



CITY OF BANNING STAFF REPORT

TO: CITY COUNCIL

FROM: Elizabeth Gibbs, City Manager

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MEETING DATE: June 9, 2026

SUBJECT: Wastewater Treatment Plant and Recycled Water Upgrades Project Update and Next Steps

STAFF RECOMMENDATION:

It is recommended that the City Council:

- Receive a presentation and update on the Wastewater Treatment Plant and Recycled Water Upgrades Project;
- Review the work completed to date, current project cost estimates, and available options for moving the project forward; and
- Provide direction to staff to proceed with Option B.3: Terminate the current Progressive Design-Build Contract and develop/implement a funding strategy for the original scope of work split into two phases: Phase I - Conventional Wastewater Treatment Plant Improvements; and Phase II - Reverse Osmosis and Brine Management.

BACKGROUND:

The City of Banning Wastewater Treatment Plant (WWTP), also known as the Water Reclamation Facility, provides for the collection, treatment, and disposal of municipal sewage. The facility has been in operation since 1925, with major improvements occurring through the early 2000s. The current treatment process includes preliminary, primary, and secondary treatment, with sludge disposal. Disinfection is part of the plant process but is currently not in use.

The WWTP has a design treatment capacity of 3.6 million gallons per day (MGD). Current average daily flows are approximately 2.0 MGD to 2.1 MGD, which are discharged into 10 unlined evaporation/percolation ponds. The treated effluent then percolates into the groundwater of the San Gorgonio Hydraulic Unit, which is used for municipal and industrial purposes.

The WWTP and Recycled Water Upgrades Project has been identified as a high priority due to several key factors:

- Aging infrastructure and major assets that are nearing the end of their useful life;
- Regulatory requirements related to nitrogen, coliforms, total dissolved solids, and groundwater protection;
- The need to plan for future wastewater capacity;
- The City's long-standing objective to develop a Title 22-compliant recycled water supply; and
- The need to reduce long-term reliance on imported water supplies.

The City's recently approved Strategic Plan, "Banning 2030 - Designing the Future TODAY," further reinforces the importance of this project. The Strategic Plan includes Strategic Goal 1 - Ensuring Public

Safety, which identifies Strategic Initiative 2c: Complete Wastewater Treatment Plant & Recycled Water Upgrades as a Tier 1 High Priority Initiative.

The purpose of this workshop is to provide the City Council and the public with an update on progress made toward this goal, review the available options for moving the project forward, and receive direction on next steps.

REGULATORY AND PLANNING DRIVERS

2016 Regional Water Quality Control Board Order

On June 30, 2016, the California Regional Water Quality Control Board, Colorado River Basin Region, adopted Board Order R7-2016-0015, which established Waste Discharge Requirements and other operating requirements for the City's WWTP.

The Board Order requires the WWTP to remove constituents that present risks to groundwater quality, including nitrogen, coliforms, and total dissolved solids. The future nitrogen limit identified in the Board Order is 10 mg/L. Current average nitrogen concentrations in the WWTP effluent are approximately 29 mg-N/L, which exceeds the future limit. As a result, the City completed a Nitrogen Removal Feasibility Study in 2020.

The Board Order also requires the City to submit a capacity improvement plan once the WWTP reaches 80% of its design capacity, or 2.88 MGD.

2018 Integrated Master Plan

The 2018 Integrated Master Plan evaluated the City's water, wastewater, and recycled water systems. The plan identified needed capital improvements to support existing customers, future growth, and system performance through buildout. The plan also identified that many WWTP assets are aging and nearing the end of their useful life, requiring replacement.

2020 Urban Water Management Plan

On June 8, 2021, the City Council adopted the 2020 Urban Water Management Plan. The plan evaluates the City's water supply and demand over a 20-year planning horizon and includes recycled water as part of the City's future water supply portfolio. City staff is currently developing the 2025 Urban Water Management Plan, which is anticipated to continue identifying recycled water as an important future water supply source.

2022 Water and Wastewater Rate Increase

On November 8, 2022 City Council approved an increase to Water and Wastewater rates to support operation and maintenance expenses, water purchases, wastewater treatment, debt service requirements, and capital improvements. One major capital improvement identified in the 2022 Water/Wastewater Rate Study is the upgrades to the WWTP, which was planned as a \$60M project which would be funded with rate revenue, existing fund balance and \$25M in debt financing.

WORK COMPLETED TO DATE

N2W Engineering - Owner Advisor Services

On December 13, 2022, the City Council approved an agreement with N2W Engineering to provide Owner Advisor services and preliminary engineering for the project in a not-to-exceed amount of \$1,576,430. To date, approximately \$1,235,259 has been spent against the N2W contract.

N2W has assisted the City with:

- Evaluation of available treatment technologies;
- Confirmation that membrane bioreactor treatment is the preferred approach;
- Preparation of a feasibility report;

- Preparation of grant applications;
- Securing \$300,000 in grant funding for feasibility and preliminary engineering work;
- Securing \$16,194,576 in Bureau of Reclamation construction grant funding;
- Development of 10% engineering design;
- Development of the RFQ scope of work;
- Preparation of procurement documents for a Progressive Design-Build delivery approach; and
- Technical assistance throughout the Progressive Design-Build process.

Kimley-Horn - Environmental Services

On May 14, 2024, the City Council approved an agreement with Kimley-Horn to provide environmental services for the WWTP Upgrades Project. These services include preparation of California Environmental Quality Act compliance documents. Kimley-Horn has completed several environmental surveys and reports and has started preparation of the Initial Study/Mitigated Negative Declaration. To date, approximately \$210,037 has been spent from the environmental services contract.

AECOM-Lyles - Progressive Design-Build Contract

On February 25, 2025, the City Council awarded a Progressive Design-Build Agreement for Phase 1 of the WWTP and Recycled Water Upgrades Project to AECOM-Lyles JV in the amount of \$3,998,627, with a 10% contingency, for a total project budget of \$4,398,490.

The Phase 1 scope includes advancing the 10% design prepared by N2W through additional design development and preparation of a Guaranteed Maximum Price. The Guaranteed Maximum Price would be used to award Phase 2, which would include equipment procurement, construction, engineering support during construction, construction management, commissioning, and acceptance testing.

To date, approximately \$1,452,010 has been spent under the AECOM-Lyles contract. Work completed or underway under the

Progressive Design-Build process includes:

- Preliminary Design Report;
- Progress toward 30% design;
- Baseline cost modeling and cost estimate updates;
- Technical workshops with staff;
- Regular progress meetings;
- Engineering surveys;
- Geotechnical investigation;
- Hydraulic analysis; and
- Review of alternative design approaches.

UPDATED COST ESTIMATES

During the Phase 1 Progressive Design-Build process, AECOM-Lyles provided multiple updated cost estimates:

- October 17, 2025: Initial construction cost estimate of approximately \$110.9 million.
- November 16, 2025: Revised estimate after value engineering of approximately \$94.3 million.
- February 26, 2026: Revised estimate of approximately \$72.2 million for a conventional WWTP after removing reverse osmosis and brine management.
- April 22, 2026: Revised estimate of approximately \$66 million for a hybrid WWTP consisting of cast-in-place aeration basins followed by packaged membrane bioreactor treatment trains, without reverse osmosis or brine management.

The original project budget was approximately \$60 million. The updated estimates indicate that the project, as originally envisioned, is significantly more expensive than anticipated.

During the design process, it was also determined that the project could be delivered in two phases without jeopardizing the Bureau of Reclamation grant:

- Phase I: Plant replacement with membrane bioreactor treatment and ultraviolet disinfection.

- Phase II: Addition of reverse osmosis and brine management.

Phase I would replace the aging WWTP and produce tertiary-treated Title 22 recycled water. However, without reverse osmosis and brine management, the recycled water would not meet Beaumont Basin requirements. This is important because the City's largest anticipated recycled water customer, Sun Lakes Country Club, overlies the Beaumont Basin. Phase II would add reverse osmosis and brine management at an estimated cost of approximately \$21.9 million (today's cost).

PACKAGED MBR TREATMENT CONSIDERATIONS

As part of the value engineering process, AECOM-Lyles presented a lower-cost hybrid treatment concept that includes packaged membrane bioreactor (MBR) treatment trains.

While packaged treatment systems may be appropriate in some applications and can reduce construction costs, staff has concerns with using this approach for the City's primary wastewater treatment facility. The WWTP is core public infrastructure that is expected to serve the community for decades.

Staff concerns include:

- Long-term durability and service life;
- Operational complexity;
- Maintenance risks;
- Long-term lifecycle costs;
- Reliance on less conventional treatment infrastructure for the City's primary plant; and
- Potential impacts to future operations and expansion.

For these reasons, staff believes the City should continue prioritizing a conventional WWTP approach rather than relying on a hybrid-packaged treatment system.

OPTIONS FOR MOVING FORWARD

Option A: Continue Forward with the Current Progressive Design-Build Contract

Benefits:

- Fastest path to project delivery;
- No risk of losing the Bureau of Reclamation grant;
- Potential ability to use available fund balance;
- Potential ability to borrow more than originally anticipated.
- Meets WWTP regulatory requirements.

Risks:

- Current proposal is over budget;
- Final project cost could increase further;
- Rate revenue impacts are not yet fully understood;
- The lowest-cost scope includes a hybrid-packaged plant, which raises concerns regarding long-term durability, maintenance, and operations.

Option B.1: Terminate the PDB Contract and Repackage the Hybrid-Packaged System

Benefits:

- Provides competitive bids rather than continuing negotiations with one design-build team;
- Low risk of losing the Bureau of Reclamation grant;
- Could allow use of additional available fund balance or borrowing;
- Could be completed relatively quickly as an interim market test before proceeding to another option.

- Meets WWTP regulatory requirements.

Risks:

- Project could still exceed the \$60 million budget;
- Hybrid-packaged plant remains less conventional for the City's primary WWTP;
- Rate revenue impacts remain uncertain.
- Loss of time if City decided to not move forward because of costs exceeding budget.

Option B.2: Terminate the PDB Contract and Develop a Funding Strategy for the Full Original Scope

Benefits:

- Provides time to seek additional funding sources;
- Allows the City to complete a new rate study and evaluate revenue needs;
- Supports a conventional plant rather than a hybrid-packaged system;
- Produces recycled water that meets Beaumont Basin discharge requirements.
- Meets WWTP regulatory requirements.

Risks:

- Project cost could approach nearly double the original budget;
- A new rate study would likely identify the need for significant rate increases;
- Delays may result in additional cost escalation;
- Low to medium risk of losing the Bureau of Reclamation grant;
- Continued reliance on aging infrastructure during the delay.

Option B.3: Terminate the PDB Contract and Develop a Funding Strategy for the Original Scope in Two Phases

Benefits:

- Allows the City to prioritize replacement of the aging WWTP;
- Provides a conventional treatment plant approach rather than a hybrid-packaged system;
- Helps keep near-term rates lower than funding both phases at the same time;
- Recognizes that Phase II is not immediately needed due to the City's current water supply portfolio and available annual supply capacity;
- Provides time to seek additional funding sources, including potential grant opportunities;
- Provides time to evaluate brine management options, including potential discharge agreements with SAWPA, Beaumont, and other regional partners;³
- Allows a new rate study to provide an updated and holistic review of revenue needs;
- Phase I produces recycled water that will serve users within the City outside of the Beaumont Basin;
- Allows staff to analyze whether Phase I recycled water can be blended with potable well water to meet Beaumont Basin requirements.
- Meets WWTP regulatory requirements.

Risks:

- Delays may result in additional cost escalation;
- Low to medium risk of losing the Bureau of Reclamation grant;
- Continued reliance on aging infrastructure during the transition period;
- Additional investment may be needed to maintain the existing plant while the project is restructured.

Option C: No Project

Benefits:

- May save money in the short term.
- No demand on staff resources, in the short term.

Risks:

- Loss of the Bureau of Reclamation grant;

- Continued reliance on aging infrastructure;
- Increased risk of system failures, sewer overflows, and emergency repairs;
- Future non-compliance with effluent discharge requirements;
- No recycled water supply development;
- Increased reliance on imported water;
- Capacity limitations as development continues;
- Likely higher project costs in the future due to escalation.

Staff recommends that City Council consider providing staff direction to move forward with Option B.3. If provide, staff will proceed with the following next steps:

- Begin the process to terminate or off-ramp the current Progressive Design-Build contract;
- Coordinate with the Bureau of Reclamation regarding the \$16.2 million grant and determine options to preserve grant eligibility;
- Continue coordination with the Regional Water Quality Control Board regarding regulatory requirements and schedule expectations;
- Initiate an updated water/wastewater rate study;
- Initiate the 100% completion of plans for a traditions Design-Bid-Build in order to meet BOR grant timelines;
- Develop a funding strategy for Phase I of the project;
- Evaluate additional funding opportunities, including state and federal grant programs for the construction phase of Phase I;
- Continue evaluating brine management options for Phase II;
- Analyze whether Phase I recycled water can be blended with potable well water to meet Beaumont Basin requirements;
- Continue environmental review and determine whether adjustments are needed based on the revised project phasing.

JUSTIFICATION:

Staff recommends Option B.3 because it provides the most balanced and practical path forward.

The City needs to replace aging WWTP infrastructure and meet future regulatory requirements. At the same time, updated cost estimates show that proceeding immediately with the full original project scope may require significant rate increases and place additional pressure on the City's wastewater utility and broader financial recovery efforts.

Option B.3 allows the City to focus first on the highest priority need: replacing the aging WWTP with a conventional treatment plant that can meet core regulatory and operational requirements. It also preserves the City's long-term recycled water objectives by keeping reverse osmosis and brine management as a future second phase.

This phased approach is appropriate for several reasons:

- It advances the highest-priority infrastructure improvements first;
- It avoids committing the City to a hybrid-packaged treatment system for its primary WWTP;
- It helps manage near-term rate impacts;
- It allows time to pursue additional grant funding and financing options;
- It provides time to further evaluate brine management solutions;
- It allows the City to reassess revenue needs through a new rate study;
- It preserves the City's ability to implement reverse osmosis and brine management when financially and operationally appropriate.

An important consideration is that Phase II is not immediately needed to meet the City's current water supply demands. The City currently has a healthy water portfolio, and water demands are within the City's annual supply capacity. This provides the City with time to evaluate the best approach to reverse osmosis and brine management without delaying the more urgent need to replace the aging WWTP.

Staff will also analyze whether recycled water produced from Phase I can be blended with potable well water to determine whether the final product could meet Beaumont Basin requirements.

Based on this analysis, Option B.3 provides the best balance of regulatory compliance, infrastructure reliability, financial responsibility, and long-term recycled water planning.

FISCAL IMPACT:

There is no immediate fiscal impact associated with receiving this workshop update.

If the City Council provides direction to proceed with Option B.3, future fiscal impacts may include:

- Additional consultant costs for rate study updates, funding strategy development, grant support, and technical review;
- Potential interim repair and maintenance costs to keep the existing WWTP operational;
- Future debt financing or loan obligations;
- Future design, construction, and environmental compliance costs.

ATTACHMENTS:

1. [12.13.22 Reso 2022-14UA N2W.pdf](#)
2. [5.14.24 Reso 2024-70 Kimley Horn CEQA.pdf](#)
3. [2.25.25 Reso 2025-30 AECOM-Lyles.pdf](#)