



CITY OF WHEATLAND

CITY COUNCIL MEETING STAFF REPORT

May 28, 2019

SUBJECT: Exploration of Wastewater Treatment Alternatives

PREPARED BY: Jim Goodwin, City Manager

Recommendation

Direct City Engineer to prepare alternatives analysis for wastewater treatment.

Background/Discussion

The City of Wheatland currently operates a wastewater treatment plant (WWTP) at the southerly edge of the City, along the Bear River. The City's existing permit allows for disposal via infiltration basins, with a 30-day dry weather average not to exceed 0.62 million gallons per day (MGD). Over the past five years, the City's 30-day average has been approximately 0.20 MGD. Although the City has unused capacity at its own plant, the City has committed a majority of the available capacity to three developers. Virtually all capacity in the City's existing WWTP has been allocated to the Caliterra, Heritage Oaks East and Heritage Oaks West subdivisions. Accordingly, any additional in-fill development will require careful examination of capacity before a project could be approved. The current plant does not have capacity to serve the Hop Farm and Johnson Rancho Annexation Area. For some time, the city has been wrestling with next steps to resolve the capacity issue. In addition, the City has struggled with the risk of having a portion of the WWTP on the river side of the Bear River levee and has received a Notice of Violation from the Regional Water Quality Control Board when a past storm event partially washed the City's infiltration basins away.

Earlier this month, Mayor Henderson and your City Manager, Community Development Director and City Engineer attended a meeting to discuss Yuba County regional wastewater concerns. That meeting revealed that both the Linda County Water District (LCWD) and Olivehurst Public Utilities District (OPUD) wastewater plants are operating significantly under design capacity. In addition, both plants are located on sites allowing for significant expansion of the current operations.

Connecting to an existing plant with capacity to serve current and future needs may provide the most immediate and cost-effective solution to the city's wastewater capacity concerns. The uncertainty regarding wastewater capacity is a limiting factor with regard to attracting new commercial investment.

The alternatives analysis will consider the following:

1. Potential treatment facility options, including interest in accepting Wheatland effluent
2. Costs associated with connection to an existing plant, including both pipeline construction, buy-in to the existing facility and any loan repayment of existing loans that may be triggered by the decision to connect to an existing plant
3. Examination of the expansion potential and continued operation of the current plant
4. Funding and financing opportunities
5. Estimated rate impact including cost of treatment, collections, debt service, reserves and capital investment

Alternatives

Council may choose not to direct the City Engineer to complete the alternatives analysis at this time.

Fiscal Impact

Estimated cost of alternatives analysis is \$37,600 and will be funded from the Sewer Collection Impact Fee Fund.

Attachments

1. Proposal from Coastland



COASTLAND

CIVIL ENGINEERING - CONSTRUCTION MANAGEMENT - BUILDING DEPARTMENT SERVICES

May 22, 2019

Mr. Jim Goodwin
City Manager
City of Wheatland
111 C Street
Wheatland, CA 95692

Re: Scope of Services for Regional Sewer Alternatives Analysis Project

Dear Jim,

We are pleased to provide this letter proposal outlining the scope of services and anticipated budget for the Regional Sewer Alternatives Analysis Project.

Understanding

Over the last 15 years, the City of Wheatland and nearby agencies have participated in several efforts for a wastewater conveyance, treatment, and disposal/reuse solutions for South Yuba County. Over the long-term, the City's wastewater treatment plant doesn't have the capacity, space, or ideal location to serve the buildout of its General Plan. The City's sewer rates are also higher than surrounding communities largely due to the economies of scale afforded at larger utilities.

The past studies have been difficult to obtain consensus because 1) each agency has been on different growth and regulatory timelines, 2) the upfront costs for planning, design and construction can be significant, and 3) financial participation is difficult to secure without coordinated participation. As an example, in 2012 Beale AFB engaged Olivehurst Public Utility District (OPUD) to take their wastewater but the initial costs were too high, complicated, and both sides were reluctant to fund the infrastructure required to make it work.

The passage of time and drastic changes in how development occurs after the recession are driving the need to re-evaluate Wheatland's wastewater alternatives.

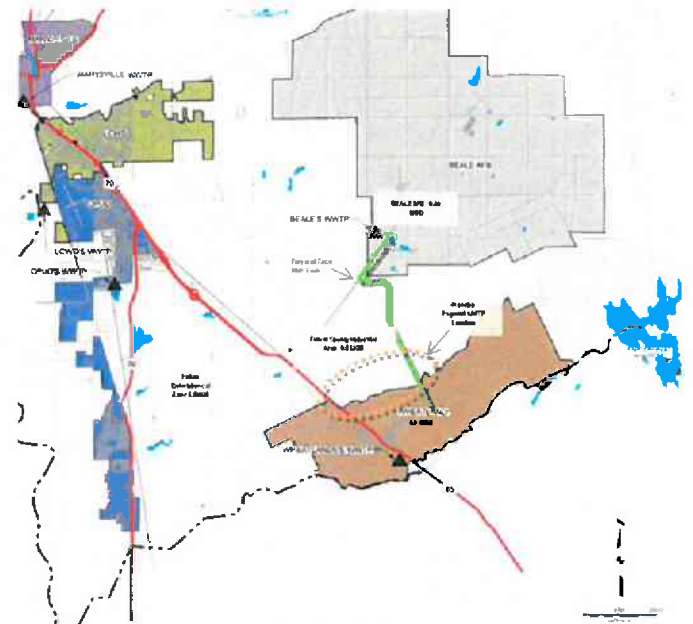


Figure 1 - Map of South Yuba County

Santa Rosa
1400 Neotomas Avenue
Santa Rosa, CA 95405
Tel: 707.571.8005

Auburn
11641 Blocker Drive, Ste. 170
Auburn, CA 95603
Tel: 530.888.9929

Pleasant Hill
3478 Buskirk Avenue, Ste. 1000
Pleasant Hill, CA 94523
Tel: 925.233.5333
www.coastlandcivil.com

City of Wheatland

The City currently operates a WWTP at the south end of the City, along the Bear River. The City's existing permit (Waste Discharge Requirements) allows for disposal via infiltration basins, with a 30-day dry weather average not to exceed 0.62 million gallons per day (MGD). Over the past five years, the City's 30-day average has been approximately 0.20 MGD. Although the City has unused capacity at its own plant, the City has committed a majority of the available capacity to three developers. Therefore, virtually all capacity in the City's existing WWTP has been allocated.

In 2014 the City significantly expanded its City Limits to incorporate approximately 4,500 acres to the north and east of the existing City. This expansion would represent between 3 and 4 MGD of generated wastewater that would need to be conveyed, treated, and disposed/reused.

Olivehurst Public Utility District (OPUD)

OPUD appears to have the capacity to accept the wastewater flows from outside their current service area and meet other future demands in the region. It has been reported that the existing wastewater treatment plant (WWTP) footprint can handle upgrades to 9 MGD.

Linda County Water District (LCWD)

Likewise, LCWD has indicated that they are willing and able to accept the wastewater flows from other areas in the region. The City of Marysville recently connected into their system. It has been reported that the existing WWTP footprint can handle upgrades to 15 MGD.

Beale AFB and the City of Lincoln

Both Beale AFB and the City of Lincoln have indicated interest over the years in partnering with Wheatland. Lincoln does not have ready-to-use capacity but could expand to meet Wheatland's needs. Beale has expressed interest in getting out of the wastewater business and has indicated an interest in leasing their plant to others that could include an expansion to accommodate Wheatland's future growth.

Project Approach

We will complete an alternatives analysis of Wheatland's options for wastewater management. We will build on and update information from previous studies and meet with the various stakeholders in the region to gather information on existing wastewater operations in the area. The work will be compiled in a matrix-type format that describes the opportunities, improvements needed, order of magnitude capital costs, approximate operating costs and expected rate impacts. The matrix (possible template shown below) will include a conceptual level analysis for alternatives including OPUD, LCWA, Beale, Lincoln and a Wheatland regional plant alternative.



Example Template for Wheatland Alternatives Analysis

Item	OPUD	LCWA	Lincoln	Beale AFB	Wheatland
Existing Conditions Description of Utility Plant Capacity Permitted Capacity Available Plant Capacity Available Sewer Capacity Future Capacity Constraints Current Sewer Rate and its Composition Connection Fee and its Composition City General Planning Objectives Planning Horizon Assumed City Growth/ Capacity Required Engineering Items Where would Wheatland Connect into their Sewer System Pipeline Alignment, Lengths, and Sizes Pipeline Right-of-way Pumping Requirements Demolition of Existing WWTP Order of Magnitude Capital Costs Expected Annual O&M Costs for both Treatment and Collection Systems Financial Impacts/ Benefits Initial Buy In Costs Pipeline and Pumping Costs Possible Cost Sharing with Others Calculated Sewer Rates for Wheatland Customers for Various Scenarios Calculated Wheatland Connection Fee for Various Scenarios Environmental Considerations Expected Permits and Timelines Known Environmental Impacts Governance Considerations Can an agreement be structured to address both near-term and long-term City needs					

Task 1- Collect Data and Meet with Agency Representatives

We will review past work and update information as necessary. The work includes the 2006 WWTP expansion study by the City of Wheatland, regional wastewater studies completed by Yuba County, OPUD and LCWA, plant reliability and rate studies by the City of Wheatland, and



possibly others. We will meet with representatives of OPUD, LCWA, Beale and Lincoln to understand their current conditions and interest in taking Wheatland's wastewater. This task will also include a kickoff meeting with all possible stakeholders to help define study objectives and any specific concerns.

Deliverables:

- Completion of applicable parts of the evaluation matrix
- Meetings and notes from meetings

Task 2- Conceptual Design and Costs

We will develop a conceptual layout and sizing of pump stations and pipelines for possible connections to other systems, and costs for a Wheatland option. Pipeline alignments will be along existing road rights-of-way to the extent possible. Projected near-term and long-term capacities of pump stations, pipelines and WWTPs will be determined and phased to the extent possible. Order of magnitude capital and operating costs will be developed.

Deliverables:

- Figures and schematics of pump station locations, pipeline alignments and plant locations
- Conceptual level cost estimates

Task 3- Financial Analysis (Rate and Fee Projections)

We will take buy-in costs, sewer rates, and new facility costs and develop estimate for sewer rates for existing City of Wheatland residents and future connection fees future City growth. The analysis will recognize that any significant increase above current sewer rates would be difficult for existing residents. The analysis may demonstrate the need for phasing costs over time and/or partnering with others may be important for a viable regional project. Several rate scenarios will be developed.

Deliverables:

- Rate and fee spreadsheet with financing scenarios

Task 4- Alternative Analysis Report and Presentation to City Council

The above tasks will be summarized in a concise report. The report will be present to City Council for their input on the report findings and direction on next steps (if any).

Proposed Staff

Coastland proposes to complete this work using a combination of in-house resources and specialty subconsultants. Dane Schilling, P.E. will serve as the overall Project Manager. He will be assisted by Laurie Loaiza. Dan Rich, P.E. and Rachel Schonwit from Nexgen Utility Management will help develop and cost wastewater conveyance and financial alternatives. The proposed staff from both Coastland and Nexgen are familiar with Wheatland's wastewater system and regional opportunities, and have also been involved in the City of Auburn's and Placer County's recent wastewater regionalization project into the City of Lincoln WWTP



Project Budget and Schedule

	Coastland PM	Coastland Senior	Coastland Admin	Nexgen Principal	Nexgen Engineer	Nexgen CAD	Labor Subtotal	Expenses	Total Cost
Billing Rate (\$/Hr)	220	180	70	220	140	120			
Task 1- Collect Data and Meet Agencies	4	4		16	20		\$ 7,920	\$ 500	\$ 8,420
Task 2- Conceptual Design and Costs	4	4		16	24	8	\$ 9,440		\$ 9,440
Task 3- Financial Analysis	4	8		8	16		\$ 6,320		\$ 6,320
Task 4- Report and Presentation to Council	8	8	4	16	16	4	\$ 9,720	\$ 500	\$ 10,220
Task 5- Project Management	8	4	4				\$ 2,760	\$ 500	\$ 3,260
Subtotal	28	28	8	56	76	12	\$ 36,160	\$1,500	\$ 37,660

The project report will be completed within 4-weeks after the meetings with various stakeholders are held. We expect this effort to be complete and presented to the City Council by the end of July 2019.

We greatly appreciate the opportunity to provide these services and look forward to our continued service to the City of Wheatland. Please feel free to contact us if you have any questions or need any additional information.

Regards,
COASTLAND CIVIL ENGINEERING, INC.



John Wanger, PE
Principal



Dane H. Schilling, PE
Associate Principal

