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DATE: December 5, 2022

TO: Honorable Mayor and Members of the City Council through City Manager

FROM: Erica Jacobs, MPA – Project Manager, Public Works & Utilities (PW&U)  
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SUBJECT: Resolution Authorizing the Updated Water Recycling Funding Program Grant Application and Authorizing the City Manager to Execute Amendment No. 1 to the Professional Services Agreement for Integrated Water Master Plan and Recycled Water Facilities Planning Studies and to Execute Financial Assistance Applications and Grant Agreements with the California State Resources Control Board’s Water Recycling Funding Program, and Finding This Action is Exempt in Accordance with CEQA Guidelines Section 15262

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### **RECOMMENDATION**

It is recommended that the City Council approve the attached Resolution Authorizing the Updated Water Recycling Funding Program Grant Application and Authorizing the City Manager to Execute Amendment No. 1 to the Professional Services Agreement for Integrated Water Master Plan and Recycled Water Facilities Planning Studies and to Execute Financial Assistance Applications and Grant Agreements with the California State Resources Control Board’s Water Recycling Funding Program, and Finding This Action is Exempt in Accordance with CEQA Guidelines Section 15262.

### **BACKGROUND**

California has experienced three consecutive years of low precipitation, followed by a historically dry 2022. January, February, and March of this year were the driest on record in over 100 years. Weather extremes caused by climate change have reduced our water supply, and as Sonoma County faces another year of severe drought, reservoir and groundwater levels are significantly below average.

In drier seasons, Petaluma relies on alternative sources of water to supplement a reduced supply of imported drinking water, such as recycled water for urban landscape irrigation and city-owned groundwater wells. The City anticipates ongoing water supply challenges into the future and seeks

to develop an Integrated Water Master Plan (IWMP) to evaluate all potential alternative water supply sources in an effort to establish long-term resilience and reliability.

The City of Petaluma owns and operates the Ellis Creek Water Recycling Facility (ECWRF), sewer collection, storm sewer, and water distribution facilities that serve our community. The City has a long-established recycled water program that serves recycled water for irrigation purposes to urban, agricultural, vineyard, and golf course customers. Expanding on the existing recycled water program, the IWMP will evaluate all non-potable and potable uses of recycled water, as well as stormwater, groundwater, surplus winter surface water, and other sources of water as a potential water supply. The IWMP will be a living document that will evolve over time with ever-changing regulations and regulatory challenges, water supply availability, and evolving climate patterns. This planning approach of viewing every drop of water as valuable, regardless of its source, is a “One Water” approach that the City seeks to embrace as we plan for long-term water supply resiliency that serves our community, works synergistically with our ecosystem, and complies with regulatory requirements. One Water is a water industry term that describes a comprehensive and long-term approach to community- and ecosystem-based water management. A One Water approach recognizes that all water is a precious resource, regardless of its source, which may become part of an integrated water supply system – whether it is water from residential, commercial, or industrial processes, surface water, groundwater, stormwater, or wastewater.

To address severe and ongoing drought impacts across the state, substantial federal and state funding has been available to water suppliers in recent years. The City was successful in obtaining several grants for water supply projects in 2022, as described in the table below.

Grant Source	Award Date	Amount	Funding Duration	Funded Project
DWR* Phase 2 Urban and Multibenefit Drought Relief Grant Program	March 2022	\$10.85 M	Through February 2026	<ul style="list-style-type: none"> <li>Advanced Metering Infrastructure Project - \$7.5 M</li> <li>Aquifer Storage and Recovery Plan - \$450,000</li> <li>Adobe Road Recycled Water Pipeline - \$2.9 M</li> </ul>
DWR* IRWM Prop 1 (through Sonoma Water as applicant)	June 2022	\$20,454	Through November 2024	<ul style="list-style-type: none"> <li>Mulch Madness Program (Turf Replacement Program)</li> </ul>
Bureau of Reclamation WaterSMART Title XVI WIIN Water Reclamation and Reuse Program	August 2022	\$6.9 M	Through September 2025	<ul style="list-style-type: none"> <li>Maria Drive Urban Recycled Water Pipeline Expansion</li> <li>Adobe Road Recycled Water Pipeline</li> <li>Ellis Creek Water Recycling Facility Tertiary Treatment Capacity Upgrades</li> </ul>

(through NBWRA as applicant)				
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\*DWR – California Department of Water Resources

In addition to the awarded funding received this year, the City submitted several near-term recycled water projects for funding to the Water Resources Development Act (WRDA) of 2022. In May 2022, the City received notice that the city’s recycled water projects were secured in the WRDA 2022 bill, pending funding of up to \$13.7 M. The bill, which authorizes the U.S. Army Corps of Engineers to carry out water resources development projects, was passed by the U.S. Senate in July 2022 and is pending signature by President Biden.

In 2015, the State Water Resources Control Board (SWRCB) adopted the Water Recycling Funding Program (WRFP), which provides funding for the planning, design, and construction of water recycling projects that offset or augment state freshwater supplies. Planning grants are available for feasibility studies that are led by a local public agency and cover 50% of eligible costs of up to \$500,000. The purpose of the planning grant is to assist agencies in completing planning studies for water recycling projects using treated wastewater and/or treated groundwater.

On January 24, 2022, the City Council adopted Resolution No. 2022-009 N.C.S. (Attachment 1) authorizing the City’s participation in the WRFP for the development of a Recycled Water Master Plan. Staff submitted a planning grant application for a Recycled Water Master Plan in February 2022. At that time, the WRFP program required a 50% cost-share on projects of up to \$300,000, resulting in a \$150,000 maximum grant amount. Recently, the program updated its maximum grant award to \$500,000 with a 50% required cost-share match, increasing the City’s opportunity to recoup planning costs with outside funding.

Since February 2022, when the original WRFP application was submitted, the City has updated its approach to recycled water program planning, to that of an integrated approach. While the City intends to develop a comprehensive IWMP, the grant funding available from the WRFP only applies to planning feasibility studies narrowly focused on evaluating alternatives for specific recycled water projects. Therefore, the City resubmitted an updated application to the WRFP for two grant-eligible recycled water facilities planning studies that will feed into the overall IWMP. The updated recycled water facilities planning studies replace the previous application for the Recycled Water Master Plan and include the following two recycled water studies:

- **Non-Potable and Potable Reuse**, which will assess the recycled water market, evaluate sources of supply, and explore all available options for non-potable and potable reuse including but not limited to the recycled water pipeline expansion, residential use of recycled water, commercial and industrial onsite use/reuse, and a high-level evaluation of direct and indirect potable reuse.
- **Recycled Water Storage** will investigate all potential options for the storage of recycled water in an attempt to maximize this valuable resource.

Stakeholder engagement and public outreach are critical components of the City’s One Water approach and will be an integral part of both the IWMP and the recycled water facilities planning

studies. The City expects to learn of the WRFPP grant award for the recycled water facilities portion of the IWMP by January 2023.

Staff has selected consultant Kennedy Jenks to begin an initial phase of the IWMP. The City entered into a Professional Services Agreement (PSA) with Kennedy Jenks in November 2022 in the amount of \$159,665 to begin foundational master planning work and develop preliminary high-level project descriptions and costs associated with water supply projects while awaiting news of the grant award for the recycled water facilities planning studies.

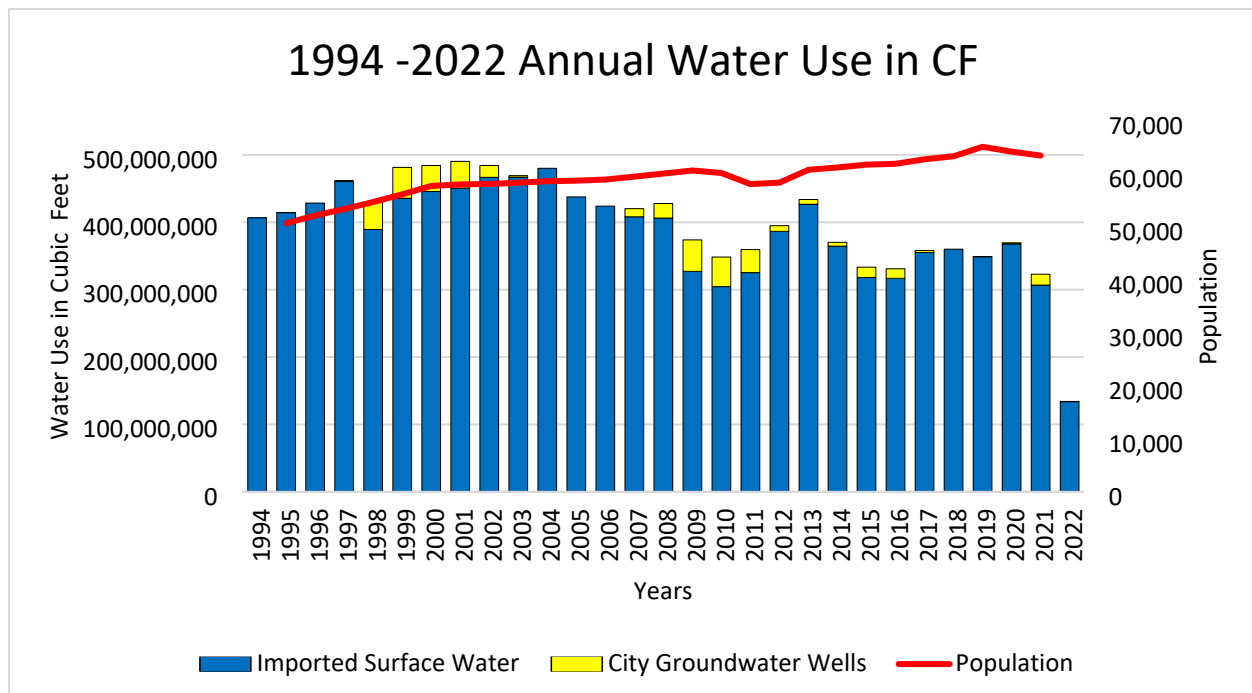
## **DISCUSSION**

The City's primary source of water supply is from the Sonoma County Water Agency (Sonoma Water), which delivers imported water from the Russian River and from groundwater wells in Santa Rosa to the City of Petaluma, as well as to Sonoma Water's other municipal water contractors. Sonoma Water has two water storage reservoirs: Lake Mendocino and Lake Sonoma. The historic dry conditions have resulted in severely low storage levels in both reservoirs, requiring the SWRCB to adopt an emergency regulation authorizing the Division of Water Rights to issue curtailment notices to water right holders in the Russian River watershed to protect water storage levels and instream flows in the lower Russian River. The required SWRCB curtailments have resulted in Sonoma Water and its contractors having to reduce total diversion from the Russian River by 20% compared to the same period in 2020 from July 1 to October 31 for two consecutive years.

The Petaluma City Council adopted resolution 2021-103 N.C.S. on June 21, 2021, in response to the drought conditions. This action activated the City of Petaluma Water Shortage Contingency Plan (WSCP) to help close the gap between a reduced water supply and customer demand, which is still in effect.

The City has a robust water conservation program that has helped achieve sustained reductions in water use year-round. The city's water conservation successes have allowed our community to grow while using less water and have also resulted in demand hardening. Demand hardening is the reduced ability to achieve additional water conservation, which is a key tool of the WSCP and imperative during periods of water shortages.

Below is a graph showing historic water use and population in Petaluma, from 1994-2022. The blue indicates surface water imported annually from Sonoma Water, and the yellow indicates local municipal well production.



The City’s established recycled water program also has contributed to demand hardening by creating an alternative water supply that can be used within the city’s water service area for potable water offset. In 2021, the City’s recycled water program served 781 million gallons of recycled water for irrigation of parks, schools, public landscapes, golf courses, pastures, vineyards, and crops, and onsite reuse at ECWRF. Of those 781 million gallons of recycled water served in 2021, approximately 4%, or 34 million gallons, was used within the city’s potable water service area to offset imported surface water from Sonoma Water and municipal groundwater production.

In addition to recycled water, the City has local groundwater wells that are used as emergency backup water supply and can produce up to 1 million gallons per day for several consecutive months to help supplement a reduced surface water supply. The city’s groundwater, however, is finite and recycled water use for potable offset is minimal. The IWMP will seek to identify additional local water resource opportunities to help the city in times of water shortage emergencies when water conservation alone is not enough to achieve the reduction needed to close the gap between a reduced water supply and customer demand.

The IWMP approach is consistent with the City’s history of innovation and being a leader in Climate Action and will help achieve a long-term resilient and reliable water supply to accommodate our growing community. With the updated IWMP approach and revised grant application, the City will develop two recycled water facilities study plans that will result in specific projects identified in the areas of Non-Potable and Potable Reuse, and Recycled Water Storage. Recommended projects may be eligible for additional design and construction grant funding. With the 50 percent match from the WRFP, the City will receive approximately \$226,500 for these grant-eligible studies.

The recycled water facilities planning studies are an integral part of the IWMP that will explore non-potable reuse such as recycled water pipeline expansion and residential use of recycled water,

as well as other uses and storage of recycled water. The IWMP will integrate the recycled water facilities planning studies into a plan that will evaluate all water sources including but not limited to stormwater, groundwater, surface water, brackish water desalination, and other process/wastewater streams as a potential for inclusion in the City's water supply portfolio.

The IWMP will include the development of a computerized hydraulic model, the identification of recycled water demand in the community, and the completion of a market assessment of potential customers. Based on that information and with the input of the City Council and the community, staff and our consultant, Kennedy Jenks, will develop and evaluate viable alternatives to expand the City's existing water supply system, including the recycled water program. To expedite implementation in the face of drought and while abundant drought funding is available, the City plans to implement a phased approach to the IWMP. To begin initial, high-level planning work for the IWMP, the City entered into a PSA with Kennedy Jenks in November 2022 in the amount of \$159,665.

An important aspect of the IWMP will be to provide budgetary guidance and support in the identification of water, wastewater, and recycled water Capital Improvement Projects. The IWMP will facilitate fiscal management of the City's water resources programs, improve operational efficiencies, plan for future growth, and provide our City, staff, and community with a One Water vision to meet our long-term community and ecosystem water needs.

In March 2022, the City received \$450,000 from DWR for an Aquifer Storage and Recovery (ASR) Feasibility Study. The ASR study will evaluate the city's existing municipal wells and groundwater basin for opportunities to import surplus drinking water from Sonoma Water during wet years and store it in a deep aquifer system in the basin. The stored water would then be available as emergency reserves during water shortage conditions. The ASR study will be conducted separately and in parallel with the IWMP. The ASR study will be conducted by Kennedy Jenks and will inform the IWMP in planning for ASR projects. This related study will require a 10% match from the City.

It is recommended that the City Council retroactively approve the City's submission of an updated application to the SWRCB's WRFP, which will increase the City's total available grant maximum funding from \$150,000 to \$226,500 and authorize the City Manager to execute Amendment No. 1 to the PSA for the second phase of the IMWP and Recycled Water Facilities Planning Studies.

## **PUBLIC OUTREACH**

This item appeared on the City's tentative agenda document on November 21, 2022, which was a publicly noticed meeting.

Development of the Integrated Water Master Plan and the grant recycled water facilities planning studies will include robust public and stakeholder engagement and public outreach efforts. Engagement and outreach methods will include community meetings, stakeholder meetings with existing and potential future customers, social media updates, a project website, and other communication methods. This outreach will occur throughout the development of the IWMP process.

## **COUNCIL GOAL ALIGNMENT**

The City Council has identified “Our Environmental Legacy” as one of its key strategic initiatives for 2021-2023. This recommended action supports the following Workplan items:

Workplan Item #42 – Find ways for City operations to reduce greenhouse gas emissions, conserve water, decrease waste, and minimize the use of fossil fuels and investigate and pursue options for carbon sequestration.

Workplan Item #46 – Establish and promote a citywide sustainability program leading with exemplary environmental practices.

Workplan Item #53 – Continue to expand recycled water services to support local agriculture and groundwater and surface water resources.

Workplan Item #70 – Continue focus on water conservation and urban recycled water expansion.

## **CLIMATE ACTION/SUSTAINABILITY EFFORTS**

The consensus is that the climate crisis will bring about more extreme weather in the coming years. For Sonoma County and the North Bay, it is projected that there will be an increase in intense rainfall events during wet months from atmospheric rivers and longer periods of drought conditions in the summer months. Moreover, there will be greater variability in these events from year to year.

The city anticipates ongoing water supply challenges as a result of climate variability and longer drought periods. The city seeks to address future water shortages by the development of an IWMP which expands upon the traditional recycled water master planning approach. The city’s recycled water program is a critical component of our water supply portfolio and will continue to be central to the integrated, One Water planning efforts of the IWMP.

## **ENVIRONMENTAL REVIEW**

The proposed action does not constitute a “project” under the California Environmental Quality Act (CEQA) pursuant to CEQA Guidelines Section 15378 as entering a professional service agreement to draft a management plan does not commit the City to any action that may directly or indirectly impact the environment. If the proposed action did constitute a “project” under CEQA it would be exempt from the requirements of the CEQA in accordance with CEQA Guidelines Section 15262, in that authorizing award of a professional services agreement for consulting services on the City’s Integrated Water Management Plan is a feasibility or planning study for future actions. Additionally, further environmental analysis under CEQA will be analyzed once the IWMP is updated and brought back for the City Council’s approval.

## **FINANCIAL IMPACTS**

In FY 22/23, Council approved \$400,000 in the budget from the wastewater enterprise fund for the development of a Recycled Water Master Plan.

The foundational work already underway in the original PSA totals \$159,665. The proposed additional scope items for an Integrated Water Master Plan result in a revised total project cost of \$777,057.

The maximum available grant award to the City through the WRFP for the two recycled water facilities planning studies is \$226,592.50, broken down as follows for the two grant-eligible components of the IWMP:

- 50% of \$264,798 for the Non-Potable and Potable Reuse Study (\$132,399)
- 50% of \$188,387 for the Recycled Water Storage Study (\$94,193.50)

As a result, the City's total out-of-pocket project costs will be approximately \$550,464.50, which is intended to be leveraged by the WRFP grant dollars.

Assuming the maximum amount of grant funding is received, an additional \$150,464.50 would be required from water and wastewater enterprise funds to complete the project. This would be allocated via a mid-year FY 22-23 budget amendment.

In the unlikely event that the City is not awarded funding through the WRFP grant program, a budget adjustment of \$377,057 would be needed as part of a mid-year budget adjustment in FY 22/23; or FY 23/24 funding could be allocated from water and wastewater enterprise funds.

## **ALTERNATIVES**

The Council may choose not to authorize this resolution. As a result, staff would withdraw the City's updated WRFP application and will not pursue the amendment to the PSA with Kennedy Jenks to complete the IWMP.

## **ATTACHMENTS**

1. Resolution Authorizing the Updated Water Recycling Funding Program Grant Application and Authorizing the City Manager to Execute Amendment No. 1 to Professional Services Agreement for Integrated Water Master Plan and Recycled Water Facilities Planning Studies
2. Resolution No. 2022-009 N.C.S.