CITY OF FULLERTON
INFRASTRUCTURE AND NATURAL RESOURCES ADVISORY COMMITTEE

INFRASTRUCTURE DATA SHEET

Date: February 2020

Asset: **WATER SYSTEM**

Asset Description: The City owns and operates the water distribution system serving all properties within the City limits. The system consists of underground piping, storage reservoirs, wells, pumps, and connections to the Metropolitan Water District of Southern California (MWD) water system. The City is responsible for water system and building/property service up to the water meter. The backflow preventer and piping on the building/property side of the meter is owned and maintained by the respective property owner.

The City relies on a combination of imported water and local groundwater to meet its water needs. The City works together with two primary agencies, MWD and Orange County Water District (OCWD) to ensure a safe and reliable water supply. Currently, the City relies on approximately 75 percent groundwater and 25 percent imported.

The water system was established in 1906 and therefore over 100 years old. Many facilities have been upgraded and/or replaced since 1906, however, the oldest facility is a well that was constructed in the 1920's. This well was only recently removed from service due to the need to upgrade and/or replace the equipment. The City intends to place this well back in service.

Over 50% of the water pipes are over 50 years old. The majority of the old pipes are made of cast iron and are susceptible to corrosive soils and therefore only have a useful life of 50 years. As a result, the water system has been experiencing an average of 100 water pipe breaks a year, which is the highest rate in Orange County.

Asset Quantity:

- 423 miles of distribution pipes
- 15 reservoirs with 67.5 million gallons of storage capacity
- 12 booster stations
- 10 active wells
- 6 active MWD connections
- 32,000 service connections/meters
- 4,100 backflow preventers
- 142,000± population served
- 22.3 square mile service area

Asset Needs:

- Replacement of 200+ miles of distribution
- Rehabilitation/replacement of wells, pump stations, and reservoirs
- Water quality improvements
- Additional safety improvements
- Improved emergency response preparedness
- Improved system efficiency (reduce energy and water loss)

Approximate Total Current Need: $127,000,000 for the next 10 years. Additional funding will be required after 10 years to continue upgrades, replacements, and repairs of the system facilities.

Allowable Funding Sources: General Fund, Water Fund

Current Annual Funding: $34M (projected for 2019) to $52M (projected for 2023)

Typical Annual Improvements/Maintenance:

Maintenance:

- Replacement and/or installation of valves
- Checking/testing for water quality
- Well and pump controls inspection and as needed maintenance
- Reservoir inspection and as needed maintenance
- Fire hydrant testing and inspection
- Isolation valves testing, cycling and as needed maintenance

Improvements:

- Replacement of existing water distribution piping and associated building/property meters.
- Rehabilitation of reservoirs (as needed and available funding)
- Rehabilitation/replacement of wells, pumps, equipment, etc. (as needed and available funding)

Recommended Annual Strategy & Associated Costs: In May 2019, the City completed a water study that, in part, reviewed the rate schedule and associated revenue shortfalls. The water Rate Study recommended a revised rate schedule that would increase and stabilize the revenue generation which would then provide funding to address the system deficiencies, upgrades, and replacement needs. On June 4, 2019, City Council approved the recommended rate schedule.

As part of the water rate study, recommendations were also provided for system improvements over the next 10 years. These improvements include increasing pipe replacement to 9 miles per year by 2024, scheduled work to the booster pump stations, wells and reservoirs. Staff will be following the improvements detailed in the study and as approved by the City Council. The resulting work will increase costs from approximately $7.5M per year to approximately $20M per year in 2028.

Recommended Additional Annual Funding: **None at this time.**

Potential Groundwater Impacts

After completion and approval of the Water Rate Study, the California State Water Resources Control Board (SWRCB) Division of Drinking Water (DDW) revised Notification Levels and is in the process of revising Response Levels for contaminants perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA). PFOA and PFOS are fluorinated organic chemicals that are part of a larger group of chemicals referred to as perfluoroalkyl substances (PFAS). PFAS are a diverse family of manmade chemicals resistant to heat, water, and oil that have been used for decades in hundreds of industrial applications and consumer products such as carpeting, apparels, upholstery, food paper wrappings, fire-fighting foams, and metal plating.

Notification Levels are precautionary health-based advisory levels established by DDW while further research and analysis are conducted by the state to determine the necessity of setting an enforceable drinking water maximum contaminant level (MCL). DDW does not recommend water

systems shut off water supplies that exceed Notification Levels. However, DDW does recommend water systems do not serve water that exceeds Response Levels.

On August 23, 2019, DDW revised Notification Levels for PFOA to 5.1 parts per trillion (ppt) and PFOS to 6.5 ppt. For context, one part per trillion is equivalent to four grains of sugar dissolved in an Olympic-sized swimming pool. As of the date of this sheet, the current combined Response Level for PFOA and PFOS is 70 ppt and is currently under review. DDW is expected to issue revised Response Levels for PFOA and PFOS in late 2019.

If, as expected, the DDW lowers the Response Level limits, the City faces the possibility of losing four high producing drinking water wells. Shutting off these four wells will result in the City losing access to roughly over half of the City's groundwater production. Water lost from the wells would be replaced by more expensive MWD water.

In order to reestablish use of the wells, treatment facilities would potentially be required for each well. The cost to construct and maintain the treatment facilities, plus the additional cost for MWD water, would result in significant impacts to revenue and improvements programmed as part of the Water Rate Study.