DATE: December 5, 2023

TO: Mayor and City Council

FROM: Director of Public Works

SUBJECT Adopt a Resolution Authorizing Renaming the Water Pollution Control Facility (WPCF) to "Water Resource Recovery Facility (WRRF)," and New Laboratory Dedication

RECOMMENDATION

That Council adopts a resolution (Attachment II) authorizing renaming the Water Pollution Control Facility (WPCF) to "Water Resource Recovery Facility (WRRF)," and New Laboratory Dedication.

SUMMARY

Council Infrastructure Committee Recommendation

On October 25, 2023[1], staff presented to Council Infrastructure Committee (CIC) a proposed name change for the WPCF to "Water Resource Recovery Facility," and requested the new laboratory be dedicated to the former lab supervisor Farid Ramezanzadeh. Both the name change and dedication were unanimously recommended for approval by the CIC. Staff are presenting these items to Council for approval.

BACKGROUND

The WPCF core infrastructure was originally constructed in 1952 to treat wastewater flows from the City of Hayward's residents and businesses prior to discharge into the San Francisco Bay. Over the years, the WPCF has expanded its mission to include use of renewable biogas produced in the digestion process as fuel for the cogeneration engine to produce power while at the same time capturing waste heat that is used in turn to heat the digesters. In addition, in 2010, a one megawatt (mW) solar facility (Phase I) was commissioned followed by another 0.6 mW (Phase IIA) commissioned in 2020 for a combined 1.6 mW of solar power adding to the renewable energy portfolio at the WPCF. The solar, combined with cogeneration, produces more energy than is needed at the WPCF

[1] https://hayward.legistar.com/LegislationDetail.aspx?ID=6390420&GUID=F9767EB7-1875-49F9-88A0-CDD9AFA511D1&Options=&Search=

with excess energy exported for use at other City facilities under the Renewable Energy Self-Generation Bill Credit Transfer Tariff (RES-BCT).

In 2007, the City prepared a Recycled Water Feasibility Study that provided a conceptual overview of the potential for delivering recycled water for irrigation and other industrial uses. In the subsequent years that followed completion of the feasibility study, approximately 8-miles of recycled water distribution pipelines, a new recycled water storage tank and pump station, recycled water treatment facility, and customer retrofits projects were constructed. In April 2022, the WPCF began producing and delivering recycled water for customer use for landscaping and industrial uses thereby reducing the City's reliance on potable water supplies. The use of recycled water provides a sustainable alternative to potable water in that it reuses water that would otherwise be discharged to the Bay.

In June 2020, the City completed a comprehensive master plan update, the WPCF Phase II Facilities Plan (Facilities Plan), to identify improvements required for the WPCF to upgrade its treatment process to incorporate nutrient reduction in the treated effluent. The WPCF Improvements Phase II Project (Phase II Project) includes a new Administration Building and Laboratory. The laboratory director, Farid Ramezanzadeh, who worked for the City for nearly 20-years, was instrumental in space and needs planning for the laboratory. Farid was very active in the design process and passionate about his vision of a new facility that would be a beacon in the water and wastewater industry.

DISCUSSION

Renaming the Facility

Staff recommends renaming the "Water Pollution Control Facility" to "Water Resource Recovery Facility (WRRF)." The wastewater treatment plant was originally constructed in 1952 and was named the "North Sewage Treatment Plant" or "Municipal Sewage Disposal Plant." Later, the plant was referred to as the "Wastewater Treatment and Disposal Facilities" or "Wastewater Treatment Facilities." In 1992, the treatment plant was renamed "Water Pollution Control Facility" to be consistent with the 1948 Federal Water Pollution Control Act. The City received funding through this act to construct and expand the wastewater facility, and consequently, the City named the facility to commemorate this program.

In the intervening time since the WPCF was constructed, various improvements have been made that expand the plant's purpose beyond wastewater treatment that include resource recovery and solar power generation. The WPCF, the City's single-largest energy user, has been producing renewable electricity for decades via a cogeneration system (combined heat and power) using biofuel produced as part of the treatment process. The original cogeneration system was in operation between 1982 and 2014 powering approximately 40% of the plants load. In 2013, a fats, oils, and grease (FOG) receiving station was commissioned that accepts a waste stream that would previously go to a landfill and incorporated it into the digestion process to further boost biogas production. With more

available biogas, the WPCF evaluated options for increasing its green power production. In December 2014, a new cogeneration facility was commissioned that included a larger (1,137 kW) cogeneration engine capable of producing more energy than is needed at the WPCF.

In December 2010, the City commissioned a 1.0-megawatt solar facility just west of the WPCF. In February 2020, another 0.6 megawatts of solar generation was commissioned providing a total of 1.6 megawatts of solar generation at the WPCF with plans to further expand the facility by 1.4 megawatts in the future.

The City has implemented a recycled water project that consists of approximately 8-miles of distribution pipelines, a pump station and 1-mgal storage reservoir, and treatment facility located at the WPCF. In April 2022, the WPCF began delivering recycled water to customers for irrigation uses. This facility recovers a resource (recycled water) that would otherwise be discharged to the Bay to use for irrigation services offsetting the need to purchase potable water from the San Francisco Public Utilities Commission (SFPUC). The City has plans to expand the system in the future to further reduce reliance on potable water.

Recognizing that wastewater treatment facilities are moving into more sustainable practices such as recovery and reuse of biogas to produce energy, recovering waste products such as FOG to produce more biogas that can be converted to energy, increasing production of recycled water to reduce reliance on potable water, and converting biosolids to use as fertilizer, the Water Environment Federation (WEF) formally began using the term "water resource recovery facility (WRRF)" to refer wastewater treatment facilities. WEF is a highly regarded water industry group with focus on research, innovation, and development to improve wastewater treatment facilities, as well as providing educational opportunities to the water community via publications and industry conferences. The intent of renaming wastewater treatment facilities as water resource recovery facilities is intended to highlight the multi-benefits that wastewater facilities provide besides conventional wastewater treatment. The name change also reflects a shift in the water sector to focus on resource recovery, such as renewable energy, cogeneration, and recycled water. Renaming the facility will inform the public that there are expanded benefits including resource recovery operations performed at the treatment plant.
Staff proposed renaming the WPCF "Water Resource Recovery Facility (WRRF)" at the October 23, 2023 CIC meeting. The committee was unanimous in favor of renaming the facility WRRF. Staff is recommending that Council approve the renaming of the WPCF to WRRF.

Laboratory Dedication to Farid Ramezanzadeh
A graduate of Valor at University of California at Davis with a master's degree in chemistry, Farid Ramezanzadeh served as the City's Laboratory Supervisor from April 2003 until his passing in an accident in September 2022. He managed the City's laboratory for nearly 20 years and transformed the lab from a limited capacity municipal lab into one that supported sampling and testing for water distribution as well as serving industrial facilities through source control all while complying with ever increasing sampling and monitoring

requirements at the WPCF in response to evolving regulatory requirements. Farid was always forward-thinking and strived to stay ahead of the curve. Under Farid's leadership, the City of Hayward's laboratory was one of the first labs in the state to become accredited by the National Environmental Accreditation Program (NELAC) Institute (TNI). This is a rigorous certification program that dictates laboratory standards and processes, and Hayward became accredited almost a year before other agencies in Northern California. For over 30 years, Farid specialized in inductively coupled plasma (ICP), which measures metal concentrations in water, reducing the need to send such samples out to a third-party laboratory for testing. In the greater Bay Area, especially among water and wastewater systems run laboratories, he was widely referred to as the industry's metals expert, with laboratory staff coming from all over the region to ask him for advice in metals testing.

Farid was revered amongst City staff as one of the most hard-working and knowledgeable, yet good-natured colleagues who was always willing to help others. Whenever others approached for help, he would always prioritize assisting and being as helpful as he could be. Farid was an exceptional boss and mentor to many laboratory staff and chemists that had the opportunity to work with him over the years. Not only did he teach valuable laboratory skills in chemistry and biology, he also fostered and mentored his team in personal skills such as interpersonal communication, troubleshooting problems, and approaching challenges with a positive and optimistic attitude. No matter how dire a situation would be, Farid always remained calm and collected, creating a serene and confident work atmosphere where everyone enjoyed coming to work and working for him.

Farid tragically passed away in September 2022, and is survived by his wife and children. Farid was actively involved in the planning stage of the laboratory portion of the Administration Building, and the laboratory layout as reflected in the current design of the building has changed very little from his vision. Staff are requesting that Council dedicate the new laboratory facility to Farid to commemorate his life and many accomplishments that he achieved throughout his nearly 20 years of service to the City of Hayward as well as his dedication to advancing the water industry.

Environmental Review
An environmental review is not required for the facility renaming or laboratory dedication.

ECONOMIC IMPACT

There is no economic impact for facility renaming or laboratory dedication.

FISCAL IMPACT

There is no fiscal impact for facility renaming or laboratory dedication.

STRATEGIC ROADMAP

This item is related to the Strategic Priority of *Invest in Water Supplies, Sanitation Infrastructure & Storm Sewers*. This items specifically relates to the following project:

Project N21: Design Water Pollution Control Facility Phase II Upgrade

PUBLIC CONTACT

No public outreach was required for this item.

NEXT STEPS

If approved by Council, the WPCF will be renamed Water Resource Recovery Facility (WRRF) following completion of the construction of the WPCF Improvements Phase II Project anticipated to be in 2029.

If approved by Council, the laboratory dedication will be part of the Administration and Laboratory Building commissioning anticipated to occur in October 2026.

Prepared by: Suzan England, Utilities Engineering Manager

Recommended by: Alex Ameri, Director of Public Works

Approved by:

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Kelly McAdoo, City Manager