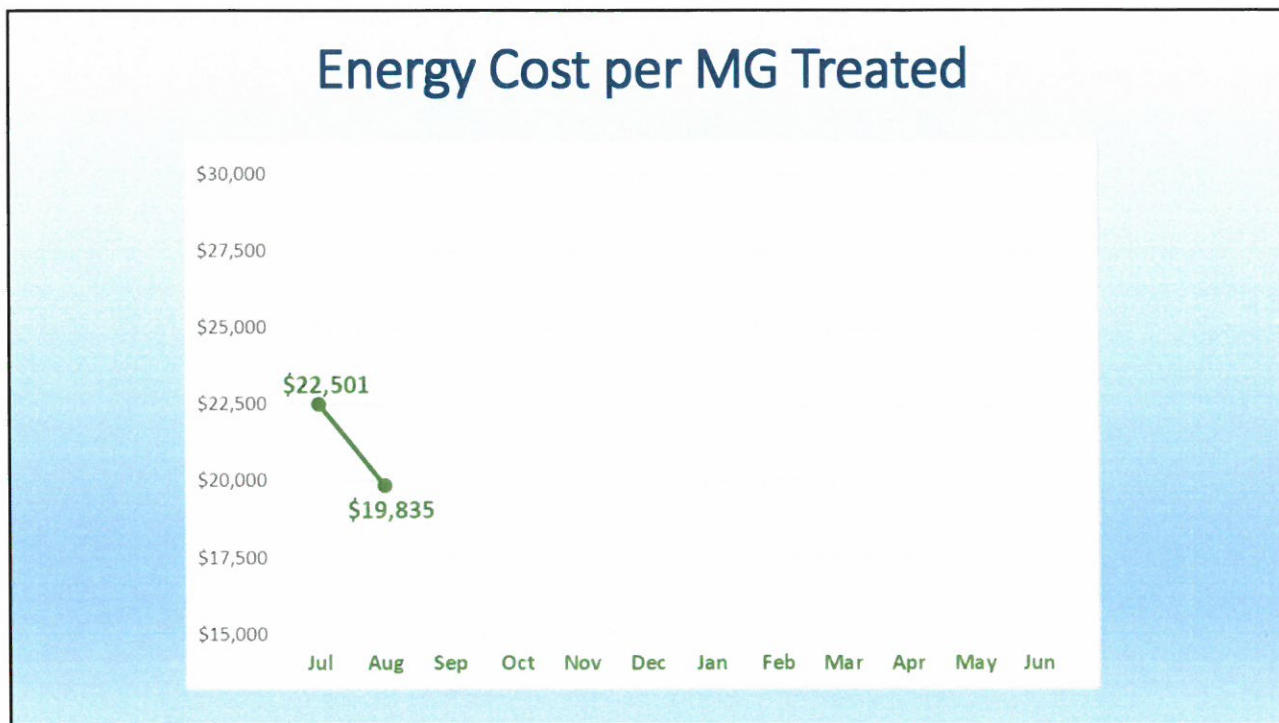


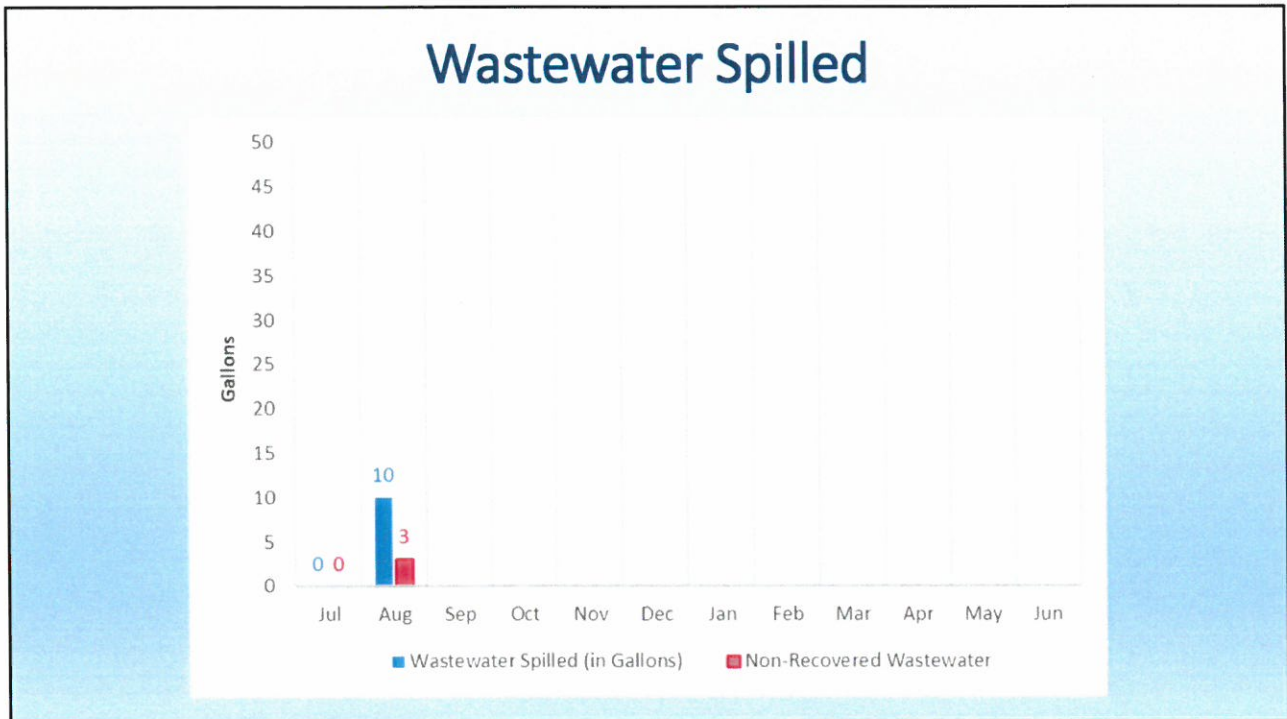
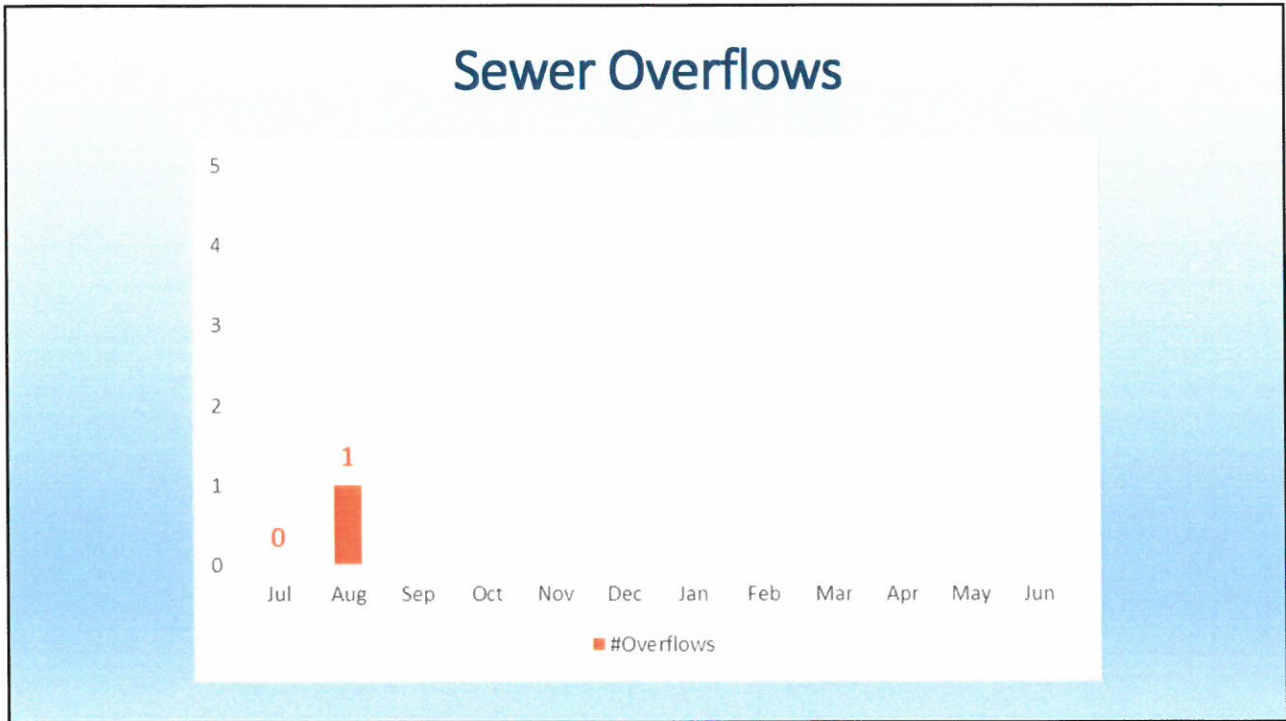
Wastewater System Regulatory Compliance



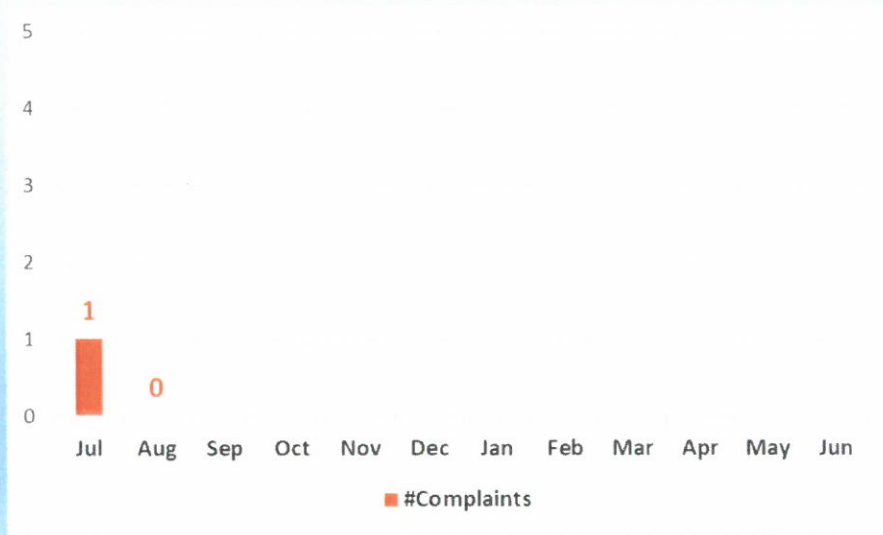
Water Preventative Maintenance Work Orders





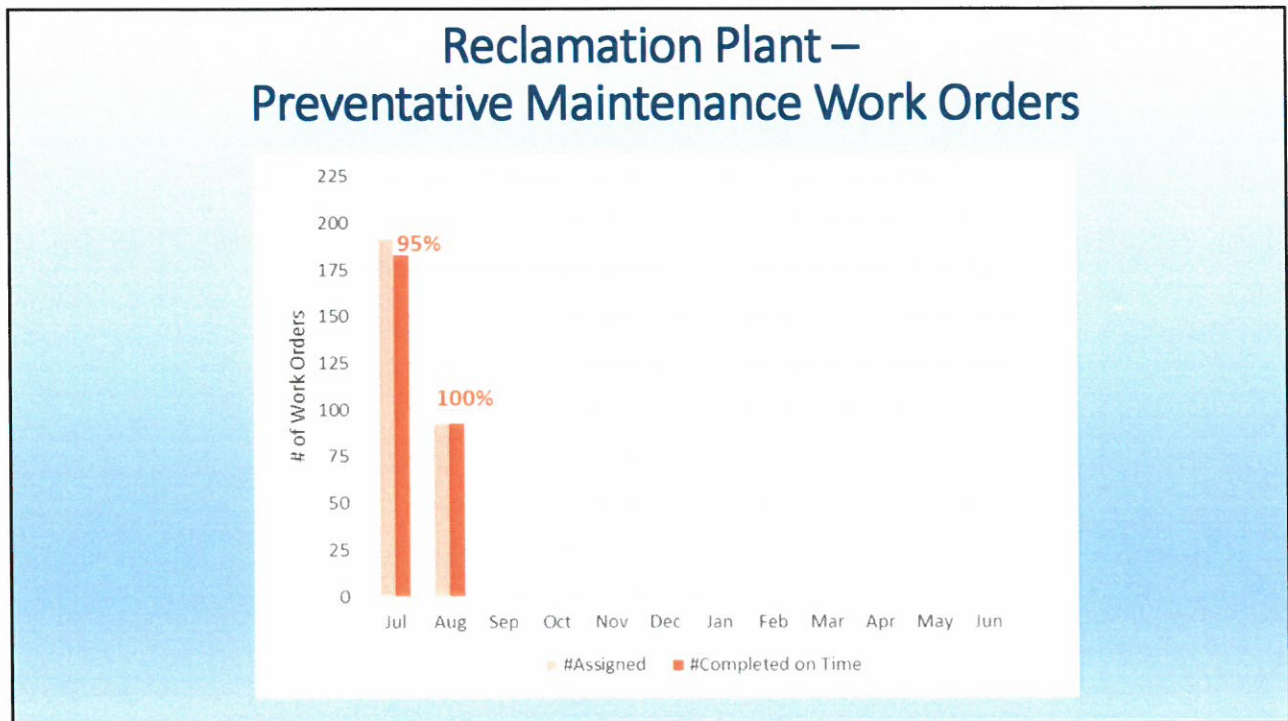
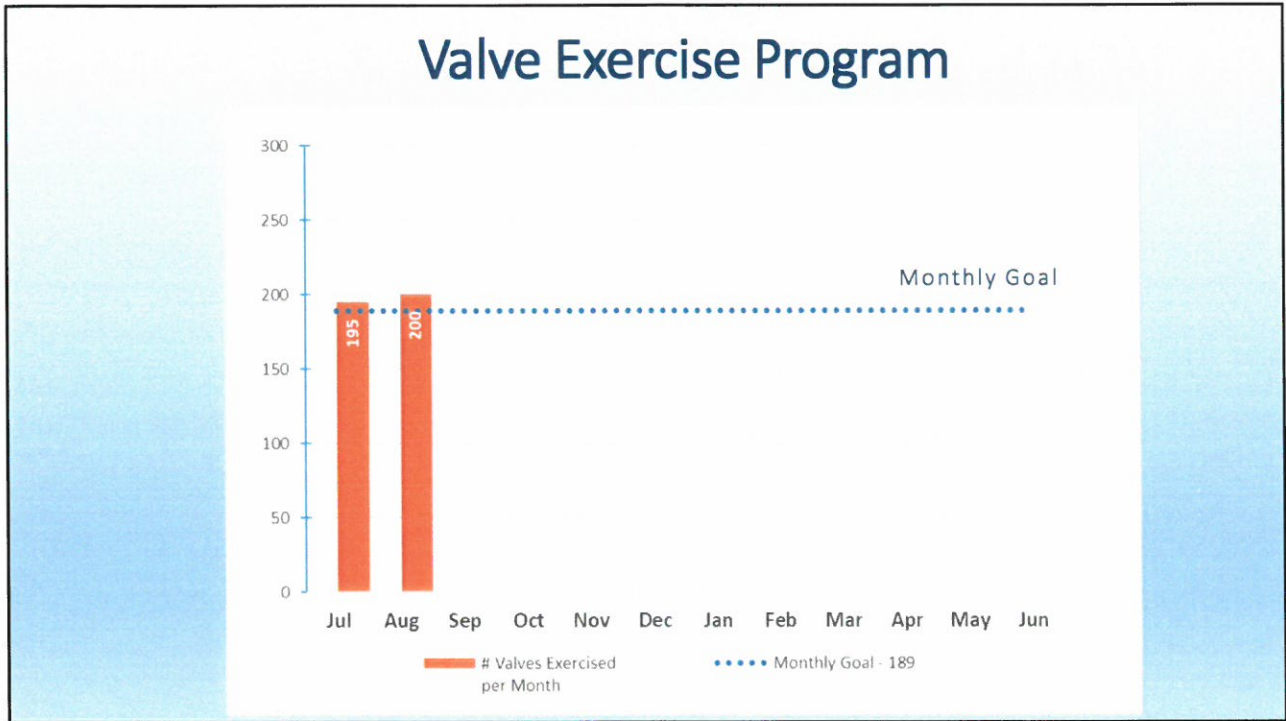


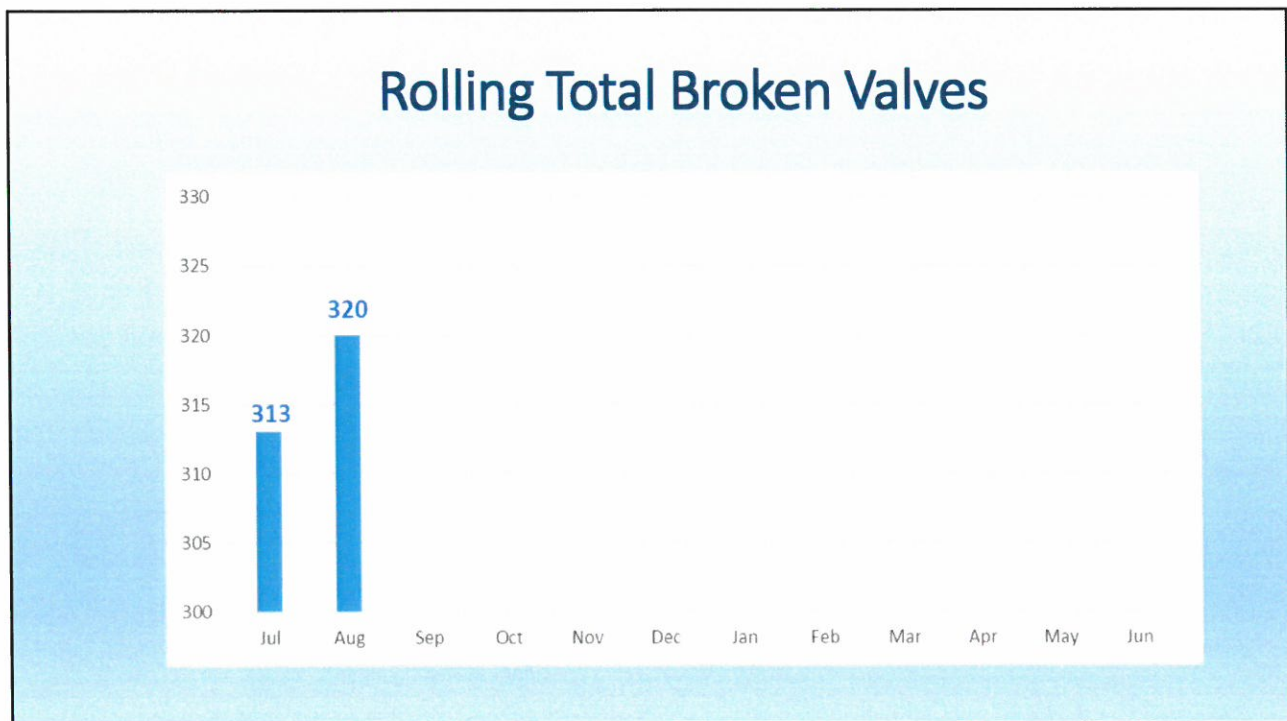
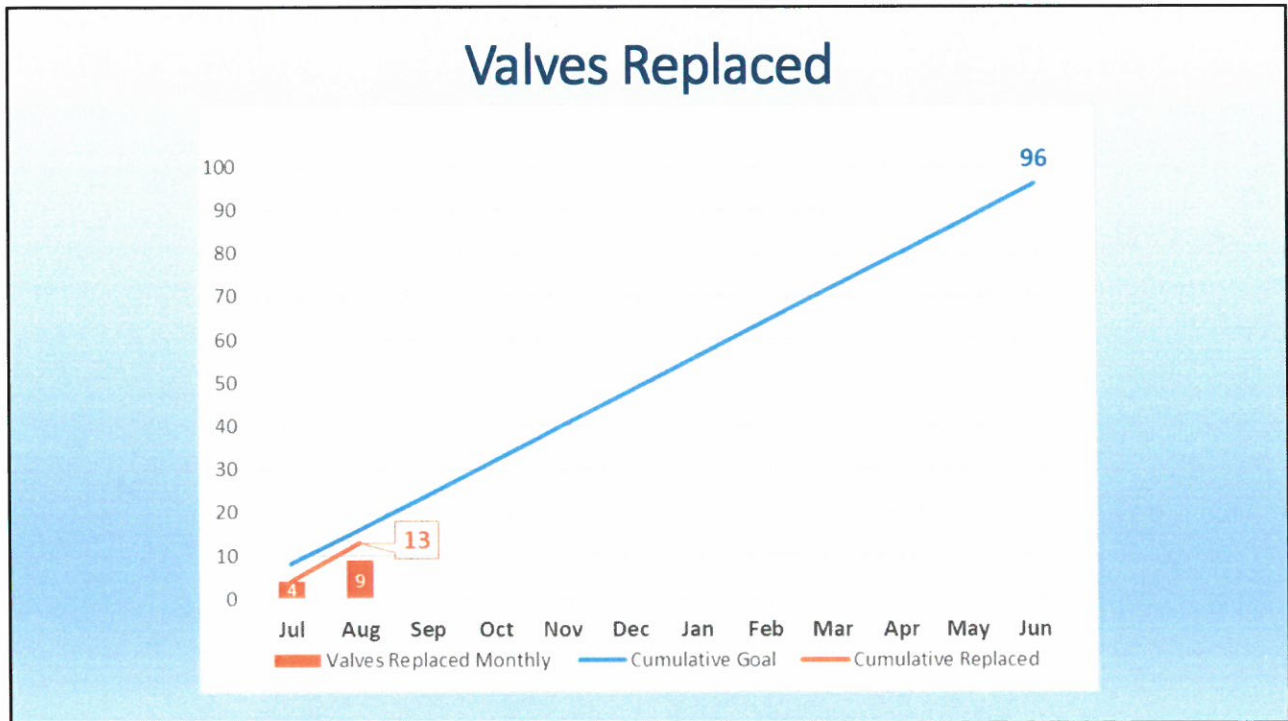
Odor Complaints

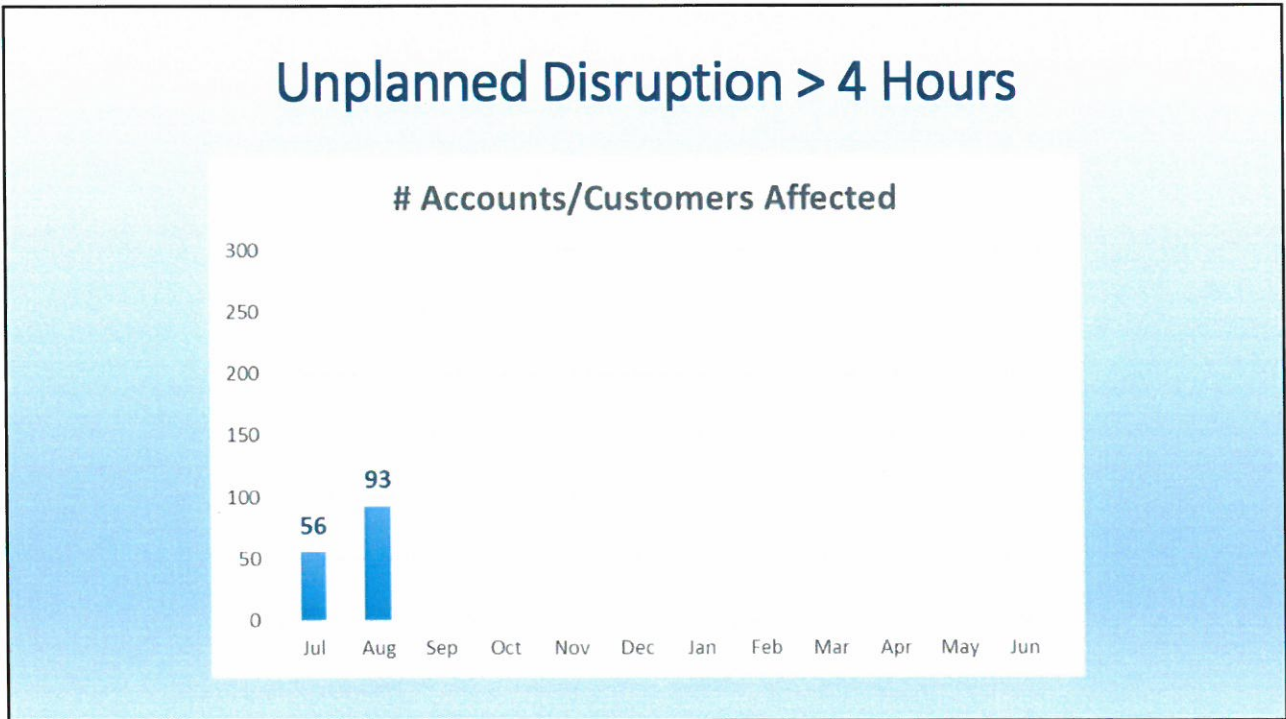
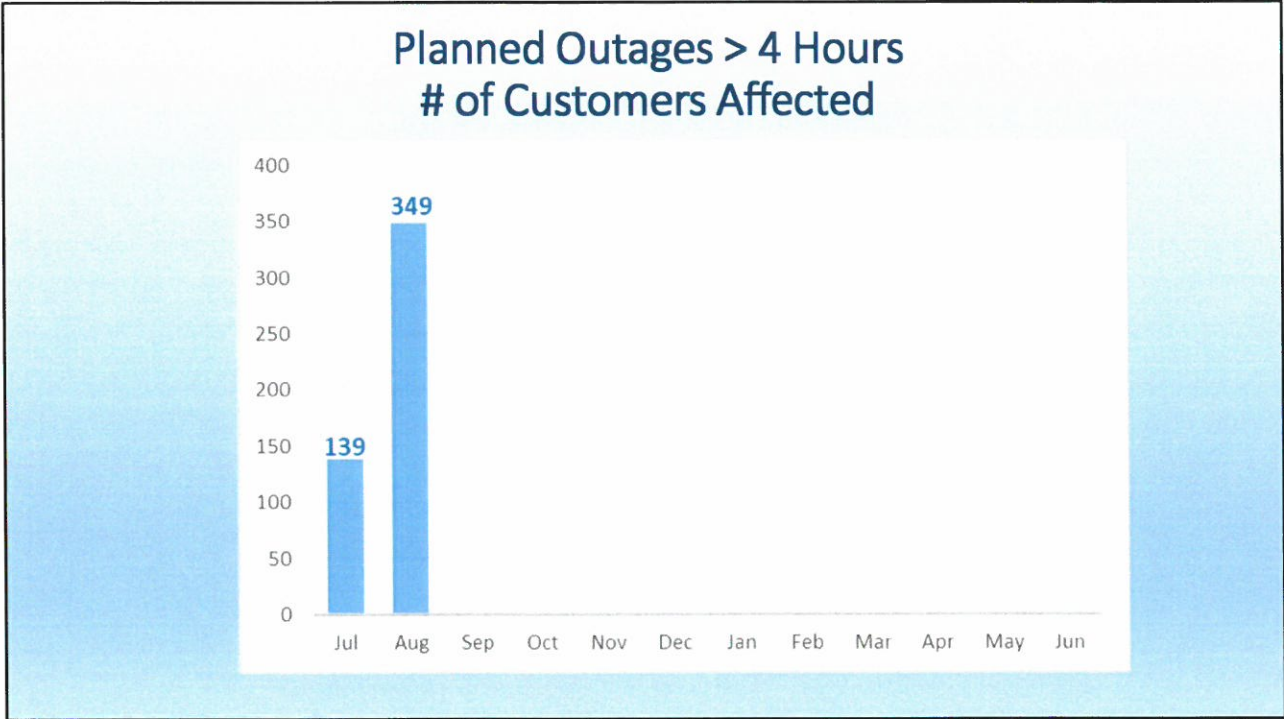


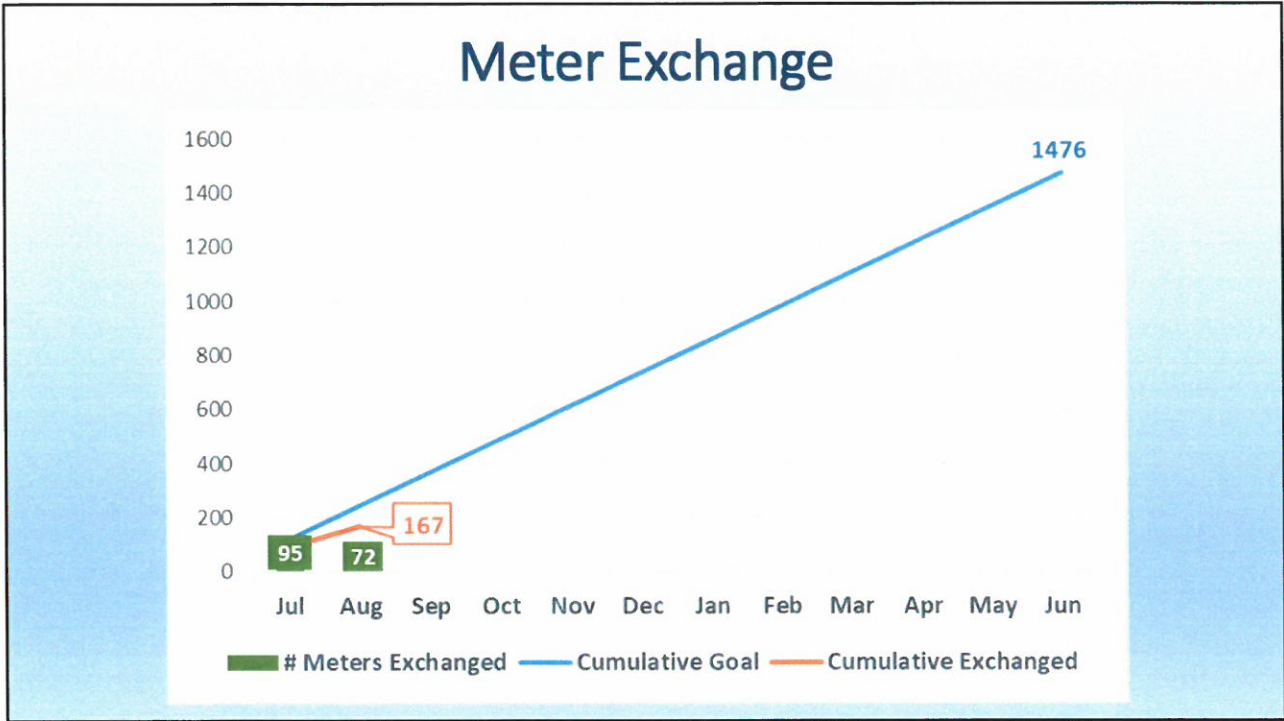
Collections – Preventative Maintenance Work Orders











M E M O

TO: Engineering & Operations Committee
FROM: Aaron Cook, Senior Engineer *AC*
DATE: October 22, 2019
SUBJECT: Pipeline and Valve Replacement Program

Description

This memo provides a progress update to the Pipeline and Valve Replacement Program.

Purpose*Valves:*

There are 6,872 total valves in the existing distribution system. Well-functioning isolation valves are critical to minimize the number of customers impacted during planned or unplanned shutdowns. The key performance indicators related to valves tracked by staff include number of valves exercised, number of valves replaced, and the rolling total of broken valves. The number of known broken valves regularly fluctuates, increasing as broken valves are discovered through the exercise program or when they do not shut-off properly during a shutdown, and decreasing as valves are replaced.

Currently the goal is to replace 100 valves per year. The number of valves replaced over the last three years are shown in the table below, as well as the amount expended to replace those valves.

<i>Year</i>	<i>Quantity Replaced</i>	<i>Total Annual Cost</i>
<i>FY 2016/17</i>	82	\$397,587
<i>FY 2017/18</i>	112	\$609,051
<i>FY 2018/19</i>	57	\$476,746
<i>FY 2019/20</i>	100 (Goal)	

Based on the past three years, the average cost to replace a valve is \$6,217. The valve replacement budget for FY 2019/20 is \$400,000. Based on this history, achieving the goal of replacing 100 valves will exceed the budget. Additionally, the current replacement rate results in a 70-year replacement cycle. Typically the service life of an isolation valve is between 20 and 30 years. The current number of known broken valves is 310.

As shown by these numbers, it would be ideal to increase both the budget allocated to valve replacement, and the valve replacement goal. The majority of the valve

replacement work is performed by internal field staff. Between 10 and 15 valves per year are replaced by outside contractors as part of the pipeline replacement program. Staff will be working on developing an approach to make incremental progress towards increasing valve replacement to a more sustainable level.

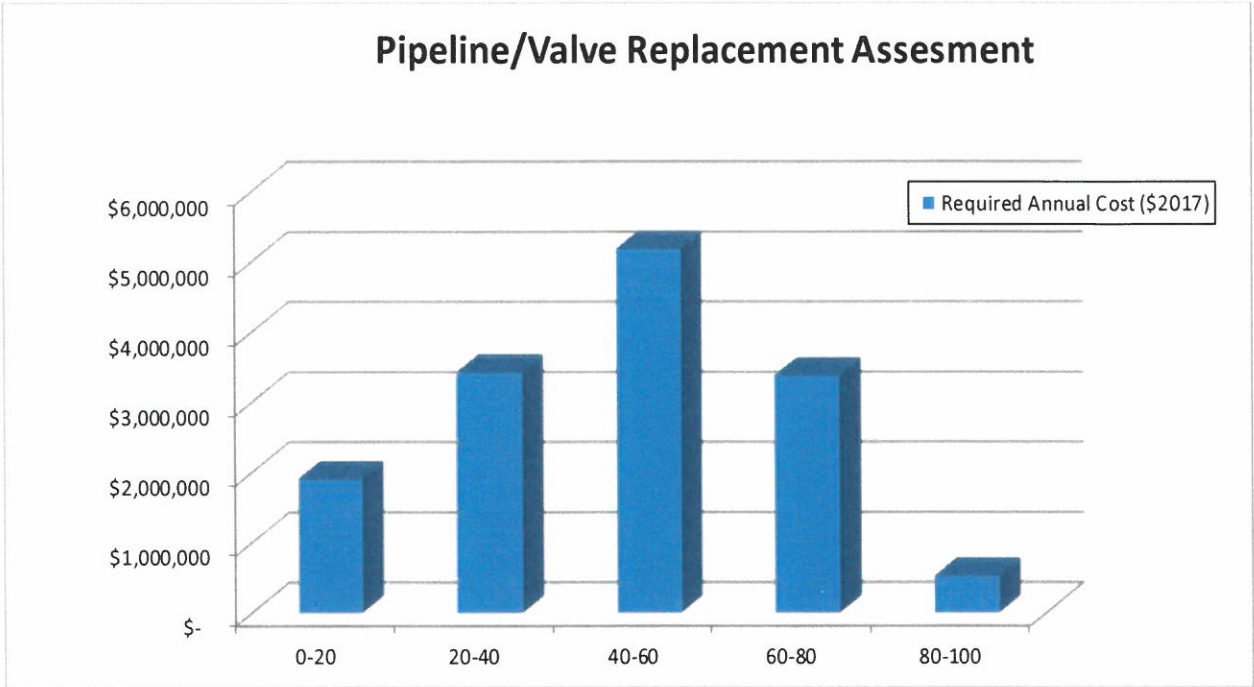
Water Mains:

Staff are continuing to work on updating the pipeline asset risk assessment model used to guide decisions on pipeline replacement. This model assigns a replacement value and risk factor to each segment of pipe in the system. That updated analysis is not complete, but as a general overview, the total replacement value of the existing distribution system has increased significantly over the past few years due to increasing construction costs.

There are 268 miles (1,415,040 feet) of water main in the existing distribution system. Based on current budget allocations of approximately \$1.7 Million, close to 5,000 linear feet of pipe are being replaced annually.

<i>Year</i>	<i>Linear Replaced</i>	<i>Feet</i>
<i>FY 2016/17</i>	1,178	
<i>FY 2017/18</i>	5,386	
<i>FY 2018/19</i>	4,885	
<i>FY 2019/20</i>	4,600 (Goal)	

The \$1.7 Million annual budget is based on asset analysis performed in 2017, with the intent to increase the annual budget in 20-year increments in order to achieve a 100-year replacement cycle. The Board also adopted a capital improvement charge and an escalation value to the charge to help make incremental progress towards reaching the 100 year replacement target.



However, based on increased construction costs, there is concern that the plan established in 2017 may not achieve the 100-year replacement goal even with the escalation factors. Staff will be bringing back an updated analysis of the estimated replacement cost, Capital improvement charge and proposed approach to meet the 100 year replacement target.

Budgetary Impact

There is no budgetary impact at this time.

Recommended Action

For discussion only. Staff will continue to update the risk assessment model and work with the committee on strategies for long-term asset replacement planning.

M E M O

TO: Engineering & Operations Committee
FROM: Jason Cavender, Operations Manager
DATE: October 22, 2019
SUBJECT: SCADA Overview

Description

This memo serves for informational purposes only as an overview of the District's Supervisory Control and Data Acquisition (SCADA) system. Staff will be presenting a summary of the SCADA system including a brief history, current status and long term goals.

Purpose

SCADA is a system of software and hardware elements that allows local, remote, and automatic operation of District facilities. SCADA allows the District to:

- Control water and wastewater treatment process
- Monitor, gather, and process real-time data
- Provide real-time data and control to Operators
- Directly interact with devices such as sensors, valves, pumps, motors, and more through human-machine interface (HMI) software
- Record events and produce reports and trends
- Alarm monitoring and handling

The District's commitment towards the continuous development and improvement of the SCADA system has significantly decreased the amount of manual operation required to operate the facilities. The ability to monitor real-time data, and produce reports and trends, allows staff to make well informed decisions regarding the operation of the District's water and wastewater facilities.


Budgetary Impact

The Capital Budget for FY 19/20 is \$130,000. There is no budgetary impact.

Recommended Action

Informational only; no recommended action.

M E M O

TO: Engineering and Operations Committee
FROM: Aaron Cook, Senior Engineer 
DATE: October 22, 2019
SUBJECT: Sewer Service Connection Requirements

Description

Consideration of options to encourage increased utilization and efficiency of existing sewer facilities within the current service area.

Purpose

The Fallbrook area was originally served by the Fallbrook Sanitary District which was formed in 1947. In 1994 the Sanitary District was incorporated into the Fallbrook Public Utility District. The sanitary district currently serves approximately 5,000 accounts in a service area of 4,200 acres. The sewer service area boundary is substantially smaller than the District's 28,000 acre water service area. The district started serving reclaimed water in 1991. The District's wastewater system consists of the following facilities:

- Water Reclamation Plant (WRP) with a design capacity of 2.7 MGD average annual flow
- 6 Lift Stations (Anthony's Corner Lift Station is scheduled to be decommissioned with the expansion of Overland Trail Lift Station next calendar year.)
- Seventy-eight miles of collection piping and force mains
- Eighteen miles of outfall piping from Fallbrook to the Pacific Ocean (Ownership of the lower portion of the outfall will be transferred to the City of Oceanside which will enable the discharge of RO Concentrate Brine from the planned Conjunctive Use Treatment Plant.)

On an average annual basis, the WRP currently treats a flow rate of approximately 1.5 MGD of the 2.7 MGD design capacity – or 55% utilization. In some specific portions of the service area, there are numerous existing dwelling units on septic systems, many of which are on lots too small to obtain septic system permits from the county based on current standards. Increasing the number of sewer service connections would increase the utilization and efficiency of the existing infrastructure, reducing costs on a per customer basis.

Unless a property owner is constructing a new structure with sewer service requirements per the county building permit process, or subdividing existing parcels, there is little incentive for them to switch from a grandfathered sub-standard septic system to sewer. There is really no way to require property owners to connect to the sewer. However, because the largest barrier to switching is the cost of extending

infrastructure to parcels not adjacent to sewer mains, establishing improvement districts within targeted areas could potentially encourage more connections.

An improvement district would identify a specific area with a high quantity of potential EDU's that could be serviced if a mainline were extended through that area. The District would construct the necessary mainlines, fronting the construction costs, and then recover those costs with an additional assessment paid as part of the permit fee at the time of connection. The assessment would be based on the cost of the improvements, divided by the number of potential new EDU's within the improvement district area. Example potential improvement district areas are shown on the attached figure highlighted in yellow.

Budgetary Impact

In the near term, installing additional sewer mains would have a high construction cost. Current costs to install 8-inch sewer collection lines are approximately \$300 per linear foot. These costs would need to be budgeted into the capital projects program. Over time, the costs would be recovered as property owners connect to the extended sewer.

Recommended Action

Consider directing staff to further evaluate creating specific improvement districts to expand the sewer collections system and encourage additional connections.

M E M O

TO: Engineering and Operations Committee
FROM: Steve Stone, Field Services Manager
DATE: October 22, 2019
SUBJECT: Heavy Equipment Replacement Program Update

Purpose

To present the Engineering and Operations Committee with an update on the District Fleet and Heavy Equipment Replacement Program (Program). The goal of the Program is to maintain a reliable fleet, which includes heavy construction and maintenance equipment, in order to continue providing the current level of service for the District's water and wastewater infrastructure.

Summary

As part of the District's Asset Management Plan to maintain infrastructure, it is important to have a reliable fleet and heavy construction and maintenance equipment to support the Program and operational needs. Moreover, the California Air Resources (CARB) has implemented regulations to reduce diesel emissions that require the District to reduce overall emissions in the existing heavy equipment fleet.

District Off Road Heavy Equipment Replacement Plan

The District's Off Road Heavy Equipment Replacement Plan is intended to reduce maintenance costs of aging off road fleet vehicles, increase utilization, increase expected life cycle, and obtain emission reductions by replacing old, high polluting mobile equipment with newer, cleaner mobile equipment to be in compliance with the CARB regulations. Low use heavy equipment will be designated as low use or retired, but it is critical for the District to have specific core equipment, including backhoes and loaders, to be able to immediately respond to repair substantial leaks and breaks and also maintain suitable productivity in valve and pipe replacement. In order to minimize costs for purchasing new heavy equipment under the new regulations, existing lower-use higher-pollutant loading heavy equipment will be retired and replaced by utilizing short-term rentals.

The CARB required all vehicles to be reported using the Diesel Off Road Online Reporting System (DOORS) and restricts adding older vehicles into fleets starting January 1, 2014.

In order to meet compliance schedules outlined under the CARB regulations and maintain a reliable heavy equipment fleet, staff recommends the following schedule for retirement and replacement of heavy equipment:

Year	EQ #	HP	Make	Model	Type	Status	Year
1990	1315	128	CASE	LOADER	MDL 621	Replace	2019-2020
2017	1345	101	VOLVO	LOADER	L45H	Meets	2038-2039
1987	1324	130	DRESSER	CRANE	150-FA 15-Ton	Replace	2020-2021
2018	1308	33	KUBOTA	TRACTOR	L 3301	Meets	2037-2038
2001	1321	75	CASE	BACKHOE	580M EXT	Replace	2019-2020
2010	1310	84	CASE	SKIP LOADER	570 MXT	Replace	2026-2027
2010	1302	84	CASE	BACKHOE	580M EXT	Meets	2024-2025
2014	1305	85	CASE	BACKHOE	580 N	Meets	2028-2029
2004	1322	85	CASE	SKID STEER	70-XT	Meets	2022-2023

If the equipment identified is not replaced, it will need to be placed in low-use or removed from service in order to meet CARB requirements. Without sufficient heavy equipment, the District will not be able to meet operational and construction needs.

The overall proposed level of equipment for the primary off-road heavy equipment fleet and utilization is outlined below:

Equipment	Number	Use
Backhoe	3	Primary Equipment. Used for potable water and wastewater repairs and valve replacement
Loader	2	One for Water Reclamation Plant for bio solids loading and miscellaneous equipment replacement. One for leak repair/collections.
Mower	1	Primarily for tanks sites/facilities maintenance/clearing
Crane	1	Shared – primarily for pipeline construction crew. Also for maintenance of pump stations and valve replacement.
Skip loader	1	Shared – primarily for right of way maintenance.
Skid Steer	1	Primarily meter service installation and small site projects

The District has maintained sufficient heavy equipment to be able to provide a high level of service and effectively respond to multiple construction needs with multiple crews at any time. The typical approach used by the District is to maintain one construction crew to complete valve replacements, one crew from meter services to respond to leaks, and one crew to support sewer collection systems repairs.

One key update since the previous plan is the proposed purchase of a hydro excavator. In order to minimize the impact for excavations in certain situations, the hydro excavator can be used. This reduces the labor as well as paving requirements, which is estimated to be an additional \$15,000 to \$20,000 a year. Currently, hydro excavating and potholing is performed utilizing the Vactor truck. The Vactor truck is intended to be used for sewer flushing and spill cleanup; therefore, its use as a hydro excavator is causing unnecessary premature wear on the vacuum unit and tubes. This premature wear is estimated to have cost the District \$37,000 over the past year. In addition to cost, excessive use of the Vactor truck has caused more repair down time for the unit, putting the District at risk of potential fines due to sewer spills and the inability to have sufficient backup equipment to perform that specific task.

In order to alleviate the excessive use of the Vactor truck, staff is recommending that a hydro excavator/vacuum trailer be purchased. The estimated cost is \$75,000. The trailer can be maneuvered utilizing a standard three-quarter ton pickup truck.

Finally, by purchasing the trailer, staff members who do not have a commercial driver's license will be able to use the equipment. Currently, only staff members who have a CDL can operate a Vactor truck.

District Fleet Replacement Plan

The District's on road fleet includes equipment used for operations, maintenance, and construction. The District currently has 46 vehicles in the on road equipment fleet (Attachment 1).

The District developed an overall fleet program that utilizes a scoring system to help prioritize replacements. The scoring for fleet vehicle replacement is attached (Attachment 2). The goal of the scoring system is to make sure that when expensive repairs are required, cost effectiveness will be evaluated. The goal of the program is to get as much useful life out of every vehicle, without extending the life past the date when repairs are no longer cost effective.

Based on the initial assessment of fleet, needs to overall projected target for replacement are as follows:

- Transportation vehicles are scheduled for replacement every 14 years.
- Crew trucks are scheduled for replacement every 13 years.

The actual replacement needs each year may vary if more expensive repairs are needed and it is determined that replacement is more cost-effective.

Budgetary Impact

The overall plan is consistent with the currently adopted budget. Attachment 3 shows the detailed back-up materials for the projected fleet and heavy equipment capital budget. The Board has authorized a total of \$560,000 for District fleet needs for fiscal year 2019/20. The purchase of the hydro excavator/vacuum trailer will have no additional impact on the approved budget number as staff determined the proposed budgeted purchase of a sweeper could be done more cost effectively with rented or attachments and the hydro excavator was a more cost-effective purchase. The estimated annual operation and maintenance savings for use of the hydro excavator is around \$50,000 a year, so the payback on the purchase of the hydro excavator is anticipated to be less than two years.

Recommended Action

It is recommended that the Engineering and Operations Committee support the updated fleet and heavy equipment replacement plan and support the proposed substitution of the hydro excavator.

Attachment 1

EQPT NO	Year	MAKE	MODEL	Eqpt #	Total Points	Year to Replace
1028	1999	FORD	F-150	1028	35.4	NO
1124	2004	FORD	F-350	1124	33.8	2019-2020-CREW
1015	1997	FORD	F-150	1015	32.7	2019-2020
1024	2000	CHEVROLET	1500	1024	32.4	NO
1122	1996	CHEVROLET	3500	1122	32.3	Low Use
1027	2004	FORD	RANGER	1027	32	2019-2020
1103	2005	CHEVROLET	3500	1103	30.3	2018-2019
1054	2006	CHEVROLET	2500	1054	30	2020-2021 CREW
1012	2003	FORD	F-150	1012	29.9	2020-2021
1004	2006	CHEVROLET	COLORADO	1004	29.4	2020-2021
1101	2002	CHEVROLET	2500	1101	29.2	2022-2023 CREW
1113	2003	FORD	F-550	1113	27.9	2024-2025 CREW
1110	2000	FORD	F-350	1110	27.2	Low Use
1008	2006	CHEVROLET	COLORADO	1008	25.8	2022-2023
1125	2008	FORD	F-250	1125	25.4	2026-2027 CREW
1037	2010	FORD	RANGER	1037	25.2	2022-2023
1034	2008	FORD	F-150	1034	24.5	2024-2025
1141	2006	INTERNATION	DT-570	1141	22.6	NOT REPLACING
1036	2008	FORD	F-150	1036	22	2026-2027
1031	2004	CHEVROLET	3500	1031	20.6	2026-2027 CREW
1116	2007	CHEVROLET	3500	1116	19.5	Low Use
1009	2010	FORD	F-150	1009	18.2	
1127	2010	FREIGHTLINE	M-2106	1127	18.1	
1035	2010	FORD	RANGER	1035	17.8	
1021	2010	FORD	RANGER	1021	17.7	
1033	2008	FORD	F-150	1033	17.5	
1128	2009	FREIGHTLINE	M-2106	1128	17.4	
1102	2010	CHEVROLET	2500	1102	16.6	
1104	2009	FORD	F-450	1104	16.3	
1100	2008	DODGE	SPRINTER	1100	15.5	
1129	2012	HINO	266A	1129	11.6	
1014	2015	FORD	F-150	1014	10.8	
1010	2015	FORD	F-150	1010	7	
1105	2015	FORD	F-450	1105	7	
1038	2016	FORD	F 150	1038	6	
1039	2016	FORD	F 150	1039	6	
1042	2016	FORD	F 150	1042	6	
1043	2016	FORD	F 150	1043	6	
1161	2016	KENWORTH	T4	1161	6	

Point Ranges			
Under 20 points	Condition I: Excellent		2018-2019
20 to 23 points	Condition II: Good		2019-2020
24 to 30 points	Condition III: Qualifies for replacement		2020-2021
31 or more points	Condition IV: Needs immediate consideration		2022-2023
			2024-2025
			2026-2027



Vehicle/Equipment Evaluation Form

990 E Mission Rd
 Fallbrook, CA
 Phone (760) 728-1125
 Fax: (760) 728-8491

Vehicle or Equipment VIN or Serial #: 1GBJK39U95E297015
 Vehicle or Equipment #: 1103
 Make: Chevy Model: 3500 Year: 2005
 Mileage: 92654 Hours of Operation: N/A
 Date of Evaluation: 1/7/2019 Evaluator: Todd Lange/Kerry Mehrens

System	Points	Comments
Age	14	Built 2005
Miles Hours	9.2	92,654
Type of service	5	2 Transmissions/Brakes
Reliability	3	Brakes and Motor Mounts
Maintenance Costs	5	Transmission/Brakes
Condition	3	Normal Wear
Total Points	39.2	

Age: 1 point for each year of chronological age, based on in service date
 Miles/Hours: 1 point for each 10,000 miles or 750 hours of use
 Type of Service: 1, 3, or 5 points are assigned based on the type of service that the vehicle had during most of its life. The more severe the type of service performed the higher the number assigned
 Reliability: 1, 3, or 5 points are assigned depending on the frequency that a vehicle is in the shop for repair. The more the frequency of shop visits the higher the number
 Maintenance Costs: 1 to 5 points are assigned based on total life maintenance and repair costs (not including repair of accident damage). A 5 is assigned to a vehicle with life repair costs equal or greater to the vehicle's original purchase price and a 1 is given to a vehicle with life repair costs equal to 20% or less of its original purchase cost
 Condition: This category takes into consideration body condition, rust, interior condition, accident history, anticipated repairs, etc. a scale of 1 to 5 points is used with the higher the number the worse the condition

Point Ranges	
Under 20 points	Condition I: Excellent
20 to 23 points	Condition II: Good
24 to 30 points	Condition III: Qualifies for replacement
31 or more points	Condition IV: Needs immediate consideration

Evaluator's Comments: Truck is undersized for the body application that was installed on chassis.

Truck has had (2) Transmissions, numerous engine mounts, suspension work, and brake jobs requiring both front and rear brakes every 10,000 miles. Full set of tires every 10,000 miles

Attachment 3

WATER DEPARTMENT Capital Budget Project Detail

Project Title: Heavy Equipment and Fleet

Description: This program provides for the purchase of field equipment and fleet vehicles to maintain the fleet at the current level to accomplish the objectives of this and projected budget years. The District has developed a fleet replacement plan to maintain a serviceable, reliable fleet in the most economical manner. For field equipment replacement is required to meet CA air quality requirements (DOORS) as Tier 0, I and II equipment must be replaced to comply with Tier IV emission requirements. Currently we meet January 1, 2021 compliance date. Since 11/2016, the Fleet has been reduced by (8) transportation vehicles, (1) Backhoe and (1) Trencher

<u>Title</u>	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
<u>Transportation</u>						
Mid Size/Full-size Truck	70,000	70,000	70,000	70,000	70,000	70,000
<u>Crew Support</u>						
1 Ton Cab & Utility Body	90000	100,000	100,000	100,000	100,000	100,000
Valve/Vacuum Truck						
TV Van-Collections				85,000		
<u>Field Equipment</u>						
Misc. Field Equipment	10,000	12,500	15,000	15,000	15,000	15,000
Loaders	162,000					
Class A Fifth Wheel						
Water Truck		80,000				
Trailer			60,000			
Crane		250,000				
Backhoe	110,000				150,000	
Skid Steer/Skip Loader						100,000
Dump Truck			150000			150000
Vactor						
Light Tower	10,000					
Hydraulic Excavator Trailer	75,000					
Hydraulic Cut Off Saw		20000				
<u>Safety Equipment</u>						
Safety Equipment	13,000	13,500	13,500	13,500	13,500	13,500
<u>Misc. Vehicles</u>						
Gas Pump Upgrade						
Major Overhaul / Fleet optimization	20,000	20,000	20,000	20,000	20,000	20,000
Total	560,000	566,000	428,500	303,500	368,500	468,500

M E M O

TO: Engineering and Operations Committee
FROM: Kevin Collins, Purchasing/Warehouse Supervisor
DATE: 10/16/19
SUBJECT: Request to exercise 2nd year option – Paving contract

Description

This request is to formally exercise our 2nd year renewal option with Kirk Paving for paving services for the District.

Purpose

In February 2018, the board awarded a contract for paving needs and authorized a not-to-exceed amount of \$328,400.

In October 2018, staff requested an additional \$315,000 for estimated paving expenses with the expectation that the additional allocation would make it through the end of fiscal year 18/19 (June 2019), which the board authorized.

The total dollar amount authorized by the board for the contract was \$643,400. The District was able to stretch the allocation through the end of the fiscal year, but an additional authorization is now needed to make it through the end of this fiscal year (June 2020).

Due to these expenses, staff is requesting the board exercise the 2nd year renewal option on the paving contract with Kirk Paving in a not-to-exceed amount of \$136,740, which will fund paving needs through June 2020. At that time, FPUD staff plan not to exercise another renewal year and, instead, re-bid for paving needs to better align true budgetary needs and fiscal years and try and develop a more cost effective approach for paving services

The original awarded contractor and low-bid, Joe's Paving, was expelled from the contract in January of 2019 after multiple issues of incorrect charging based on traffic control fees. The next low-bidder, Kirk Paving, was awarded the rights to the contract. However, Kirk Paving's pricing is higher than Joe's, leading to a depletion of funds more quickly than anticipated.

In order to determine the most cost-effective long-term approach paving expenses, FPUD staff plans to do some smaller paving jobs internally on low traffic side streets to determine what is the most cost effective approach, specifically to attempt to combat traffic control fees and mobilization costs which are key factors in the paving budget.

Staff will create a cost analysis based on those smaller jobs to better anticipate what a more cost-effective method is—having almost all paving work done by a contractor or doing most jobs internally and keeping a contract for larger work.

The District currently pays Kirk Paving \$2,511.00 for labor and materials to pave a 10'x10'x4" excavation, in addition to a \$662 mobilization fee per site. FPUD field supervisors anticipate the same work done internally would cost the District \$1,147.00.

Staff estimate that nearly 75% of all jobs currently given to Kirk Paving could be performed internally by FPUD field crews, creating a significant savings annually. If these estimations are validated by this test, additional staff and equipment may be necessary to take on the additional paving work created by utilizing the contract less frequently.

Budgetary Impact

For fiscal year 19/20, staff had budgeted \$235,000 in operating costs from departments 3, 4, and 5 for paving, and approximately \$75,000 associated with capital projects.

Of the \$235,000 in operating budgets, approximately \$45,108.37 has been spent.

Of the \$75,000 in capital budgets, approximately \$56,512.25 has been spent.

The remaining budget left for paving in this fiscal year, combined, is \$208,379.38.

Recommended Action

Staff recommends the committee approve exercising the 2nd year renewal of the annual paving contract with Kirk Paving in the amount of \$208,379.38 with the expectation that a new paving contract will be bid and awarded by July 2020.

In addition, staff will provide the committee with an updated analysis before the end of the fiscal year identifying potential savings by doing some paving jobs internally.

M E M O

TO: Engineering and Operations
FROM: Owni Toma, Chief Plant Operator
DATE: October 22, 2019
SUBJECT: Neuros Maintenance Service Plan

Description

The 5-year warranty for the six NX100-C070 high-efficiency turbo blowers at the Water Reclamation Plant expires October 2019. The preferred asset management method going forward is the Maintenance Service Plan (MSP) offered by Neuros.

Purpose

The six NX100-C070 Neuros turbo blowers are a highly-sophisticated state of the art blower system that were installed during the plant upgrade in 2014. The blowers use proprietary technology which requires a specialized service person with extensive training to service and maintain. During the last five years, the warranty covered the repair and replacement of core failures, and also provided a loaner unit in the interim period. There were seven core failures in the last five years. The price of a NX100-C070 core is \$59,225, and covering all six blowers with the MSP will cost \$67,620 in the first year of coverage. The cost of the MSP is heavily discounted since it only applies when enrolled to a five year term agreement, otherwise the cost would be \$96,600 per year.

The MSP will include routine recommended upgrades and new engineered components such as cores, bearings, impellers, vibration sensors, variable frequency drives (VFDs), among other components. It will also include routine updating of programming and software, programmable logic controllers (PLCs) and fine tuning of the aeration system. Additionally, the MSP includes annual site visits and technical inspections, remote monitoring, priority access to a field support team, priority availability of parts and modules, and dedicated 24 hour a day, 365 days a year service support. The parts and components utilized within the blower system are customized and manufactured by Neuros.

Due to the proprietary nature of this equipment, it is not possible to procure multiple quotes for the maintenance contract and due to the cost of replacement parts and past repair requirements the MSP provides a savings over purchasing parts after a failure.

Budgetary Impact

The approved O&M budget for FY2019-2020 included \$67,620 for the MSP under Wastewater Contract Service Expenses. The cost to procure the plan will be \$67,620 for the first year of coverage. For the second year of coverage, the cost will be \$68,296.

The third year of coverage will cost \$68,978. The fourth year of coverage will cost \$69,978. The fifth year of coverage will cost \$70,365. The proposal is valid only until October 31, 2019.

Recommended Action

Staff recommends the procurement of the Neuros Maintenance Service Plan as the asset management method for the six NX100-C070 turbo blowers.