

# Olivehurst Public Utility District



## Agenda Item Staff Report

**Meeting Date: March 17, 2022**

### Item description/summary:

**Discuss proposal from EPS for an OPUD Wastewater Treatment capacity fee update study.** This item has been discussed in committee. The wastewater treatment capacity fees are used to upgrade the wastewater treat facility to accept more wastewater as the community grows. It became apparent that with the future addition of the City of Wheatland as a customer, now is a good time to update the fees with a study. As technology, construction methods and costs and OPUD customer type influence plant upgrades the capacity fees need to be updated to reflect cost changes. We typically try and update the fees every 5 years. EPS has provided a proposal, attached, to provide the capacity fee update study.

### Fiscal Analysis:

Per attached proposal

### Employee Feedback

None

### Sample Motion:

Move to accept the attached proposal from EPS for a study to update the OPUD wastewater treatment facility capacity fee.

Prepared by:

John Tillotson, P.E., General Manager

*The Economics of Land Use*



March 15, 2022

John Tillotson  
General Manager  
Olivehurst Public Utility District (OPUD)  
PO Box 670  
Olivehurst, CA 95961

Subject: Proposal for Wastewater Master Plan Update and  
Connection Fee Update; EPS #222013

John Tillotson:

Economic & Planning Systems, Inc. (EPS) would appreciate the opportunity to assist the Olivehurst Public Utility District (OPUD) in exploring financing options for the wastewater treatment plant, such as updating the wastewater treatment plant connection fee for new development. EPS is familiar with historical financing arrangements for the wastewater treatment plant and would leverage that experience to advise OPUD regarding future financing options.

EPS is submitting this proposal in conjunction with Jacobs Engineering Group, Inc. (Jacobs), which will prepare an update to the Wastewater Treatment Plant (WWTP) Master Plan Update. The previous Master Plan Update was prepared in May 2016. OPUD is expanding its water and wastewater systems to accommodate the recently annexed South Yuba County Service Area. Portions of the sewer system improvements will be oversized to provide capacity for the City of Wheatland (City) that will be received, treated, and disposed of at the WWTP. Jacobs will serve as a subcontractor to EPS for this proposed Work Program.

The Work Program will consist of an updated WWTP Master Plan and updated Capital Connection Fee charges for new development. The proposed EPS Work Program is discussed in **Attachment A**. **Attachment B** is the proposed Work Program for Jacobs.

*Economic & Planning Systems, Inc.*  
455 Capitol Mall, Suite 701  
Sacramento, CA 95814  
916 649 8010 tel  
916 649 2070 fax

*Oakland  
Sacramento  
Denver  
Los Angeles*

**[www.epsys.com](http://www.epsys.com)**

## Key Personnel

Managing Principal **Jamie Gomes** will serve as Principal-in-Charge of this project and will provide guidance and input as needed. Senior Vice President **Russ Powell** will serve as Project Manager and will conduct the day-to-day management of this project. Additional EPS staff may assist in identifying, collecting, and analyzing data.

## Schedule

EPS will begin working on this project as soon as contract approval is received, and EPS will provide you with accurate information and work products on a schedule that meets your needs. It is estimated that the overall project will take 7 to 8 months to complete.

## Budget

The estimated budget to complete this work is **\$346,945**. EPS proposes a budget of **\$50,000** to complete **Task 1** of the Work Program (**Attachment A**). Jacobs proposes a budget of **\$296,945** to complete **Tasks 2 through 4** (**Attachment B**). A copy of Jacobs' proposal and budget is included as **Attachment C**.

EPS charges for its services on a direct-cost (hourly billing rates plus direct expenses), not-to-exceed basis; therefore, you will be billed only for the work completed up to the authorized budget amount. Travel, data, or reproduction expenses will be billed at cost, and invoices are submitted monthly and are payable on receipt. If additional work or meetings are required, EPS will request authorization for additional budget with the understanding that terms will be negotiated in good faith. EPS's Hourly Billing Rates and Terms and Conditions for Consulting Services are attached as part of this letter agreement.

Again, EPS would appreciate the opportunity to work on this project. To approve this proposal, please sign below, return a signed copy of this letter agreement to EPS, and keep another copy for your records. If you have questions or require changes to this proposal, please call Project Manager Russ Powell at (916) 649-8010.

Sincerely,

ECONOMIC & PLANNING SYSTEMS, INC. (EPS)



Jamie Gomes  
Managing Principal

Attachments

Approved:

\_\_\_\_\_  
John Tillotson, Olivehurst Public Utility District (OPUD)

\_\_\_\_\_  
Date

## **Attachment A**

### **Task 1 Work Program**

### **WWTP Connection Fee Update**

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OPUD is responsible for treating wastewater generated within OPUD's service area boundaries. The WWTP Phase 1 Expansion and Upgrade provided increased capacity to serve the growing community, up to a rated maximum average dry weather flow (ADWF) of 3.0 million gallons per day (MGD). The current WWTP's unit processes include screening, grit removal, two oxidation ditches, three secondary clarifiers, tertiary filtration, ultraviolet disinfection, post aeration, two return and waste activated sludge pump stations, an aerobic digester pond, sludge storage pond, sludge drying beds, and other supporting systems.

The previous WWTP Master Plan, dated May 2016, outlined five phases of recommended improvements to incrementally expand the WWTP to a partial and full buildout ADWF capacity of approximately 5.625 and 8 MGD, respectively. The latter was considered the maximum practical buildout capacity using existing treatment processes and the WWTP site.

OPUD is expanding its water and wastewater systems to accommodate the recently annexed South Yuba County Service Area. Portions of the sewer system improvements will be oversized to provide capacity for the City wastewater effluent that will be received, treated, and disposed of at the WWTP. The estimated ADWF from the South Yuba County Service Area and City contributions is 3.6 MGD, which includes 1.5 MGD ADWF from the City. This 1.5 MGD ADWF of capacity does not represent the City's buildout service area needs.

Full buildout of the City's and OPUD's service areas are estimated to substantially exceed the 8 MGD ADWF buildout capacity of the WWTP described in the previous Master Plan. To address this deficiency, OPUD has requested that EPS and Jacobs develop this scope of work for the preparation of an updated master plan. The new WWTP master plan would also be used by EPS to update OPUD's Capital Connection Fee to the WWTP. Jacobs will be a subconsultant to EPS for this work. Because the existing WWTP site is constrained and additional land area is not readily available to accommodate future growth, the Master Plan Update will incorporate new unit processes that are both cost-effective and require less land area for implementation than the existing processes.

## **Tasks**

### **Task 1: Capital Connection Fee Update**

#### ***Subtask 1.1: Update Land Use Assumptions***

Under this task, EPS will prepare an update to the land use assumptions for future growth in the OPUD service area. EPS will review development approvals (tentative maps and final maps) for residential projects that have been approved and not yet fully built out. EPS will review Specific Plans for new development in the OPUD service area to determine the future growth capacity for residential and nonresidential projects. EPS will prepare land use tables for review by OPUD staff. EPS will reach out to Yuba County Community Development staff to affirm findings and determinations for planned new growth in the OPUD service area. The City will develop their own land use assumptions for inclusion in this analysis.

#### ***Subtask 1.2: Develop Equivalent Dwelling Unit for New Development***

EPS will work with Jacobs to develop equivalent dwelling unit (EDU) assignments for all planned growth in the OPUD service area by land use type. Jacobs will develop EDU assumptions for various land uses but is not developing buildout land use assumptions for the purposes of their Master Plan Update.

EPS and Jacobs will compare growth assumptions and EDU capacity for the Master Plan Update to make sure that capacity assumptions for the WWTP are consistent with future growth requirements.

#### ***Subtask 1.3: Develop Cost Allocations to Land Uses***

Using the land use assumptions developed by EPS, the EDU assignments to land uses, and estimated costs for WWTP improvements, EPS will develop a cost allocation of WWTP improvements to planned future development by land use category. EPS will prepare a Draft Technical Memorandum documenting findings for land use assumptions, EDU assignments, and cost allocations. Cost allocation for the City will be in the form of the total cost allocation to the City for the capacity of the WWTP assigned to new development in the City. The City will be responsible for developing cost allocations and implementing connection fees to fund the City's fair share costs of the WWTP.

Once all interested parties have reviewed the Draft Technical Memorandum, EPS will incorporate recommended changes to the analysis assumptions into the Final Technical Memorandum. This report will then be used to develop the Nexus Study required to update Capital Connection Fees for OPUD.

***Subtask 1.4: Prepare the Nexus Study for Updated Capital Connection Fees***

Using the analysis prepared for the Final Technical Memorandum, EPS will prepare the Draft Nexus Study, which will present the findings of nexus that support a maximum justified capital connection fee for all land uses in the OPUD service area. The Draft Nexus Study will be distributed to all interested parties for review and comment. OPUD may schedule Board of Director workshops to present the findings of the Draft Nexus Study and to seek public comment.

Once all comments have been provided, EPS will update the Nexus Study for consideration by the OPUD Board of Directors.

***Subtask 1.5: Board of Directors' Approval of Nexus Study***

EPS will prepare the Final Nexus Study for consideration of approval by the OPUD Board of Directors. EPS will attend up to two meetings to present the Nexus findings and provide technical support during public hearings.

***Subtask 1.6: Perform Project Management***

Under this subtask, EPS will serve as project lead in reviewing and preparing documents for presentation to OPUD staff, interested parties, and the OPUD Board of Directors. EPS will coordinate with Jacobs for the preparation and presentation of materials prepared by Jacobs. EPS will schedule regular progress meetings with OPUD staff and Jacobs to ensure that tasks remain on schedule for completion in a timely manner.

## **Attachment B**

### **Tasks 2 through 4 Work Program**

### **WWTP Master Plan Update**

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#### **Task 2 – Project Management**

The goal of project management is the successful completion of projects in a set budget and schedule. Jacobs shall assign the appropriate resources to the project to accomplish this goal. Jacobs shall establish and implement an effective project management plan for the project and perform the following subtasks.

##### **2.1 Conduct Progress Meetings**

Conduct regularly scheduled progress meetings with EPS and OPUD throughout the course of the project. These meetings will be held on a monthly basis. Because the City is a major stakeholder in the future WWTP system, OPUD is anticipated to include the City in a selected number of those progress meetings.

A review of **Task 3.3** activities, results, and recommendations shall be conducted as part of the third or fourth monthly progress meeting. The alternatives defined in **Task 3.3** shall be presented and compared and a single alternative will be selected by OPUD to complete the Master Plan Update.

**Deliverables:** Provide meeting agenda a minimum of 4 days before each meeting. Produce and maintain an action item list and decision log to record details of decision making on important issues.

##### **2.2 Provide Accounting/Invoicing**

Submit monthly payment requests in a format acceptable to EPS.

Prepare and submit monthly progress reports as part of the monthly payment request. The monthly progress reports shall include:

- An overview of work accomplished during the previous month.
- Description of current activities, an updated schedule indicating whether the project is on schedule, within budget, and any concerns.
- A list of decisions and action items and responsible parties.
- A list of problem areas, if any, and proposed corrective actions.
- A list of tasks for the following month.



**Deliverables:** Submit project changes to OPUD and EPS as soon as any change is determined to be pending or to have occurred. Provide a Project Change Report on a monthly basis as part of the monthly Progress Report, when necessary.

### **2.3 Administer Quality Program**

Institute and maintain a Quality Assurance/Quality Control (QA/QC) program for the work performed on this project. This effort includes continuous QA/QC of all work products and formal reviews of deliverables before submission to EPS and OPUD.

## **Task 3—Prepare Master Plan Update**

The Master Plan Update will provide information on future facilities required at the WWTP to meet anticipated discharge requirements and achieve the required buildout capacity on the existing site. Cost estimates (ASCEE Class 5) for those future improvements will be prepared to allow the determination of a proposed capital connection fee to be performed by EPS.

Below are descriptions of the subtasks to be conducted to prepare the Master Plan Update.

### **3.1 Review and Update Background Information, Regulatory Climate, and EDU Definition**

Jacobs will review operations information and evaluate recycled flow streams, existing loading conditions, and other current conditions that are provided to Jacobs by OPUD. OPUD shall also provide Jacobs with 36 months of influent flow and loading data, effluent data, and process operating data from plant records, along with the actual number and type of connections that currently provide flow and loading to the WWTP.

Before the first progress meeting, Jacobs shall meet with OPUD staff to review information on current flow and loading into the WWTP and future known changes. EPS will provide Jacobs with information on future flow and loading conditions at buildout of the service area, to include the City.

Jacobs shall also prepare a technical memorandum (TM) describing the potential/likely direction of the regulatory climate in California and the types of constituents that may be designated for removal in the future. The TM will discuss the potential for increased removals for currently monitored constituents.

In 2015, OPUD evaluated flow and loading from each EDU and adopted the following definition of an EDU:

- Flow: 260 gallons per day (based on ADWF conditions)
- BOD: 0.67 lb/day
- TSS: 0.50 lb/day

For the purposes of this Master Plan Update, it is proposed that the definition of an EDU for OPUD's service area only will be reviewed and compared to current flow and loading and revised, if necessary, to reflect the current flow and loading and reduction in flow from new housing developments because of the implementation of low-flow water fixtures.

***Deliverables:*** Summary of current flow and loadings and projections for future anticipated changes. TM describing direction of California regulatory climate for WWTPs discharging to effluent-dominated waterbodies in draft and final PDFs. Recommended definition of an EDU.

### **3.2 Confirm Capacity of Existing WWTP Improvements**

The previous Master Plan evaluated existing capacity and determined that the WWTP was capable of processing a maximum ADWF of 3.8 MGD. This capacity, however, was predicated on the use of one larger secondary clarifier and two smaller secondary clarifiers. As part of the current South Yuba County Water and Wastewater Infrastructure Improvements Project, OPUD is also implementing several Sanitary Sewer Overflow (SSO) improvements, the addition of one additional larger secondary clarifier, and the likely abandonment of the two smaller clarifiers. Jacobs shall review impacts of solids loading to the secondary clarifiers, evaluate the impacts of a future primary clarification system, confirm or update the 3.8 MGD ADWF capacity for the WWTP, and make other recommendations to allow for optimized use of the improvements, if necessary.

### **3.3 Preliminary Evaluation of Selected Options to Maximize WWTP Site Capacity**

A preliminary evaluation will be conducted by Jacobs using the following technologies:

- Conventional activated sludge (CAS) using rectangular tankage
- Membrane bioreactor (MBR)
- Membrane aerated biofilm reactor (MABR)
- Aerobic granular sludge (AGS)
- Integrated Fixed-Film Activated Sludge (IFAS)

CAS is included as an option to determine whether the combination of primary treatment and deeper bioreactors would allow required buildout capacity to be achieved on the existing site. These other technologies are representative of options that can maximize the capacity of the remaining WWTP site. The initial evaluation will be conducted based only on buildout capabilities (no plant phasing will be considered), and only a qualitative analysis will be conducted for each technology; the goal is to select one of the evaluated technologies for further evaluation and costing as part of the master plan recommendations. It is anticipated that the draft recommendation for the selected technology will be the subject of a workshop that would include the City as a stakeholder.

Evaluation criteria for each technology will be as follows (each technology will be ranked for each criterion):

- Whether required buildout capacity can be achieved on the existing site, and if not, how much additional land would be required.
- Capital cost.
- O&M cost.
- Complexity of operation.
- Required companion technologies (as an example, MBR and IFAS would require fine screens after the previously proposed primary clarifiers).
- Ability to handle peak flows.
- Effluent quality (a parameter that might allow for more stringent regulatory requirements being imposed).
- Greenhouse Gas impacts.
- Odor potential.

### **3.4 Develop Recommended Improvements Capacity Model for Existing Facilities and the Selected Subtask 3.3 Technology**

Jacobs shall complete model runs to assess the WWTP's near-term<sup>1</sup> and buildout capacities using Jacobs's proprietary whole plant simulation model, PRO2D. The results of the model runs will be presented in the Master Plan Update.

The evaluation of the solids processing train will be included in the project, and it is assumed that the (a) installation of new primary clarification and anaerobic digesters and (b) continued use of the drying beds will be used with all alternatives evaluated, in accordance with the recommendations of the previous Master Plan. The potential to improve drying bed capacity will be evaluated.

### **3.5 Prepare Master Plan Update for the OPUD WWTP**

Based on the information gathered as part of **Subtasks 3.1** through **3.4**, Jacobs shall prepare the Master Plan Update consisting of the following sections:

1. Executive Summary
2. Introduction
3. Plant Influent Flow and Loadings
4. Secondary Treatment Alternative Analysis
5. Estimated Capital Costs for Recommended Improvements
6. Phasing Plan
7. References
8. Appendices

Jacobs shall make a recommendation on the apparent best alternative for implementation after completion of **Subtask 3.3**, and that recommended treatment option will be the subject of the **Subtask 3.4** and **Subtask 3.5** master plan preparation. Jacobs's work product with the preparation of a single recommended course of action, which will be presented based solely on engineering judgment and Jacobs's knowledge of the WWTP, with input from the OPUD and stakeholders, as determined by OPUD.

Both "Trigger" and "Capacity" flows in terms of ADWF will be provided for each phase or recommended improvement. As defined in the previous Master Plan, "Trigger" flowrates are intended to define the start of a phase (for example,

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<sup>1</sup> Addition of new influent pump, secondary clarifier, RAS/WAS pump station expansion, and Emergency Storage Basin grading improvements included in the South Yuba County Water and Wastewater Infrastructure Improvements Project scheduled to begin construction later this year.

commencement of engineering studies and design), and "Capacity" flowrates indicate the ADWF capacity of the completed phase.

***Deliverables:*** Electronic PDF copies of the draft and final TM and Master Plan Update.

## **Task 4 – EPS-Directed Services**

This task is established to cover costs for unforeseen project work items that may arise and may be used by OPUD or EPS to address unforeseen conditions. A task budget of \$35,000 is incorporated into this Contract. Labor effort to this task only when authorized in writing by OPUD or EPS and in accordance with rate schedule.

Assumptions:

- \$35,000 contingency allocation for Owner-directed services.
- Requires OPUD's or EPS's written authorization to proceed.

**Attachment C**  
**Jacobs Proposal and Fees**

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# PROFESSIONAL SERVICES AGREEMENT

**PROJECT**

**NAME:** WWTP Master Plan Update  
**CLIENT:** Olivehurst Public Utility District  
**ADDRESS:** 1970 9th Ave, Olivehurst, CA 95961

hereby requests and authorizes Jacobs Engineering Group Inc. (“Jacobs”) to perform the following Services:

**SCOPE OF SERVICES:** See attached

**COMPENSATION:** See attached

The parties agree to the “Provisions” provided on page 2 of this authorization.

Accepted for **CLIENT**

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

Accepted for **JACOBS ENGINEERING GROUP INC.**

By: \_\_\_\_\_  
Name: Rob Tull  
Title: Vice President  
Date: [Insert Date]

## PROVISIONS

1. **AUTHORIZATION TO PROCEED.** Signing this Agreement shall be construed as authorization by CLIENT for JACOBS to proceed with the Services, unless otherwise provided for in this Agreement.

2. **LABOR COSTS.** In the event JACOBS' compensation is calculated by reference to JACOBS' Labor Costs, Labor Costs shall be the amount calculated by the number of hours actually worked by each of JACOBS' employees on CLIENT's Project, multiplied by an amount charged for each such employee's work, which is calculated by dividing each such employee's annualized, non-overtime compensation (whether salary or paid to such employee at an hourly rate, as the case may be) by 2,080 hours per year.

3. **DIRECT EXPENSES.** JACOBS' Direct Expenses shall be those costs incurred on or directly for the CLIENT's Project, including but not limited to necessary transportation costs including mileage at JACOBS' current rate when its automobiles are used, meals and lodging, laboratory tests and analyses, computer services, word processing services, telephone, printing and binding charges. Reimbursement for these expenses shall be on the basis of actual charges when furnished by commercial sources and on the basis of usual commercial charges when furnished by JACOBS.

4. **OUTSIDE SERVICES.** When technical or professional services are furnished by an outside source, when approved by CLIENT, an additional amount shall be added to the cost of these services for JACOBS' administrative costs.

5. **COST ESTIMATES.** Any cost estimates provided by JACOBS will be on a basis of experience and judgment. Since JACOBS has no control over market conditions or bidding procedures, JACOBS does not warrant that bids or ultimate construction costs will not vary from these cost estimates.

6. **PROFESSIONAL STANDARDS.** JACOBS shall be responsible to the level of competency presently maintained by other practicing professionals in the same type of work in CLIENT's community, for the professional and technical soundness, accuracy, and adequacy of all design, drawings, specifications, and other work and materials furnished under this Agreement. If after completion of the Services the CLIENT can demonstrate that the Services hereunder fail to conform to such standards, JACOBS will reperform the deficient Services at no cost to the CLIENT, and JACOBS shall have no liability for repair or replacement, construction rework or other costs. JACOBS makes no warranty, expressed or implied.

7. **ADDITIONAL SERVICES.** Services in addition to those specified in Scope of Services will be provided by JACOBS if authorized in writing or otherwise confirmed by CLIENT. Additional services will be paid for by CLIENT as indicated in any Letter of Proposal, Task Authorization, or such other document as deemed appropriate by CLIENT and JACOBS. In the absence of an express agreement about compensation, JACOBS shall be entitled to an equitable adjustment to its compensation for performing such additional services.

8. **SALES TAX.** In addition to any other sums or amounts required to be paid by CLIENT to JACOBS pursuant to this Agreement, CLIENT must also pay to JACOBS the amount of any applicable sales, use, excise or other tax with respect thereto (other than any general income tax payable by JACOBS with respect thereto) as the same may be levied, imposed or assessed by any federal, state, county or municipal government entity or agency.

9. **LIMITATION OF LIABILITY.** Excluding JACOBS' liability for bodily injury or damage to the property of third parties, the total aggregate liability of JACOBS arising out of the performance or breach of this Agreement shall not exceed the compensation paid to JACOBS under this Agreement. Notwithstanding any other provision of this Agreement, JACOBS shall have no liability to the CLIENT for contingent, consequential, or other indirect damages including, without limitation, damages for loss of use, revenue or profit; operating costs and facility downtime, however the same may be caused. The limitations and exclusions of liability set forth in this Article shall apply regardless of the fault, breach of contract, tort (including negligence), strict liability or otherwise of JACOBS, its employees, or subconsultants.

10. **DISPUTE RESOLUTION.** All disputes arising out of this Agreement shall be mediated by the parties within a reasonable time after the first request for mediation, prior to either party filing a suit in a court of law, provided, however, that neither party shall be obligated to mediate prior to requesting injunctive relief.

11. **ASSIGNMENT TO RELATED ENTITY.** Notwithstanding anything in this Agreement to the contrary, in the event JACOBS is not qualified and licensed in the relevant jurisdiction to provide any Services required hereunder, JACOBS may, without the consent of any other party, assign all or any part of its obligation to provide such Services to an entity related to JACOBS which is qualified and licensed to provide such Services in the jurisdiction involved and

which is contractually bound to JACOBS to provide such Services.

12. **PAYMENT TO JACOBS / INTEREST ON PAST-DUE AMOUNTS.** Monthly invoices will be issued by JACOBS for all Services performed under the terms of this Agreement. Invoices are due and payable net 15 days. CLIENT agrees to pay interest at the rate of 1½% per month on all past-due amounts, unless not permitted by law. Any interest charged or collected in excess of the highest legal rate will be applied to the principal amount owing to JACOBS, and if such interest exceeds the principal balance of CLIENT's indebtedness to JACOBS, will be returned to CLIENT.

13. **TERMINATION FOR NON-PAYMENT OF FEES.** Without limiting any other remedy that may be available, JACOBS may stop work or terminate this Agreement if CLIENT has not cured a payment default within 7 days after receipt of written notice from JACOBS. Any failure to make a payment within the time required in Article 12 above shall constitute a payment default. Notice by e-mail or fax, followed by overnight courier, shall meet this notice requirement. JACOBS' right to stop work or terminate this Agreement shall not be waived by JACOBS' continued performance during any period of investigation by JACOBS to determine the reasons for CLIENT's nonpayment.

14. **LEGAL EXPENSES.** In the event legal action is brought by JACOBS to enforce any of the obligations hereunder or arising out of any dispute concerning the terms and conditions hereby created, CLIENT shall pay JACOBS reasonable amounts for fees, costs and expenses as may be set by the court.

15. **CONSTRUCTION PHASE SERVICES.** If this Agreement includes the furnishing of any Services during the construction phase of the project, the following terms will apply: (a) If JACOBS is called upon to observe the work of CLIENT's construction contractor(s) for the detection of defects or deficiencies in such work, JACOBS will not bear any responsibility or liability for such defects or deficiencies or for the failure to so detect. JACOBS shall not make inspections or reviews of the safety programs or procedures of the construction contractor(s), and shall not review their work for the purpose of ensuring their compliance with safety standards. (b) If JACOBS is called upon to review submittals from construction contractors, JACOBS shall review and approve or take other appropriate action upon construction contractor(s)' submittals such as shop drawings, product data and samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the contract documents. JACOBS' action shall be taken with such reasonable promptness as to cause no delay in the work while allowing sufficient time in JACOBS' professional judgment to permit adequate review. Review of such submittals will not be conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities. (c) JACOBS shall not assume any responsibility or liability for performance of the construction services, or for the safety of persons and property during construction, or for compliance with federal, state and local statutes, rules, regulations and codes applicable to the conduct of the construction services. JACOBS shall have no influence over the construction means, methods, techniques, sequences or procedures. Construction safety shall remain the sole responsibility of the construction contractor(s). (d) All contracts between CLIENT and its construction contractor(s) shall contain broad form indemnity and insurance clauses in favor of CLIENT and JACOBS, in a form satisfactory to JACOBS.

16. **SEVERABILITY.** In case any one or more of the provisions contained in this Agreement shall be held illegal, the enforceability of the remaining provisions contained herein shall not be impaired thereby.

17. **FORCE MAJEURE.** Any delays in or failure of performance by JACOBS shall not constitute breach hereunder if and to the extent such delays or failures of performance are caused by occurrences beyond the reasonable control of JACOBS. In the event that any event of force majeure as herein defined occurs, JACOBS shall be entitled to a reasonable extension of time for performance of its Services under this Agreement.

18. **ELECTRONIC MEDIA.** (a) As a component of the services provided under this Agreement, JACOBS may deliver electronic copies of certain documents or data (the "Electronic Files") in addition to printed copies (the "Hard Copies") for the convenience of CLIENT. CLIENT and its consultants, contractors and subconsultants may only rely on the Hard Copies furnished by JACOBS to CLIENT. If there is any discrepancy between any Electronic File and the corresponding Hard Copy, the Hard Copy controls. (b) CLIENT acknowledges that Electronic Files can be altered or modified without JACOBS' authorization, can become corrupted and that errors can occur in the transmission of such Electronic Files.

19. **THIRD PARTY BENEFICIARIES.** Except to the extent any claims alleging negligence are asserted directly against any JACOBS employee wherein such JACOBS employee shall be deemed a third party beneficiary to this Agreement and the protections in favor of JACOBS, there are no third party beneficiaries to this Agreement.





# Olivehurst Public Utility District

## Master Plan Update

The Olivehurst Public Utilities District (District) is responsible for treating wastewater generated within the District's service area boundaries. The Olivehurst Wastewater Treatment Plant (WWTP) Phase 1 Expansion and Upgrade provided increased capacity to serve the growing community, up to a rated maximum average dry weather flow (ADWF) of 3.0 million gallons per day (MGD). The current WWTP's unit processes include screening, grit removal, two oxidation ditches, three secondary clarifiers, tertiary filtration, ultraviolet disinfection, post aeration, two return and waste activated sludge pump stations, an aerobic digester pond, sludge storage pond, sludge drying beds, and other supporting systems.

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The following are descriptions of the tasks for the master plan update:

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The goal of project management is the successful completion of projects within a set budget and schedule. The Consultant shall assign the appropriate resources to the project to accomplish this goal. The Consultant shall establish and implement an effective project management plan for the project and perform the following subtasks.

#### **1.1 Conduct Progress Meetings**

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major stakeholder in the future WWTP system, the District is anticipated to include the City in a selected number of those progress meetings.

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***Deliverables:*** Provide meeting agenda a minimum of 2 days in advance of each meeting. Produce and maintain an action item list and decision log to record details of decision-making on important issues.

## **1.2 Provide Accounting/Invoicing**

Submit monthly payment requests in a format acceptable to EPS. Invoices shall be sent to:

Russ Powell, Senior Vice President  
Economic & Planning Systems (EPS)  
455 Capital Mall, Suite 701  
Sacramento, CA 95814  
Email: rpowell@epssac.com

Prepare and submit monthly progress reports as part of the monthly payment request. The monthly progress reports shall include:

- An overview of work accomplished during the previous month
- Description of current activities, an updated schedule indicating whether the project is on schedule, within budget, and any concerns
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- A list of problem areas, if any, and proposed corrective actions
- A list of tasks for the following month

***Deliverables:*** Submit project changes to the District as soon as any change is determined to be pending or to have occurred. Provide a Project Change Report on a monthly basis as part of the monthly Progress Report, when necessary.

## **1.3 Administer Quality Program**

Institute and maintain a Quality Assurance/Quality Control (QA/QC) program for the work performed on this project. This effort includes continuous QA/QC of all work products and formal reviews of deliverables prior to submission to EPS and the District.

## **Task 2—Prepare Master Plan Update**

The Master Plan Update will provide information on future facilities required at the WWTP to meet anticipated discharge requirements and achieve the required buildout capacity on the existing site. Cost estimates (ASCEE Class 5) for those future improvements will be prepared to allow the determination of a proposed capital connection fee to be performed by EPS.

The following are descriptions of the tasks to be conducted to prepare the Master Plan Update:

## 2.1 Review and Update Background Information, Regulatory Climate, and EDU Definition

Consultant to review operations information and evaluate recycled flow streams, existing loading conditions, and other current conditions that are provided to Consultant by the District. District shall also provide Consultant with 36 months of influent flow and loading data, effluent data, and process operating data information from plant records, along with the actual number and type of connections that currently provide flow and loading to the WWTP.

Prior to the first progress meeting, Consultant shall meet with District staff to review information on current flow and loading into the WWTP and future known changes. EPS will provide Consultant information on future flow and loading conditions at buildout of the service area, to include the City of Wheatland.

Consultant shall also prepare a technical memorandum (TM) describing the potential/likely direction of the regulatory climate in California, and the types of constituents that may be designated for removal in the future. The TM will discuss the potential for increased removals for currently monitored constituents.

In 2015, the District evaluated flow and loading from each equivalent dwelling unit (EDU) and adopted the following definition of an EDU:

- Flow: 260 gallons per day (based on average dry weather flow conditions)
- BOD: 0.67 lb/day
- TSS: 0.50 lb/day

For the purposes of this Master Plan Update, it is proposed that the definition of an EDU for the District's service area only will be reviewed and compared to current flow and loading and revised, if necessary, to reflect the current flow and loading and reduction in flow from new housing developments due to the implementation of low-flow water fixtures.

**Deliverables:** Summary of current flow and loadings and projections for future anticipated changes. TM describing direction of California regulatory climate for WWTPs discharging to effluent dominated waterbodies in draft and final PDFs. Recommended definition of an EDU.

## 2.2 Confirm Capacity of Existing WWTP Improvements

The previous Master Plan evaluated existing capacity and determined that the WWTP was capable of processing a maximum ADWF of 3.8 MGD. This capacity, however, was predicated on the use of one larger secondary clarifier and two smaller secondary clarifiers. As part of the current South Yuba County Water and Wastewater Infrastructure Improvements Project, the District is also implementing a number of Sanitary Sewer Overflow (SSO) improvements, the addition of one additional larger secondary clarifier, and the likely abandonment of the two smaller clarifiers. Consultant shall review impacts of solids loading to the secondary clarifiers, evaluate the impacts of a future primary clarification system, and confirm or update the 3.8 MGD ADWF capacity for the WWTP, and make other recommendations to allow for optimized use of the improvements, if necessary.

### 2.3 Preliminary Evaluation of Selected Options to Maximize WWTP Site Capacity

A preliminary evaluation will be conducted by Consultant using the following technologies:

- Conventional activated sludge (CAS) using rectangular tankage
- Membrane bioreactor (MBR)
- Membrane aerated biofilm reactor (MABR)
- Aerobic granular sludge (AGS)
- Integrated Fixed-Film Activated Sludge (IFAS)

CAS is included as an option to determine whether the combination of primary treatment and deeper bioreactors would allow required buildout capacity to be achieved on the existing site. These other technologies are representative of options that can maximize the capacity of the remaining WWTP site. The initial evaluation will be conducted based only on buildout capabilities (no plant phasing will be considered), and only a qualitative analysis will be conducted for each technology; the goal is to select one of the evaluated technologies for further evaluation and costing as part of the master plan recommendations. It is anticipated that the draft recommendation for the selected technology will be the subject of a workshop that would include the City as a stakeholder.

Evaluation criteria for each technology will be as follows (each technology will be ranked for each criterion):

- Whether required buildout capacity can be achieved on the existing site, and if not, how much additional land would be required.
- Capital cost
- O&M cost
- Complexity of operation
- Required companion technologies (as an example, MBR and IFAS would require fine screens after the previously proposed primary clarifiers)
- Ability to handle peak flows
- Effluent quality (a parameter that might allow for more stringent regulatory requirements being imposed)
- Green House Gas impacts
- Odor potential

### 2.4 Develop Recommended Improvements Capacity Model for Existing Facilities and the Selected Task 2.3 Technology

Consultant shall complete model runs to assess the WWTP's near-term<sup>1</sup> and buildout capacities using Consultant's proprietary whole plant simulation model, PRO2D. The results of the model runs will be presented in the Master Plan Update.

The evaluation of the solids processing train will be included in the project, and it is assumed that the (a) installation of new primary clarification and anaerobic digesters and (b) continued use of the drying beds will be used with all alternatives evaluated, in

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<sup>1</sup> Addition of new influent pump, secondary clarifier, RAS/WAS pump station expansion, and Emergency Storage Basin grading improvements included in the South Yuba County Water and Wastewater Infrastructure Improvements Project scheduled for construction to begin later this year.

accordance with the recommendations of the previous Master Plan. The potential to improve drying bed capacity will be evaluated.

## **2.5 Prepare Master Plan Update for the OPUD WWTP**

Based upon the information gathered as part of Tasks 2.1 through 2.4, Consultant shall prepare the Master Plan Update consisting of the following sections:

Executive Summary

1. Introduction
2. Plant Influent Flow and Loadings
3. Secondary Treatment Alternative Analysis
4. Estimated Capital Costs for Recommended Improvements
5. Phasing Plan
6. References

Appendices

Consultant shall make a recommendation on the apparent best alternative for implementation after completion of Task 2.3, and that recommended treatment option will be the subject of the Task 2.4 and 2.5 master plan preparation. Consultant's work product with the preparation of a single recommended course of action which will be presented based solely on engineering judgment and Consultant's knowledge of the WWTP, with input from the District and stakeholders, as determined by District.

Both "Trigger" and "Capacity" flows in terms of ADWF will be provided for each phase and/or recommended improvement. As defined in the previous Master Plan, "Trigger" flowrates are intended to define the start of a phase (for example, commencement of engineering studies and design), and "Capacity" flowrates indicate the ADWF capacity of the completed phase.

*Deliverables:* Electronic PDF copies of the draft and final TM and Master Plan Update.

## **Task 3—Owner Directed Services**

This task is established to cover cost for unforeseen project work items that may arise and may be used by the District or EPS to address unforeseen conditions. A task budget of \$35,000 is incorporated into this Contract. Labor effort to this task only when authorized in writing by District or EPS and in accordance with rate schedule.

Assumptions:

- \$35,000 contingency allocation for Owner directed services.
- Requires District or EPS written authorization to proceed.

## **Schedule**

The draft Master Plan Update shall be completed within 6 months after Notice to Proceed. The final master plan update will be completed within 15 days of receipt of all EPS and District comments.

## Fee

Compensation to Consultant will be on a Cost Reimbursable-Per Diem (Time and Expense) basis and invoiced in accordance with the following rate schedule.

Jacobs  
Professionals and Technicians\*  
2022 Hourly Billing Rates\*\*

| Classification  | Rate  |
|---|-------|
| Principal -In-Charge/Principal Program Manager                          | \$349 |
| Principal Technologist/Principal Project Manager/Quality Manager        | \$325 |
| Sr. Technologist/Sr. Project Manager                                    | \$299 |
| Engineer Specialist*/Project Manager/Design Manager                     | \$274 |
| Project Engineer*/Associate Project Manager                             | \$245 |
| Associate Engineer*/Sr. Project Automation Lead                         | \$198 |
| Staff Engineer 2*   | \$176 |
| Staff Engineer 1*/Project Automation Lead/Corrosion Engineer/Site Civil | \$151 |
| Engineering/Environmental Tech 5  | \$208 |
| Engineering/Environmental Tech 4/Cost Estimator                         | \$176 |
| Engineering/Environmental Tech 3/Sr. Specifications Processor           | \$149 |
| Engineering/Environmental Tech 2  | \$116 |
| Engineering/Environmental Tech 1  | \$102 |
| Office/Clerical/Accounting  | \$116 |

**Notes:**

\* includes engineering, consulting, planner and scientist disciplines

\*\* Rates are effective January 1, 2020 through December 31, 2020 annual increase of 3% per year will be included in invoices after January 1 of each year. Labor rates shown in our fee estimate have these escalations included.

A markup of 10% shall be applied to all Subcontract, Travel and Other Direct Costs.

An additional \$6 per labor hour for computes and communication costs will be assessed.

For on-site construction management/observation staff, overtime will be invoiced if overtime is incurred.

An additional premium of 25% will be added to the above rates for Expert Witness and Testimony Services.

**Total Fee:** Total budgetary amount authorized is \$296,945 for Tasks 1-3.

Consultant will make reasonable efforts to complete the work within the budget and will keep EPS informed of progress toward that end so that the budget or work effort can be adjusted if found necessary.

Consultant is not obligated to incur costs beyond the indicated budgets, as may be adjusted, nor is OWNER obligated to pay Consultant beyond these limits.

When any budget has been increased, Consultant's excess costs expended prior to such increase will be allowable to the same extent as if such costs had been incurred after the approved increase.

**OWNER:** Economics & Planning Systems

By: \_\_\_\_\_  
Russ Power

Title: Senior Vice President

Date: \_\_\_\_\_

**CONSULTANT:** Jacobs Engineering  
Group Inc.,

By: \_\_\_\_\_  
Rob Tull

Title: Vice President

Date: \_\_\_\_\_



## 2022 HOURLY BILLING RATES

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### Sacramento Office

|                                     |             |
|-------------------------------------|-------------|
| Managing Principal                  | \$295-\$310 |
| Senior Principal                    | \$360       |
| Principal                           | \$275       |
| Executive/Senior Vice President     | \$250       |
| Senior Consultant                   | \$250       |
| Vice President                      | \$225       |
| Senior Technical Associate          | \$205       |
| Senior Associate                    | \$195       |
| Associate                           | \$175       |
| Research Analyst II                 | \$140       |
| Research Analyst I                  | \$100       |
| Production and Administrative Staff | \$90        |

Billing rates updated annually.



**Economic & Planning Systems, Inc. (EPS)**  
**Terms and Conditions for Consulting Services**  
**EPS #222013**

**1. Authority**

Each party has full power and authority to enter into and perform this contract, and the person signing this contract on behalf of each has been properly authorized and empowered to enter into this contract. Each party further acknowledges that it has read this agreement, understands it, and agrees to be bound by it.

**2. Independent Contractor**

It is specifically understood and agreed that in the creation and performance of this Agreement, EPS is an independent contractor, and is not and shall not be construed to be an employee or agent of the CLIENT.

**3. Insurance**

EPS shall maintain the following insurance:

- 3.1. Workers Compensation as required by law.
- 3.2. General Liability insurance of \$2,000,000 each occurrence, \$4,000,000 general aggregate.
- 3.3. Auto Liability insurance of \$1,000,000, combined single limit for bodily injury and property damage, covering non-owned and hired autos only.
- 3.4. Errors and Omissions/Professional Services Liability insurance in the amount of \$2,000,000 per claim/aggregate.
- 3.5. Excess/Umbrella Liability insurance of \$1,000,000.

**4. Personnel**

EPS represents that it is an equal opportunity employer and has, or will secure at its expense, all personnel required in performing the services under this Agreement. All personnel engaged in the work shall be authorized or permitted under State and Local law to perform such services.

**5. Interest of EPS**

EPS covenants that it presently has no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the performance of services required to be performed under this Agreement.

## **6. Publication, Reproduction, and Use of Material**

CLIENT may publish, distribute, or otherwise use any data, information, reports, or other materials prepared under this Agreement by EPS (EPS Work Product), in whole or in part, for purposes of this project (as described in an attached Work Order). This authority does not apply to any computer models or software used or developed as a result of this contract, unless a separate agreement is signed concerning the disposition of such materials or compelled by legal process. CLIENT acknowledges that EPS Work Product was prepared by EPS solely for contemporaneous use by CLIENT for this Project and that it is not intended for use at any other time, location, purpose or by any other party. Accordingly, CLIENT shall not, without the prior written consent of EPS (which EPS may withhold in its sole discretion), (i) use EPS Work Product for purposes unrelated to the Project, (ii) modify EPS Work Product, or (iii) disclose or distribute any EPS Work Product to any other person, firm, or entity. EPS shall be entitled to indemnification by CLIENT, pursuant to paragraph 13 hereof, if CLIENT breaches this provision, in addition to all other available remedies at law or in equity.

## **7. Confidentiality**

Any reports, information, or data given to or prepared or assembled by EPS under this Agreement shall not be made available to any individual or organization by EPS without the prior written approval of the CLIENT. EPS is entitled to retain copies of all data, working papers, interim documents, memoranda, and reports produced under this Agreement. However, nothing contained herein shall prevent the disclosure of such information if compelled by legal process, and in the event thereof, only after notice to CLIENT.

## **8. Amendments to the Contract**

No amendment to this Agreement shall be effective unless it is in writing and signed by duly authorized representatives of both parties.

## **9. Disputed Invoices**

In the event that CLIENT disputes any item on an invoice, CLIENT shall notify EPS of this disputed item within five working days of receipt of the invoice. CLIENT will approve payment of items on an invoice that are not in dispute and CLIENT and EPS will proceed to negotiate or arbitrate the disputed items as specified elsewhere in this Agreement.

## **10. Audits and Inspections**

On reasonable notice, CLIENT may inspect any books, records, or other materials that pertain directly to this Agreement.

## **11. Compensation for Testimony and Preparation Thereof**

If any legal action is brought in connection with the Agreement, other than an action that is solely the result of the incompetence or malfeasance by EPS, by or against a third party, and CLIENT requests that EPS or a SUBCONSULTANT, (or if EPS or a SUBCONSULTANT is otherwise required) to testify, provide information, produce materials, or otherwise spend time on such action, then

CLIENT shall pay EPS or SUBCONSULTANT for time expended at their standard rates then in effect, plus advance all related expenses and costs, including, but not limited to, reasonable attorneys' fees. Such compensation shall be in addition to the maximum charge for services defined in the Agreement.

## **12. Termination of Agreement**

The CLIENT may, at its option, elect to cancel the contract at any time, by notice to EPS, on completion of any task described in the scope of services. In such event the CLIENT will pay to EPS the amount due by virtue of completion of the products therefore delivered. If such cancellation is not based on any claim of EPS default, such payment shall include any sums withheld pursuant to this Agreement. In addition, EPS shall be reimbursed (in addition to the payment) for that portion of the actual out-of-pocket costs not otherwise reimbursed under this Agreement previously incurred by EPS during the period of the Agreement, which are directly attributable to the incomplete portion of the services covered by this Agreement.

## **13. Indemnification/Limitation of Liability**

CLIENT agrees to release, indemnify, hold harmless, and defend EPS and all of its partners, employees, agents, and representatives of all types from and against all claims, liability, loss, cost, damage, expense, or obligation, including, but not limited to reasonable attorneys' and experts' fees and costs, which any of them may hereafter incur, suffer, or be required to pay by reason of any acts or omissions of Client in connection with its performance of this Agreement except as to claims arising from the sole negligence or willful misconduct of EPS.

EPS agrees to release, indemnify, hold harmless, and defend CLIENT and all of its partners, employees, agents, and representatives of all types from and against all claims, liability, loss, cost, damage, expense, or obligation, including, but not limited to reasonable attorneys' and experts' fees and costs, which any of them may hereafter incur, suffer, or be required to pay by reason of any acts or omissions of EPS in connection with its performance of this Agreement except as to claims arising from the sole negligence or willful misconduct of CLIENT.

In cases of shared negligence, responsibility shall be in proportion to each party's negligence.

## **14. Nondiscrimination and Equal Opportunity**

EPS and its SUBCONSULTANTS shall not unlawfully discriminate against any employee, applicant for employment, subcontractor, bidder for a subcontract, or participant in, recipient of, or applicant for any services or programs provided by EPS under this Agreement because of race, religion, color, national origin, ancestry, physical disability, medical condition, marital status, age (over 40), gender, or gender orientation. EPS shall comply with all applicable federal, state, and local laws, policies, rules, and requirements related to equal opportunity and nondiscrimination in employment, contracting, and the provision of any services that are the subject of this Agreement, including but not limited to the satisfaction of any positive obligations required of EPS thereby.

## **15. Standard of Performance**

All work performed by EPS for CLIENT pursuant to this Agreement shall be performed by qualified persons, and shall be performed in accordance with standards of performance generally applicable to experts in the field for which EPS's services are retained.

As in all projects of this type, the estimated results are based on the continued competent and efficient management by CLIENT. In addition, the conclusions reached by EPS are based on the assumption that no significant changes in project conditions will occur beyond those expressly discussed in EPS Work Product. EPS shall be able to rely on information provided to it by the CLIENT, and EPS shall have no responsibility to audit or otherwise verify such information.

## **16. Force Majeure**

Neither party shall be responsible for delays or failures in performance resulting from acts beyond the control of such party. Such acts shall include, but not be limited to, acts of God, strikes, lockouts, riots, acts of war, epidemics, governmental regulations superimposed after the fact, fire, power failures, earthquakes, or other disasters.

## **17. Arbitration**

Any disputes arising out of this agreement shall be resolved by arbitration in accordance with Part 3, Title 9 of the Code of Civil Procedure, commencing with section 1280. All of the provisions of section 1283.05 are incorporated into, made a part of, and shall be applicable to, this agreement to arbitrate, except subdivision (e) requiring that leave be granted by the arbitrator before the taking of depositions.

## **18. Governing Law**

This contract will be governed by and construed in accordance with the laws of the State of California.

## **19. Notice**

Notice given under the terms of this Agreement shall be in writing and shall be effective the day it is mailed, properly addressed, to the party to receive such notice. Notice delivered other than by mail shall be effective when received. Any change of address of either of the parties shall be effective on receipt of notice of such change by the opposite party.