CLACKAMAS
WATER ENVIRONMENT SERVICES

GREGORY L. GEIST | DIRECTOR
Water Quality Protection
Surface Water Management
Wastewater Collection & Treatment

September 4, 2025 BCC Agenda Date/Item: _____

Board of County Commissioners
Acting as the governing body of Water Environment Services
Clackamas County

Approval of a Personal Services Contract with Brown & Caldwell for on-call engineering services. Contract Value is $1,000,000 for 5 years. Funding is through Water Environment Services Construction Fund and Operating Fund. No County General Funds are involved.

Previous Board Action/Review	N/A		
Performance Clackamas	1. This project supports the WES Strategic Plan Goal to strategically plan and execute capital projects to meet the growth, reliability, and regulatory needs of our service area at the lowest-life cycle cost. 2. This project supports the County's Strategic Priorities of Strong Infrastructure, Vibrant Economy, and Safe, Secure and Livable Communities.		
Counsel Review	Yes	**Procurement Review**	Yes
Contact Person	Jeff Stallard	**Contact Phone**	503-742-4694

EXECUTIVE SUMMARY: WES frequently encounters unanticipated projects and urgent engineering needs that arise outside of the annual planning and capital improvement process. These can include emergency repair design, regulatory compliance support, specialty technical analysis, and smaller capital or operational projects.

Under the current procurement process, engaging engineering services for these smaller or urgent projects often requires repetitive contracting efforts, which can be time-consuming and delay project delivery. Establishing on-call contracts will allow WES to streamline procurement, improve efficiency, and ensure timely response to our needs.

We conducted a competitive solicitation process to identify qualified engineering firms capable of providing services in four categories, Wastewater Conveyance and Treatment Engineering, Water Resources Engineering, Engineering Construction Services, and Wastewater Process Engineering and Operational Support. Work in these categories will include a wide range of services, including planning, design, permitting, and construction support. Multiple firms were selected to ensure adequate availability,

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specialized expertise, and competitive pricing.

The on-call contracts do not obligate funding at the time of award. Task orders issued under these contracts will be funded through approved operating or capital project budgets.

RECOMMENDATION: Staff recommends that the Board of County Commissioners of Clackamas County, acting as the governing body of Water Environment Services, approve Contract #1277 with Brown & Caldwell, Inc. for engineering on-call services.

Respectfully submitted,

Greg Geist
Director, WES

Attachment: Contract #1277 Brown and Caldwell, Inc.

WATER ENVIRONMENT SERVICES
PERSONAL SERVICES CONTRACT
Contract #0000001277

This Personal Services Contract (this "Contract") is entered into between Brown and Caldwell, Inc. ("Contractor"), and Water Environment Services, an intergovernmental entity formed pursuant to ORS Chapter 190 ("District").

ARTICLE I.

1. **Effective Date and Duration.** This Contract shall become effective upon signature of both parties. Unless earlier terminated or extended, this Contract shall expire on **June 30, 2030**.

2. **Scope of Work.** Contractor shall provide On-Call Engineering Services ("Work"), further described in **Exhibit A.** The Contractor is approved to provide services for the following classes of Work:

   ☒ 1) Wastewater Conveyance and Treatment Engineering
   ☐ 2) Water Resources Engineering
   ☐ 3) Engineering Construction Services
   ☐ 4) Wastewater Process Engineering and Operational Support

   This Contract is on an "on-call" or "as-needed basis" for Work.

   When the District wishes Contractor to perform the Work, the District will submit an official Clackamas District Task Order form (found at: https://www.clackamas.us/finance/terms.html) detailing the scope of Work, the entity on whose behalf the Work will be performed, and the total compensation, pursuant to the fee schedule set forth in this Contract. Contractor may not perform Work until the County Task Order form has been executed by the parties. In the event a project authorized under the County Task Order extends beyond the expiration of this Contract, the County Task Order shall remain in effect under the terms of this Contract until the completion or expiration of the authorized task.

   No task order shall modify or amend the terms and conditions of this Contract.

3. **Consideration.** The District agrees to pay Contractor, from available and authorized funds, a sum not to exceed **one million dollars ($1,000,000.00)** for accomplishing the Work required by this Contract. Because this is an on-call or as-needed contract, and the exact amount of Work needed, if any, is unknown, nothing herein shall be construed as a promise to pay Contractor the full $1,000,000.00 authorized herein. Consideration rates are on a time and materials basis in accordance with the rates and costs specified in Exhibit A. If any interim payments to Contractor are made, such payments shall be made only in accordance with the schedule and requirements in Exhibit A.

4. **Invoices and Payments.** Unless otherwise specified, Contractor shall submit monthly invoices for Work performed. Invoices shall describe all Work performed with particularity, by whom it was performed, and shall itemize and explain all expenses for which reimbursement is claimed. The invoices shall include the total amount billed to date by Contractor prior to the current invoice. If Contractor fails to present invoices in proper form within one hundred twenty (120) calendar days after the end of the month in which the services were rendered, Contractor waives any rights to present such invoice thereafter and to receive payment therefor. Payments shall be made in accordance with ORS 293.462 to Contractor following the District's review and approval of invoices submitted by Contractor. Contractor shall not submit invoices for, and the District will not be obligated to pay, any amount in excess of the maximum compensation amount set forth above. If this

maximum compensation amount is increased by amendment of this Contract, the amendment must be fully effective before Contractor performs Work subject to the amendment.

Invoices shall reference the above Contract Number and be submitted to: Wes-Payables@clackamas.us

5. **Travel and Other Expense.** Authorized: ☐ Yes ☒ No
If travel expense reimbursement is authorized in this Contract, such expense shall only be reimbursed at the rates in the Clackamas County Contractor Travel Reimbursement Policy, hereby incorporated by reference and found at: https://www.clackamas.us/finance/terms.html. Travel expense reimbursement is not in excess of the not to exceed consideration.

6. **Contract Documents.** This Contract consists of the following documents, which are listed in descending order of precedence and are attached and incorporated by reference, this Contract, Exhibit A, and Exhibit B. Unless explicitly agreed to by the parties in this Contract, any additional terms and conditions that may be contained in Exhibit B are void.

7. **Contractor and District Contacts.**

Contractor	District
Administrator: Mark Strahota Phone: 503-977-6678 Email: mstrahota@brwncald.com	Administrator: TDB Phone: Email:

Payment information will be reported to the Internal Revenue Service ("IRS") under the name and taxpayer ID number submitted. (See I.R.S. 1099 for additional instructions regarding taxpayer ID numbers.) Information not matching IRS records will subject Contractor payments to backup withholding.

ARTICLE II.

1. **Access to Records.** Contractor shall maintain books, records, documents, and other evidence, in accordance with generally accepted accounting procedures and practices, sufficient to reflect properly all costs of whatever nature claimed to have been incurred and anticipated to be incurred in the performance of this Contract. District and their duly authorized representatives shall have access to the books, documents, papers, and records of Contractor, which are directly pertinent to this Contract for the purpose of making audit, examination, excerpts, and transcripts. Contractor shall maintain such books and records for a minimum of six (6) years, or such longer period as may be required by applicable law, following final payment and termination of this Contract, or until the conclusion of any audit, controversy or litigation arising out of or related to this Contract, whichever date is later.

2. **Availability of Future Funds.** Any continuation or extension of this Contract after the end of the fiscal period in which it is written is contingent on a new appropriation for each succeeding fiscal period sufficient to continue to make payments under this Contract, as determined by the District in its sole administrative discretion.

3. **Captions.** The captions or headings in this Contract are for convenience only and in no way define, limit, or describe the scope or intent of any provisions of this Contract.

4. **Compliance with Applicable Law.** Contractor shall comply with all applicable federal, state and local laws, regulations, executive orders, and ordinances, as such may be amended from time to time.

5. **Counterparts.** This Contract may be executed in several counterparts (electronic or otherwise), each of which shall be an original, all of which shall constitute the same instrument.

6. **Governing Law.** This Contract, and all rights, obligations, and disputes arising out of it, shall be governed and construed in accordance with the laws of the State of Oregon and the ordinances of Clackamas County without regard to principles of conflicts of law. Any claim, action, or suit between District and Contractor that arises out of or relates to the performance of this Contract shall be brought and conducted solely and exclusively within the Circuit Court for Clackamas County, for the State of Oregon. Provided, however, that if any such claim, action, or suit may be brought in a federal forum, it shall be brought and conducted solely and exclusively within the United States District Court for the District of Oregon. In no event shall this section be construed as a waiver by the District of any form of defense or immunity, whether sovereign immunity, governmental immunity, immunity based on the Eleventh Amendment to the Constitution of the United States or otherwise, from any claim or from the jurisdiction of any court. Contractor, by execution of this Contract, hereby consents to the personal jurisdiction of the courts referenced in this section.

7. **Indemnity, Responsibility for Damages.** Contractor shall be responsible for all damage to property, injury to persons, and loss, expense, inconvenience, and delay to the extent caused by, any negligent act, error or omission of Contractor, its subcontractors, agents, or employees. The Contractor agrees to indemnify and defend the District and Clackamas County, and their officers, elected officials, agents and employees from and against all claims, actions, losses, liabilities, including reasonable attorney and accounting fees, and all expenses incidental to the investigation and defense thereof, to the extent caused by Contractor's negligent acts, errors or omissions in performing under this Contract. Provided, however, that pursuant to ORS 30.140(4), Contractor's duty to defend obligations arising from or related to Contractor's professional negligence, or related to professional services provided by Contractor, are limited to reimbursement of reasonable defense costs (including reasonable attorney fees) of District and Clackamas County in an amount not to exceed the proportionate fault of Contractor, as determined by adjudication, alternative dispute resolution, or otherwise resolved by settlement agreement.

   However, neither Contractor nor any attorney engaged by Contractor shall defend the claim in the name of District or Clackamas County ("County"), purport to act as legal representative of District or County, or settle any claim on behalf of District or County, without the approval of the Clackamas County Counsel's Office. District or County may assume their own defense and settlement at their election and expense.

8. **Independent Contractor Status.** The service(s) to be rendered under this Contract are those of an independent contractor. Although the District reserves the right to determine (and modify) the delivery schedule for the Work to be performed and to evaluate the quality of the completed performance, District cannot and will not control the means or manner of Contractor's performance. Contractor is responsible for determining the appropriate means and manner of performing the Work. Contractor is not to be considered an agent or employee of District for any purpose, including, but not limited to: (A) The Contractor will be solely responsible for payment of any Federal or State taxes required as a result of this Contract; and (B) This Contract is not intended to entitle the Contractor to any benefits generally granted to District employees, including, but not limited to, vacation, holiday and sick leave, other leaves with pay, tenure, medical and dental coverage, life and disability insurance, overtime, Social Security, Workers' Compensation, unemployment compensation, or retirement benefits.

9. **Insurance.** Contractor shall secure at its own expense and keep in effect during the term of the performance under this Contract the insurance required and minimum coverage indicated below. The insurance requirements outlined below do not in any limit the amount of scope of liability of Contractor under this Contract. Contractor shall provide proof of said insurance and name the District

and Clackamas County as an additional insureds on its Commercial General and Automobile liability policies. Proof of insurance and notice of any material change should be submitted to the following address: Clackamas County Procurement Division, 2051 Kaen Road, Oregon City, OR 97045 or the County Contract Analyst.

Required - Workers Compensation: Contractor shall comply with the statutory workers' compensation requirements in ORS 656.017, unless exempt under ORS 656.027 or 656.126.
☒ Required – Commercial General Liability: combined single limit, or the equivalent, of not less than $1,000,000 per occurrence, with an annual aggregate limit of $2,000,000 for Bodily Injury and Property Damage.
☒ Required – Professional Liability: combined single limit, or the equivalent, of not less than $1,000,000 per claim, with an annual aggregate limit of $2,000,000 for damages caused by a negligent act, error, or omission.
☒ Required – Automobile Liability: combined single limit, or the equivalent, of not less than $1,000,000 per accident for Bodily Injury and Property Damage.

Commercial General and Automobile Liability shall be primary insurance as respects to the District. Any insurance or self-insurance maintained by the District shall be excess and shall not contribute to it. Any obligation that District agree to a waiver of subrogation is hereby stricken.

10. **Limitation of Liabilities.** This Contract is expressly subject to the debt limitation of Oregon counties set forth in Article XI, Section 10, of the Oregon Constitution, and is contingent upon funds being appropriated therefore. Any provisions herein which would conflict with law are deemed inoperative to that extent. Except for liability arising under or related to Article II, Section 20 neither party shall be liable for (i) any indirect, incidental, consequential or special damages under this Contract or (ii) any damages of any sort arising solely from the termination of this Contact in accordance with its terms.

11. **Notices.** Except as otherwise provided in this Contract, any required notices between the parties shall be given in writing by personal delivery, email, or mailing the same, to the Contract Administrators identified in Article 1, Section 6. If notice is sent to District, a copy shall also be sent to: Clackamas County Procurement, 2051 Kaen Road, Oregon City, OR 97045. Any communication or notice so addressed and mailed shall be deemed to be given five (5) days after mailing, and immediately upon personal delivery, or within 2 hours after the email is sent during District's normal business hours (Monday – Thursday, 7:00 a.m. to 6:00 p.m.) (as recorded on the device from which the sender sent the email), unless the sender receives an automated message or other indication that the email has not been delivered.

12. **Ownership of Work Product.** All work product of Contractor that results from this Contract (the "Work Product") is the exclusive property of District. District and Contractor intend that such Work Product be deemed "work made for hire" of which District shall be deemed the author. If for any reason the Work Product is not deemed "work made for hire," Contractor hereby irrevocably assigns to District all of its right, title, and interest in and to any and all of the Work Product, whether arising from copyright, patent, trademark or trade secret, or any other state or federal intellectual property law or doctrine. Contractor shall execute such further documents and instruments as District may reasonably request in order to fully vest such rights in District. Contractor forever waives any and all rights relating to the Work Product, including without limitation, any and all rights arising under 17 USC § 106A or any other rights of identification of authorship or rights of approval, restriction or limitation on use or subsequent modifications. Notwithstanding the above, District shall have no rights in any pre-existing Contractor intellectual property provided to District by Contractor in the performance of this Contract except to copy, use and re-use any such Contractor intellectual property for District use only.

13. **Representations and Warranties.** Contractor represents and warrants to District that (A) Contractor has the power and authority to enter into and perform this Contract; (B) this Contract, when executed and delivered, shall be a valid and binding obligation of Contractor enforceable in accordance with its terms; (C) Contractor shall at all times during the term of this Contract, be qualified, professionally competent, and duly licensed to perform the Work; (D) Contractor is an independent contractor as defined in ORS 670.600; and (E) the Work under this Contract shall be performed in accordance with the standard of professional skill and care required for a project of similar size, location, scope, and complexity, during the time in which the Work is being performed. The warranties set forth in this section are in addition to, and not in lieu of, any other warranties provided. The Contractor shall be responsible for the technical accuracy of its services and documents resulting therefrom, and District shall not be responsible for discovering deficiencies therein. The Contractor shall correct such deficiencies without additional compensation except to the extent such action is directly attributable to deficiencies in information furnished by the District.

14. **Survival.** All rights and obligations shall cease upon termination or expiration of this Contract, except for the rights and obligations set forth in Article II, Sections 1, 6, 7, 10, 12, 13, 14, 15, 17, 20, 21, 25, 27, 28 and 32, and all other rights and obligations which by their context are intended to survive. However, such expiration shall not extinguish or prejudice the District's right to enforce this Contract with respect to: (a) any breach of a Contractor warranty; or (b) any default or defect in Contractor performance that has not been cured.

15. **Severability.** If any term or provision of this Contract is declared by a court of competent jurisdiction to be illegal or in conflict with any law, the validity of the remaining terms and provisions shall not be affected, and the rights and obligations of the parties shall be construed and enforced as if the Contract did not contain the particular term or provision held to be invalid.

16. **Subcontracts and Assignments.** Contractor shall not enter into any subcontracts for any of the Work required by this Contract, or assign or transfer any of its interest in this Contract by operation of law or otherwise, without obtaining prior written approval from the District, which shall be granted or denied in the District's sole discretion. In addition to any provisions the District may require, Contractor shall include in any permitted subcontract under this Contract a requirement that the subcontractor be bound by this Article II, Sections 1, 7, 8, 13, 16, and 27 as if the subcontractor were the Contractor. District's consent to any subcontract shall not relieve Contractor of any of its duties or obligations under this Contract.

17. **Successors in Interest.** The provisions of this Contract shall be binding upon and shall inure to the benefit of the parties hereto, and their respective authorized successors and assigns.

18. **Tax Compliance Certification.** The Contractor shall comply with all federal, state and local laws, regulation, executive orders and ordinances applicable to this Contract. Contractor represents and warrants that it has complied, and will continue to comply throughout the duration of this Contract and any extensions, with all tax laws of this state or any political subdivision of this state, including but not limited to ORS 305.620 and ORS chapters 316, 317, and 318. Any violation of this section shall constitute a material breach of this Contract and shall entitle District to terminate this Contract, to pursue and recover any and all damages that arise from the breach and the termination of this Contract, and to pursue any or all of the remedies available under this Contract or applicable law.

19. **Termination.** This Contract may be terminated for the following reasons: (A) by mutual agreement of the parties or by the District (i) for convenience upon thirty (30) days written notice to Contractor, or (ii) at any time the District fails to receive funding, appropriations, or other expenditure authority as solely determined by the District; or (B) if Contractor breaches any Contract provision or is declared insolvent, District may terminate after thirty (30) days written notice with an opportunity to cure.

Upon receipt of written notice of termination from the District, Contractor shall immediately stop performance of the Work. Upon termination of this Contract, Contractor shall deliver to District all documents, Work Product, information, works-in-progress and other property that are or would be deliverables had the Contract Work been completed. Upon District's request, Contractor shall surrender to anyone District designates, all documents, research, objects or other tangible things needed to complete the Work.

20. **Remedies.** If terminated by the District due to a breach by the Contractor, then the District shall have any remedy available to it in law or equity. If this Contract is terminated for any other reason, Contractor's sole remedy is payment for the goods and services delivered and accepted by the District, less any setoff to which the District is entitled.

21. **No Third Party Beneficiaries.** District and Contractor are the only parties to this Contract and are the only parties entitled to enforce its terms. Nothing in this Contract gives, is intended to give, or shall be construed to give or provide any benefit or right, whether directly, indirectly or otherwise, to third persons unless such third persons are individually identified by name herein and expressly described as intended beneficiaries of the terms of this Contract.

22. **Time is of the Essence.** Contractor agrees that time is of the essence in the performance this Contract.

23. **Foreign Contractor.** If the Contractor is not domiciled in or registered to do business in the State of Oregon, Contractor shall promptly provide to the Oregon Department of Revenue and the Secretary of State, Corporate Division, all information required by those agencies relative to this Contract. The Contractor shall demonstrate its legal capacity to perform these services in the State of Oregon prior to entering into this Contract.

24. **Force Majeure.** Neither District nor Contractor shall be held responsible for delay or default caused by events outside the District or Contractor's reasonable control including, but not limited to, fire, terrorism, riot, acts of God, or war. However, Contractor shall make all reasonable efforts to remove or eliminate such a cause of delay or default and shall upon the cessation of the cause, diligently pursue performance of its obligations under this Contract.

25. **Waiver.** The failure of District to enforce any provision of this Contract shall not constitute a waiver by District of that or any other provision.

26. **Public Contracting Requirements.** Pursuant to the public contracting requirements contained in Oregon Revised Statutes ("ORS") Chapter 279B.220 through 279B.235, Contractor shall:
    a. Make payments promptly, as due, to all persons supplying to Contractor labor or materials for the prosecution of the work provided for in the Contract.
    b. Pay all contributions or amounts due the Industrial Accident Fund from such Contractor or subcontractor incurred in the performance of the Contract.
    c. Not permit any lien or claim to be filed or prosecuted against District on account of any labor or material furnished.
    d. Pay the Department of Revenue all sums withheld from employees pursuant to ORS 316.167.
    e. As applicable, the Contractor shall pay employees for work in accordance with ORS 279B.235, which is incorporated herein by this reference. The Contractor shall comply with the prohibitions set forth in ORS 652.220, compliance of which is a material element of this Contract, and failure to comply is a breach entitling District to terminate this Contract for cause.
    f. If the Work involves lawn and landscape maintenance, Contractor shall salvage, recycle, compost, or mulch yard waste material at an approved site, if feasible and cost effective.

27. **No Attorney Fees**. In the event any arbitration, action or proceeding, including any bankruptcy proceeding, is instituted to enforce any term of this Contract, each party shall be responsible for its own attorneys' fees and expenses.

28. **Reserved.**

29. **Reserved.**

30. **Key Persons.** Contractor acknowledges and agrees that a significant reason the District is entering into this Contract is because of the special qualifications of certain Key Persons set forth in the contract. Under this Contract, the District is engaging the expertise, experience, judgment, and personal attention of such Key Persons. Neither Contractor nor any of the Key Persons shall delegate performance of the management powers and responsibilities each such Key Person is required to provide under this Contract to any other employee or agent of the Contractor unless the District provides prior written consent to such delegation. Contractor shall not reassign or transfer a Key Person to other duties or positions such that the Key Person is no longer available to provide the District with such Key Person's services unless the District provides prior written consent to such reassignment or transfer.

31. **Reserved.**

32. **Merger.** THIS CONTRACT CONSTITUTES THE ENTIRE AGREEMENT BETWEEN THE PARTIES WITH RESPECT TO THE SUBJECT MATTER REFERENCED THEREIN. THERE ARE NO UNDERSTANDINGS, AGREEMENTS, OR REPRESENTATIONS, ORAL OR WRITTEN, NOT SPECIFIED HEREIN REGARDING THIS CONTRACT. NO AMENDMENT, CONSENT, OR WAIVER OF TERMS OF THIS CONTRACT SHALL BIND EITHER PARTY UNLESS IN WRITING AND SIGNED BY ALL PARTIES. ANY SUCH AMENDMENT, CONSENT, OR WAIVER SHALL BE EFFECTIVE ONLY IN THE SPECIFIC INSTANCE AND FOR THE SPECIFIC PURPOSE GIVEN. CONTRACTOR, BY THE SIGNATURE HERETO OF ITS AUTHORIZED REPRESENTATIVE, IS AN INDEPENDENT CONTRACTOR, ACKNOWLEDGES HAVING READ AND UNDERSTOOD THIS CONTRACT, AND CONTRACTOR AGREES TO BE BOUND BY ITS TERMS AND CONDITIONS.

By their signatures below, the parties to this Contract agree to the terms, conditions, and content expressed herein.

Brown and Caldwell, Inc.

Bryan K Paulson 8/14/2025
Authorized Signature Date

Bryan K. Paulson, Vice President
Name / Title (Printed)

_015248-26_____
Oregon Business Registry #

__FBC/ California_____
Entity Type / State of Formation

Water Environment Services

_____
Signature Date

Name: _____

Title:_____

Approved as to Form:

_____ 8/19/2025
County Counsel Date

EXHIBIT A
RFP 2025-01
Water Environment Services Engineering Master Contract
On-Call Engineering Services
Published January 27, 2025

REQUEST FOR PROPOSALS #2025-01

FOR

Water Environment Services Engineering Master Contract
On-Call Engineering Services

BOARD OF COUNTY COMMISSIONERS
CRAIG ROBERTS, Chair
PAUL SAVAS, Commissioner
MELISSA FIRESIDE, Commissioner
MARTHA SCHRADER, Commissioner
BEN WEST, Commissioner

Gary Schmidt
County Administrator

Ryan Rice
Contract Analyst

PROPOSAL CLOSING DATE, TIME AND LOCATION

DATE: **February 20, 2025**

TIME: **2:00 PM, Pacific Time**

PLACE: **Email:** https://bidlocker.us/a/clackamascounty/BidLocker

SCHEDULE

Request for Proposals Issued…….....January 27, 2025

Protest of Specifications Deadline.....February 3, 2025, 5:00 PM, Pacific Time

Deadline to Submit Clarifying Questions.....February 13, 2025, 5:00 PM, Pacific Time

Request for Proposals Closing Date and Time…….....February 20, 2025, 2:00 PM, Pacific Time

Deadline to Submit Protest of Award.....Seven (7) days from the Intent to Award

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SECTION 1
NOTICE OF REQUEST FOR PROPOSALS

Notice is hereby given that Water Environment Services ("WES"), through its Board of County Commissioners, will receive sealed Proposals per specifications until **2:00 PM, February 20, 2025** ("Closing"), to provide On-Call Engineering Services. No Proposals will be received or considered after that time.

RFP Documents can be downloaded from the state of Oregon procurement website ("OregonBuys") at the following address https://oregonbuys.gov/bso/view/login/login.xhtml, Document No. S-C01010-00012654.

Prospective Proposers will need to sign in to download the information and that information will be accumulated for a Plan Holder's List. Prospective Proposers are responsible for obtaining any Addenda, clarifying questions, and Notices of Award from OregonBuys. Sealed Proposals are to be emailed to https://bidlocker.us/a/clackamascounty/BidLocker.

Submitting Proposals: Bid Locker

Proposals will only be accepted electronically thru a secure online bid submission service, **Bid Locker**. *Email submissions to Clackamas County email addresses will no longer be accepted.*

A. Completed proposal documents must arrive electronically via Bid Locker located at https://bidlocker.us/a/clackamascounty/BidLocker.
B. Bid Locker will electronically document the date and time of all submissions. Completed documents must arrive by the deadline indicated in Section 1 or as modified by Addendum. LATE PROPOSALS WILL NOT BE ACCEPTED.
C. Proposers must register and create a profile for their business with Bid Locker in order to submit for this project. It is free to register for Bid Locker.
D. Proposers with further questions concerning Bid Locker may review the Vendor's Guide located at https://www.clackamas.us/how-to-bid-on-county-projects .

Contact Information

Procurement Process and Technical Questions: Ryan Rice, rrice@clackamas.us

The Board of County Commissioners reserves the right to reject any and all Proposals not in compliance with all prescribed public bidding procedures and requirements, and may reject for good cause any and all Proposals upon the finding that it is in the public interest to do so and to waive any and all informalities in the public interest. In the award of the contract, the Board of County Commissioners will consider the element of time, will accept the Proposal or Proposals which in their estimation will best serve the interests of Clackamas County and will reserve the right to award the contract to the contractor whose Proposal shall be best for the public good.

Clackamas County encourages proposals from Minority, Women, and Emerging Small Businesses.

SECTION 2
INSTRUCTIONS TO PROPOSERS

Clackamas County ("County") reserves the right to reject any and all Proposals received as a result of this RFP. County Local Contract Review Board Rules ("LCRB") govern the procurement process for the County.

2.1 Modification or Withdrawal of Proposal: Any Proposal may be modified or withdrawn at any time prior to the Closing deadline, provided that a written request is received by the County Procurement Division Director, prior to the Closing. The withdrawal of a Proposal will not prejudice the right of a Proposer to submit a new Proposal.

2.2 Requests for Clarification and Requests for Change: Proposers may submit questions regarding the specifications of the RFP. Questions must be received in writing on or before 5:00 p.m. (Pacific Time), on the date indicated in the Schedule, at the Procurement Division address as listed in Section 1 of this RFP. Requests for changes must include the reason for the change and any proposed changes to the requirements. The purpose of this requirement is to permit County to correct, prior to the opening of Proposals, RFP terms or technical requirements that may be unlawful, improvident or which unjustifiably restrict competition. County will consider all requested changes and, if appropriate, amend the RFP. No oral or written instructions or information concerning this RFP from County managers, employees or agents to prospective Proposers shall bind County unless included in an Addendum to the RFP.

2.3 Protests of the RFP/Specifications: Protests must be in accordance with LCRB C-047-0730. Protests of Specifications must be received in writing on or before 5:00 p.m. (Pacific Time), on the date indicated in the Schedule, or within three (3) business days of issuance of any addendum, at the Procurement Division address listed in Section 1 of this RFP. Protests may not be faxed. Protests of the RFP specifications must include the reason for the protest and any proposed changes to the requirements.

2.4 Addenda: If any part of this RFP is changed, an addendum will be provided to Proposers that have provided an address to the Procurement Division for this procurement. It shall be Proposers responsibility to regularly check OregonBuys for any notices, published addenda, or response to clarifying questions.

2.5 Submission of Proposals: Proposals must be submitted in accordance with Section 5. All Proposals shall be legibly written in ink or typed and comply in all regards with the requirements of this RFP. Proposals that include orders or qualifications may be rejected as irregular. All Proposals must include a signature that affirms the Proposer's intent to be bound by the Proposal (may be on cover letter, on the Proposal, or the Proposal Certification Form) shall be signed. If a Proposal is submitted by a firm or partnership, the name and address of the firm or partnership shall be shown, together with the names and addresses of the members. If the Proposal is submitted by a corporation, it shall be signed in the name of such corporation by an official who is authorized to bind the contractor. The Proposals will be considered by the County to be submitted in confidence and are not subject to public disclosure until the notice of intent to award has been issued.

No late Proposals will be accepted. Proposals submitted after the Closing will be considered late and will be returned unopened. Proposals may not be submitted by telephone or fax.

2.6 Post-Selection Review and Protest of Award: County will name the apparent successful Proposer in a Notice of Intent to Award published on OregonBuys. Identification of the apparent successful Proposer is procedural only and creates no right of the named Proposer to award of the contract. Competing Proposers shall be given seven (7) calendar days from the date on the Notice of Intent to Award to review the file at the Procurement Division office and file a written protest of award, pursuant to LCRB C-047-0740. Any award protest must be in writing and must be delivered by hand-delivery or mail to the address for the Procurement Division as listed in Section 1 of this RFP.

Only actual Proposers may protest if they believe they have been adversely affected because the Proposer would be eligible to be awarded the contract in the event the protest is successful. The basis of the written protest must

be in accordance with ORS 279B.410 and shall specify the grounds upon which the protest is based. In order to be an adversely affected Proposer with a right to submit a written protest, a Proposer must be next in line for award, i.e. the protester must claim that all higher rated Proposers are ineligible for award because they are non-responsive or non-responsible.

County will consider any protests received and:

a. reject all protests and proceed with final evaluation of, and any allowed contract language negotiation with, the apparent successful Proposer and, pending the satisfactory outcome of this final evaluation and negotiation, enter into a contract with the named Proposer; OR
b. sustain a meritorious protest(s) and reject the apparent successful Proposer as nonresponsive, if such Proposer is unable to demonstrate that its Proposal complied with all material requirements of the solicitation and Oregon public procurement law; thereafter, County may name a new apparent successful Proposer; OR
c. reject all Proposals and cancel the procurement.

2.7 Acceptance of Contractual Requirements: Failure of the selected Proposer to execute a contract and deliver required insurance certificates within ten (10) calendar days after notification of an award may result in cancellation of the award. This time period may be extended at the option of County.

2.8 Public Records: Proposals are deemed confidential until the "Notice of Intent to Award" letter is issued. This RFP and one copy of each original Proposal received in response to it, together with copies of all documents pertaining to the award of a contract, will be kept and made a part of a file or record which will be open to public inspection. If a Proposal contains any information that is considered a **TRADE SECRET** under ORS 192.345(2), **SUCH INFORMATION MUST BE LISTED ON A SEPARATE SHEET CAPABLE OF SEPARATION FROM THE REMAINING PROPOSAL AND MUST BE CLEARLY MARKED WITH THE FOLLOWING LEGEND:**

"This information constitutes a trade secret under ORS 192.345(2), and shall not be disclosed except in accordance with the Oregon Public Records Law, ORS Chapter 192."

The Oregon Public Records Law exempts from disclosure only bona fide trade secrets, and the exemption from disclosure applies only "unless the public interest requires disclosure in the particular instance" (ORS 192.345). Therefore, non-disclosure of documents, or any portion of a document submitted as part of a Proposal, may depend upon official or judicial determinations made pursuant to the Public Records Law.

2.9 Investigation of References: County reserves the right to investigate all references in addition to those supplied references and investigate past performance of any Proposer with respect to its successful performance of similar services, its compliance with specifications and contractual obligations, its completion or delivery of a project on schedule, its lawful payment of subcontractors and workers, and any other factor relevant to this RFP. County may postpone the award or the execution of the contract after the announcement of the apparent successful Proposer in order to complete its investigation.

2.10 RFP Proposal Preparation Costs and Other Costs: Proposer costs of developing the Proposal, cost of attendance at an interview (if requested by County), or any other costs are entirely the responsibility of the Proposer, and will not be reimbursed in any manner by County.

2.11 Clarification and Clarity: County reserves the right to seek clarification of each Proposal, or to make an award without further discussion of Proposals received. Therefore, it is important that each Proposal be submitted initially in the most complete, clear, and favorable manner possible.

2.12 Right to Reject Proposals: County reserves the right to reject any or all Proposals or to withdraw any item from the award, if such rejection or withdrawal would be in the public interest, as determined by County.

2.13 Cancellation: County reserves the right to cancel or postpone this RFP at any time or to award no contract.

2.14 Proposal Terms: All Proposals, including any price quotations, will be valid and firm through a period of one hundred and eighty (180) calendar days following the Closing date. County may require an extension of this firm offer period. Proposers will be required to agree to the longer time frame in order to be further considered in the procurement process.

2.15 Oral Presentations: At County's sole option, Proposers may be required to give an oral presentation of their Proposals to County, a process which would provide an opportunity for the Proposer to clarify or elaborate on the Proposal but will in no material way change Proposer's original Proposal. If the evaluating committee requests presentations, the Procurement Division will schedule the time and location for said presentation. Any costs of participating in such presentations will be borne solely by Proposer and will not be reimbursed by County. **Note:** Oral presentations are at the discretion of the evaluating committee and may not be conducted; therefore, **written Proposals should be complete.**

2.16 Usage: It is the intention of County to utilize the services of the successful Proposer(s) to provide services as outlined in the below Scope of Work.

2.17 Review for Responsiveness: Upon receipt of all Proposals, the Procurement Division or designee will determine the responsiveness of all Proposals before submitting them to the evaluation committee. If a Proposal is incomplete or non-responsive in significant part or in whole, it will be rejected and will not be submitted to the evaluation committee. County reserves the right to determine if an inadvertent error is solely clerical or is a minor informality which may be waived, and then to determine if an error is grounds for disqualifying a Proposal. The Proposer's contact person identified on the Proposal will be notified, identifying the reason(s) the Proposal is non-responsive. One copy of the Proposal will be archived and all others discarded.

2.18 RFP Incorporated into Contract: This RFP will become part of the Contract between County and the selected contractor(s). The contractor(s) will be bound to perform according to the terms of this RFP, their Proposal(s), and the terms of the Sample Contract.

2.19 Communication Blackout Period: Except as called for in this RFP, Proposers may not communicate with members of the Evaluation Committee or other County employees or representatives about the RFP during the procurement process until the apparent successful Proposer is selected, and all protests, if any, have been resolved. Communication in violation of this restriction may result in rejection of a Proposer.

2.20 Prohibition on Commissions and Subcontractors: County will contract directly with persons/entities capable of performing the requirements of this RFP. Contractors must be represented directly. Participation by brokers or commissioned agents will not be allowed during the Proposal process. Contractor shall not use subcontractors to perform the Work unless specifically pre-authorized in writing to do so by the County. Contractor represents that any employees assigned to perform the Work, and any authorized subcontractors performing the Work, are fully qualified to perform the tasks assigned to them, and shall perform the Work in a competent and professional manner. Contractor shall not be permitted to add on any fee or charge for subcontractor Work. Contractor shall provide, if requested, any documents relating to subcontractor's qualifications to perform required Work.

2.21 Ownership of Proposals: All Proposals in response to this RFP are the sole property of County, and subject to the provisions of ORS 192.410-192.505 (Public Records Act).

2.22 Clerical Errors in Awards: County reserves the right to correct inaccurate awards resulting from its clerical errors.

2.23 Rejection of Qualified Proposals: Proposals may be rejected in whole or in part if they attempt to limit or modify any of the terms, conditions, or specifications of the RFP or the Sample Contract.

2.24 Collusion: By responding, the Proposer states that the Proposal is not made in connection with any competing Proposer submitting a separate response to the RFP, and is in all aspects fair and without collusion or fraud. Proposer also certifies that no officer, agent, elected official, or employee of County has a pecuniary interest in this Proposal.

2.25 Evaluation Committee: Proposals will be evaluated by a committee consisting of representatives from County and potentially external representatives. County reserves the right to modify the Evaluation Committee make-up in its sole discretion.

2.26 Commencement of Work: The contractor shall commence no work until all insurance requirements have been met, the Protest of Awards deadline has been passed, any protest have been decided, a contract has been fully executed, and a Notice to Proceed has been issued by County.

2.27 Best and Final Offer: County may request best and final offers from those Proposers determined by County to be reasonably viable for contract award. However, County reserves the right to award a contract on the basis of initial Proposal received. Therefore, each Proposal should contain the Proposer's best terms from a price and technical standpoint. Following evaluation of the best and final offers, County may select for final contract negotiations/execution the offers that are most advantageous to County, considering cost and the evaluation criteria in this RFP.

2.28 Nondiscrimination: The successful Proposer agrees that, in performing the work called for by this RFP and in securing and supplying materials, contractor will not discriminate against any person on the basis of race, color, religious creed, political ideas, sex, age, marital status, sexual orientation, gender identity, veteran status, physical or mental handicap, national origin or ancestry, or any other class protected by applicable law.

2.29 Intergovernmental Cooperative Procurement Statement: Pursuant to ORS 279A and LCRB, other public agencies shall have the ability to purchase the awarded goods and services from the awarded contractor(s) under terms and conditions of the resultant contract. Any such purchases shall be between the contractor and the participating public agency and shall not impact the contactor's obligation to the County. Any estimated purchase volumes listed herein do not include other public agencies and County makes no guarantee as to their participation. Any Proposer, by written notification included with their Proposal, may decline to extend the prices and terms of this solicitation to any and/or all other public agencies. County grants to any and all public serving governmental agencies, authorization to purchase equivalent services or products described herein at the same submitted unit bid price, but only with the consent of the contractor awarded the contract by the County.

SECTION 3
SCOPE OF WORK

3.1. INTRODUCTION

Clackamas County on behalf of Clackamas Water Environment Services ("District") is seeking Proposals from vendors to provide On-Call Engineering Services. This Contract is on an "on-call" or "as-needed basis" for work. When the District wishes Contractor to perform the Work, the District will submit an official County Task Order form (found at: https://www.clackamas.us/finance/terms.html) detailing the scope of work, the entity on whose behalf the Work will be performed, and the total compensation, pursuant to the fee schedule set forth in this contract. Contractor may not perform work until the County Task Order form has been executed by the parties. In the event a project authorized under the County Task Order extends beyond the expiration of this contract, the County Task Order shall remain in effect under the terms of this contract until the completion or expiration of the authorized task.

No task order shall modify or amend the terms and conditions of this contract.

Please direct all Technical/Specifications or Procurement Process Questions to the indicated representative referenced in the Notice of Request for Proposals and note the communication restriction outlined in Section 2.19.

3.2 BACKGROUND

Clackamas Water Environment Services (WES, District), an intergovernmental partnership formed pursuant to ORS 190, owns and operates over 340 miles of wastewater conveyance infrastructure and five wastewater treatment facilities serving more than 150,000 residents. WES operates and maintains this critical infrastructure in order to collect and treat waste and storm water. The engineering services resulting from this RFP will play a vital role in ensuring the continuous and safe operation of WES facilities, and ensure that WES goals are met as part of the adopted Capital Improvement Plan, Facility Plans, Sanitary Sewer System Master Plan, and Storm System Master Plan. Access to those plans can be found here: https://www.clackamas.us/wes/wes-projects.

3.3. SCOPE OF WORK

3.3.1. Scope:

Water Environment Services (District) wishes to select several consultants to provide services in one or more of the following categories:

SCOPE OF SERVICES

1) Wastewater Conveyance and Treatment Engineering

Wastewater engineering consultants to provide professional engineering services in support of projects involving the planning, design, and construction of wastewater treatment facilities, treatment processes, pump stations and force mains, gravity conveyance systems, and related facilities.

2) Water Resources Engineering
Water resources engineering to provide management, development, and conservation of water resources to ensure their sustainability and availability. It involves the design and implementation of systems for stormwater, water recovery, and sustainable watershed management.

3) Engineering Construction Services
Construction services to provide management and inspection of construction projects to ensure they are completed efficiently and safely. It involves overseeing the construction process, which includes, but is not limited to: project management, attending meetings on
WES' behalf, review of work/inspection services, independent testing, survey, regulation compliance, contractor coordination, pay application support, substantial and final completion, RFI's, document management, and startup/commissioning.

4) Wastewater Process Engineering and Operational Support
Engineering services for wastewater treatment process engineering and operational support include providing expert consultation and technical assistance on an as-needed basis to optimize treatment processes and ensure compliance with regulatory requirements. Tasks may include evaluating plant performance, troubleshooting operational issues, developing process improvement strategies, preparing technical reports, and conducting data analysis to enhance efficiency and reliability. Additional responsibilities involve recommending equipment upgrades, reviewing and designing process modifications, and offering training to operational staff. The service provider must also be available to respond promptly to urgent operational challenges and collaborate with stakeholders to maintain continuous and effective treatment operations.

Firms may submit a Statement of Qualifications (SOQ) for one or all categories. WES will assess the submitted SOQs and select the most qualified firm(s) for each category. Each selected firm will enter into a Master Contract and will be eligible to provide services in support of WES tasks, initiatives and projects under the terms of the Contract. The specific work to be performed under these Master
Contracts will be defined, budgeted, and scheduled on a task-by-task basis through Task Order sub-agreements.

Interested firms must submit SOQs. A single SOQ is required for each category the consultant is applying. Each SOQ must apply to only one company; no "teaming" of companies is permitted.

WES may reject any SOQ not in compliance with all prescribed procedures and requirements, and may cancel this solicitation or reject, for good cause, any or all SOQs upon a finding that it is in the public's best interest to do so.

3.3.2. Term of Contract:
The term of the contract shall be from the effective date through **June 30, 2030.**

3.3.3. Sample Contract: Submission of a Proposal in response to this RFP indicates Proposer's willingness to enter into a contract containing substantially the same terms (including insurance requirements) of the sample contract identified below. No action or response to the sample contract is required under this RFP. Any objections to the sample contract terms should be raised

in accordance with Paragraphs 2.2 or 2.3 of this RFP, pertaining to requests for clarification or change or protest of the RFP/specifications, and as otherwise provided for in this RFP. This RFP and all supplemental information in response to this RFP will be a binding part of the final contract.

The applicable Sample Personal Services Contract for this RFP can be found at https://www.clackamas.us/finance/terms.html.

Personal Services Contract (unless checked, item does not apply)

The following paragraphs of the Professional Services Contract will be applicable:

☐ Article I, Paragraph 5 – Travel and Other Expense is Authorized
☐ Article II, Paragraph 27 – Confidentiality
☐ Article II, Paragraph 28 – Criminal Background Check Requirements
☒ Article II, Paragraph 29 – Key Persons
☒ Exhibit A – On-Call Provision

The following insurance requirements will be applicable:

☒ Commercial General Liability: combined single limit, or the equivalent, of not less than $1,000,000 per occurrence, with an annual aggregate limit of $2,000,000 for Bodily Injury and Property Damage.
☒ Professional Liability: combined single limit, or the equivalent, of not less than $1,000,000 per occurrence, with an annual aggregate limit of $2,000,000 for damages caused by error, omission or negligent acts.
☒ Automobile Liability: combined single limit, or the equivalent, of not less than $1,000,000 per occurrence for Bodily Injury and Property Damage.
☐ Cyber Liability: combined single limit, or the equivalent, of not less than $1,000,000 per occurrence for network security (including data breach), privacy, interruption of business, media liability, and errors and omissions

Additional Personal Services Contract Terms:

Max Multiplier: 3.15
Rate Cap: $260.00
Technical Expert: Negotiated.
Subcontractor Markup: 5%
Expenses Markup: 0%
Accounting, Technology and Safety program charges are considered to be business expenses and included in the multiplier.

SECTION 4
EVALUATION PROCEDURE

4.1 An evaluation committee will review all Proposals that are initially deemed responsive and they shall rank the Proposals in accordance with the below criteria. The evaluation committee may recommend an award based solely on the written responses or may request Proposal interviews/presentations. Interviews/presentations, if deemed beneficial by the evaluation committee, will consist of the highest scoring Proposers. The invited Proposers will be notified of the time, place, and format of the interview/presentation. Based on the interview/presentation, the evaluation committee may revise their scoring.

Written Proposals must be complete and no additions, deletions, or substitutions will be permitted during the interview/presentation (if any). The evaluation committee will recommend award of a contract to the final County decision maker based on the highest scoring Proposal. The County decision maker reserves the right to accept the recommendation, award to a different Proposer, or reject all Proposals and cancel the RFP.

Proposers are not permitted to directly communicate with any member of the evaluation committee during the evaluation process. All communication will be facilitated through the Procurement representative.

4.2 Evaluation Criteria

Category	**Points available:**
Firm Resources	0-10
Local Experience	0-35
Project Team	0-40
Approach	0-15
Available points	**0-100**

4.3 Once a selection has been made, the Proposer will be required to submit its proposed fees for completion of the project. The proposed fees must be on a time and material basis with a not to exceed for each phase of the work. The proposed fees must be reasonable and fair to the County, as determined solely by the County.

During negotiation, the County may require any additional information it deems necessary to clarify the approach and understanding of the requested services. Any changes agreed upon during contract negotiations will become part of the final contract. The negotiations will identify a level of work and associated fee that best represents the efforts required. If the County is unable to come to terms with the highest scoring Proposer, negotiations shall be terminated and negotiations will begin with the next highest scoring Proposer. If the resulting contract contemplates multiple phases and the County deems it is in its interest to not authorize any particular phase, it reserves the right to return to this solicitation and commence negotiations with the next highest ranked Proposer to complete the remaining phases.

SECTION 5
PROPOSAL CONTENTS

5.1. Vendors must observe submission instructions and be advised as follows:

5.1.1. Complete Proposals must be emailed to https://bidlocker.us/a/clackamascounty/BidLocker. The subject line of the email must identify the RFP title. Proposers are encouraged to contact Procurement to confirm receipt of the Proposal.

5.1.2. County reserves the right to solicit additional information or Proposal clarification from the vendors, or any one vendor, should the County deem such information necessary.

5.1.3. The Proposal's Statements of Qualifications (SOQ) consists of the proposer's Firm Resources, Local Experience, Project Team, and Approach, as defined below in sections 5.3, 5.4, 5.5 and 5.6 respectively. To maintain the fairness and integrity of the selection process, limit the entire SOQ to the following page limit requirements:

- Limit entire SOQ for each category to 10 pages (five double-sided sheets of paper).
- Use 8 ½ x 11 paper size, in a minimum of 12 pt. font, with one-inch margins.
- Blank pages, cover letter, section separators, resumes, and the Proposal Certification do not count towards the SOQ page limit.

Provide the following information in the order in which it appears below:

5.2. Introduction:

a. Indicate the complete legal name, address, and telephone numbers (voice and fax) of your company.
b. Provide the name and telephone number of the contact person for your SOQ.
c. Provide the name and title of the person who is legally authorized to sign the Master Contract, if it is awarded to your firm.
d. State that your SOQ will be valid for a period of ninety days.
e. State the categories covered by the SOQ.

5.3. Firm Resources (10 Points):

Provide a profile of your firm and the firm-wide resources that will be available to support the performance of the work. Provide the firm's length of time in business, number of employees, and the locations of key offices supporting the project. Describe the firm's overall experience with providing professional services. Provide a brief profile of the firm and available firm resources.

5.4. Local Experience (35 Points):

Describe your company's local (Pacific Northwest Region) experience in performing the services you are proposing. Describe similar services your company has performed for a minimum of three local customers in the past five years and include the names and telephone numbers for contact persons for each of these customers. District will use the information required in this paragraph, along with the District's prior experience with the consultant, to evaluate the Local Experience selection criterion.

5.5. Project Team (40 Points):

Describe your proposed team's capability to perform the services within the category. Include the number of employees who are available to perform the work and their qualifications and level of expertise. Describe any specialized equipment or software your company owns that would be used in performing the work. Describe

specific skills and experience of key staff that provide the professional services outlined in the categories section of the RFP. Provide resumes for key staff that will have responsibility for the work. (The resumes should be included in the Appendix.) List any licenses, certifications or accreditations your company or staff holds that are relevant to the services to be performed.

5.6. Approach (15 Points)
Describe your company's approach to providing the on-call services. Describe how projects will be managed. WES will use the information required in this paragraph to evaluate the "Approach" selection criterion.

5.7 Appendices
Include resumes for staff that will be responsible for performing the proposed services, up to 12 pages in this appendix.

5.8 Completed Proposal Certification (see the below form).

EXHIBIT B
CONTRACTOR'S PROPOSAL

Brown AND Caldwell

Water Environment Services Engineering Master Contract

On-Call Engineering Services

CLACKAMAS WATER ENVIRONMENT SERVICES

February 20, 2025 // RFP#2025-01 // Categories 1 and 4

6500 S Macadam Avenue, Suite 200
Portland, OR 97239-3552
T: 503.244.7005

February 20, 2025

Ryan Rice
Contract Analyst
Clackamas County Water Environment Services

Subject: RFP #2025-01: Water Environment Services Engineering Master Contract On-call Engineering Services - Categories 1 and 4

Dear Selection Committee:

Clackamas County Water Environment Services (District) is a leader in Oregon water quality, providing wastewater and stormwater services for nearly 200,000 people and treating 7 billion gallons of wastewater per year. The District's capital improvement plan (CIP) references priorities to "**maintain** existing facilities, allow **efficient, cost-effective operations**, and provide **new infrastructure** to protect human health and clean water, today and into the future." We understand and share these priorities, and we have helped many Oregon municipal agencies fulfill their purpose over decades of experience in the Northwest.

Brown and Caldwell's (BC) team of wastewater professionals are available and eager to work with you to help **maintain**, **optimize**, and **expand** your system. Our enclosed proposal highlights our experience and approach in **Categories 1 (Wastewater Conveyance and Treatment Engineering) and 4 (Wastewater Process Engineering and Operational Support)**. We are excited and dedicated to providing you with solutions that will meet current and future protection of human health and clean water. To deliver success for the District, we plan to:

- Support you with a deep bench of committed and available wastewater professionals that will proactively identify industry trends and how that might shape the District's investments.
- Listen and respond promptly with a dedicated and efficient team to requests for engineering services.
- Provide forward-thinking solutions that offer opportunities for operational improvements and cost savings.

BC has a long history of providing on-call services for small to medium sized projects anticipated under Categories 1 and 4. Our Portland office specifically provides wastewater treatment, conveyance, process, and operational on-call services to municipalities in Oregon and southwest Washington, including Clean Water Services, Clark Regional Wastewater District, and the cities of Eugene, Salem, Lake Oswego, Wilsonville, Gresham, Vancouver, and Portland. BC's long history of working on-call contracts with Oregon municipal agencies will allow us to efficiently and strategically engage with the District.

BC recognizes the need to provide comprehensive, reliable, and responsive service to the District. Dating back to the 1990s, BC has been familiar with the District's facilities and systems, and our team is confident working with District staff. Our approach to successful project implementation through on-call contracts is based on a thorough understanding of the project objectives and staff expectations upfront.

BC's Northwest team is growing, and we're continuously adding skilled professionals to serve our clients and communities. We have current availability among experienced staff while remaining focused and committed to providing engineering and technical services to municipalities in Oregon. Our proposed contract managers and key staff have support from local multi-disciplinary teams and nationally recognized specialists with significant experience in Categories 1 and 4. Our Northwest resources are summarized in the figure below.

Elliott Mecham will be our contract manager and primary point of contact. He is knowledgeable and experienced in the execution of multidisciplinary projects and in developing projects with the teams and scopes to deliver successful outcomes. Thank you for your consideration. Should you have any questions regarding this SOQ, please contact Elliott at 503.977.6652 or by email at emecham@brwncald.com. **This SOQ is valid for 90 days.**

Very truly yours,

Brown and Caldwell

Elliott Mecham
Contract Manager

Mark Strahota
Principal in Charge
Category 1
Authorized Signature

Tim Mills
Principal in Charge
Category 4

Wastewater Conveyance and Treatment Engineering

CATEGORY 1

Brown AND Caldwell

Introduction

Primary Contact: Elliott Mecham, 503.977.6652, emecham@brwncald.com

Authorized Signatory: Mark Strahota, Director, Project Management

This SOQ is valid for 90 days.

Brown and Caldwell
6500 S Macadam Avenue, Suite 200
Portland, OR

Submitting on Category 1: Wastewater Conveyance and Treatment Engineering

Firm Resources

Brown and Caldwell's deep bench of multi-disciplinary engineers allows for comprehensive and nimble project delivery.

Brown and Caldwell (BC) has designed and implemented customized wastewater treatment facility and pump station solutions for more than 75 years. BC's core business is the planning and design of wastewater facilities, with experience at more than 400 major water resource reclamation facilities (WRRFs) across the country. Our internal systems and company structure allow easy access to our national wastewater treatment and pump station specialists and recognized industry experts, so we can bring unique solutions and an unparalleled knowledge base to partner with Clackamas Water Environment Services (District). With our significant experience in Oregon wastewater and pump station on-call assignments and Oregon-based multi-disciplinary team, we deliver comprehensive solutions tailored to local environmental and regulatory conditions.

BC creates solutions to help municipalities successfully overcome their most challenging water and environmental obstacles. Our staff includes civil, chemical, mechanical, electrical, instrumentation and controls, structural, water resources, and environmental engineers, environmental scientists, architects, and support personnel. Our Portland office team performs stormwater, wastewater, potable water, and conveyance work for agencies across the state of Oregon. We are one of the largest environmentally focused firms and a leader in adapting state-of-the-art approaches to safeguard drinking water, maintain sanitary systems, improve vital infrastructure, and restore habitats to keep our communities thriving. Our bottom line is the success of our clients.

Like the District, BC has a unique level of focus on the wastewater industry. Our design teams are passionate about **operation and maintenance centered design** and **efficient project delivery**, and and we value our long tradition of providing service to your teams and facilities. We look forward to partnering with your team to continue **improving reliability of operations** and **enabling economic growth** through utility expansion.

Figure 1 // BC Firm Profile

Local Experience

BC has decades of experience at your facilities and an experienced team to deliver results.

WRRF Upgrade, Repair, and Construction. BC is leading major facility upgrades and repair projects with multiple municipalities and service districts throughout Oregon. Our experience ranges from early planning stages, continuing through design and construction services. We have mechanical, electrical, instrumentation and control (I&C), structural, civil, and environmental engineers in-house, who are focused on wastewater engineering solutions. This broad experience provides efficient analysis and design solutions for upgrades while mitigating secondary impacts to the WRRF.

Pump Station Upgrade, Repair, and Construction. BC has a well-established reputation for excellence in pump station engineering across a wide range of pump station sizes, capacities, and hydraulic requirements. Our in-house team allows BC to develop innovative and efficient solutions for upgrading and repairing existing facilities. BC has a technical group that offers specialized in hydraulic analysis, including force main modeling. These combined resources produce cost-effective and durable infrastructure systems.

The following completed projects demonstrate our experience with similar work, providing public agencies with planning, design, and construction of wastewater treatment facilities, treatment processes, pump stations and force mains, gravity conveyance systems, and related facilities.

Price Agreement for Pump Station Improvements (PAPSI)

City of Portland Bureau of Environmental Services (BES), Oregon

BC's experience with rehabilitating and renovating existing outlying pump stations for Portland BES has allowed us to maintain and develop state-of-the industry standards for collection system facilities in the Pacific Northwest. Our recent work has included leveraging existing infrastructure while modernizing to new design standards, such as National Fire Protection Association (NFPA) 820 guidelines, and to new client driven level of service standards that incorporate security, odor control, and response time features. For the Portland BES NE 33rd Drive Pump Station, the BC team designed a unique combination of geotechnical measures to mitigate impacts of liquefaction in a seismic event. In addition to rehabilitating the existing station to include a self-cleaning trench type wet well and new standby generator, the team designed deep soil mixing and micropiles to stabilize the existing and new structures. For several other outlying pump stations, BC has helped BES envision projects from conceptual design through construction, and into successful startup and operation.

COMPLETION DATE
2023 – Ongoing

REFERENCE
Aaron Lawler, Aaron.Lawler@portlandoregon.gov, 503.823.2476

BC STAFF INVOLVEMENT
Mark Strahota, Tim Mills, Bryan Paulson, Leo Rodgers, Zack Schorr, Katie Pollock, Jim Cook, Catherine Dummer, Elliott Mecham

On-Call Asset Rehabilitation and Restoration Engineering Support

City of Gresham, Oregon

COMPLETION DATE
2023 – Ongoing

REFERENCE
Jacob Corum, jacob.corum@greshamoregon.gov, 503.618.3455

BC STAFF INVOLVEMENT
Mark Strahota, Katie Pollock, Tim Mills, Catherine Dummer, Dana Henshaw, Bryan Paulson, Jerome Duletzke, Jennifer Kersh, Marc Maisonville, Elliott Mecham

Since 2010, BC has been a trusted partner to the City of Gresham, efficiently delivering a variety of on-call wastewater projects and master services contracts. Our breadth of services and experience delivering small, focused on-call projects allows us to clearly define projects and respond quickly to Gresham's needs. Through regular communication and interaction with operations and engineering staff during frequent check-ins and site visits, BC has been able to cost-effectively meet Gresham's project-specific goals. Services have included mixing zone study planning, variable frequency drive (VFD) replacement, equipment and clarifier condition assessments, hydraulic modeling, digester gas control, digester cleaning design and inspection, stormwater system improvements, local limits evaluation, and funding support. Larger, standalone rehabilitation projects included headworks screen replacement, digestion system modernizations, thickened sludge pumping, fat, oil, and grease (FOG) system improvements, and return activated sludge (RAS) pumping and clarifier rehabilitation. BC has more recently conducted Tier II seismic evaluations of five major facilities within the Wastewater Treatment Plant (WWTP) to provide recommendations on improvements needed to maintain seismic resiliency at the WWTP.

Wastewater Treatment and Conveyance On-call Contracts

Clean Water Services, Oregon

COMPLETION DATE
2023 – Ongoing

REFERENCE
Mike Idehara, ideharam@cleanwaterservices.org, 503.547.8152

BC STAFF INVOLVEMENT
Tim Mills, Bryan Paulson, Zack Schorr, Mark Strahota, Catherine Dummer, Quinn Behnke, Rick Kelly, Katie Pollock, Elliott Mecham

BC has delivered task orders through On-Call contracts with Clean Water Services (CWS) for more than a decade. BC currently hold contracts in Wastewater Engineering, Conveyance Engineering, Water Resources, and Environmental Services. Over the past five years, we have worked on more than 24 task orders and have a holistic understanding of the service district, their staff, and their partner agencies. Our multi-disciplinary, local team has helped CWS increase redundancy, improve operator safety, and extend the service life of facilities. Our structural team has completed numerous task orders to assess the condition of existing structures and evaluate solutions and design improvements. Notable recent projects include secondary clarifier and ancillary improvements to the aeration basins and return-activated sludge (RAS) pumping system at the Forest Grove Water Resource Recovery Facility (WRRF), Fats, Oil, and Grease (FOG) Tank Replacement at the Durham WRRF, and Rock Creek Headworks Improvements.

BC has also led the Rosedale Pump Station Siting Study. To meet the needs of future development in the South Hillsboro Community, the District asked BC to prepare a Siting Study to assess design component alternatives, including an upstream gravity collection system, downstream force main, and pump station. The conveyance pipe alternatives assessment required the estimation of flows spurred by development, assessment of possible routes, and review of the required pipe diameter for 9,000 linear feet (LF) of 8- to 30-inch diameter gravity

pipe. Force main alternative routes were assessed by comparing preliminary system curves, emphasizing the hydraulic differences created by each. The siting study summarizes the alternatives, pros and cons, preliminary design requirements, and planning-level cost estimates for each design component.

On-Call Wastewater Planning and Design Services

City of Vancouver, Washington

The City of Vancouver has issued numerous task orders to BC for projects critical to their wastewater operations. BC is leading the Wastewater Solids Renewal Program planning, which seeks a more sustainable and beneficial direction for wastewater solids management that advances the City's Climate Action Framework. At the wastewater reclamation facilities, BC has collaborated with the City to address dewatering challenges, recommending high-capacity centrifuge replacement to enhance system efficiency and sustainability. In addition, BC aided the City in replacing aging headworks equipment to enhance system reliability and efficiency.

COMPLETION DATE
2023 – Ongoing

REFERENCE
Frank Dick, Frank.Dick@cityofvancouver.us, 360.487.7179

BC STAFF INVOLVEMENT
Tim Mills, Quinn Behnke, Mark Strahota, Dana Henshaw, Jim Cook, Catherine Dummer, Elliott Mecham

Minter Bridge Sanitary and Stormwater Analysis and Design

City of Hillsboro, Oregon

BC conducted sewer and stormwater conveyance capacity modeling that identified a need for capacity improvements along Minter Bridge Road. BC's initial modeling work led to defining and designing a capacity improvements project. BC collaborated with Hillsboro to separate the project into two phases to expedite portions in Minter Bridge Road to support ongoing paving work.

COMPLETION DATE
2023 – Ongoing

REFERENCE
Allison Bergseng, Allison.Bergseng@hillsboro-oregon.gov, 503.681.5248

BC STAFF INVOLVEMENT
Sam Salvia, Catherine Dummer

BC developed a dynamic hydraulic model using PCSWMM software to evaluate the Minter Bridge Road sewer shed. BC evaluated the capacity of the upstream conveyance system under both existing and projected development conditions and sanitary flow rates, including infiltration/inflow (I/I). The analysis confirmed hydraulic deficiencies throughout the system and resulted in a recommendation for targeted pipe replacement and upsizing. BC designed both gravity sewer mainlines along Minter Bridge Road and stormwater collection improvements. Design complexities included avoiding multiple existing large-diameter utility mains and coordinating difficult intersections with complex utility crossings. Phase 1, which included combining sanitary and stormwater design at a 90 percent level and coordination to meet a tight construction window, completed construction in June 2024. Phase 2 is underway and includes design and permitting of sanitary and stormwater conveyance improvements in Jacquelin Drive and a new stormwater quality control facility.

Relevant Experience. Work under this on-call contract will be performed primarily by BC team members in the Portland office, located less than 10 miles from District offices. In Table 1, we have summarized our local, recent experience with wastewater treatment and pump station on-call contracts with completed task orders for neighboring districts in Oregon and southern Washington.

Table 1 // BC's Oregon Treatment Plant and Pump Station Experience

	Area of Expertise											
Project Name + Client	Treatment plant upgrade, repair, and construction	Conveyance upgrade, repair, and construction	Structural engineering	Mechanical engineering	Electrical engineering	I&C engineering	Hydraulic engineering	Geotechnical engineering	Civil engineering	Cost estimation	Project management	Technical reports
Price Agreement for Pump Station Improvements City of Portland BES, OR		●	●	●	●	●	●	●	●	●	●	●
On-Call Repair and Replace City of Gresham, OR	●	●	●	●	●	●	●	●	●	●	●	●
Wastewater On-Call Clean Water Services, OR	●	●	●	●	●	●	●	●	●	●	●	●
Wastewater Treatment On-Call City of Vancouver, WA	●		●	●	●	●	●	●		●	●	●
Minter Bridge Sanitary Sewer Capacity Analysis and Design City of Hillsboro, OR		●					●	●	●	●	●	●
Wastewater On-Call City of Newport, OR	●	●	●	●	●	●	●	●	●	●	●	●
Price Agreement for Wastewater Engineering City of Portland BES, OR	●		●	●	●	●	●			●	●	●
Consultant of Record for General Civil Engineering City of Salem, OR	●		●	●	●	●	●	●	●	●	●	●
Consultant Support Services Discovery Clean Water Alliance/Clark Regional, WA	●		●	●	●	●	●			●	●	●

Project Team

BC brings a team with local experience coupled with support from some of our best technical specialists.

As shown in Figure 2, we have identified 17 team members to support anticipated projects under this on-call, with an emphasis on local personnel who are available to perform this work for the District. Additional resources will be added, as needed. Experience and skill summaries are provided for key team members below. Resumes for key staff listed in the table are included in the Appendix, along with any relevant licenses, certifications, and credentials.

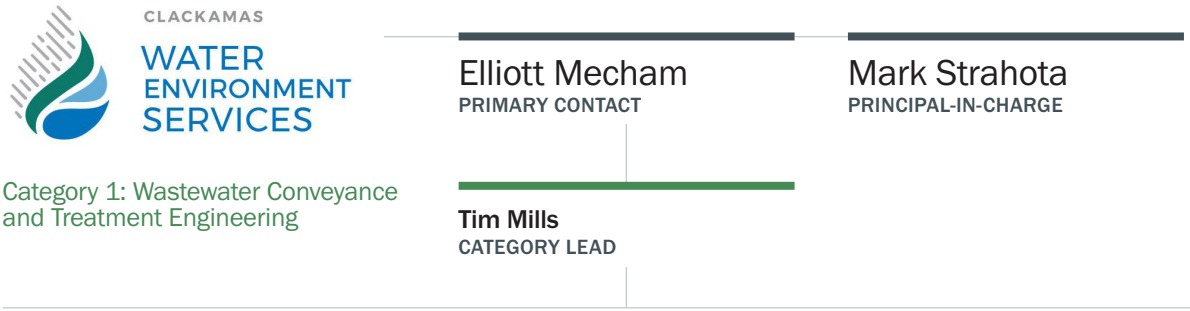


Figure 2 // Organizational Chart

Elliott Mecham, P.E.

Primary Contact

For over 20 years, Elliott has managed mutlidisciplinary teams, performed geotechnical work, and delivered complex water and wastewater projects involving deep excavations, trenchless methods, retaining walls, slope stability, seismic studies, and hazard mitigation.

Elliott has managed geotechnical work in all project phases, including conceptual engineering, final design, and construction observation. Elliott supports subconsultants and performs Quality Assurance and Quality Control (QA/QC) on deliverables, developing earthwork specifications and reviewing plans. Elliott has on-site experience at both the Tri-City and Kellogg Creek WRRFs, at District pump stations and in the distributions system, where Elliott oversaw geotechnical evaluations, and provided recommendations for earthwork, dewatering, and deep excavations. Elliott's expertise supports and contributes to efficient solutions for complex wastewater challenges.

Tim Mills, P.E.

Category Lead

Tim has provided engineering services for the planning, design, and construction of wastewater projects to clients in Oregon, Washington, and California for more than 20 years.

Tim has worked on numerous projects as the project manager or project engineer leading a multidisciplinary team of engineers. His technical focus is in solids processing, digestion, solids thickening, pumping, odor control, energy efficiency, dewatering, and renewable energy. Tim has extensive experience in managing and improving wastewater treatment facilities for Clackamas WES. He has led numerous projects, focusing on areas such as influent pump station evaluations, digester improvements, and disinfection system implementations. His expertise also includes odor control, HVAC analysis, and biosolids program optimization.

Table 2 // Additional Team Members

Name/Role	Specific Skills and Experience
Mark Strahota, P.E. Principal-in-Charge	Mark is responsible for overseeing project delivery, client service, and project quality. He will work closely with Elliott and Tim to make sure resources are available to complete your project and that BC consistently delivers high-quality work that meets your expectations.
Zack Schorr, P.E. Conveyance Lead	Zack has been serving as project manager and lead engineer for pumping system design, site civil design, site utility layout, conveyance, wastewater, and water utility projects since 2013. He has vast, local design experience, adhering to both local, state, and federal design criteria.
Katie Pollock, P.E. Treatment Lead	Katie's experience encompasses both large and small projects across several practice areas, including municipal wastewater design and water and wastewater planning projects. She has experience leading multi-discipline design teams efficiently and with a focus on quality.
Bryan Paulson, P.E. Technical Advisor - General	Bryan has more than four decades of experience in wastewater engineering. He has served as a technical advisor for the District, focusing on the planning, design, and construction management of wastewater treatment facilities. His expertise includes wastewater conveyance, liquids stream treatment, and solids handling improvements.
Rick Kelly, PhD, P.E. Technical Advisor - Wastewater	Rick is a wastewater treatment process and design engineer with experience in municipal and industrial wastewater treatment and wastewater treatment process upset. He has provided project support and expertise for many wastewater treatment projects accross the Northwest and is a guiding resource for our local wastewater teams.
Samantha Salvia, P.E. Planning Lead	Samantha is a dynamic civil engineer with experience in pump station and collection system planning, wastewater conveyance design, solids design, water resources management, and decision support. Samantha will oversee planning for wastewater treatment, collections, and conveyance projects.
Quinn Behnke, P.E. Solids & Energy Lead	Quinn specializes in mechanical systems and equipment replacement for solids and energy projects across the country. His technical focus includes energy and fluid systems, mechanical system sizing and layouts, and interdisciplinary coordination for wastewater collection and conveyance systems.
Joe Reardon, P.E. Project Engineer	Joe is a mechanical engineer and project manager with extensive experience in municipal and industrial water projects. He specializes in pumping systems and water treatment processes, including filtration, ultrafiltration, reverse osmosis, and ultraviolet (UV) treatment. He has also managed projects, coordinated design activities, performed hydraulic analysis, and performed equipment startup and commissioning.
Jennifer Kersh, P.E. Project Engineer	Jennifer's experience encompasses both large and small infrastructure projects across several practice areas. She has played a key role in the pipeline design for the Willamette Water Supply Program (WWSP) and is currently providing construction services. Additionally, she supports wastewater treatment projects, including planning and design, chemical feed, as well as experience evaluating and analyzing wastewater treatment processes.

Marc Maisonville, P.E. Electrical	Marc has extensive experience in electrical system design with challenging coordination requirements, including replacement of medium voltage switchgear, low voltage switchgear, motor control centers and variable frequency drives. Marc led the design for a plant-wide PLC and SCADA network upgrade at the Kellogg Creek Water Pollution Control Plant, and provided electrical design for biosolids handling improvements and aeration basin upgrades at the Tri-City Water Pollution Control Plant.
Alex Short I&C/Programming	Alex specializes in I&C/Programming, focusing on the efficient operation and automation of wastewater treatment systems. He brings a wide range of technical expertise in wastewater treatment. His expertise includes planning, engineering, design, and procurement for project execution during construction and commissioning phases of wastewater treatment facilities, treatment processes, pump stations, force mains, and gravity conveyance systems.
Leo Rodgers, P.E. SCADA	Leo is skilled in a broad range of PLC, HMI, and SCADA platforms, including programming, development, and implementation. He has extensive experience in designing control panels, software development for PLCs and HMIs, control system testing, documentation, commissioning, and SCADA Master Planning for wastewater treatment facilities.
Dana Henshaw, P.E. Structural	Dana has seven years of professional experience in the structural design of water and wastewater treatment plants and pumping stations, including condition assessments, detailed design, and construction support.
Dan Stewart, P.E. Building Mechanical	Dan has been designing building heating, ventilation, and air conditioning (HVAC), plumbing and roof drainage systems for 28 years. His experience includes central utility plant design with a focus on reliable, energy-efficient systems for wastewater treatment facilities.
Catherine Dummer, P.E. Cost Estimating	Catherine is a locally based engineer with extensive experience on a variety of cost-estimating projects with an emphasis on water and wastewater projects in the Pacific Northwest.

Software

BC has the equipment and software needed to provide project deliverables consistent with the District's software, database, and archiving formats. We have the expertise and extensive experience in software and programs to support the wastewater project needs for the District, including **Biowin™** and **SUMO™** for process modeling, **UNO 2Dc™** for clarifier CFD modeling, **AFT Fathom™** for pump sizing, **Visual Hydraulics™** for hydraulic profile modeling, **PCSWMM™** for collection system modeling, and **Egnyte™** for file collaboration. BC has also made significant investments in collaboration tools, such as Microsoft Teams, and OneDrive for Business that virtually connect BC staff to our clients.

In addition, our internally-developed project management tool, WorkSmart+ supports our teams with seamless project delivery (see Figure 3).

Figure 3 // BC's dynamic project management tool, WorkSmart+, helps project managers track schedule, budget, QA/QC, and communicate with the project team.

Approach

BC provides a unique combination of a strong local team with a wide range of capabilities, nationally-recognized technical specialists, and a service mindset.

The District intends to engage with a consultant to provide ongoing services for evaluation and design of rehab and improvements projects at their existing wastewater facilities. The task assignments, and urgency of each request may vary. These criteria translate call for a responsive, nimble, and multi-disciplinary team with a deep pool of resources. BC checks all those boxes.

For example, we understand that the District may consider a chemical feed project for struvite control as a project assignment via this on-call. Mark Strahota, Jennifer Kersh, and Katie Pollock all recently completed designs of three separate chemical storage and feed facilities in the Pacific Northwest. For all three projects, our chief engineers independently conducted QC reviews of the designs to confirm the design intents were achieved, and the documents were biddable and constructible. Rick Kelly, our Technical Advisor for wastewater who has taught operator education classes in struvite formation and control, was consulted for high-level guidance and the latest industry trends. Together, these teams provided optimal designs with reliable results, and they are ready to bring these skills to benefit the District.

We have other nationally recognized specialists to partner with you locally as well, whether the request is evaluation of electrical upgrades and backup power, replacement of key equipment at the treatment plant, or hydraulic analysis of a major pump station. On-call contracts require a flexible team that can mobilize quickly and stay engaged until the work is complete. BC will build teams that are committed to project goals and have the responsiveness to meet tight schedules. Our approach to infrastructure on-call contracts starts with **listening to your needs**, and our action plan is summarized in Figure 4.

RESPOND PROMPTLY with a local team that brings institutional knowledge and an understanding of the District's values and priorities.

DEFINE AND EXECUTE tasks using our proven approach to on-call contracts. The District will benefit from an effective and efficient work process.

COLLABORATE with you to develop projects informed by national technical expertise. The District and BC's top water and wastewater practitioners will work together through project completion.

Figure 4 // BC's approach to on-call projects: consistently deliver quality work on the District's timeline.

Roles and Responsibilities of BC and the District. The purpose of an on-call contract is to have a streamlined delivery approach for small to medium-sized projects. The process to identify and execute projects needs to be effective for this contracting method to be a good use of District staff time. We expect that the District will contact BC's Primary Contact (Elliott Mecham) when there may be an opportunity for BC to engage within the limits of the on-call contract. Elliott will confirm fit and applicability to available staff, and assign a Task Lead, who will act as an internal project manager to develop a scope and budget for the assignment. The District will provide necessary background information and written clarification of project objectives. BC will work closely with the District to help identify and define these projects, providing timely scoping of tasks and refinement of objectives so that the budget is used efficiently. Elliott and the Task Lead will then partner together and collaborate with the District to achieve the stated objectives.

Budget, Schedule, and Team Management. BC's task leads will use internally developed tools to track budget expenditures and provide the information required to forecast final project task costs and keep the project on course. We will monitor key project performance benchmarks and provide "real-time" project data to monitor and control costs and effectively manage each assignment, helping verify that tasks remain within budget. Our Task Leads will use our internal workload tracking system and monthly workload planning meetings to review assignments of our key staff and confirm availability to support your projects.

Quality Management. Quality is core to how BC serves our clients and our environment. We emphasize quality assurance (QA), investing time up front to plan and do the work right, starting as early as project scoping. We engage our subject matter experts early to set the project in the right direction. Our quality control (QC) process provides tailored, thorough, and independent peer review of strategies, calculations, and work products. A key component of our deliverable QC process (Figure 5) is working with you to verify critical decisions and pre-established criteria at each intermediate milestone before advancing work.

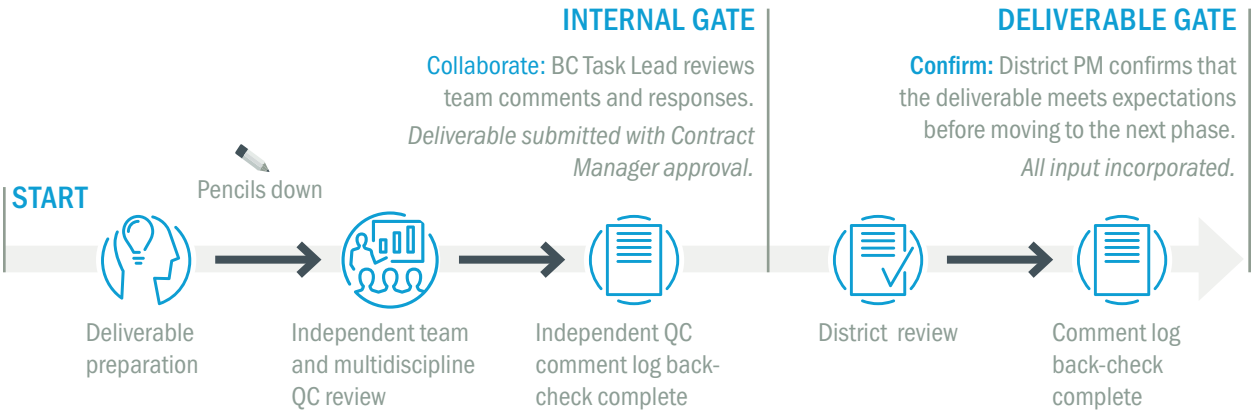


Figure 5 // BC's QA/QC process.

Wastewater Process Engineering and Operational Support

CATEGORY 4

Brown AND Caldwell

Introduction

Primary Contact: Elliott Mecham, 503.977.6652, emecham@brwncald.com

Authorized Signatory: Mark Strahota, Director, Project Management

This SOQ is valid for 90 days.

Brown and Caldwell
6500 S Macadam Avenue, Suite 200
Portland, OR

Submitting on Category 4: Wastewater Process Engineering and Operational Support

Firm Resources

Brown and Caldwell brings a nationally recognized wastewater process skill set to the District with quality local service and solutions tailored to Oregon.

Brown and Caldwell (BC) has designed and implemented customized water resource reclamation facility (WRRF) and pump station solutions for more than 75 years. BC's core business is the planning and design of wastewater facilities, with experience at more than 400 major WRRFs across the country. Our internal systems and company structure allow easy access to our national staff of wastewater process and operation specialists and recognized industry experts, so we can bring unique solutions and an unparalleled knowledge base to partner with Clackamas Water Environment Services (District). With our significant experience in Oregon wastewater on-call assignments, we deliver solutions tailored to local environmental and regulatory conditions.

BC creates solutions to help municipalities successfully overcome their most challenging water and environmental obstacles. Our staff includes civil, chemical, mechanical, electrical, instrumentation and controls, structural, water resources, and environmental engineers, solids and energy engineers, environmental scientists, architects, and support personnel. Our Portland office team performs stormwater, wastewater, potable water, and conveyance work for agencies across the state of Oregon. We are one of the largest environmentally focused firms and a leader in adapting state-of-the-art approaches to safeguard drinking water, maintain sanitary systems, and improve vital infrastructure to keep our communities thriving. Our bottom line is the success of our clients.

Like the District, BC has a unique level of focus on the wastewater industry. Our wastewater process specialists are passionate about **water quality** and **efficient operation of treatment processes**, and we value our long tradition of providing service to your teams and facilities. We look forward to partnering with your team to **continue improving performance of your facilities** and **driving down operational costs**.

Figure 1 // BC Firm Profile

Local Experience

BC's local wastewater process team has more than 50 combined years of experience in local wastewater challenges and regulatory conditions.

Local wastewater process specialists Rick Kelly and Patricia Tam have been providing the requested services for decades, and we look forward to engaging with the District to help identify and implement solutions to ongoing challenges. Category Lead Mark Strahota brings a strong background of process modeling and operational troubleshooting from across the US to serve the District locally and engage our process specialists when needed. This team has worked closely together on multiple projects, and are excited to present BC's local experience in helping other local utilities in a similar capacity.

Wastewater Process Engineering. BC serves the needs of owners and operators by delivering a rare level of technical skill and long-term perspective. We have been navigating evolving regulations and different water environment conditions across the Northwest for decades. This experience provides a broad skill set that includes modeling and optimization of every unit process that is in operation at the District's facilities. Mark's experience alone includes preliminary and primary treatment, membrane bioreactors (MBRs), attached growth systems, conventional activated sludge, chlorine disinfection, UV disinfection, water reuse, odor control, chemical storage and feed systems, anaerobic digestion, and solids handling. No matter the process challenge, BC has likely encountered and resolved it before, based on deep practice of addressing process challenges in the Northwest.

Our wastewater process team focuses first on reducing operating costs, maintaining system reliability and flexibility, and achieving regulatory compliance without capital expenditures. Although we have designed many new and expanded facilities, we know that utilities are stewards of public funding. At the Gresham WWTP, BC recently completed a design to double the ammonia removal capacity with no new concrete tanks or blowers.

Solids Modeling. Customized tools for solids process modeling have been key to BC's unparalleled reputation in the solids and energy specialty area. BC has optimized solids systems through on-call contracts for peer-organizations' facilities, including solids enhancements for digestion systems and solids facilities at Gresham, Clean Water Services, Portland, Vancouver, Clark Regional Wastewater Authority and Eugene. Tim Mills can effectively apply solutions to your facilities with his familiarity from prior digester mixing, gas management, energy efficiency, and pumping task orders at Tri-City, Metropolitan Wastewater Management Commission (MWMC), and Kellogg Creek. The proposed team is currently developing solids plans for Vancouver and Clark Regional, that include outreach to biosolids land application sites and technology evaluations for a flexible approach to manage uncertainty related to PFAS and available land application sites.

Operational Support. With a service-oriented approach and a large local team, BC can be on-site to meet with the District when needed to troubleshoot process upsets, assist with targeted sampling events, or simply gather intel for process modeling analysis. BC also develops client-specific staff trainings

on a range of topics. Rick Kelly has led or participated in more than a dozen operator process training sessions and routinely presents at operator training workshops, including the WES Short School at Clackamas Community College. The key to an engaging training session is to meet with staff to incorporate areas of interest or concern into training curricula.

Work under this on-call contract will be performed primarily by BC team members in the Portland office, located less than 10 miles from District offices. In the following paragraphs, we have summarized our recent, local experience with wastewater treatment process engineering and operational support.

Aeration System Upgrades

Metropolitan Wastewater Management Commission, Eugene, Oregon

COMPLETION DATE
2020 - Ongoing

REFERENCE
Troy McAllister, tmcallister@springfield-or.gov, 541.726.3625

BC STAFF INVOLVEMENT
Patricia Tam, Katie Pollock, Rick Kelly, Tim Mills, Marc Maisonville, Quinn Behnke

This project included an evaluation of the existing aeration system, equipment, and controls and provided a condition assessment to determine remaining useful life of all systems prior to design. An assessment of the current biological and aeration processes was conducted, including wastewater characterization and biological modeling. The objective of modeling was to identify the optimum operational modes for winter, summer (ammonia removal) and for future treatment. All this information, as well as input from plant staff on their preferences and any operations and maintenance (O&M) issues that existed, was used to develop options to modernize and rehabilitate the existing aeration system, including blowers, pumping, piping, electrical, and instrumentation and control (I&C). BC performed a business case evaluation to select a preferred project alternative and prepared a Basis of Design Report and detailed design for that alternative. Building off of this initial modeling, BC evaluated alternate modes of operation with reduced aeration basins that if implemented during construction could improve constructability of the aeration basin upgrades.

Inverness Pump Station Planning

Bureau of Environmental Services (BES), Portland, Oregon

COMPLETION DATE
2021 - 2024

REFERENCE
Dana Devin-Clarke, dana.devin-clarke@portlandoregon.gov, 503.823.7740

BC STAFF INVOLVEMENT
Tim Mills, Patricia Tam, Quinn Behnke, Rick Kelly

The Inverness System serves some of BES's most diverse community, including the ecologically important Columbia Slough, and is highly vulnerable to seismic and flooding events. The long-term planning effort developed alternatives and decision criteria to identify a solution for the Inverness System that meets BES's Levels of Service while creating environmental, community, and system benefits. Some alternatives included planning level process modeling of a new membrane bioreactor (MBR) plant, led by Patricia Tam. BC led cross-department collaboration with BES staff and facilitated workshops utilizing the multiple-criteria decision analysis (MCDA) tool to support reaching solutions that were equitable, resilient, and sustainable. BC also completed the Inverness Emergency Response Plan. When BES had a force main emergency similar to one BC simulated in a tabletop exercise, BC worked with the BES Project Manager (PM) to adjust scope and incorporated lessons learned, providing BES a more responsive plan, budget savings, and efficiency.

Wastewater Master Plan

Oak Lodge Water Services, Milwaukie, Oregon

COMPLETION DATE
2021 - 2023

REFERENCE
Brad Albert, brad.albert@olws.org, 503.353.4202

BC STAFF INVOLVEMENT
Mark Strahota, Patricia Tam, Rick Kelly, Katie Pollock, Elliott Mecham

BC led master planning for evaluation of and upgrades to the Oak Lodge Water Services (OLWS) WWTP over a 30-year planning period. The team evaluated condition, performance, and capacity of the WWTP, and developed recommendations to address short and long-term needs considering potential changes in regulatory requirements. As part of the work, BC reviewed data provided by OLWS and collected additional data to evaluate historical performance of the WWTP over a five-year period. BC also performed a condition assessment of each process unit facility at the WWTP, operations assessment of the existing facilities, capacity assessment of the existing facilities, and evaluation of alternatives to meet future flows and loads. The evaluation of the activated sludge treatment system included BioWin modeling by Patricia Tam to demonstrate compliance with more stringent effluent limits for BOD, TSS and nutrients. Mark Strahota led completion of the WWMP in February 2023, with a CIP for recommended improvements to the WWTP that included projects to address condition, capacity, and effluent discharge requirements over a 30-year planning period. BC is now working on a project to construct a new tertiary treatment facility to meet seasonal permit limits.

Upper Plant Nitrification Improvements

City of Gresham, Gresham, Oregon

COMPLETION DATE
2023 - Ongoing

REFERENCE
Rob Chapler, rob.chapler@greshamoregon.gov, 503.618.3458

BC STAFF INVOLVEMENT
Mark Strahota, Patricia Tam, Rick Kelly, Elliott Mecham

BC designed a full upgrade to the City's "Upper Plant," i.e., one half of their secondary treatment system, to accomplish full nitrification of increasing industrial ammonia loads while meeting more stringent permit limits. The design included a calibrated BioWin model of the Upper Plant, which was originally designed by BC and constructed more than 20 years ago, equalization of sidestreams from solids handling, and a conversion of the aeration system to ammonia-based aeration control (ABAC) for added capacity and efficiency. The BioWin model was calibrated through a focused on-site sampling effort by BC and the City's contract operations group. Patricia Tam led the modeling effort to evaluate aeration processes, differing load conditions, and varying seasonal conditions to plan for future flows and loads and meet future discharge limits. The project started with a spreadsheet mass balance around ammonia loads, and the scope was refined through calibrated process modeling to facilitate detailed design of a new air diffuser system, internal mixed liquor recycle system, alkalinity feed system, and filtrate pumping station. No new concrete aeration tanks or blowers were needed due to BC's innovative use of ABAC.

Wastewater Engineering On-Call

City of Tacoma, Tacoma, Washington

COMPLETION DATE
2019 - Ongoing

REFERENCE
Teresa Peterson, tpeterson@ci.tacoma.wa.us, 253.591.5766

BC STAFF INVOLVEMENT
Rick Kelly, Patricia Tam, Shannon Cavanaugh

BC has provided on-call engineering services to Tacoma for more than 20 years. Recent projects that are similar to those anticipated for the District's on-call contract includes:

Capacity Evaluation: BC prepared a comprehensive capacity evaluation for Tacoma's Central Treatment Plant (CTP). Tasks included identifying potential nutrient removal process upgrades and evaluating solids thickening and dewatering capacity.

Secondary Clarifier Optimization Evaluation: building on our previous work looking at optimizing capacity and performance of the secondary clarifiers at CTP, Rick Kelly led a task order to evaluate the condition and make recommendations for upgrades to the clarifiers. After engaging equipment manufacturers for the condition of the drives and corrosion experts for the mechanism, BC recommended and designed upgrades to the clarifiers, including replacement of their weir cleaning system, an extension of splash guards to avoid solids carryover, and additional influent ports to alleviate peak flow hydraulic issues.

Project Team

BC brings a team with local experience coupled with support from our best technical specialists.

BC knows that goals and challenges can vary week-to-week when managing water and wastewater utilities. Complex treatment systems, like those in service at the District's facilities, need a certain level of experience and focus for proper operation and enhancement. We have nationally-recognized specialists in the Pacific Northwest to partner with you for evaluation of process upsets, potential optimization measures, personnel training, and proposed facility upgrades. Our local team will provide nimble, on-demand service to facilitate direct communication and understanding of each request.

As shown in Figure 2, we have identified 10 team members to support anticipated projects under this on-call, with an emphasis on local personnel who are available to perform this work for the District. Additional resources will be added as needed. Experience and skill summaries are provided for key team members below. Resumes for key staff listed in the table are included in the Appendix, along with any relevant licenses, certifications, and credentials.

Category 4: Wastewater Process Engineering and Operational Support

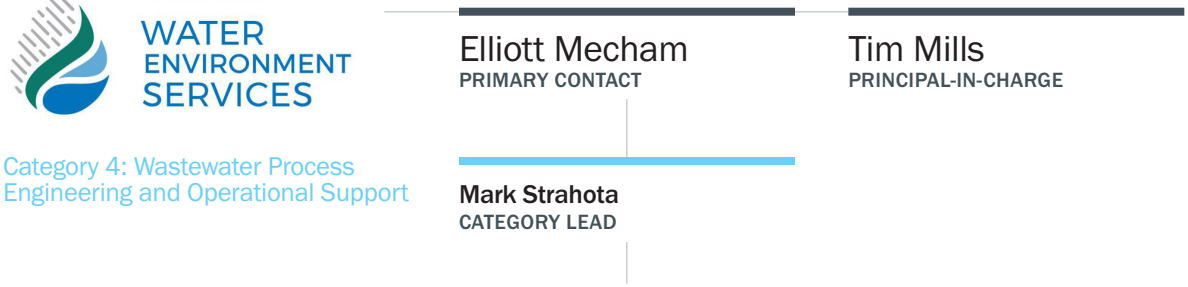


Figure 2 // Organizational Chart

Elliott Mecham, P.E.

Primary Contact

For over 20 years, Elliott has brought teams together and delivered complex water and wastewater projects involving deep excavations, trenchless methods, retaining walls, slope stability, seismic studies, and hazard mitigation.

Elliott has managed geotechnical work in all project phases, including conceptual engineering, final design, and construction observation. Elliott supports subconsultants and performs QA/QC on deliverables, developing earthwork specifications and reviewing plans. Elliott has on-site experience at both the Tri-City and Kellogg Creek WRRFs, that goes back over a decade where Elliott oversaw geotechnical evaluations, and provided recommendations for earthwork, dewatering, and deep excavations. Elliott's expertise supports and / contributes to efficient solutions for complex wastewater challenges.

Mark Strahota, P.E.

Category Lead

Mark has extensive project management experience with an emphasis on secondary treatment process optimization. He has completed dozens of BioWin models supporting evaluations and designs of conventional and nutrient removal processes.

Mark has specific experience in process modeling of biological treatment systems, fixed-film treatment systems, MBRs, nitrification and denitrification, and methods for control of foaming and bulking filamentous organisms. He specializes in operational optimization, plant capacity assessments, onsite sampling for troubleshooting, and applying this knowledge to aid design teams in optimizing performance.

Table 1 // Additional Team Members

Name/Role	Specific Skills and Experience
Tim Mills, P.E. Principal-in-Charge	Tim is responsible for overseeing project delivery, client service, and project quality. He will work closely with Elliott and Mark to make sure resources are available to complete your project and that BC consistently delivers high-quality work that meets your expectations.
Patricia Tam, P.E. Process Modeling	Patricia is a chemical engineer with 28 years of professional environmental engineering experience. She focuses mainly on process design of the biological treatment systems in municipal treatment plants and has been involved in numerous plant capacity assessments, primary and secondary clarifier testing, and aeration system design projects.
Quinn Behnke, P.E. Solids And Energy Modeling	Quinn brings experience with biosolids master planning and detailed system evaluations. His technical focus is solids and energy systems, with an emphasis on field investigation and operational evaluations to provide meaningful solutions.
Rick Kelly, PhD, P.E. Operational Support and Technical Advisor – WW Process	Rick specializes in process upset investigations, plant capacity assessments, and secondary clarifier process modeling and full-scale stress testing, applying this knowledge to aid design teams develop the details of clarifier features to optimize clarifier performance.
Katie Pollock, P.E. Project Engineer	Katie's experience encompasses both large and small projects across several practice areas, holding roles as project engineer and project manager. Her recent experience includes supporting municipal wastewater design projects, water and wastewater planning, and managing industrial wastewater pretreatment compliance.
Shannon Cavanaugh, E.I.T. Project Engineer	Shannon is a process engineer focused on optimizing wastewater treatment processes and regulatory compliance. She has experience in evaluating plant performance, troubleshooting operational issues, developing process improvement strategies, and conducting data analysis to enhance efficiency and reliability in wastewater treatment operations.
Greg Mockos, P.E. Thermal Processing	Greg has experience managing the concept development, detailed design, bidding, construction, and commissioning of complex multi-disciplinary wastewater projects. His primary focus is wastewater treatment process design and delivery of complex multi-disciplinary projects using project delivery methods such as energy performance contracting (ESCO) and design-build (DB).
Natalie Sierra, P.E. PFAS	Natalie specializes in in biosolids master planning and biosolids management with expert knowledge on biosolids regulations and end use. She has leveraged her extensive experience in biosolids management to address the unique challenges posed by PFAS contamination and has been instrumental in developing strategies for the detection, monitoring, and mitigation of PFAS in biosolids.

Specialized Equipment and Software

BC has the equipment and software needed to provide project deliverables consistent with the District's software, database, and archiving formats. We have the expertise and extensive experience in software and programs to support the wastewater project needs for the District, including **Biowin™** and **SUMO™** for process modeling, **TRIFIL®** for trickling filter process, **UNO 2Dc™** for clarifier CFD modeling, **AFT Fathom™** for pump sizing, **Visual Hydraulics™** for hydraulic profile modeling, and **PCSWMM™** for collection system modeling.

BC's Treatability Testing Laboratory is where innovation starts. Through rigorous bench- and small pilot-scale testing, the Laboratory evaluates and optimizes treatment processes of wastewater, and drinking, reclaimed, and industrial waters, when modeling software isn't quite enough. The proven test results reduce the cost and risk to implement game-changing solutions at full-scale demonstration. Based in Nashville, BC's Laboratory is unique among other environmental engineering firms as it provides clients with a greater depth, breadth, and quality of treatability testing services available on the market today.

Figure 4 // BC process expert Rick Kelly performing full-scale stress testing on a clarifier.

BC has also made significant investments in collaboration tools, such as Microsoft Teams, **Egnyte™**, and OneDrive for Business that virtually connect BC staff to our clients.

For digestion and solids system modeling, **BC's SWEET tool** is designed to evaluate and optimize the management of solids, water, and energy within wastewater treatment facilities, as summarized below. The SWEET tool has been successfully implemented in various projects, including the Vancouver, Washington Solids Planning project, where it played a crucial role in envisioning a transition to a circular economy and enhancing resource recovery.

Solids-Water-Energy Evaluation Tool (SWEET)

A tool tailored for biosolid's management evaluations

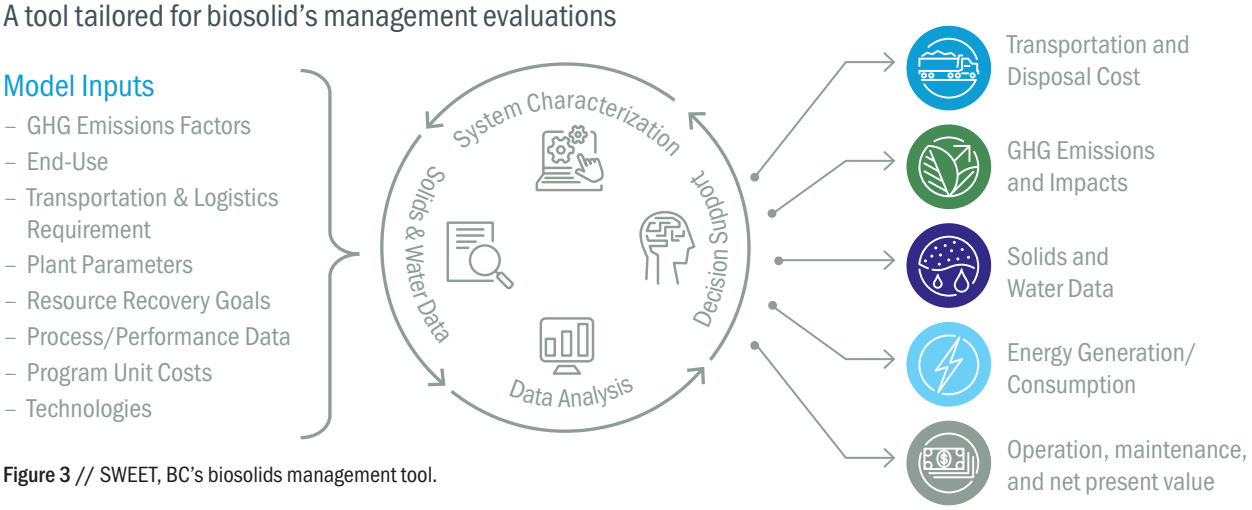


Figure 3 // SWEET, BC's biosolids management tool.

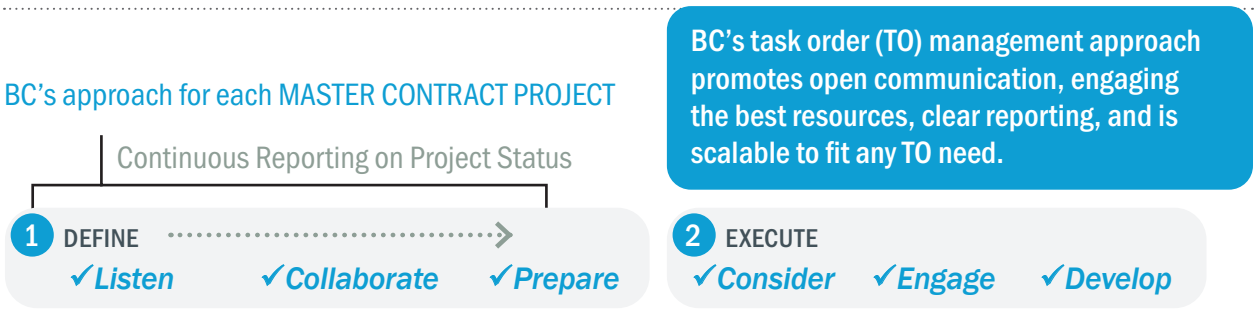
Approach

The District's treatment facilities are a cornerstone of Oregon water quality, and BC's team is ready to partner with you to optimize their performance and efficiency.

The District has identified a need to have process modeling capabilities at the ready to evaluate plant processes and confirm project approaches on a consistent basis. BC's team can provide these specialty services, and we share the District's values, including stewardship of healthy watersheds with fiscal responsibility. We are passionate about water quality, and we are dedicated to finding efficient, innovative solutions to help utilities meet their goals.

On-call contracts require a flexible and responsive team that can mobilize quickly and stay engaged until the work is complete. BC will build teams that are committed to project goals and have the responsiveness to meet tight schedules. Our approach to task orders coming from on-call contracts is summarized in Figure 5.

Figure 5 // The BC team will deliver on the District's task orders with our proven task order approach.



Roles and Responsibilities of BC and the District. The purpose of an on-call contract is to have a streamlined delivery approach for small to medium-sized projects. The process to identify and execute projects needs to be effective for this contracting method to be a good use of District staff time. We expect that the District will contact BC's Primary Contact (Elliott Mecham) when there may be an opportunity for BC to engage within the limits of the on-call contract. Elliott will confirm fit and applicability to available staff, and assign a Task Lead, who will act as an internal project manager to develop a scope and budget for the assignment. The District will provide necessary background information and written clarification of project objectives. BC will work closely with the District to help identify and define these projects, providing timely scoping of tasks and refinement of objectives so that the budget is used efficiently. Elliott and the Task Lead will then partner together and collaborate with the District to achieve the stated objectives.

Budget, Schedule, and Team Management. BC's task leads will use internally developed tools to track budget expenditures and provide the information required to forecast

final project task costs and keep the project on course. We will monitor key project performance benchmarks and provide "real-time" project data to monitor and control costs and effectively manage each assignment, helping verify that tasks remain within budget. Our Task Leads will use our internal workload tracking system and monthly workload planning meetings to review assignments of our key staff and confirm availability to support your projects.

Approach to Process Optimization and Operations Support. BC offers an approach to provide the most comprehensive and cost-effective means to meet the District's objectives, summarized below.

COST EFFECTIVE OPERATIONS

Optimization measures can be very effective in reducing chemical use, energy consumption, and O&M time. BC's team will identify ways to mnimize these operational costs.

RELIABLE PERFORMANCE

Dependable equipment and infrastructure, paired with a sound operating strategy, are keys to reliable operation. BC's specialists can simplify complex processes down to simple metrics to identify when and where action is needed.

EFFICIENT PROJECT DELIVERY

Our versatile local team can swiftly mobilize from our Portland office to address the District's needs. We will draw on our prior experience at your facilities and utilize our Pacific Northwest resources to efficiently deliver reliable results.

Quality Management. Quality is core to how BC serves our clients and our environment. We emphasize quality assurance (QA), investing time up front to plan and do the work right, starting as early as project scoping. We engage our subject matter experts early to set the project in the right direction. Our quality control (QC) process provides tailored, thorough, and independent peer review of strategies, calculations, and work products. A key component of our deliverable QC process (Figure 6) is working with you to verify critical decisions and pre-established criteria at each intermediate milestone before advancing work.

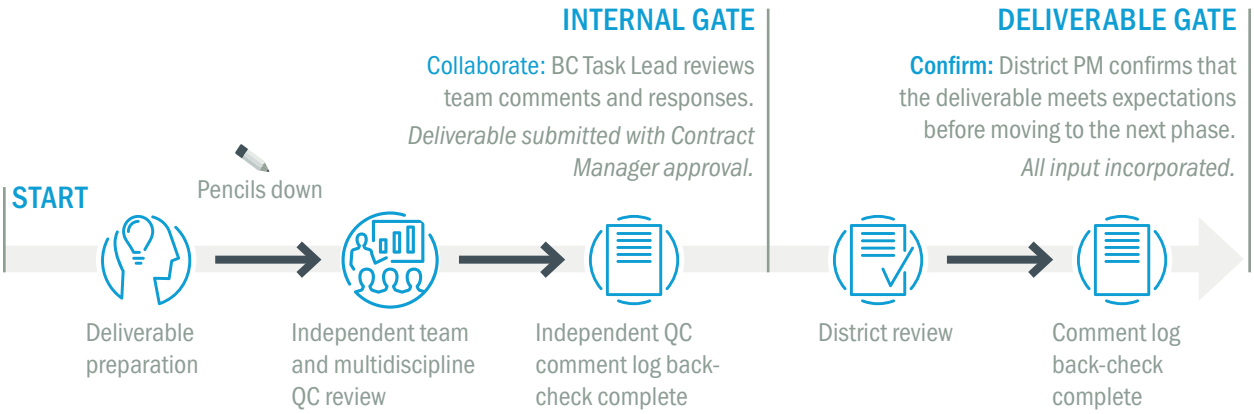


Figure 6 // BC's QA/QC process.

Resumes - Category 1

APPENDICES

Brown AND Caldwell

Mark Strahota, P.E.

Principal-in-Charge

Mark provides project management experience for wastewater conveyance and treatment on-call contracts.

He specializes in wastewater treatment process and facility design, including biological nutrient removal, process modeling, hydraulics, and collection systems. He has led design and construction teams on a variety of wastewater treatment projects, ranging in size from less than 0.1 million gallons per day (mgd) to 920 mgd.

On-Call Repair and Replace, City of Gresham, Gresham, OR

Project Manager. Mark manages BC's on-call contract with Gresham, and is currently managing multiple task orders at their facilities.

Wastewater On-Call, City of Newport, Newport, OR

Project Manager. Mark manages BC's Consultant of Record contract with Newport, and recently managed updates to their WWTP.

Columbia Boulevard WWTP Process Heating Improvements, Portland Bureau of Environmental Services (BES), OR

Project Manager. Mark has been managing a multi-disciplinary, multi-consultant project team to design a new digester heating system at the largest WWTP in Oregon.

Rock Creek Digester Cover Evaluation, Clean Water Services, Hillsboro, OR

Project Manager. As a task order for the Wastewater Treatment On-Call for Clean Water Services, Mark led the project team through an evaluation of rehabilitation versus replacement of existing digester covers, leading to detailed design of cover replacement.

Tertiary Treatment Design, Oak Lodge Water Services (OLWS), Oak Grove, OR

Project Manager. BC provided detailed design services for a new tertiary treatment facility using disc filters for a full plant wet weather capacity, including upgrades to the UV disinfection facility for operational flexibility. Mark led the project team through successful design delivery and guided OLWS through a decision-making process to identify the filtration technology.

EDUCATION

MS, Environmental and Water Resources Engineering, University of Texas at Austin, 2005

BS, Civil and Environmental Engineering, University of Cincinnati, 2003

REGISTRATION

Engineer (Civil), No. 101155PE, OR

YEARS OF EXPERIENCE

19

JOINED FIRM

2022

Elliott Mecham, P.E.

Primary Contact

For over 20 years, Elliott has led teams through complex water and wastewater projects.

Elliott serves as a geotechnical leader for BC, supporting design teams and subconsultants with geotechnical issues, constructability, and trenchless reviews and performs QA/QC on deliverables. He manages diverse teams and subconsultants to deliver projects with contract values of up $1 million. Elliott has successfully supported many of the region's leading water and wastewater agency projects.

Kellogg Creek WRRF Pump Station, Clackamas County WES, OR*

Principal-in-Charge. Elliott oversaw the design and construction of a new pump station, including subsurface condition reviews, foundation and lateral earth pressure evaluations, and construction observations.

Pump Station Rehabilitation Project, Clackamas County WES, OR*

Principal-in-Charge. Elliott evaluated the structural, mechanical, and electrical systems of multiple pump stations, added new infiltration facilities, oversaw infiltration testing and soil classification, and prepared a geotechnical data report.

On-Call, Clean Water Services, Washington County, OR

Contract Manager/Task Order Project Manager. Elliott managed the new pump station project, oversaw the expansion and remodel of the Operations and Maintenance Building at the Durham AWWTF, and provided trenchless recommendations, geotechnical site characterization, and team management.

Willamette Interceptor Connector, Clackamas County WES, OR

Principal-in-Charge/Project Manager. Elliott led geotechnical explorations and provided trenchless evaluations and specifications for a new Abernethy Bridge sewer line.

EDUCATION

BS, Civil Engineering, Utah State University, 1999

MS, Civil Engineering, University of Texas, Austin, 2001

REGISTRATION

Engineer (Civil), OR 77330PE

YEARS OF EXPERIENCE

24

JOINED FIRM

2024

* *project performed while at another firm*

Tim Mills, P.E.

Category Lead

Tim leads engineering teams in the delivery of planning, design, and engineering services during construction of wastewater projects.

He has worked on numerous projects throughout Oregon, Washington, and California for over 20 years, leading multidisciplinary teams. He has served as contract manager for on-call contracts for the wastewater facilities of Vancouver, Gresham, Clean Water Services, Portland, and Newport.

EDUCATION
BS, Civil Engineering, Oregon State University, 2003

REGISTRATION
Engineer (Civil), No. 72538, OR

YEARS OF EXPERIENCE
22

JOINED FIRM
2002

Vancouver Solids Planning, City of Vancouver, WA

Project Manager. Tim led the planning team and successfully guided them through the decision process to develop alternatives that align investments with City values. This includes a recommendation to replace the incinerator with a new resource recovery facility.

Digester improvements and Waste Gas Flare Replacement, Kellogg Creek Water Pollution Control Plant, Clackamas County WES, OR

Project Engineer. The project included installation of a new waste gas flare, coordinated with plant operations, and conducted startup and performance testing.

Odor Control Study, Kellogg Creek Water Pollution Control Plant, Clackamas County WES, OR

Project Engineer. An odor study was conducted to determine the severity and speciation of odors emanating from the treatment plant's processes and the upstream collection system to deterimine if it impacted off-site air quality.

Digester Improvements and Flare Projects, Tri-City Water Pollution Control Plant, Clackamas County WES, OR

Project Engineer. The project included new digested solids recirculation pumps, mixing system, heat exchanger cleaning, hot water loop improvements, digester feed control valves, waste gas burner and radar level instruments.

Zack Schorr, P.E.

Conveyance Lead

Zack is a civil engineer and project manager leading projects across various engineering disciplines.

He has experience in municipal site, utility, water, wastewater, and stormwater design. Whether it is wastewater pump stations, heavy civil design, multi-stakeholder or design discipline coordination, or complex stormwater design, he consistently provides innovative technical solutions across the Portland Metro area.

EDUCATION
BS, Agricultural and Biological Engineering, The Pennsylvania State University, 2013

REGISTRATION
Engineer (Civil), No. 57412, WA

YEARS OF EXPERIENCE
12

JOINED FIRM
2024

Wastewater On-Call, Rosedale Pump Station, Clean Water Services, Hillsboro, WA

Deputy Project Manager/Civil Engineer. Zack coordinated with private and public stakeholders, and provided updates to gravity and forcemain alignments. Design constraints included high groundwater, private development coordination, private property owners, easement acquisition, high groundwater, and close proximity to critical.

Price Agreement for Pump Station Improvements On-Call, Portland BES, Portland, OR

Project Manager/Lead Civil Engineer. Through this on-call contract, Zack has provided project management, civil site design, utility design, alternatives analysis, detailed design, through the project life cycle of four pump station projects.

Large Sanitary Sewer Replacement Project (LSSRP), Portland BES, Portland, OR

Lead Civil Engineer. Zack supported BES on the LSSRP, providing design, QA/QC, and support for multiple large diameter sewer projects.

4014 Oak Street Pump Station Upgrade, City of Longview, Longview, WA

Project Manager/Design Manager. Zack managed the design and rehabilitation of wastewater pump stations, including basin analysis, wetwell design, pump selection, and coordination with subconsultants.

Katie Pollock, P.E.

Treatment Lead

Katie's experience encompasses both large and small projects across several practice areas holding roles as project engineer and project manager.

Her recent experience includes supporting municipal wastewater design projects and water and wastewater planning projects. Outside of consulting projects, she has worked directly for the City of Portland managing industrial wastewater pretreatment permits.

Gresham Disinfection, City of Gresham, Gresham, OR

Project Engineer. Katie led the chlorine analyzer alternatives analysis, prepared the predesign report, and contributed to drawings and specifications. She continues to support construction by tracking, routing, and reviewing submittals and requests.

Alderwood Pump Station Replacement, City of Portland BES, Portland, OR

Project Engineer/Deputy Project Manager. BC is providing siting study and design services for a new pump station that meets BES level of service goals and Port of Portland land use requirements. Katie participated in meetings, site visits, and workshops, prepared graphical layouts, and presented alternatives analysis in a technical memo and matrix. Katie is also supporting the management of a multi-discipline sub-consultant design team during pre-design of the new pump station.

Columbia Boulevard WWTP Process Heating Improvements, City of Portland BES, Portland, OR

Project Engineer/Deputy Project Manager. Katie led the preparation of the basis of evaluation report, coordinated contributions from project team members, and subconsultants, and leads weekly design calls and design workshops.

Digester Cover Replacement, Clean Water Services, Hillsboro, OR

Deputy Project Manager. BC designed a digester cover replacement. Katie co-facilitated client check-ins, reviews of deliverables, and management of a multi-discipline team.

EDUCATION

BS, Environmental Engineering, Portland State University, 2016

AAS, Environmental Health and Safety, Mt. Hood Community College, 2007

REGISTRATION

Engineer (Environmental), No. 104602PE, OR

YEARS OF EXPERIENCE

11

JOINED FIRM

2022

Samantha Salvia, P.E.

Planning Lead

Samantha is a dynamic civil engineer with experience in infrastructure planning, water resources management, and decision support.

She excels in strategic communication and long range planning, helping utilities navigate complex projects to successful implementation. Her experience working in the public sector early in her career provides her with a better understanding of utility perspectives. She provides clients with strategic guidance and oversees planning efforts for complex, multi-benefit, and multi-agency projects.

EDUCATION

MS, Environmental Fluid Mechanics and Hydrology, Stanford University, 1999

BA, Philosophy, Politics, and Economics, University of Oxford (Rhodes Scholar), 1998

BS, Civil Engineering, Old Dominion University, 1996

REGISTRATION

Civil Engineer, OR, 93962

YEARS OF EXPERIENCE

20

JOINED FIRM

2022

Sanitary Sewer Master Plan, City of Hillsboro, Hillsboro, OR

Project Manager. Samantha oversaw preparation of the City's Sanitary Sewer Master Plan (SSMP), including prioritizing capital improvement program (CIP) projects and conducting a staffing and operations and maintenance (O&M) gap analysis. The SSMP will serve as a guiding document for the City's future collection system improvements over the next 10 years. Samantha's team identified current system deficiencies and developed recommended improvements to rehabilitate or replace the assets.

Wastewater Solids Renewal Planning, City of Vancouver, Vancouver, WA

Planning Lead. Samantha is leading a planning process to assist Vancouver in transitioning from incineration of wastewater solids to resource recovery to address aging infrastructure and align with Vancouver's climate goals. The work includes establishing a decision framework, developing alternatives, facilitating workshops with a multi-departmental team, and briefing City Council.

Inverness Pump Station Planning, City of Portland BES, Portland, OR

Deputy Project Manager. Samantha oversaw the long-term planning effort to develop and evaluate conveyance and treatment alternatives for the critical Inverness System pumping system that could meet the City's Levels of Service goals while creating environmental, community, and system benefits.

Quinn Behnke, P.E.

Solids + Energy Lead

Quinn specializes in wastewater solids and digester gas engineering for projects across BC.

He brings experience in mechanical system design and equipment replacement projects. His technical focus is solids and digester gas systems, including the evaluation, design, and support during construction. He specializes in interdisciplinary design for successful delivery of complex retrofit projects.

EDUCATION
BS, Mechanical Engineering, University of Southern California, 2012

REGISTRATION
Engineer (Mechanical), No. 94228PE, OR

YEARS OF EXPERIENCE
11

JOINED FIRM
2018

Salmon Creek Treatment Plant Dewatering Equipment Replacement, Discovery Clean Water Alliance, Vancouver, WA

Process Mechanical Lead/Design Manager. Quinn led the initial evaluation of the dewatering process, including performing a mass balance, reviewing sludge dewaterability, and generating loading projections. BC prepared an Engineering Report and is currently designing the equipment retrofit in the existing solids building. Quinn is managing the design and overseeing process mechanical elements.

South Treatment Plant Near-Term Biogas Improvements, King County, Seattle, WA

Process Mechanical Engineer. Quinn led the design of a new gas flashing vessel, replacement desiccant dryers, and replacement scrubbing water pumps for the system. This project will help the County maintain uptime of the system and reduce associated maintenance.

Durham Fats, Oils, and Grease Tank Retrofit, Clean Water Services, Tigard, OR

Deputy Project Manager/Project Engineer. BC evaluated tank repair and replacement options and designed two new stainless-steel storage tanks, including a new drum screen and lobe pump to streamline fats, oils, and grease (FOG) receiving activities. Quinn led the process mechanical design, managed the design team, and oversaw construction services, including troubleshooting equipment operation.

Joe Reardon, P.E.

Project Engineer

Joe is a mechanical engineer and project manager with experience across a wide range of municipal and industrial water projects.

He has experience managing projects, coordinating design activities, performing hydraulic analysis, providing services during construction, and participating in equipment startup. Joe also brings recent experience in wastewater conveyance projects.

- **North Brushy Creek Wastewater Intercept, City of Leander, Leander, TX**// *Project Manager.*
- **Lander Street Water Reclamation Facility Phase 2, City of Boise, ID**// *Project Engineer.*
- **Storm Sewer Improvements, Griswold, City of, Griswold, IA**// *Assistant Project Manager.*

EDUCATION
BS, Mechanical Engineering, Georgia Institute of Technology, 2011

MA, Business Administration, Emory University, 2021

REGISTRATION
Engineer (Mechanical), No. 106310PE, OR

YEARS OF EXPERIENCE
13

JOINED FIRM
2024

Jennifer Kersh, P.E.

Project Engineer

Jennifer's experience encompasses both large and small infrastructure projects across several practice areas.

Her expertise as both a project engineer and manager lead to insightful and effective performance in many types of roles. Jennifer is building experience in wastewater treatment project efforts, including designs for various upgrades and replacements, local limits evaluations, and master planning.

- **Upper Plant Nitrification Improvements, City of Gresham, Gresham, OR**// *Project Engineer.*
- **Wastewater Treatment Master Plan (Phase II), City of Newport, Newport, OR**// *Project Engineer.*
- **Tertiary Treatment Design, Oak Lodge Water Services, Portland, OR**// *Project Engineer.*

EDUCATION
MS, Civil Engineering, University of Washington, 2018

BS, Chemical Engineering, Washington State University, 2016

REGISTRATION
Engineer, No. 102621PE, OR

YEARS OF EXPERIENCE
5

JOINED FIRM
2019

Marc Maisonville, P.E.

Electrical

Marc has extensive experience in electrical engineering for WWTPs.

He provides electrical engineering and instrumentation and controls (I&C) engineering for design, commissioning, startup, O&M, field testing, electrical systems, and plant control systems.

- **Kellogg Creek Water Pollution Control Plant Improvements, Clackamas County WES, OR**// *Electrical/I&C Designer.*
- **Tri-City Water Pollution Control Plant: Biosolids Handling Improvements, Clackamas County WES, OR**// *Designer.*
- **Wastewater Treatment Plant Expansion, City of Gresham, Gresham, OR**// *Field Support.*

EDUCATION

BAppSc, Electrical Engineering, University of Vancouver, British Columbia, Canada, 1980

BS, Honors Physics, University of British Columbia, Vancouver, British Columbia, Canada, 1978

REGISTRATION

Engineer (Electrical), No. 42250, WA

YEARS OF EXPERIENCE

39

JOINED FIRM

2000

Alex Short

I&C/Programming

Alex specializes in I&C/programming, focused on operation and automation of wastewater treatment systems.

His expertise includes planning, engineering, design, troubleshooting and procurement during construction and commissioning for wastewater treatment facilities, processes, pump stations, force mains, and gravity conveyance systems.

- **I&C Effort, Kansas City Regional, Sedalia, MO**// *Project Manager/ Lead Design Engineer/Commissioning Lead.*
- **Data Center Water Systems for Clean and Wastewater, Prineville, OR**// *Project Lead Commissioning Engineer.*
- **Controls Engineer, Industrial Semiconductor Facilities, Nationwide**// *Lead Controls Engineer.*

EDUCATION

BS, Mechanical Engineering, Washington State University, 2006

AAS, Instrumentation and Process Control, Lower Columbia College, 2008

BS, Project Management, University of Seattle, 2009

Project Management Certificate, Oregon State University, 2020

YEARS OF EXPERIENCE

19

JOINED FIRM

2005

Leo Rodgers, P.E.

SCADA

Leo has a strong background in SCADA master planning, standards development, and systems documentation.

He excels in designing control panels, software development for programmable logic controllers (PLCs) and Human Machine Interfaces (HMIs), control system testing, documentation, commissioning, and migration developments.

- **Technical Project Specification Automation Master Plan, City of Portland BES, Portland, OR**// *Technical Lead.*
- **Smart Utility/SCADA Roadmap and Implementation Plan, Confidential Client, Portland, OR** // *Automation Lead.*
- **Eastern Group Automation Program, Arizona Water Company, Phoenix, AZ**// *Automation Lead.*

EDUCATION
BS, Electrical Engineering, Seattle University, 2007

REGISTRATION
Engineer (Control Systems), No. 20100394, WA

YEARS OF EXPERIENCE
17

JOINED FIRM
2021

Dana Henshaw, P.E.

Structural

Dana brings extensive experience in structural design of wastewater treatment plants.

His experience includes design of pumping stations, condition assessments for existing facilities, and detailed design and construction support for new structures.

- **Kellogg Creek Water Pollution Control Plant Improvements, Clackamas County WES, OR**// *Structural Engineer.*
- **Dewatering and Solids Processing, Metro Wastewater Reclamation District, Denver, CO**// *Structural Engineer.*
- **Aeration Basin Improvements, Metropolitan Wastewater Management Commission, Eugene-Springfield, OR**// *Structural Engineer.*

EDUCATION
MS, Civil Engineering, Purdue University, 2012

BS, Civil Engineering, Portland State University, 2011

REGISTRATION
Engineer (Civil), No. 84900PE, OR

YEARS OF EXPERIENCE
10

JOINED FIRM
2016

Dan Stewart, P.E., LEED AP

Building Mechanical

Dan is BC's national building mechanical specialty leader.

He designs building heating, ventilation, and air conditioning (HVAC), plumbing, and roof drainage systems. His experience with HVAC and energy modeling helps clients select reliable, energy efficient systems.

- **Water Reclamation Facility Expansion, Big Creek Water Reclamation Facility, Fulton County, GA**// *Lead Plumbing Engineer.*
- **Solids Pretreatment Facility, San Francisco Public Utilities Commission, San Francisco, CA**// *Lead Building Mechanical Engineer.*
- **Potomac Yard Pump Station, AlexRenew, Alexandria, VA**// *Lead Building Mechanical Engineer.*

EDUCATION
BS, Mechanical Engineering, Iowa State University, 1995

REGISTRATION
Engineer (Mechanical), No. 93592PE, OR

YEARS OF EXPERIENCE
30

JOINED FIRM
2020

Catherine Dummer, P.E.

Cost Estimating

Catherine brings wastewater design and operations experience to her role.

During Catherine's career, she has focused primarily on wastewater system evaluation and design with an emphasis on both WWTP operations and construction inspection. Catherine has worked on a variety of projects with an emphasis on local wastewater projects.

- **Kellogg Creek Water Pollution Control Plant Improvements, Clackamas County WES, OR**// *Lead Estimator.*
- **Inverness Pump Station Planning, City of Portland, Bureau of Environmental Services, Portland, OR**// *Lead Estimator.*
- **Lower Blower Building Rehabilitation and Bar Screens Replacement, Gresham Wastewater Treatment Plant, City of Gresham, Gresham, OR**// *Lead Estimator.*

EDUCATION
MS, Environmental Engineering, Washington State University, 1996

BS, Mechanical Engineering, Oregon State University, 1993

REGISTRATION
Engineer (Mechanical), No. 58548PE, OR

YEARS OF EXPERIENCE
28

JOINED FIRM
2008

Bryan Paulson, P.E.

Technical Advisor - General

Bryan has more than four decades of experience in wastewater engineering.

He has been involved in the planning, design, and construction management of many wastewater treatment facilities. His expertise includes wastewater conveyance, liquids stream treatment, and solids handling improvements.

- **Wastewater Treatment Engineering, Clean Water Services, Washington County, OR**// *Contract Manager/Technical Advisor.*
- **Solids Process Improvements: Gresham WWTP, City of Gresham, Gresham, OR**// *Project Delivery Officer/Technical Advisor.*
- **Influent Pump Station Capacity Improvements, City of Portland, BES, Portland, OR**// *Project Manager.*

EDUCATION
BS, Civil Engineering, Oregon State University, 1976

REGISTRATION
Engineer (Civil), No. 10899, OR

YEARS OF EXPERIENCE
43

JOINED FIRM
1980

Rick Kelly, Ph.D., P.E.

Technical Advisor - Wastewater

Rick is a wastewater treatment process and design engineer with municipal and industrial experience.

He has experience in process modeling of biological treatment systems; nitrification, denitrification, and phosphorus removal; WWTP design; plant capacity assessments, solids mass balances, stress testing, solids thickening, dewatering equipment, and hydraulic profiling.

- **Rock Creek Secondary Clarifier Project, Clean Water Services, Hillsboro, OR**// *Process Engineer.*
- **Trickling Filter Mechanism Replacement, City of Salem, OR**// *Lead Process Engineer.*
- **Aeration Basin Improvements, Metropolitan Wastewater Management Commission, Eugene-Springfield, OR**// *Lead Process Engineer.*

EDUCATION
PhD, Civil Engineering, Virginia Polytechnic Institute and State University, 2005

MS, Civil Engineering, Virginia Polytechnic Institute and State University, 2002

BS, Civil Engineering, Bucknell University, 2000

REGISTRATION
Engineer (Civil), No. 84102PE, OR

YEARS OF EXPERIENCE
19

JOINED FIRM
2005

Resumes - Category 4

APPENDICES

Brown AND Caldwell

Elliott Mecham, P.E.

Primary Contact

For over 20 years, Elliott has brought teams together and delivered complex water and wastewater projects.

He serves as a geotechnical National Specialty leader for BC, supporting geotechnical project work and performing QA/QC on deliverables. Elliott has successfully worked with local engineering firms and supported many of the region's leading water and wastewater agency projects.

EDUCATION
BS, Civil Engineering, Utah State University, 1999

MS, Civil Engineering, University of Texas, Austin, 2001

REGISTRATION
Engineer (Civil), No. 77330PE, OR

YEARS OF EXPERIENCE
24

JOINED FIRM
2024

Kellogg Creek WRRF Plant Pump Station, Clackamas County WES, OR*

Principal-in-Charge. The project included designing and constructing a new eight- by 20-foot pump station, including three pumps and associated piping, with a 15-foot-deep wet well. Elliott provided principal review and oversight for the subsurface conditions and subsoil properties (including the potential for encountering groundwater), evaluated and developed shallow foundation recommendations, evaluated and developed lateral earth pressures (including a seismic component), and provided construction considerations for the new pump station. During construction Elliott oversaw construction observations of shoring and subgrade and provided input on construction submittals.

Pump Station Rehabilitation, Clackamas County WES, OR*

Principal-in-Charge. The project included an evaluation of the structural, mechanical and electrical systems of multiple pump stations and adding new infiltration facilities at the South Welches Pump Station. Elliott oversaw the infiltration testing, hand augers, and laboratory testing to measure the infiltration rate and classify the soils. He also prepared a geotechnical data report documenting our findings.

On-Call, Clean Water Services, Washington County, OR*

Contract Manager/Task Order Project Manager. Elliott was responsible for project management of the on-call task orders and responsible for managing the team providing trenchless recommendations, geotechnical site characterization, and recommendations for pump station foundation and seismic design to the BC Design Team. During construction he managed Requests for Information (RFI's) and the geotechnical construction observations.

* *project performed while at another firm*

Tim Mills, P.E.

Principal-in-Charge

Tim has been responsible for overseeing project delivery, client service, and project quality for many Portland area clients.

He leads wastewater engineering teams through delivery of planning, design, and engineering services during construction. He has worked on numerous projects throughout Oregon, Washington, and California for over 20 years, leading multidisciplinary teams. He has served as contracts manager for on-call contracts for Clean Water Services, Portland, Vancouver, and Gresham.

EDUCATION
BS, Civil Engineering, Oregon State University, 2003

REGISTRATION
Engineer (Civil), No. 72538, OR

YEARS OF EXPERIENCE
22

JOINED FIRM
2002

Inverness System Planning, City of Portland, Bureau of Environmental Services (BES), Portland, OR

Project Manager. The Inverness System Assets were outdated and needed repair. BC is currently evaluating alternatives with BES for long-term improvements to the Inverness System, including alternatives ranging from a new pump station and forcemains to wastewater treatment and recourse recovery. The planning effort includes multiple phases to address needs, including an Emergency Response Plan to be organized and best prepared for a response. A Short-term Risk Management Plan is drafted to identify improvements to reduce risk over the next 10-15 years prior to implementation of the recommendations in the Long-Term Master Plan. The Long-Term Master Plan included the development of a core planning team comprised of representatives from multiple BES working groups and Level of Service goals informed by the City's values and strategic objectives. Tim led the consultant portions of the planning effort in close collaboration with City of Portland staff.

Wastewater Solids Planning, City of Vancouver, Vancouver, WA

Project Manager. Tim led the planning team and successfully guided them through the decision process. The outcome so far is the development of alternatives that align investments with the values of the City. The includes a recommendation to replace the incinerator with a new resource recovery facility.

Mark Strahota, P.E.

Category Lead

Mark provides project management experience in wastewater process planning and design.

He specializes in wastewater treatment process and facility design, including biological nutrient removal, process modeling, hydraulics, and collection systems. He has led design and construction teams on a variety of wastewater treatment projects from headworks to disinfection, ranging in size from less than 0.1 mgd to 920 mgd. He also has experience in the OneWater sector, including reclaimed water system master planning, and treatment design for Class A reuse.

Upper Plant Nitrification Improvements, City of Gresham, Gresham, OR

Project Manager. Mark is leading the project team through detailed design of proposed improvements to the City of Gresham's Upper Plant for reliable nitrification to handle influent industrial loads and meet anticipated permit limits. Completed tasks include process model calibration sampling, hydraulic evaluations, aeration evaluation, staffing evaluations, and operational considerations.

91st Avenue Wastewater Treatment Plant 2B Upgrades, City of Phoenix, Phoenix, AZ

Process Design Lead. Mark led the design of upgrades to a major portion of the 91st Ave wastewater treatment plant (WWTP). Design includes upgrades to aeration basins, including the aeration system, internal mixed liquor recycle (IMLR) pumping optimization, circular primary and rectangular secondary clarifier mechanism replacement, and process and hydraulic modeling of the entire Plant 2B.

Bowery Bay WWTP Master Plan, New York City Department of Environmental Protection, New York, NY

Project Engineer. Conducted master planning level wastewater process modeling to identify alternatives for further analysis and design. Evaluations included ammonia-based DO control, gravity belt thickeners for WAS, sidestream treatment with ANNAMOX technologies, and secondary settling optimization.

EDUCATION

MS, Environmental and Water Resources Engineering, University of Texas at Austin, 2005

BS, Civil and Environmental Engineering, University of Cincinnati, 2003

REGISTRATION

Engineer (Civil), No. 101155PE, OR

YEARS OF EXPERIENCE

19

JOINED FIRM

2022

University Park Water Reclamation Facility Upgrade, Pennsylvania State University, University Park, PA

Design Lead. Mark led civil and mechanical design for this $70 million progressive design build project to replace the existing WRF with a new 3 mgd MBR plant with biological nutrient removal. Designed inherent flexibility and scalability in treatment processes for widely variable influent conditions associated with the academic schedule. Oversaw construction progress and assisted contractor with planning for maintenance of plant operations (MOPO), submittal reviews, RFI responses, site inspections and startup assistance.

Throop WWTP Aeration Study and Blower Replacement, Lackawanna River Basin Sewer Authority, Throop, PA

Project Manager. Mark led a comprehensive evaluation of the aeration system at this 10 mgd BNR plant, including multistage centrifugal blowers, turbo blowers, air headers, and fine bubble ceramic disc diffusers. Study was followed by a detailed design to replace an existing multistage centrifugal blower with a new turbo blower.

Kuwahee WWTP Industrial Pretreatment Study, Knoxville Utilities Board, Knoxville, TN

Design Leader. Mark led a team of engineers in field sampling and evaluation of this 60 million gallons per day (mgd) WWTP to determine impacts of a major industrial user in the service area. Evaluation included process modeling using BioWin, data analysis, and state point analyses of clarifiers.

WWTP Capacity Upgrade, Borough of Lansdale, Lansdale, PA

Project Manager. Mark led a wastewater process model calibration and design of a capacity expansion at this 4.5 million gallons per day (mgd) biological nutrient removal (BNR) plant, which receives peak flows up to 40 mgd. Design included a new aeration system with all new piping and disc diffusers, as well as a new influent pump station with submersible pumps and force main with 15 mgd capacity.

Tertiary Treatment Design, Oak Lodge Water Services, Oak Grove, OR

Project Manager. BC delivered detailed design services for a new tertiary treatment facility using disc filters for the full plant wet weather capacity (approximately 20 mgd). The project also included upgrades to the UV disinfection facility for flow monitoring and operational flexibility. Mark led the project team to successful design delivery and guided OLWS through a decision-making process to identify the filtration technology.

Patricia Tam, P.E.

Process Modeling

Patricia focuses on process design of the biological treatment systems in municipal WWTPs.

She has experience in plant capacity assessment, aeration system design, nutrient removal, and hydraulic modeling. As a project manager and process lead, she has successfully helped clients navigate complex facility planning and rehabilitation projects.

EDUCATION
MS, Environmental Engineering, University of Washington, 1995

BS, Chemical Engineering, University of California at San Diego, 1993

REGISTRATION
Engineer (Chemical), No. 35722, WA

YEARS OF EXPERIENCE
28

JOINED FIRM
1996

Aeration System Upgrades, Metropolitan Wastewater Management Commission, Eugene-Springfield, OR

Lead Process Engineer. BC provided engineering services to design improvements to the Metropolitan Wastewater Management Commission (MWMC) Water Pollution Control Facility (WPCF) aeration system to enhance operability and increase energy efficiency. Patricia led the secondary system process assessment as part of the Aeration Basin Improvements project to improve operability and increase energy efficiency at the MWMC water pollution control facility. Patricia first provided calibration of the biological process simulator using special sampling data. Using the calibrated simulator, Patricia then provided evaluation of the performance of the current secondary system, determined the optimal operational configuration in terms of energy efficiency, and estimated future air flow requirements which were then used as basis for a blower alternatives evaluation. Patricia also provided additional modeling during the subsequent design phase of the improvements, including analyses to support construction sequencing.

Wastewater Master Plan, Oak Lodge Water Services District, Oak Grove, OR

Lead Process Engineer. BC led master planning for evaluation of and upgrades to the Oak Lodge Water Services District (OLWS) wastewater treatment plant (WWTP) over a 30-year planning period. As the process lead, Patricia was responsible for assessing the current treatment performance and operation, developing a plan for special wastewater characterization, developing loading projections, assessing current plant capacity, and performing alternatives analysis to meet projected flow and load conditions and potential future regulatory requirements.

Upper Plant Nitrification Improvements, City of Gresham, Gresham, OR

Lead Process Engineer. This project provides design of nitrification improvements at the Upper Plant within the City's WWTP in order to meet potential future permit limits, while accommodating higher ammonia loads from industrial dischargers. Project elements include diffuser replacement, addition of control valves and air flow meters, replacement of the mixed liquor recycle pump and piping, aeration control improvements, and addition of a chemical feed facility. Patricia led the process design, which includes development and calibration of the biological process simulator, historical data analysis, and evaluation of process improvements to meet the effluent ammonia limits. She also developed specification of the new diffuser grids and supporting the optimization of the blower system and development of operations dashboards.

Inverness Pump Station Planning, City of Portland BES, Portland, OR

Lead Process Engineer. The Inverness System currently consists of a pump station and two force mains, and facilities are rapidly approaching the end of their useful life. A long-term management plan that considers environmental enhancement, social equity, and system resiliency was developed. Patricia supported the development and analysis of alternatives, developing loading projections based on sampling data and performing process modeling to preliminarily size treatment units for two different treatment alternatives.

Long Term Treatment Planning and Nutrient Reduction Evaluation, King County Wastewater Treatment Division, King County, WA

Lead Process Engineer. This ongoing project provides strategic planning, engineering and related services to King County to develop long-term treatment plan and nutrient reduction evaluation (NRE). The NRE will satisfy the requirements listed in the 2021 Puget Sound Nutrient General Permit (PSNGP). The NRE includes evaluation for two levels of nitrogen removal. Site-specific analysis will be conducted for each of the five treatment facilities. Patricia developed sampling plans for wastewater characterization and model calibration, supported development of nitrogen removal alternatives, and performed process modeling of the screened alternatives for system sizing and life cycle cost development. The project is currently in the alternatives evaluation stage.

Process Control Consulting Services for Improved Operations for City and County of Honolulu Wastewater Facilities, City and County of Honolulu, HI

Process Engineer. BC is supporting City and County of Honolulu (CCH) on wastewater process control related work orders for all CCH treatment and collection maintenance facilities. The process control work orders range from identification and analysis of wastewater treatment issues to planning and design work relating to process control optimization and providing third party reviews for design and construction documents. Patricia supported various process troubleshooting and optimization efforts and provided on-site operator training on process-related topics.

Quinn Behnke, P.E.

Solids and Energy Modeling

Quinn specializes in wastewater solids and digester gas projects for wastewater treatment facilities across the country.

He brings extensive experience in mechanical systems and equipment replacement for wastewater projects. His technical focus is solids and digester gas systems, including their evaluation, design, and support during construction support at treatment plants. He brings solids planning experience along with skills in detailed system evaluations to provide meaningful solutions.

EDUCATION
BS, Mechanical Engineering, University of Southern California, 2012

REGISTRATION
Engineer (Mechanical), No. 94228PE, OR

YEARS OF EXPERIENCE
11

JOINED FIRM
2018

Digester Heating System Evaluation, Metropolitan Wastewater Management Commission, Eugene, OR

Project Engineer. BC is evaluating the existing process heating system operation and identify redundancy options for the existing boiler and cogeneration system. Quinn led the data review and field investigation to evaluate noted operational challenges. He is overseeing the development of a business case evaluation for redundancy options and the documentation of the detailed system evaluation, which includes the hot water, biogas, and natural gas systems.

Wastewater Solids Planning, City of Vancouver, Vancouver, WA

Technical Lead. BC is conducting biosolids master planning for both wastewater treatment plants in the City of Vancouver. The existing sewage sludge incinerator is requiring increased maintenance and will be nearing its end of useful life in the next decade. The City asked BC to generate evaluation criteria and level of service goals, identify candidate biosolids management alternatives, evaluate the alternatives, and recommend an alternative. Quinn is the technical lead for the second phase of the biosolids master plan. As part of this phase, Quinn is leading the development of BC's solids, water, and energy evaluation tool (SWEET) to compare alternatives. He contributed to an initial technical memorandum (TM) identifying existing conditions and potential evaluation assumptions. He presented technical evaluation results to the City's project team and led analysis documentation in the summary report.

Katie Pollock, P.E.

Project Engineer

Katie's recent experience includes wastewater planning and design projects.

Outside of consulting projects, she has worked directly for the City of Portland and private sector managing industrial wastewater pretreatment permits.

Aeration System Upgrades, Metropolitan Wastewater Management Commission (MWMC), Eugene, OR

Project Engineer/Deputy Project Manager. Katie provided cross discipline coordination and led the preparation of design reports and drawings, specifications. She facilitated weekly design coordination calls, client check-ins, and multiple design workshops when reaching project milestones. She directly contributed to the design work as a general and civil design lead preparing process flow diagrams, site plans, specifications, and construction schedules. Katie worked with process engineers to present the results of modeling alternate modes of secondary treatment operation that would improve constructability of the project and allow the client to continue to meet discharge requirements. Katie also prepared energy savings calculations for the client to use when applying for energy rebates for the project.

Columbia Boulevard WWTP Process Heating Improvements, City of Portland BES, Portland, OR

Project Engineer/Deputy Project Manager. BES Columbia Boulevard Wastewater Treatment Plant (CBWTP) operates a process heating system that consists of steam boilers, water heat exchangers, hot water supply/return piping loops, and associated appurtenances used to heat sludge in anaerobic digesters that produce Class B biosolids. BC is providing project development, alternative analysis, predesign, and detailed design services to support improvements to the process heating system. Katie led the preparation of the basis of evaluation report and coordinated cross-discipline contributions from sub-consultants. She directly contributed to existing conditions, hazardous classification, and building mechanical sections of the report. Katie also provides cross discipline coordination, leads weekly design calls and co-facilitates design workshops when reaching project milestones.

EDUCATION
BS, Environmental Engineering, Portland State University, 2016

AAS, Environmental Health and Safety, Mt. Hood Community College, 2007

REGISTRATION
Engineer (Environmental), No. 104602PE, OR

YEARS OF EXPERIENCE
11

JOINED FIRM
2022

Shannon Cavanaugh, E.I.T.

Project Engineer

Shannon is a process engineer focused on wastewater treatment and biosolids.

She has experience in process engineering for wastewater and nutrient planning projects, biosolids master planning, and design for both liquid and solids treatment. She joined BC after completing her graduate study on nitrous oxide emissions from wastewater treatment. She brings experience in process modeling, nutrient removal, lab reactor and pilot operation, and full-scale emissions monitoring from her professional and educational experiences.

EDUCATION
MS, Civil & Environmental Engineering, University of Washington, 2021

BS, Environmental Science, UCLA, 2019

YEARS OF EXPERIENCE
3

JOINED FIRM
2022

CTP Solids Evaluation, City of Tacoma, Tacoma, WA

Project Engineer. BC performed a comprehensive evaluation of City of Tacoma's CTP grit, solids thickening, and digester processes to develop an integrated solution which ties together all of the process elements of the system for future capacity requirements. Shannon supported digester alternatives analysis through flows and loads analysis, sizing, and capital cost development. She supported the alternative selection process by facilitating multi-criteria decision analysis (MCDA) with City stakeholders.

Comprehensive Plan Update, Lakehaven Water and Sewer District, Federal Way, WA

Process Engineer. BC helping the District update their wastewater comprehensive plan. This project will be used to set a Capital Improvements Plan for the next 10 years. This project involves modeling of the wastewater collection system and evaluating nutrient removal processes at two WWTPs to meet requirements of the new Puget Sound Nutrients General Permit. As process engineer, Shannon supported process modeling for nutrient optimization, capacity analysis, and nutrient reduction evaluation.

Westside Centrifuge Study, City of Vancouver, Vancouver, WA

Project Engineer. This planning study evaluated current solids handling and dewatering processes at Westside Wastewater Treatment Facility. Shannon coordinated with centrifuge manufacturers, supported capacity analysis, and performed alternatives identification and evaluation for the project.

Rick Kelly, Ph.D., P.E.

Operational Support and Technical Advisor – Wastewater Process

Rick is a wastewater process and design engineer with experience in municipal and industrial wastewater treatment and process upset.

He has specific experience in process modeling of biological treatment systems; nitrification, denitrification, and phosphorus removal; methods for control of foaming and bulking filamentous organisms through plant-, pilot-, and laboratory-scale testing; WWTP design; and plant capacity assessments through the use of computer simulation tools, solids mass balances, stress testing of clarifiers and solids thickening and dewatering equipment, and hydraulic profiling.

Upper Plant Nitrification Improvements, City of Gresham, Gresham, OR

Subject Matter Specialist. This project is looking at process upgrades to support nitrification at the upper plant of the Gresham WWTP in anticipation of new effluent ammonia requirements for the facility. Rick reviewed process calculations for the aeration system design to support these modifications.

Solids Dewaterability Study, City of Gresham, Gresham, OR

Process Engineer. Rick provided process evaluations for potential liquid and solids stream modifications to reduce struvite and improve thickening and dewatering for the Gresham WWTP. Options included implementing co-thickening of waste activated sludge (WAS) and primary sludge and liquid process modifications to elimination biological phosphorus removal, which is not required by permit.

Secondary Clarifier No. 5, City of Gresham, Gresham, OR

Process Engineer. This project involves design and construction of a new secondary clarifier at the Gresham WWTP to support growth and capacity needs at the facility. Rick's role was to review the process design of the clarifier upgrades and work with the project engineer to verify appropriate sizing of the internal equipment for the clarifiers for proper process operation. Rick reviewed the process design of clarifier upgrades.

EDUCATION

PhD, Civil Engineering, Virginia Polytechnic Institute and State University, 2005

MS, Civil Engineering, Virginia Polytechnic Institute and State University, 2002

BS, Civil Engineering, Bucknell University, 2000

REGISTRATION

Engineer (Civil), No. 84102PE, OR;

YEARS OF EXPERIENCE

19

JOINED FIRM

2005

Greg Mockos, P.E.

Thermal Processing

Greg is BC's Solids and Energy area practice leader for the Northwest.

He has experience managing the concept development, detailed design, bidding, construction, and commissioning of complex multi-disciplinary wastewater projects. His primary focus is wastewater treatment process design.

EDUCATION
MS, Civil and Environmental Engineering, University of California – Davis, 2008

BS, Environmental Engineering, Montana Technological University, 2005

REGISTRATION
Engineer (Civil), No. 102586PE, OR

YEARS OF EXPERIENCE
17

JOINED FIRM
2023

Central Treatment Plant Solids Evaluation Implementation Plan, City of Tacoma, Tacoma, WA

Implementation Plan Lead. The Tacoma Central Treatment Plant will be replacing its existing Autothermal Thermophilic Aerobic Digestion (ATAD) process with a new Temperature Phased Anaerobic Digestion (TPAD) with batch tank process to address aging infrastructure and capacity requirements. This significant upgrade required the offsite relocation of the existing Tagro facilities. Greg was responsible for developing the Solids Evaluation Implementation Plan and directing and coordinating associated activities including cost estimating, scheduling, design criteria development, site plan figure development.

North End Treatment Plant Trickling Filter Upgrade Detail Design, City of Tacoma, Tacoma, WA

Design Manager, Process Mechanical Lead. BC designed a new trickling filter and associated facilities, including influent and effluent pumping, snail control facilities, and chemical storage. Expansion of the existing disinfection basin for added residence time and replace of the existing MIOX disinfection system with associated chemical storage facilities. Refurbishment of the existing onsite welded steel potable water storage tank. Greg is responsible for the coordinating detailed design and leading the process mechanical design.

WWTP Facility Plan, City of Lynnwood, Lynnwood, WA

Project Manager, Process Design Lead. Greg led a two-stage comprehensive review and evaluation of biosolids management technologies for the Lynnwood WWTP as part of the Facility Plan. Greg evaluated complete biosolids handling processes for each biosolids handling technology, including waste activated sludge (WAS) equalization and thickening, dewatering, dewatered sludge storage and conveyance, and odor control. Using a ranked scoring matrix, which thermal drying was identified as the most suitable biosolids handling technology.

Natalie Sierra, P.E.

PFAS

Natalie has played a key role in navigating the complex regulatory landscape of PFAS, complying with evolving regulations and guidelines.

She specializes in biosolids master planning and biosolids management and possesses expert knowledge on biosolids regulations and end use. Natalie has assisted utilities across the country in developing biosolids management strategies with a wide variety of products. She has served as the biosolids coordinator and project manager where responsibilities have included establishing biosolids program metrics, contract management, regulatory management, and implementation of a Biosolids Management System (BMS).

Solids and Energy Planning, Clackamas County WES, OR

Technical Advisory Committee. The County engaged in long term solids and energy evaluations, seeking to assess emerging solutions in the process. Working as a subconsultant, served as technical advisory committee member to assist the utility with identifying and evaluating emerging and proven technologies for biosolids management, with a particular emphasis on biosolids to energy.

Wastewater Solids Planning, City of Vancouver, Vancouver, WA

Biosolids Planning Advisor. With major facilities reaching the end of useful life, in 2022 the City of Vancouver, WA's Climate Action Framework set a commitment for the City to reach carbon neutrality by 2040 and identified resource recovery from wastewater solids as a key strategy to support this. BC is supporting this effort. The first phase of the plan is to align with the Climate Action Plan, city council goals, and consider alternatives including recover resources. The project involves facilitating workshops of a multi-department group around shared goals and investments. The concepts of diverting organic waste from landfills, to generate renewable energy, and carbon sequestration through land application are being explored. Alternatives were developed with based on markets and products. Attributes considered include biosolids land application, renewable energy, greenhouse gas reduction, PFAS treatment, and using resources in the local economy.

EDUCATION

MS, Environmental Sciences and Engineering, University of North Carolina at Chapel Hill, 2000

BS, Agricultural and Biological Engineering, Cornell University, 1998

REGISTRATION

Engineer (Civil), No. C69751, CA; Engineer (Civil), No. 062074510, IL; Engineer (Civil), No. 55897, MA; Engineer (Civil), No. 099943, NY

YEARS OF EXPERIENCE

22

JOINED FIRM

2014

PROPOSAL CERTIFICATION
RFP #2025-01

Submitted by: Brown and Caldwell, California

(Must be entity's full legal name, and State of Formation)

Each Proposer must read, complete and submit a copy of this Proposal Certification with their Proposal. Failure to do so may result in rejection of the Proposal. By signature on this Proposal Certification, the undersigned certifies that they are authorized to act on behalf of the Proposer and that under penalty of perjury, the undersigned will comply with the following:

SECTION I. OREGON TAX LAWS: As required in ORS 279B.110(2)(e), the undersigned hereby certifies that, to the best of the undersigned's knowledge, the Proposer is not in violation of any Oregon Tax Laws. For purposes of this certification, "Oregon Tax Laws" means the tax laws of the state or a political subdivision of the state, including ORS 305.620 and ORS chapters 316, 317 and 318. If a contract is executed, this information will be reported to the Internal Revenue Service. Information not matching IRS records could subject Proposer to 24% backup withholding.

SECTION II. NON-DISCRIMINATION: That the Proposer has not and will not discriminate in its employment practices with regard to race, creed, age, religious affiliation, sex, disability, sexual orientation, gender identity, national origin, or any other protected class. Nor has Proposer or will Proposer discriminate against a subcontractor in the awarding of a subcontract because the subcontractor is a disadvantaged business enterprise, a minority-owned business, a woman-owned business, a business that a service-disabled veteran owns or an emerging small business that is certified under ORS 200.055.

SECTION III. CONFLICT OF INTEREST: The undersigned hereby certifies that no elected official, officer, agent or employee of Clackamas County is personally interested, directly or indirectly, in any resulting contract from this RFP, or the compensation to be paid under such contract, and that no representation, statements (oral or in writing), of the County, its elected officials, officers, agents, or employees had induced Proposer to submit this Proposal. In addition, the undersigned hereby certifies that this proposal is made without connection with any person, firm, or corporation submitting a proposal for the same material, and is in all respects fair and without collusion or fraud.

SECTION IV. COMPLIANCE WITH SOLICITATION: The undersigned further agrees and certifies that they:

1. Have read, understand and agree to be bound by and comply with all requirements, instructions, specifications, terms and conditions of the RFP (including any attachments); and
2. Are an authorized representative of the Proposer, that the information provided is true and accurate, and that providing incorrect or incomplete information may be cause for rejection of the Proposal or contract termination; and
3. Will furnish the designated item(s) and/or service(s) in accordance with the RFP and Proposal; and
4. Will use recyclable products to the maximum extend economically feasible in the performance of the contract work set forth in this RFP.

Name: Mark Strahota Date: 2/17/2025

Signature: Mark Strahota Title: Director, Project Management

Email: mstrahota@brwncald.com Telephone: 503.977.6678

Oregon Business Registry Number: 015248-26 OR CCB # (if applicable): _____

Business Designation (check one):
☒ Corporation ☐ Partnership ☐ Sole Proprietorship ☐ Non-Profit ☐ Limited Liability Company

☒ Resident Quoter, as defined in ORS 279A.120
☐ Non-Resident Quote. Resident State: _____

Portland Office

6500 S Macadam Avenue | Suite 200
Portland, OR 97239-3552

T 503.244.7005