

STAFF REPORT

City Council Consent Item

DATE: October 17, 2022

TO: Honorable Mayor and Council Members

FROM: Brendan Byrd, Public Works Director/City Engineer

SUBJECT: Public Works/Engineering Department Monthly Report

STAFF RECOMMENDATION:

Receive report as an informational item.

EXECUTIVE SUMMARY:

Public Works Director/City Engineer:

City Engineer/Public Works Director activities for the past month will be included in the November staff report.

Utilities Division- Utility Lead

Service Call Summary

- In the month of September the utilities division completed 114 service calls by operators. Figure 1 below shows the distribution of service calls by type.
- The division completed 59 Underground Service Alert (USA) mark and locates with zero miss-marks, resulting in zero broken utilities.

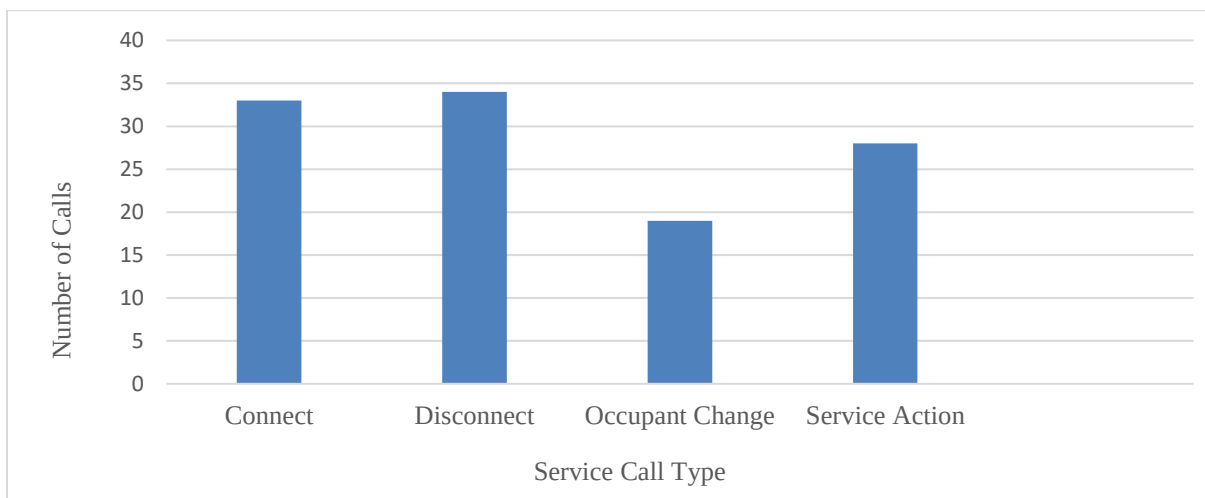


Figure 1. Utility division service calls by type in September.

Water Distribution System

- Read water meters and completed meter worksheet.

- The utilities team installed three new services to the system in the month of September.
- In September, three water leaks resulted in an estimated 6,960 gallons of water lost. That amount is considered low for the Utilities Department.
- In the month of September the utilities team changed out four dead water meters.
- Continued to check service lines for lead per EPA compliance guidelines.
- Continued to perform annual Backflow Prevention Device (BPD) testing.
- Installed a new air relief valve on Kelli way, and turned the PRV back on at Kenmar and Kelli way.
- Repaired one fire hydrant hit by a vehicle, and waiting for parts to repair another one hit by vehicle.

Table 1. Water leak rate and water loss estimates for September 2022.

Date	Location	Pipe Information	Estimated Leak Rate (Gallons per Minute)	Leak Duration	Total Estimate Leak Volume (Gallons)
9/12/2022	Hillras and Airport Rd	4'' Blue Bell	0.5	4 Days	2,880
9/17/2022	Smith Ln	2'' Brass Nipple	4	2 Hours	480
9/19/2022	Boone St	1'' Blue Plastic	0.25	10 Days	3,600

Wastewater Collections System

- The utilities team had two sewer plugs in the month of September with no overflows.
- Utilities cleaned 4,000 feet of sewer main.
- Repaired broken sewer connection on 13th Street along with roughly nine feet of main line.

Miscellaneous Tasks

- The Utilities Division performed monthly maintenance on the division's heavy equipment, including greasing and checking all fluids.

Water Treatment/Wastewater Division- Chief Plant Operator

Wastewater Treatment Plant Upgrade:

- Staff and senior management met virtually with members of the Regional Water Quality Control Board to discuss a Basin Plan Triennial Review. This came as a result of recent engineering studies that found discharging across the river to a new percolation field may result in overall impacts equivalent to the City's existing percolation ponds. Alternative proposals will be presented to the Board such as flow augmentation and enhanced (tertiary) treatment, so that the City can possibly continue discharging to the existing percolation ponds.
- Staff met with representatives of Tesco Controls Inc. regarding a proposal for a potential CIP project to upgrade the wastewater treatment plant's computer control SCADA and PLC systems. These important data acquisition and automated operational control systems are crucial for proper plant functioning. The City's versions are aged and obsolete.

Emergency Generator Project:

- Colburn Electric worked at both Kenmar and Drake Hill booster pump stations, installing new conduit and excavating the pads for the new, emergency generators.

Staffing:

- Three staff members of the Wastewater Treatment Plant Division attended CPR and First Aid training this month.

Wastewater Treatment

Table 2. September wastewater plant effluent flows for the past five years in Million Gallons (MG) and Million Gallons per Day (MGD).

Year	2018	2019	2020	2021	2022
Total Monthly Flow, MG	26.643	27.775	22.840	25.590	26.330
Maximum Daily Flow, MGD	1.073	1.079	0.925	0.980	1.140
Average Monthly Flow, MGD	0.888	0.926	0.761	0.853	0.878

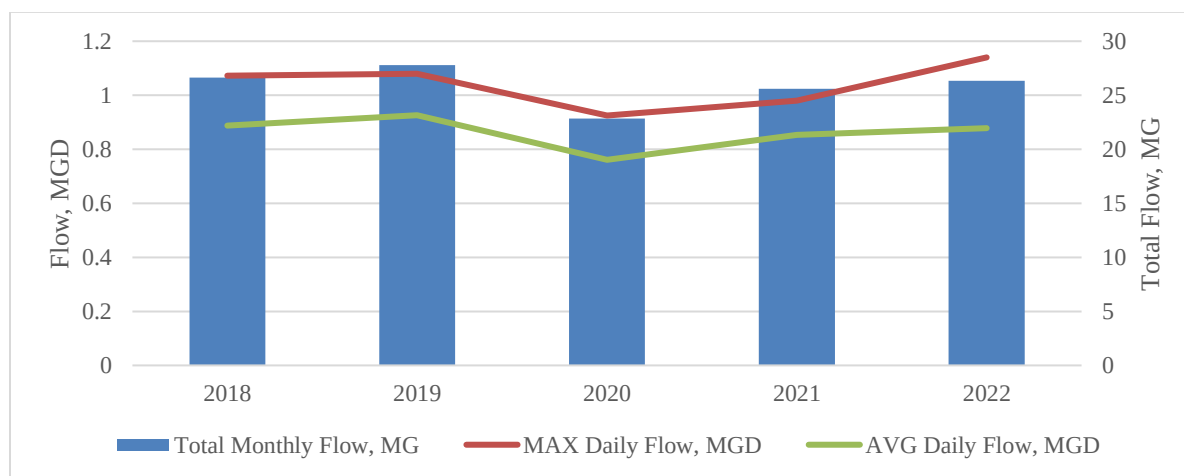
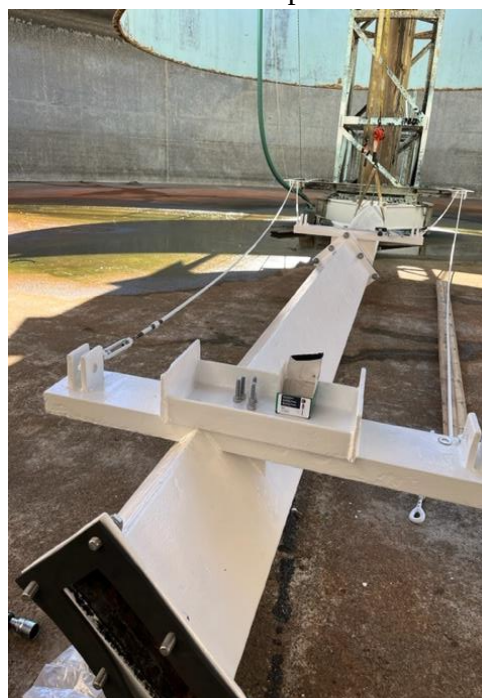


Figure 2. September wastewater plant effluent flows for the past five years in Million Gallons (MG) and Million Gallons per Day (MGD).

Wastewater Events & Maintenance Tasks Completed:

- Staff worked on dewatering one of the side-stream process tanks at the wastewater treatment plant. This semiannual to annual maintenance task is important to keep previously processed solids rich in ammonia from the main treatment system.
- Staff drained, cleaned, and returned the chlorine contact basins to service and the plant water hydropneumatic tank.
- Staff conducted preparatory work on rebuilding components of the grit channel, replacing wear-shoes on the flights. This system went down in May after a catastrophic failure. Parts were ordered, but not all have been received yet. Plans are to hopefully have the rehabilitation work complete before winter.
- Staff spent a great deal of time on rehabilitating submerged metal in one of the plants secondary clarifiers (see photo inset right). The suction rake arm was badly pitted and rusted with deteriorating truss rod supports. The supports were replaced and the arm was cleaned up and re-coated, which will provide many more years of service life.
- Staff replaced a 4" isolation valve and a pump stator for one of the three primary sludge pumps. The existing valve was inoperable and the previous pump stator was worn beyond proper operability.



Water Treatment

Table 3. September potable water production for the past five years in Million Gallons (MG).

Year	2018	2019	2020	2021	2022
Total Production, MG	40.375	39.503	45.218	40.281	36.360
Maximum Daily, MG	1.798	1.708	2.078	1.938	1.677
Average Daily, MG	1.346	1.317	1.507	1.343	1.212

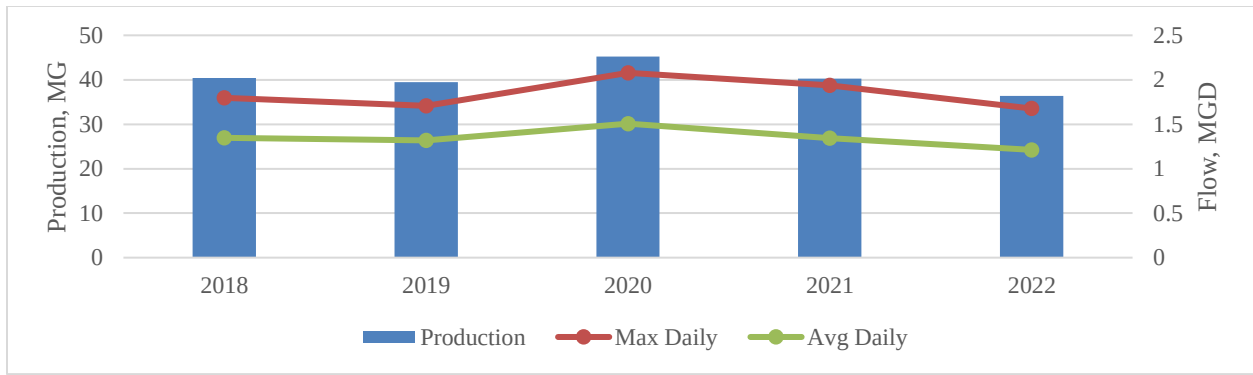


Figure 3. September potable water production for the past five years in Million Gallons (MG).

Table 4. Average September depth-to-groundwater static levels in the City’s active wells for the past five years in feet.

Year	2018	2019	2020	2021	2022
Well #1	30.0	28.7	28.2	30.4	30.9
Well #2	27.1	25.8	25.2	27.5	28.6
Well #4	32.6	19.6	30.7	33.3	33.7
Well #5	33.4	32.0	32.6	34.7	35.6

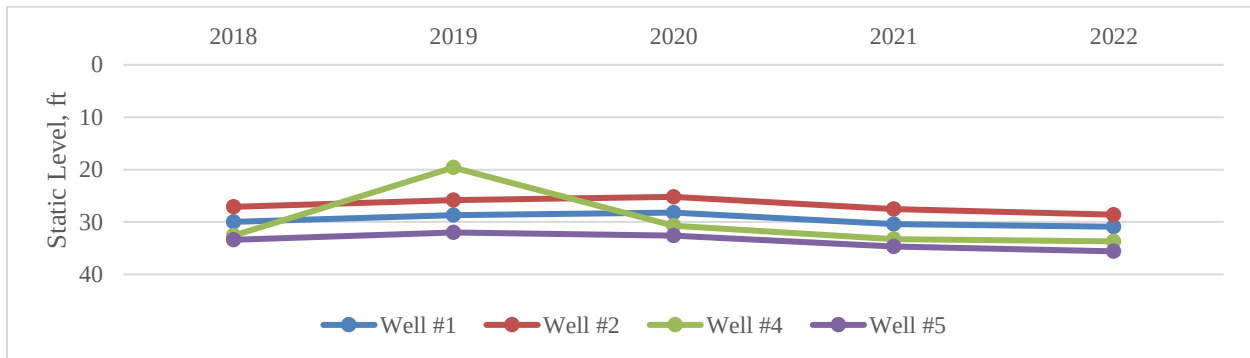


Figure 4. Average September depth-to-groundwater static levels in the City’s active wells for the past five years in feet.

Water Events & Maintenance Tasks Completed:

- Two, large bull pine trees were removed at the Water Wells Site (see photo inset right). These trees had large branches hanging low over Eel River Drive, and one of them was leaning precariously toward the Tesla battery packs, the emergency generator, and the main booster pump building. Plans are to grind the stumps next and fill in the area with grass, which the Eel River Trap Club will assist in mowing.
- Staff completed rehabilitation work on the Well #4 building, tiling an interior wall to prevent water rot caused by flushing and sampling operations.
- Staff replaced one of the two exhaust fans in the chlorine building at the Water Wells Site.
- Staff trouble-shot a pump trip-out problem at the Water Wells Site. All well pumps and the main booster pump would shut off and then immediately turn on again at random during their pump cycle for no apparent reason. Staff found and fixed a frayed wire, which resolved the issue.



General Services and Streets - General Services Superintendent

The following is a list of scheduled assignments completed by the General Services staff in September:

- Staff prepared and assisted in setting traffic control measures for the last First Friday's event of the season. Traffic detours were between Ninth Street and Twelfth Street.
- Staff prepared traffic control measures for Apple Harvest Festival prior to the event on October 1, 2022.
- Staff finished repairing the siding on the kennel building at the Corporation Yard. A forty-foot storage container was placed next to the kennel that took the place of a carport awning.



- Staff prepared, cleaned, and swept in preparation of the micro slurry project. The contractor applied the slurry mix in the greater Kenwood area. (Picture of Brandi Lane shown upper right).



- Staff restriped the parking lot on the east side of City Hall.
- Staff weed eat the Hillside Creek drainage in between Fortuna Boulevard and the mini storage. Staff removed young alder trees to keep the channel clear from any obstruction during the wet season. (Pictured of Hillside Creek shown right)
- Staff assisted the Utility staff on a new Twelfth Street water crossing.
- Staff assisted the Parks staff on preparation of the rodeo grounds for a California High School Rodeo Association event. Staff replaced broken boards in the grandstands, weed eat and mowed the arena area.
- Staff ground out three tree stumps that caused damage to sidewalks on Baxter Lane. Staff placed form boards and graded with rock in preparation of new sidewalks.

In addition to the special tasks noted above, staff also engaged in the following regular routine maintenance activities including USA's, street sweeping, recycling and trash management, road maintenance, vegetation management, and safety training and inspections. Staff is available for questions, requests, and emergency responses to the community.

RECOMMENDED COUNCIL ACTION:

Receive Public Works Department Monthly Report. Consent Agenda vote.