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**TEMPLETON COMMUNITY SERVICES DISTRICT****P.O. BOX 780 • 420 CROCKER STREET • TEMPLETON, CA 93465 • (805) 434-4900 • FAX: (805) 434-4820**

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**MEMO****DATE:** September 27, 2022**TO:** Facilities Committee**FROM:** Tina Mayer, Templeton CSD**SUBJECT:** Water System Modeling, Urban Water Management Plan, and Water and Wastewater Master Plan Updates**DISCUSSION:**

The District currently provides water service to approximately 2990 municipal and residential/commercial connections. The District also maintains a wastewater treatment plant serving approximately 2270 connections.

The District anticipates reaching 3,000 water service connections by the end of 2022 and will be required by the California Urban Water Management Planning Act (Act) to develop and adopt an Urban Water Management Plan within one year. The UWMP is intended to provide the District and the public, information on District water supplies, water use, water conservation programs, water shortage contingency planning, and water supply reliability under different planning scenarios.

In preparation for the UWMP and the extensive and detailed reporting that will be required, the District will update its hydraulic water model to include all changes that have occurred within the District since the model was updated in 2013. The water model update will include: all new waterline distribution infrastructure completed by commercial and residential developments since 2013; water model calibration of the water model through in-system pressure logging; and development of baseline water demand within the District based on existing demand conditions. The existing demand conditions will be based on actual water consumption data referenced to each parcel receiving water service.

When the base water modeling is complete, the District will issue a request for proposals (RFP) for the preparation of the District's first Urban Water Management Plan (UWMP). It is anticipated that the RFP will be issued toward the end of 2022 and that the first iteration of the reports will be based on updated population projections.

Once the UWMP is underway, the District will turn its attention to the Water and Wastewater Master Plan which was last updated in 2103. The 2013 Update provided a detailed evaluation of the District's water and wastewater system infrastructure with respect to existing and future needs with a 20 year horizon.

However, a number of significant improvements and changes to both the Water and Wastewater systems have been made since then and many recommendations may be outdated. Most notably, the construction of the East Side Force Main Project (ESFM), and the original allotment of 250 acre-feet of Nacimiento Water Project (Naci) water, followed by the purchase of additional 156 acre-feet of Naci water have greatly increased the wastewater treatment demand and increased the potential water supply in the future.

A new Water and Wastewater Master Plan Update is needed to provide a comprehensive evaluation of both the water and wastewater systems. The report should include discussion on existing and future population, growth patterns, water demand, water supply, water storage, water distribution, wastewater flows, wastewater collection, wastewater treatment and disposal, and recommended capital improvements.

Overall, the anticipated work plan is as follows:

#### **Water System Modeling**

1. Redline the draft water and sewer atlas plans to correct any errors or omissions.
2. Consultant to convert atlas into GIS and update water hydraulics model based on water GIS.
3. Consultant to develop baseline water demand based on existing demand conditions to update model and make it available for use.
4. Water Model Calibration using pressure loggers placed in various locations in the system.

#### **UWMP (Near the end of 2022)**

1. Issue UWMP RFP. By mid-January, the full calendar year water production and consumption will be available and can be used for the UWMP water demand data. Reporting will be set up on a calendar year basis to coincide with the water supply and buffer model update.
  - a. 2023 UWMP demand modeling will be based on population estimates.
  - b. In 2025, an UWMP Update will be required. The demand modeling for the update will be based on the Water Master Plan, which will include future demands based on actual projects and development.

#### **Water and Wastewater Master Plan Update**

Issue Water and Wastewater Master Plan Update RFP. The Master Plan will have at least three sections:

##### **GENERAL PLANNING INFORMATION**

The 2013 Master Plan updates included Land Use, Population and growth rate projections from which water demand and wastewater flows were determined. For the purpose of this study, the 2013 general planning assumptions should be reviewed and updated. This section should include the following:

- District Facilities History and Overview
- Inventory of Existing Facilities
- Inventory proposed development projects in process
- Summary of applicable statutes, ordinances, policies and regulations.
- Planning Approach and Assumptions
- Study Area Characteristics
- Land Use
- Population
- Growth Rate Analysis
- Consideration of impact of Accessory Dwelling Units (ADUs).

## **WATER SYSTEM UPDATE**

This section will focus on the water system and should include:

- Use hydraulic model of the water distribution system to evaluate existing system for current and future needs.
- Inventory proposed development projects in process and include proposed infrastructure in modeling future demands.
- Review adequacy of existing water supply sources for current demand and identify available capacity.
- Identify existing and future system deficiencies and develop capital improvement projects to address the deficiencies.
- Review adequacy of existing and future water supply storage requirements
- Summarize pertinent current and anticipated statutes and regulations.
- Review the Urban Water Management Plan and include demand management and conservation requirements in the Water Master Plan.
- Provide a prioritized 20 year capital improvement program in five-year increments along with budget cost estimates for each of the proposed capital improvement projects.

## **WASTEWATER SYSTEM UPDATE**

This section will focus on the wastewater system and, using one or more consultants, should include:

- Update existing wastewater system distribution map.
- Develop and evaluate dynamic model of the wastewater distribution system.
- Inventory proposed development projects in process and include proposed infrastructure in modeling future demands.
- Identify existing and future system deficiencies and develop capital improvement projects to address the deficiencies.
- Analyze potential future treatment and discharge requirements; summarize pertinent current and anticipated statutes and regulations.
- Identify and evaluate opportunities for wastewater re-use.
- Identify potential funding sources.
- Provide a prioritized 20 year capital improvement program in five-year increments along with budget cost estimates for each of the proposed capital improvement projects.
- Provide a Wastewater Treatment Plant study to evaluate the treatment and disposal processes and develop recommendations for improvements to meet anticipated future Waste Discharge Requirements (WDRs). Study should include both short and long term improvements for both treatment and disposal.