

STAFF REPORT

City Council Consent Item

DATE: May 15, 2023

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

Police Facility Remodel Project

Work has steadily continued at the police facility through the past month, with the majority of the focus being demolition, rough plumbing and interior framing. To date, the contractor has completed most of the interior rough-framing in the existing building footprint, with the exception of the existing pool room area. Overall the project remains on schedule to be completed by the end of the year, however, as noted below there are a number of additional construction changes and it is likely that over the course of the project this may result in the need to add some time to the contract. Staff will continue to work with the contractor to ensure the project is being completed as quickly as possible.

As can be anticipated with a remodel, staff have found during the course of construction several issues that have required change orders. This has included the need for new building insulation, repairs to framing, a new roof, additional electrical wiring, new gutter and various other minor change orders to make the project meet the intent of the design plans. To date, staff have needed to spend approximately \$275,000 of the \$400,000 construction contingency to address unknown issues. Although early in the project, staff are hopeful that most of the major issues are now known and addressed, and that the remaining contingency will be sufficient to complete the project. Staff will continue to provide monthly updates to the Council on project budget.

Rohner Park Basketball Court Project

The contractor began the project in-mid April, and within a few days completed excavation and most of the placement of new base rock. Currently, staff anticipate paving to be completed by mid-May, with the installation of the fence and basketball hoops to follow shortly after. The new pavement requires a cure time of several weeks, and appropriate weather for application of the acrylic sealant and striping, and therefore it is likely the project will not be fully completed until mid- to late June.

Well 5 Replacement Project

As the Council is aware in 2022 the City's contractor installed a new well at the City's water well site on Eel River Drive, to replace an existing well (well 5) that has shown a steady decline in

performance in recent years. When the new well was completed (well 5b) and developed, it was sampled for various water quality constituents per the requirements of the Department of Water Resources. When the analytical data came back it was found that well 5b, which projects deeper into the lower aquifer system of the Eel River groundwater basin, had elevated levels of manganese. The manganese levels were above the maximum allowable limit for municipal distribution systems, and therefore it was determined that supplementary water treatment would be required to bring the well active and online.

Given the anticipated high expense of supplementary manganese treatment at the water wells site, staff elected to mobilize another contractor to the site to perform supplementary well development and sampling, given that there was a possibility that the elevated manganese levels were a result of construction methods, or incomplete well development. After the additional development and testing was performed in late 2022, it was confirmed that the well did in fact continue to have elevated manganese levels.

Following the results of the supplementary sampling, the City's engineering consultant developed a planning level alternatives analysis for treatment systems that could be constructed on the site to remove manganese to a suitable concentration level, which ultimately would allow the City to proceed to bring the new well 5b online and active. The analysis indicated that although possible, the treatment system required to remove manganese would cost in excess of \$3 million dollars, and would also come with significant long-term operating and maintenance costs.

Given that there is not a currently regulatory need to draw water from the lower Eel River aquifer, staff feel that the City's best path forward to continue with the replacement of well 5 is to drill a new well, fully located in the upper aquifer (consistent with the City's existing wells). Although this presents some cost redundancy's as the City did just construct a new well, this option would be significantly less expensive to install and develop than a new manganese treatment system. The recently constructed well 5b would be preserved and could be used as an emergency water source, or if the City is ever compelled by regulations to drill deeper there would be a well ready to use, with appropriate treatment upgrades.

Currently staff plan to meet with the City's engineers in late May to discuss next steps on the project, and staff can provide additional updates when a fully recommended project direction is identified.

Water Tank Coating Project

The City's contractor is currently preparing to mobilize and anticipates beginning the project the week of May 22nd. The project will begin at Hillside tank, and based on the initial project schedule the work is anticipated to last through early September.

Utilities Division- Utility Lead

Service Call Summary

- In April the utilities division completed 79 service calls by operators. Figure 1 below shows the distribution of service calls by type.
- Underground Service Alert (USA) has changed their format and the utilities crew can no longer track how many mark and locates have been completed. There were zero miss-marked lines, resulting in no broken utilities.

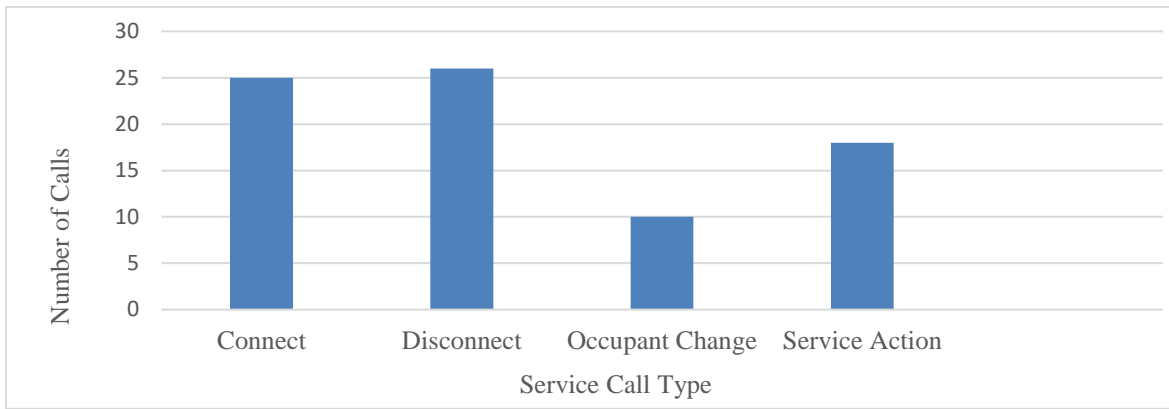
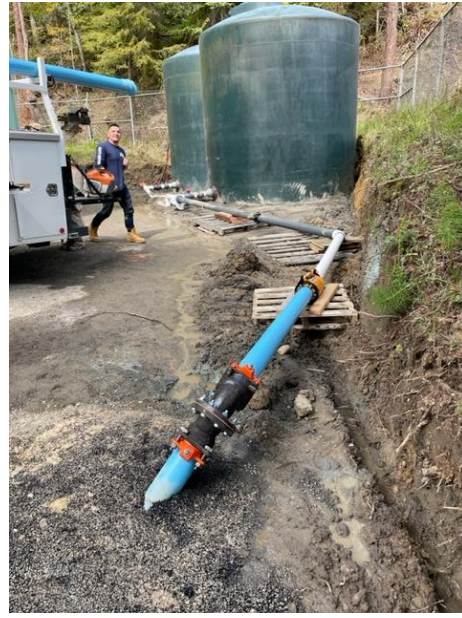


Figure 1. Utility division service calls by type in April 2023.

Water Distribution System

- The utilities crew read water meters and completed meter worksheet.
- The utilities crew installed one new service to the system in April.
- In April the utilities crew changed out 14 dead water meters.
- The utilities crew continued to check service lines for lead.
- In April there were three water leaks. As a result of this there was an estimated water loss of 41,040 gallons. The three leak locations were 218 Newell Drive, the 5500 block of Rohnerville road, and 1006 meadow lane.
- The Utility crew repaired hydrant hit on Mill St. The estimated water loss for this was 30,000 gallons.
- Replaced two broken angle valves throughout the system.
- Installed a new fire hydrant on Smith Lane. This run was 36-feet of C900 pipe (PVC) to a new hydrant. This was a multi-day project.
- Installed a bypass to temporary tanks at the Hillside Tank location, to support the water tank recoating project. This was a week-long project that was deep and technical (see photos below).



- The crew began replacing a pressure reducing valve located at Rohnerville Road and David Way. This valve has not been functional in some time and the main line pipe started leaking after the earthquake in December of 2022. This was a multi-day job that is deep and had bad soil conditions, requiring the use of a shore box and shore jacks. This job required a permitted confined space entry to remove the old valve. The utilities crew is currently half way done with this project and it is scheduled to finish in the first week of May (see photos below).

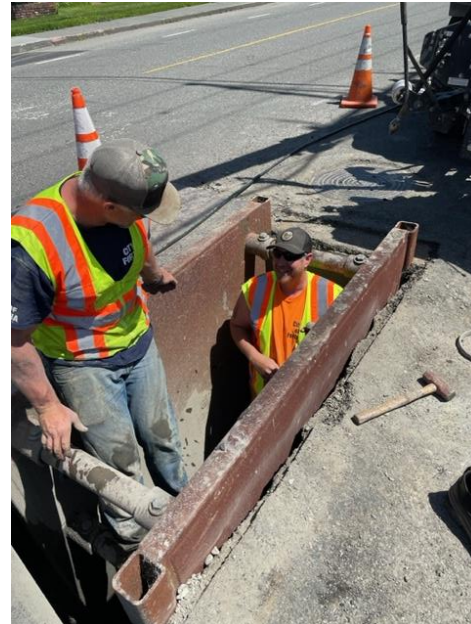


Table 1. Water leak rate and water loss estimates for April 2023.

Date	Location	Pipe Information	Estimated Leak Rate (Gallons per Minute)	Leak Duration	Total Estimate Leak Volume (Gallons)
4/14/2023	218 Newell Dr	¾” Plastic	0.25	14 Days	5,040
4/19/2023	5500 Rohnerville Rd	6” Plastic	15	24 Hours	21,600
4/28/2023	2006 Meadow	1” Plastic	10	24 Hours	14,400
4/29/2023	Mill St @ Jones CT	6” Fire Hydrant	1,000	30 Minutes	30,000

Wastewater Collections System

- Utilities crew cleaned 8,000 feet of sewer main.
- Repaired a broken sewer lateral in the 2400 block of Rohnerville Road.

Miscellaneous Tasks

- The utilities crew performed monthly maintenance on the division’s heavy equipment, including greasing and checking all fluids.
- Cleaned up old scrap metal in the yard from hydrant repairs.

Water Treatment/Wastewater Division- Chief Plant Operator

- A professional service technician from Tesco Controls visited the City this month to troubleshoot radio telemetry communications from booster pump stations and sewer lift stations. Staff requested this visit due to recent issues of decreasing or intermittent signal strength and frequent signal loss. Tesco downloaded significant data and will further investigate the matter to present possible solutions soon.
- An Area Sales Manager from the Cla-Val company came to the City to provide hands-on training to the Wastewater Treatment Plant Division (see photo inset right). The City has a number of this company’s important and highly specialized pressure-regulating valves in service, mainly where two of the City’s seven pressure zones interconnect. Attending this training ensures proper understanding of these valves and provides guidance on their crucial maintenance.



Wastewater Treatment

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

Year	2019	2020	2021	2022	2023
Total Monthly Flow, MG	40.369	35.424	33.670	38.220	41.510
Maximum Daily Flow, MGD	2.021	2.466	1.380	1.880	1.830
Average Monthly Flow, MGD	1.346	1.181	1.122	1.274	1.384

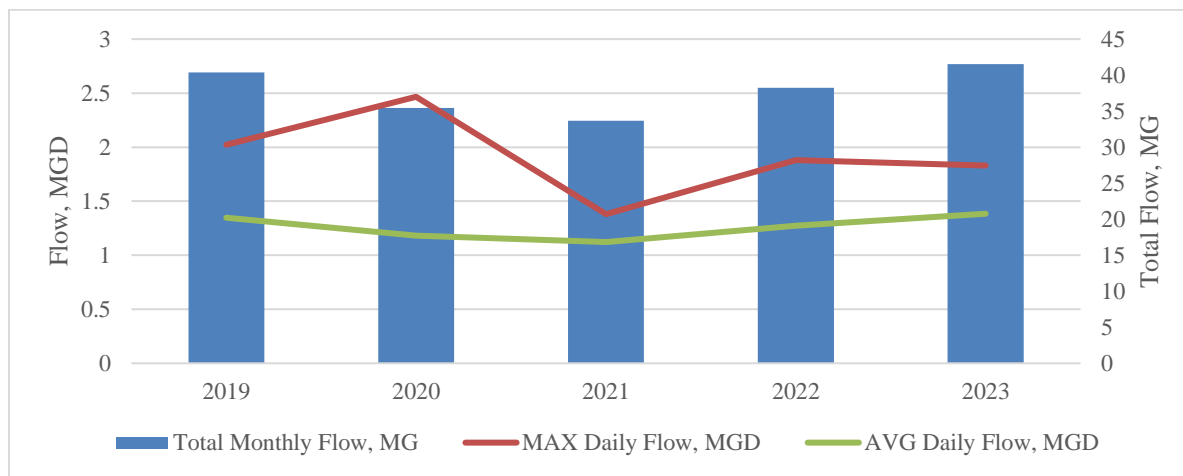


Figure 2. April wastewater plant effluent flows for the past five years in Million Gallons (MG) and Million Gallons per Day (MGD).

Wastewater Events & Maintenance Tasks Completed:

- Staff managed a successful compost giveaway early in the month. Approximately 176 cubic yards of exceptional quality, class A compost was given away for use as a soil amendment to about four dozen members of the community. Later in the month, staff sampled more compost for regulatory analysis in hopes of another giveaway potentially at the end of May.
- Staff conducted significant maintenance tasks at the wastewater treatment plant this month including cleaning out the digester boiler, replacing three expansion joints on the digester gas line, and replacing a computer control module for the Headworks stair screen press unit.
- Staff also removed one of the two secondary clarifiers, and one of the three aeration basins from service. This annual task coincides with a drop in rainfall towards the end of the month and subsequent decreasing, seasonal wastewater influent flows. Removing active plant volume allows for a more streamlined treatment process, and permits important inspection and maintenance activity. Staff plan on removing one of the three primary clarifiers next.
- Staff pumped out the percolation ponds, which filled in over the winter with rainfall and river-flow. This important task will enable the contractor to rehabilitate the ponds in early May—an annual requirement before staff can divert the effluent to the ponds. The Water

Boards stipulate that effluent cease flowing to Strongs Creek (and thus into the percolation ponds) by May 15 each year.

Water Treatment

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

Year	2019	2020	2021	2022	2023
Total Production, MG	28.875	34.400	31.892	26.589	26.483
Maximum Daily, MG	1.127	1.460	1.424	1.445	1.405
Average Daily, MG	0.963	1.147	1.063	0.886	0.883

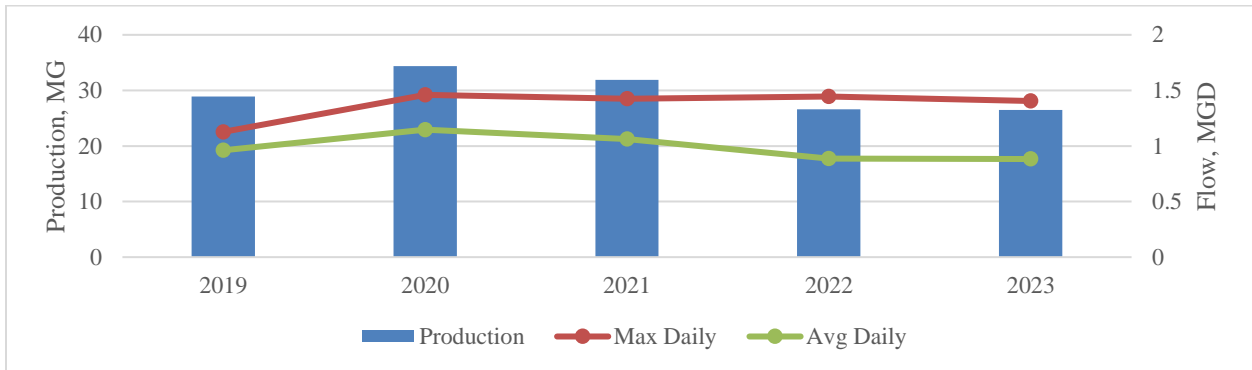


Figure 3. April potable water production for the past five years in Million Gallons (MG).

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

Year	2019	2020	2021	2022	2023
Well #1	21.0	27.4	26.6	26.4	20.8
Well #2	18.0	24.2	23.5	23.9	20.6
Well #4	23.5	29.8	29.3	29.0	24.4
Well #5	25.5	32.0	31.1	30.9	26.2

Water Events & Maintenance Tasks Completed:

- Staff spent many hours and effort preparing the Hillside tank site for the imminent arrival of the tank-coating contractors. Staff installed three temporary, plastic tanks to use while the large, steel tank is out of service. The Utilities crew assisted with tapping into the main line. Staff will disinfect these temporary tanks and place them in service once the contractors arrive on site sometime in late-May.
- Certified tank-diving contractors arrived in the City late in the month to clean out and inspect the 2MG concrete Stewart Tank on Stewart St. The American Water Works Association (AWWA) recommends that municipalities conduct this important maintenance task on potable water tanks every 3-5 years. Stewart tank has been in service for ten years without this service. The divers vacuumed out a significant amount of mostly manganese sediment from the tank floor, and then conducted a thorough video inspection of the tank interior.

General Services and Streets - General Services Superintendent

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

- Staff potholed for utilities and soils samples at the Patrol Officer Division (POD).
- Staff responded to a hazardous tree on Alder Drive. The tree hazard was removed by PG&E tree crews as it was near their infrastructure.
- Staff assisted in traffic control for the Utility Department on Smith Lane for a hydrant installation and a repair on Rohnerville Road. Staff provided traffic control for Spencer Electric at Main and Twelfth Street traffic signal for an installation of a new traffic loop.
- Staff responded to the traffic signal on Main and Twelfth Street for a large vehicle colliding with the traffic signal head (see picture inset right).
- Staff replaced the concrete in a sidewalk on Smith Lane for a new hydrant.
- Staff lubricated faulty door locks and investigated a roof leak at the Administration Building.
- Staff repaired the chip bin to be attached to a City dump truck.



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, collect batteries at City Hall, road maintenance, vegetation management including sniping of curbs, 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.