

STAFF REPORT

City Council Consent Item

DATE: March 20, 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

On March 12th Sequoia Construction mobilized to the site and began project work. In the beginning, the contractor is focusing on building demolition, and filling the pool, hot tub, and pool equipment room with gravel (see photo inset right).

Over the next month, the contractor plans to continue demolition activities, and to install the new plumbing in the existing floor. Additionally, the contractor hopes to have the new concrete floors poured over the pool area.



Staff are also working on the PG&E application for the project, which is being modified to include a future solar panel interconnection. Additionally, public works and police department staff are working with Silke, the City's radio communications contractor, to finalize a scope and fee to relocate and upgrade the radio communications infrastructure for the new facility. Staff anticipate bringing a contract with Silke to the Council for approval in April.

2022 Pavement Management Plan Update

In March the 2022 Update to the City's Pavement Management Plan was completed by the consultant retained by the Humboldt County Association of Governments (HCOAG). In short, while the City's Pavement Condition Index (PCI) did increase from 63 to 65 over the past five-years, the City's deferred maintenance liability did as well. Based on the analysis performed by the consultant, the City's existing deferred maintenance liability is \$24.2 Million, and the average annual funding amount required to maintain the City's existing road condition (PCI of 65) is \$2.73

Million over the next 10-years. Staff plan to present the findings and implications of the report in detail at a coming council meeting.

Water Tank Coating Project

Since approval of the project at the March 6th Council meeting, staff have been working on contracting and bonding with the contractor. Staff anticipate being under contract within the next week. The City’s engineering consultant GHD, who is acting as the construction manager for the project, is working to set up a pre-construction meeting, and currently staff believe that the contractor will mobilize to Fortuna in late April or early May.

Concurrently, public works staff are working to develop a temporary water storage plan, as each tank will be taken off line during construction. Also, staff are working on flyers and other messaging for a voluntary citizen water use reduction plan during construction, as the available water storage within the City will be reduced while the main tanks are taken offline for the project.

12th Street LID Project

Bids will be opened for the project on March 16, and staff anticipate bringing this item to the Council for an award recommendation in April if bids come back within budget. Currently, the engineers estimate for the project matches the construction budget available. Should bids come in higher than the available budget, staff will have to consider additional funding sources, which could include additional grant funding from the state as they have indicated some additional capacity for gap funding.

Corp Yard Generator, Corp Yard Roof, and Percolation Pond Project

Staff is currently working on contracting, bonding, and insurance for each of these projects. Staff anticipate that each of these projects should being in April or May.

Utilities Division- Utility Lead

Service Call Summary

- In the month of February the utilities division completed 103 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-marks, resulting in zero broken utilities.

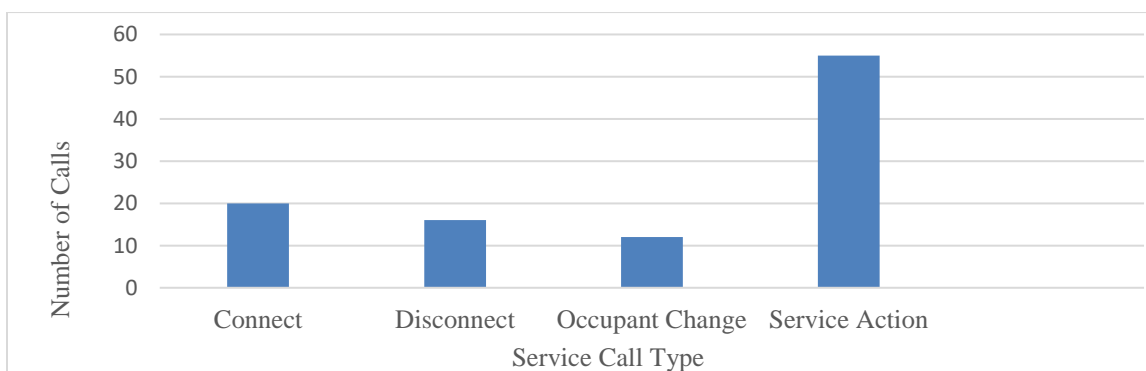


Figure 1. Utility division service calls by type in February.

Water Distribution System

- Read water meters and completed meter worksheet.

- In the month of February the utilities crew changed out 22 dead water meters.
- Continued to check service lines for lead.
- Continued to perform regulatory backflow testing.
- In February the City had two water leaks. There was an estimated water loss of 18,045 gallons.
- The crew repaired the hydrant hit on Redwood Way at Rohnerville Road. The estimated water loss for this is 37,800 gallons.
- Rebuilt 15 water meters to put back into the system. Also finally received 30 new water meters.
- Repaired hydrant burry that was damaged on Mathew Lane.

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

| Date | Location | Pipe Information | Estimated Leak Rate (Gallons per Minute) | Leak Duration | Total Estimate Leak Volume (Gallons) |
|-----------|---------------------------|------------------|--|---------------|--------------------------------------|
| 2/9/2023 | Newell Dr. | 2'' Cast Iron | 0.5 | 20 Days | 14,400 |
| 2/25/2023 | Acacia | 2.5'' PVC | 81 | 45 Min. | 3,645 |
| 2/25/2023 | Rohnerville @ Redwood Way | Fire Hydrant | 1080 | 35 Min. | 37,800 |

Wastewater Collections System

- Utilities cleaned 20,000 feet of sewer main.
- Repaired 22 feet of sewer lateral on St Joseph Dr. that was hit by an underground boring crew (see photo inset right).

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

Table 2. February 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 | 80.056 | 39.242 | 57.689 | 25.530 | 46.620 |
| Maximum Daily Flow, MGD | 5.988 | 2.101 | 3.623 | 1.240 | 3.260 |
| Average Monthly Flow, MGD | 2.859 | 1.353 | 2.060 | 0.912 | 1.665 |

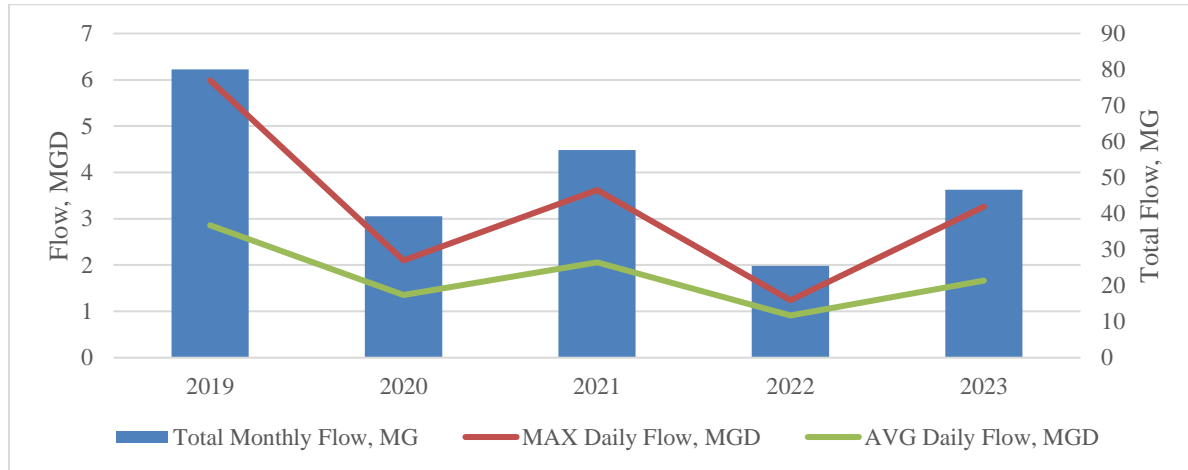


Figure 2. February wastewater plant effluent flows for the past five years in Million Gallons (MG) and Million Gallons per Day (MGD).

Wastewater Events & Maintenance Tasks Completed:

- Staff assisted Engineering with measuring the depths of sewer pipes at various manholes throughout the City. Consultant engineers needed field verification for the Sewer System Model and Master Plan CIP project. (See photo inset right).
- Staff spent significant time during this past month troubleshooting wastewater treatment plant problems, including poor pump performance from a heat exchanger recirculation pump, and similar pump issues on one of the two plant sump pumps. Staff also tackled an electrical control problem at the Headworks stair-screen press unit.
- Staff removed one of the three primary clarifiers from service due to poor sludge pump performance and a rising sludge blanket. In the process of cleaning the clarifier, staff discovered a dislodged rubber wheel in the opening of the pump sump inlet pipe. This wheel had fallen off the scum skimmer device on the clarifier’s surface. Staff returned the unit to service upon removing the obstruction.
- Staff compiled and submitted compost samples to contract laboratories for analysis. Once results come back clear, staff hope to announce a free compost giveaway to the community in mid-March.



- Staff completed final preparations on multiple shafts, sprockets and drive-chain to re-install in the grit channel. Staff had removed this equipment last year after a catastrophic failure. Supply lead times and weather-related delays prolonged the time-line of this project, but staff plan to finalize it in March.
- The Utilities crew assisted staff with cleaning out the wet-well at the Strongs Creek lift station. This regular preventive maintenance task is required to remove grease, trash, and other solids buildup that can harm the pumps at the station.

Water Treatment

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

| Year | 2019 | 2020 | 2021 | 2022 | 2023 |
|-----------------------------|--------|--------|--------|--------|--------|
| Total Production, MG | 25.329 | 29.410 | 27.218 | 26.947 | 25.740 |
| Maximum Daily, MG | 1.045 | 1.106 | 1.425 | 1.355 | 1.171 |
| Average Daily, MG | 0.905 | 1.014 | 0.972 | 0.962 | 0.919 |

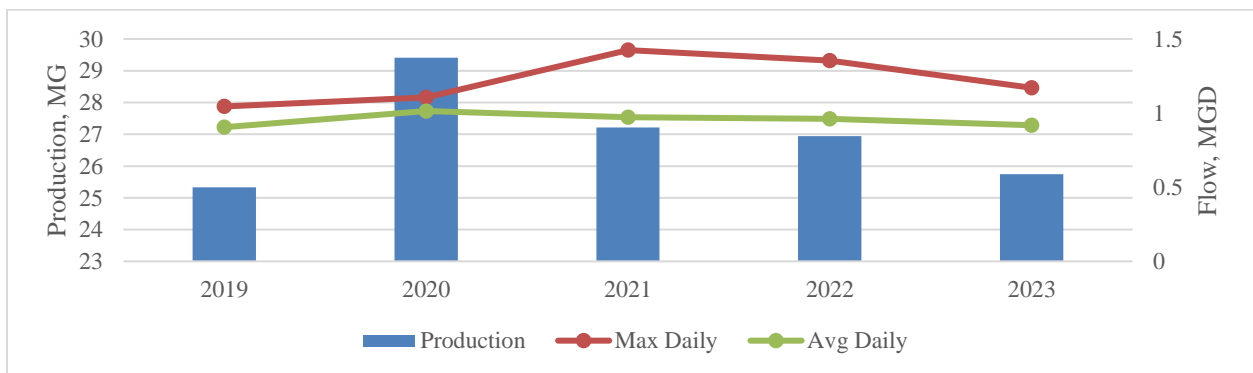


Table 3. February potable water production for the past five years in Million Gallons (MG).

Table 4. Average February 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 | 19.0 | 22.9 | 26.6 | 27.3 | 24.4 |
| Well #2 | 16.0 | 20.0 | 23.5 | 24.4 | 21.4 |
| Well #4 | 21.3 | 25.6 | 29.3 | 29.9 | 27.0 |
| Well #5 | 23.2 | 27.4 | 31.1 | 31.7 | 28.8 |

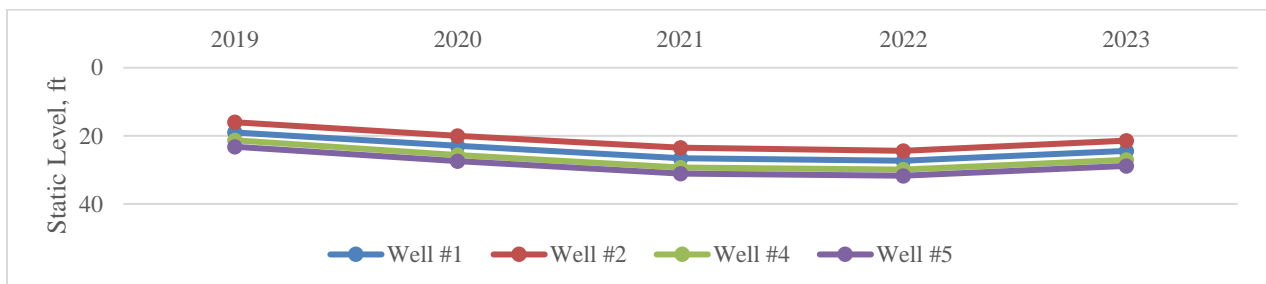


Figure 4. Average February depth-to-groundwater static levels in the City’s active wells for the past five years in feet.

Water Events & Maintenance Tasks Completed:

- Tesla and PG&E contractors conducted functionality testing on the battery power system at the water wells site (Corrosion Control Facility) this past month. This was the next-to-last step in the process before commissioning of the energy storage device. Once the unit is given permission to operate, it will provide electricity to the site during times of peak energy demand on the grid. Plans are to finalize this process within a month.

General Services and Streets - General Services Superintendent

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

- Staff replaced and repaired asphalt in multiple locations. The majority of the locations were due to damaged water mains from the earthquake in late December.
- Staff removed the remaining fence post from the north and the east side of Vancil Reservoir.
- Staff assisted a consultant in collecting roadway core samples on Fortuna Boulevard in preparation of resurfacing project. The project will be on Fortuna Boulevard in between Redwood Way and Newburg Road.
- Staff relocated the office area of the Engineer Technician to the Administration Building. The former Tech Building will be a small meeting and training area.
- Staff mowed small City owned lots in between winter storms.
- Staff was called out after hours for fallen trees, inappropriate language on city signs (graffiti), and traffic collisions.
- Staff prepared vehicles and equipment for winter storm conditions.

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.