RESOLUTION NO. 2159

A RESOLUTION OF THE CITY OF WILSONVILLE AUTHORIZING THE CITY ENGINEER TO SIGN A PROFESSIONAL SERVICES AGREEMENT WITH RW BECK, INC. TO PROVIDE PROFESSIONAL (ENGINEERING) SERVICES FOR THE OWNERS REPRESENTATIVE FOR THE WASTEWATER TREATMENT PLANT EXPANSION PROJECT

WHEREAS, adopted on August 30, 2004, by Wilsonville Ordinance No. 571, the Wastewater Treatment Plant (WWTP) Facility Plan determined that the current capacity (daily peak flow) of the plant was 4 million gallons per day (MGD) and that by 2011 the WWTP would need to have capacity (daily peak flow) of 7 MGD in order to serve the City's growth demands and that several improvements were needed to obtain operational efficiencies, meet anticipated regulatory requirements, modernize equipment, change over systems to a drying of solids process in recognition of the lack of qualified land for application of the liquid bio-solids generated by the WWTP, and

WHEREAS, given the 2011 date, time is of the essence to select an Owner's Representative to facilitate the solicitation and award of a contract best suited to meet project goals, and position the contractor to start the two years of construction in 2010 in order to have substantial completion in 2011; and

WHEREAS, the previously submitted April 2008 staff report demonstrated that the role of the Owner Representative is to ensure that an alternative contracting method of DBO for a complex project of this nature is properly solicited and awarded through a competitive RFP process within the time constraints set forth above and that there is the expertise necessary to assist staff in the oversight and management of the DBO contract deliverables; and

WHEREAS, on August 18, 2008, in Resolution 2131, the City Council/Local Contract Review Board authorize the City Engineer to solicit a Request for Proposal for an Owner's Representative to provide professional services for the referenced project and be awarded by the Local Contract Review Board; and

WHEREAS, the total cost of design and construction is currently estimated to be $60 million and the adopted appropriation for FY 2008/09 is $5,500,000 which includes the estimated cost of the Owners Representative (# 520.950.45030.00000.2051); and

WHEREAS, Phase A of the Owners Representative contract (this Resolution) is to be awarded in the amount of $1,585,721 plus an amount for contingency that brings the total of authority of this Resolution to $2,000,000; and

WHEREAS, future phases are still be negotiated with the Owners Representative and awarding those phases and costs will be brought before Council for action at future dates; and

WHEREAS, the adopted budget for FY 2008/09 assumed costs would be financed from bond sales; however, in lieu of issuing bonds, the sewer system development charges (SDC) are available and staff recommends delaying debt issuance due to market conditions; and

WHEREAS, a $2,000,000 supplemental budget transfer from Sewer SDC contingency fund will be necessary and the Finance Department will submit such supplemental prior to June 30, 2009; and

WHEREAS, the Owners Representative for the WWTP project was duly advertised the Request for Statement of Qualifications (Proposal) to provide professional services in the Daily Journal of Commerce, a newspaper of general circulation on August 22, 2008; and

WHEREAS, of the thirteen (13) proposals requested by various engineering firms, two (2) proposals were received by September 30, 2008, prior to 5:00 p.m., local time, at the City Hall, 29799 SW Town Center Loop East, Wilsonville, Oregon; and

WHEREAS, the two (2) proposals were reviewed by City staff using the qualification-based selection process and interviews were conducted on October 17, 2008; and

WHEREAS, upon completion of the review of the requested qualification materials from the two (2) firms that responded, RW Beck, Inc. was selected as the consulting firm that was best qualified to provide the requested professional services; and

WHEREAS, the initial phase (Phase A) of the Project's Scope of Work, a copy of which is marked Exhibit A, attached hereto and incorporated by reference herein, consists of the key tasks that will be implemented on order to yield the overall project management approach, identify key technical information and establish the foundation of

the DBO procurement process. In addition, Phase A will encompass the tasks associated with the development of the DBO procurement strategy and the implementation of the first stage of the procurement process: the Request for Qualifications (RFQ); and

WHEREAS, RW Beck, Inc. has proposed to accomplish the Phase A of the professional engineering services for a time and materials fee, not to exceed $1,585,721.00; and

WHEREAS, the general description of the future phases of work (Phases B-D) is shown in Exhibit B, a copy of which is attached hereto and incorporated by reference herein. Phase B will use the information gathered in Phase A to develop the performance criteria, the detailed DBO Scope of Services and the technical submittal requirements as well as other contractual requirements of the DBO service contract. Phase C includes monitoring the selected DBO team to ensure compliance with the directives of the DBO service contract, adherence to the schedule and cost guarantees and adequacy and compliance with contractual and industry requirements for design and construction. Phase D includes oversight and verification of the findings of the DBO team's acceptance testing efforts to ensure the upgraded facilities and processes are performing as designed and are able to meet the performance requirements. It also includes on-going support related to equipment performance testing and reporting; and

WHEREAS, each of the future Scope of Work Phases will be negotiated with RW Beck, Inc. and awarded at future Council meetings by the City Council/Local Contract Review Board; and

WHEREAS, RW Beck, Inc. has proposed to accomplish all four phases of the project for an estimated $5,000,000 (2009$); and

WHEREAS, staff has determined that the fees, as proposed by RW Beck, Inc. and major subcontractor Brown & Caldwell, are fair and reasonable based on the demonstration of prior Owners Representative experience on many projects of similar size, scope, has the staff available to meet the aggressive design and construction schedule, and staff's research of past project pricing and performance on other similar projects; and

WHEREAS, in the public interest the City Council acting as the Local Contract Review Board may exercise its rights to reject any proposals and waive informalities, if any, as reserved in its Request for Proposals; and

WHEREAS, on the 22nd day of February, 2005, the City of Wilsonville adopted Ordinance No. 578 adopting State findings, policies and methods of fostering competition and definitions consistent therewith, to provide for competitive bids or proposals, providing for contracting officers and the creation of procedures for the screening and selection of professional services and the process as outlined above meets those standards and requirements; and

WHEREAS, Section 2.310 of the Wilsonville Code states that "The Wilsonville City Council is designated as a Local Contract Review Board under the State of Oregon Public Contracting Code"; and

WHEREAS, the City of Wilsonville desires to execute a Professional Services Agreement in a timely manner.

NOW, THEREFORE, THE CITY OF WILSONVILLE RESOLVES AS FOLLOWS:

1. The recitals of findings above are incorporated by reference herein.
2. The City Council, acting as the Local Contract Review Board, does hereby exempt the award of a contract for engineering professional services from competitive bidding based on the qualification based selection process and further concludes this award will not diminish competition based on the competitive qualification process used and will result in substantial cost savings given the negotiated price and staff's research into pricing and performance on other similar projects.
3. The City Council, acting as the Local Contract Review Board, does hereby approve and authorize the City Engineer to sign a Professional Services Agreement between the City of Wilsonville and RW Beck, Inc., a copy of which is marked Exhibit "C", attached hereto and incorporated herein, to provide the engineering professional services recited within for the referenced project.

4. Subject to final completion of all improvements specified in the contract documents and any supplemental changes, the City Engineer is authorized to certify the required improvements complete and make final payment including release of retainage.
5. The City Engineer is authorized to approve change orders to this contract so long as total project costs do not exceed the Phase A budget amount of $2,000,000.
6. The City Council hereby authorizes the expenditures for the Phase A contract, not to exceed $1,585,721, from the Fiscal Year 2008/09 budget with supplemental budget transfer as follows:

Budget Year	Account	Budget Amount
2008/09	520.950.45030.00000.2051	$2,000,000

7. This resolution is effective upon adoption.

ADOPTED by the Wilsonville City Council at a special meeting thereof this 26th day of January, 2009, and filed with the Wilsonville City Recorder this date.

TIM KNAPP, MAYOR

ATTEST:

Sandra C. King, MMC, City Recorder

SUMMARY OF VOTES:

Mayor Tim Knapp	Yes
Council President Kirk	Yes
Councilor Ripple	Yes
Councilor Núñez	Yes
Councilor Hurst	Yes

Attachments:
Exhibit A – Project's Scope of Work, Phase A – Initial Phase
Exhibit B – General Description of Future Phases of Work, Phases B-D
Exhibit C – Professional Services Agreement with RW Beck, Inc.

CITY OF WILSONVILLE
PROFESSIONAL SERVICES AGREEMENT
WWTP Expansion – Owners Representative Services: Phase A

THIS AGREEMENT is made and entered into as of the date first indicated on the signature page, by and between the City of Wilsonville, Wilsonville, Oregon, (hereinafter referred to as the "City"), and R.W. Beck, Inc., a Washington corporation hereinafter referred to as "Consultant").

WHEREAS, City requires services which Consultant is capable of providing, under terms and conditions hereinafter described; and

WHEREAS, Consultant represents that it is qualified on the basis of specialized experience and technical competence and prepared to provide such services as City does hereinafter require;

NOW, THEREFORE, in consideration of those mutual promises and the terms and conditions set forth hereafter, the parties agreed as follows:

A. Term

The term of this Agreement shall be from the date of execution by both parties until tasks required hereunder are complete and accepted, unless earlier terminated in accordance herewith.

B. Consultant's Services

B.1 The scope of Consultant's services and time of performance under this Agreement are set forth in Exhibit A. All provisions and covenants contained in Exhibit A are hereby incorporated by reference and shall become a part of this Agreement as if fully set forth herein. The Request for Qualification (Exhibit B) and Statement for Qualification (Exhibit C) are included as part of the Scope of Work and incorporated into this contract.

B.2 All written documents, drawings, and plans submitted by Consultant and intended to be relied on for the project shall bear the signature, stamp or initials of Consultant or Consultant's authorized Project Manager. Any documents submitted by Consultant which do not bear Consultant's signature, stamp or initials or those of the Consultant's authorized Project Manager shall not be relied upon by City. Interpretation of plans and answers to questions covering Plans given by Consultant or Consultant's Project Manager need not be put in writing unless requested by the City and may be relied upon by City.

B.3 All agreements on the Consultant's part are contingent upon, and the Consultant shall not be responsible for damages or be in default or be deemed to be in default by reason of delays in performance due to third party: strikes, lockouts, accidents; acts of God; other delays unavoidable or beyond the Consultant's reasonable control, or due to shortages or unavailability of labor at established area wage rates or delays caused by failure of the City or City's agents to furnish information or to approve or disapprove the Consultant's work promptly, or due to late or slow, or faulty performance by the City, other contractors, other consultants not under Consultant's control or governmental agencies, the performance of whose work is precedent to or concurrent with the performance of the Consultant's work. In the case of the happening of any such cause of delay, the time of completion shall be extended accordingly.

B.4 The existence of this Agreement between City and Consultant shall not be construed as City's promise or assurance that Consultant will be retained for future services unrelated to this public works project.

B.5 Consultant shall maintain confidentiality of any private confidential information and any public information which is exempt from disclosure under state or federal law to which the Consultant may have access by reason of this Agreement. Consultant warrants that its employees assigned to work on services provided in this Agreement shall maintain confidentiality. All agreements with respect to confidentiality shall survive the termination or expiration of this Agreement. Consultant will not be prohibited from disclosing or using any information which:

a. Is or becomes generally available to the public other than as a result of a disclosure by Consultant ;
b. Was already in Consultant's possession before any disclosure of the information by City;
c. Has been or is obtained by Consultant from a third party (other than one acting on behalf of City) who Consultant has no reason to believe is not lawfully in possession of the information and who Consultant has no reason to believe is in violation of any contractual, legal or fiduciary obligation to City with respect to the information;
d. Is required to be disclosed by a subpoena or other directive of a court, administrative agency, quasi-judicial body or arbitration panel (provided, Consultant notifies City as soon as reasonably possible after receiving the demand for disclosure. City may, at its sole cost, take steps it deems advisable to prohibit disclosure of the information provided. Further the City may recover all such costs and attorney fees if the subpoena or court directive was caused by Consultant failing to maintain confidentiality in the first place); or
e. is independently developed by Consultant.

C. City's Responsibilities

C .1 The scope of City's responsibilities, including those of its Project Manager, are set forth in Exhibit D, which is attached hereto and incorporated herein.

C.2 City certifies that sufficient funds are available and authorized for expenditure to finance costs of this Agreement.

D. Compensation

D.1 Except as otherwise set forth in this subsection D, City agrees to pay Consultant not more than $_____ for performance of those services provided hereunder. However, compensation may be less than such maximum amount and shall be actually determined on an hourly basis as shown on the Rate Schedule, Exhibit E, which is attached hereto and incorporated herein. Compensation shall be only for actual hours worked on this project and related direct expenses. Consultant shall furnish with each bill for services an itemized statement showing the amount of hours devoted to the project by Consultant as well as any agents or employees of Consultant and any direct expenses.

D.2 During the course of Consultant's performance, if City or its Project Manager specifically requests Consultant to provide additional services which are beyond the scope of the services described on Exhibit A, Consultant shall provide such additional services and bill the City at the hourly rates outlined on the attached Standard Hourly Rate Schedule, provided the parties comply with the requirements of Section R. No compensation for additional services shall be paid or owing unless both parties specifically agree to such additional compensation and services.

D.3 Unless expressly set forth on Exhibit E as a reimbursable expense item, Consultant shall only be entitled to the compensation amount specified in subsections D.1 and D.2. Only those reimbursable expenses which are set forth on Exhibit E and itemized on Consultant's bills for services shall be the basis for which payment of those expenses by City shall be owing.

D.4 Except for amounts withheld by City pursuant to this agreement, Consultant will be paid for services for which an itemized bill is received by City within 30 days.

D.5 City shall be responsible for payment of required fees, payable to governmental agencies including, but not limited to plan checking, land use, zoning and all other similar fees resulting from this project, and not specifically covered by Exhibit A.

D.6 Consultant's compensation rate includes but is not limited to salaries or wages plus fringe benefits and contributions including payroll taxes, workers' compensation insurance, liability insurance, pension benefits and similar contributions and benefits.

D.7 In the event Consultant's responsibilities as described on Exhibit A have been separated into two or more phases, then Consultant shall not be entitled to any compensation for work performed directly on a later category of responsibilities unless and until City specifically directs that Consultant proceed with such work.

E. City's Project Manager

City's Project Manager is Jadene Stensland. City shall give Consultant prompt written notice of any redesignation of its Project Manager.

F. Consultant's Project Manager

Consultant's Project Manager is Kyle Rhorer. In the event that Consultant's designated Project Manager is changed, Consultant shall give City prompt written notification of such redesignation. In the event that City receives any communication from Consultant of whatsoever nature which is not executed by Consultant's designated Project Manager, City may request clarification by Consultant's Project Manager, which shall be promptly furnished.

G. Project Information

City shall provide full information regarding its requirements for the Project. Consultant agrees to share all project information, to fully cooperate with all corporations, firms, contractors, public utilities, governmental entities, and persons involved in or associated with the Project. No information, news or press releases related to the Project, whether made to representatives of

newspaper, magazines or television and radio stations, shall be made without the authorization of City's Project Manager.

H. Duty to Inform

If at any time during the performance of this Agreement, or any future phase of this Agreement for which Consultant has been retained, Consultant becomes aware of actual or potential problems, faults or defects in the project or any portion thereof, any nonconformance with the federal, state or local law, rule, or regulation, or has any objection to any decision or order made by City with respect to such laws, rules or regulations, Consultant shall give prompt written notice thereof to City's Project Manager. Any delay or failure on the part of City to provide a written response to Consultant shall neither constitute agreement with nor acquiescence to Consultant's statement or claim, nor constitute a waiver of any of City's rights.

I. Consultant is Independent Contractor

I.1 Consultant shall be and herein declares that it is an independent contractor for all purposes and shall be entitled to no compensation other than compensation provided for under paragraph D of this Agreement. Consultant binds itself, its partners, officers, successors, assigns and legal representatives to the City.
Consultant shall be completely independent and solely determine the manner and means of accomplishing the end result of this Agreement, and City does not have the right to control or interfere with the manner or method of accomplishing said results. City, however, has the right to specify and control the results of the Consultant's responsibilities.

I.2 Subcontracting: City understands and agrees that only those special consulting services identified on Exhibit A may be performed by those persons identified on Exhibit A and not by Consultant. Consultant acknowledges such services are provided to City pursuant to a subcontract(s) between Consultant and those who provide such services. Consultant may not utilize any subcontractors or in any way assign its responsibility under the Agreement without first obtaining the express written consent of the City.

I.3 Consultant shall be responsible for and indemnify and defend City against any liability, cost or damage arising out of Consultant's use of such subcontractor(s) and subcontractor's negligent acts, omissions, or errors. Subcontractors will be required to meet the same insurance requirements of Consultant under this Agreement. Unless otherwise specifically agreed to by City, Consultant shall require that subcontractors also comply with and be subject to the provisions of this Section I.

I.4 Consultant shall make prompt payment of any claim for labor, materials or services furnished to the Consultant by any person in connection with this Agreement as such claim becomes due. Consultant shall not permit any lien or claim to be filed or prosecuted against the City on account of any labor or material furnished to or on behalf of the Consultant. If the Consultant fails, neglects or refuses to make prompt payment of any such claim, the City may pay such claim to the person furnishing the labor, materials or services and charge the amount of the payment against funds due or to become due the Consultant under this Agreement.

I.5 No person shall be employed under the terms of this agreement as described herein in violation of all wage and hour laws.

I.6 Consultant shall make prompt payment as due to any person, co-partnership, association or corporation, furnishing medical, surgical and hospital care or other needed care and attention, incident to sickness or injury, to the employees of such Consultant of all sums which the Consultant agrees to pay for such services and all monies and sums which the Consultant collected or deducted from the wages of employees pursuant to any law, contract or agreement for the purpose of providing or paying for such service.

I.7 Should Consultant elect to utilize employees on any aspect of this Agreement, Consultant shall be fully responsible for payment of all withholding required by law, including but not limited to taxes, including payroll, income, Social Security (FICA) and Medicaid. Consultant shall also be fully responsible for payment of salaries, benefits, taxes, Industrial Accident Fund contributions and all other charges on account of any employees. Consultant shall pay to the Department of Revenue all sums withheld from employees pursuant to ORS 316.167. All costs incident to the hiring of assistants or employees shall be Consultant's responsibility. Consultant shall indemnify, defend and hold City harmless from claims for payment of all such expenses. Unless otherwise expressly set forth on Exhibit A as a reimbursable expense item, specific costs associated with items set forth in this paragraph shall be deemed as fully and conclusively included in the rate upon which consultants compensation is based.

I.8 No person shall be denied or subjected to discrimination in receipt of the benefits of any services or activities made possible by or resulting from this Agreement on the grounds of sex, race, color, creed, marital status, age, disability or national origin. Any violation of this provision shall be grounds for cancellation, termination or suspension of the Agreement in whole or in part by the City.

J. Indemnity and Insurance

J.1 Consultant shall hold City harmless from and indemnify City of any and all liability, settlements, loss, costs and expenses in connection with any action, suit, or claim to the extent caused by or allegedly caused by Consultant's negligent acts, omissions, errors or willful or reckless misconduct provided pursuant to this Agreement or from Consultant's failure to perform its responsibilities as set forth in this agreement. The review, approval or acceptance by City, its Project manager or City of Wilsonville employees of documents or other work prepared or submitted by Consultant shall not relieve Consultant of its responsibility to provide such materials in full conformity with City's requirements as set forth in this Agreement and to indemnify City from any and all costs and damages resulting from Consultant's failure to adhere to the standard of performance described in Section J.2.3. The provisions of this section shall survive termination of this Agreement. City agrees to indemnify and hold Consultant harmless from liability, settlements, losses, costs, and expenses in connection with any action, suit or claim to the extent caused by or allegedly caused by City's negligent acts or omissions or from its willful or reckless misconduct as governed by ORS Chapter 30.

Except for intentional, grossly neglect or reckless act or failure to act, no employee of Consultant shall have individual liability to City. To the extent permitted by law, the total

aggregate liability of Consultant, its officers, directors, shareholders, employees and subconsultants for any and all claims arising out of this Agreement, including attorneys' fees, and whether caused by negligence, errors, omissions, strict liability, breach of contract or contribution, or indemnity claims based on third party claims, shall not exceed the revenue received by Consultant under this Agreement or one hundred fifty thousand dollars (U.S. $150,000.00), whichever is greater. It is anticipated that Consultant services shall be provided in phase and over several years. It is estimated that the revenues to be received by Consultant over 5-7 years would be in the range of $5 million dollars or greater.

In no event and under no circumstances shall Consultant be liable to City for any principal, interest, loss of anticipated revenues, earnings, profits, increased expense of operation or construction, loss by reason of shutdown or non-operation due to late completion or otherwise or for any other economic, consequential, indirect, punitive or special damages.

J.2 Insurance Requirements and Consultant's Standard of Care.

J.2.1 Consultant shall provide City with evidence of the following insurance coverages prior to the commencement of the work. A certificate of insurance, issued by a company currently licensed in the State of Oregon, and signed by an authorized representative of the issuing company in a form satisfactory to City certifying to the issuance of such insurance shall be furnished to City. Unless specifically set forth on Exhibit A, expenses relating to the cost of insurance shall not be the basis for additional reimbursement to Consultant.

J.2.2 The City agrees that in accordance with generally accepted construction practices, the construction contractor will be required to assume sole and complete responsibility for job site conditions during the course of construction of the project, including safety of all persons and property.

J.2.3 In the performance of its professional services, the Consultant shall use that degree of care and skill ordinarily exercised under similar circumstances by reputable members of its profession practicing in the Portland Metropolitan Area. The Consultant will re-perform any services not meeting this standard without additional compensation. Consultant's re-performance of any services, even if done at City's request, shall not be considered as a limitation or waiver by City of any other remedies or claims it may have arising out of consultant's failure to perform in accordance with the applicable standard of care or this Agreement.

J.2.4 Consultant shall furnish the City a certificate evidencing the date, amount and type of insurance that has been procured pursuant to this Agreement. All policies shall be written on an "occurrence basis," except for Consultant's Professional Liability Insurance which may be written on a "claims made" basis, provided it shall endeavor to be maintained in full force for not less than four (4) years following Consultant's performance under this Agreement. All policies shall provide for not less than 30 days' written notice to the City before they may be non-renewed, or canceled. The Consultant shall endeavor to provide for not less than 30 days' written notice to the City before the policy coverage may be

reduced. In the event the policy lapses during performance, the City may: treat said lapse as a breach; terminate this Agreement and seek damages; withhold progress payments without impairing obligations of Consultant to proceed with work; pay an insurance carrier (either Consultants' or a substitute) the premium amount and withhold that amount from payments; and, use any other remedy provided by this Agreement or by law.

J.2.5 Insurance Requirements. The Consultant, its subcontractors, if any, and all employers working under this Agreement are subject employers under the Oregon Worker's Compensation Law and shall comply with ORS 656.017 which requires them to provide workers' compensation coverage for all their subject workers. The Consultant will maintain throughout this Agreement the following insurance:

J.2.5.1 Workers' compensation and employers liability insurance as required by the State where the work is performed.

J.2.5.2 Comprehensive automobile and vehicle liability insurance covering claims for injuries to members of the public and/or damages to property of others arising from the use of motor vehicles, including on-site and off-site operations, and owned, non-owned, or hired vehicles, with $500,000 combined single limits.

J.2.5.3 Commercial general liability insurance covering claims for injuries to members of the public or damage to property of others arising out of any covered negligent act or omission of the Consultant or of any of its employees, agents or subcontractors, with $5,000,000 per occurrence and in the aggregate.

J.2.5.4 Professional liability insurance of $5,000,000 per occurrence and in the aggregate, including contractual liability coverage. If Consultant proposes using subcontractors, in addition to any other requirements of this Agreement, City may require subcontractors to provide Professional Liability Insurance, provided the amount and form of coverage complies with the requirements of paragraphs J.2.1, J.2.2, J.2.3, J.2.4 and J.2.5.4.

J.2.5.5 City will be named as an additional insured with respect to Consultant's liabilities hereunder in insurance coverages. The following is included as additional insured: City of Wilsonville, its elected and appointed officials, officers, agents, employees and volunteers. Except professional liability and worker's compensation coverage, all policies shall provide an endorsement.

J.2.6 The coverage provided by these policies shall be primary and any other insurance carried by City is excess. Consultant shall be responsible for any deductible amounts payable under all policies of insurance. In the event a dispute arises between City and Consultant for which Consultant has obtained insurance, the maximum amount which may be withheld by City for all such claims shall be no

more than the amount of the applicable insurance deductible.

K. Early Termination

K.1 This Agreement may be terminated prior to the expiration of the agreed upon terms:

K.1.1 By mutual written consent of the parties;

K.1.2 By City for any reason within its sole discretion, effective upon delivery of ten (10) days written notice to Consultant by mail or in person; and

K.1.3 By Consultant, effective upon seven days prior written notice in the event of substantial failure by the City to perform in accordance with the terms through no fault of the Consultant.

K.2 If City terminates the Agreement in whole or in part due to default or failure of Consultant to perform services in accordance with this Agreement, City may procure, upon reasonable terms and in a reasonable manner, services similar to those so terminated. In addition to any other remedies the City may have, Consultant shall be liable for all costs and damages incurred by City in procuring such similar service, and the Contract shall be in full force to the extent not terminated.

K.3 If City terminates the Agreement for its own convenience, payment of Consultant shall be prorated to and include the day of termination and shall be in full satisfaction of all claims by Consultant against City under this Agreement.

K.4 Termination under any provision of this paragraph shall not affect any right, obligation or liability of Consultant or City which accrued prior to such termination. Consultant shall surrender to City items of work or portions thereof, referred to in Paragraph O for which Consultant has received payment, or City has made payment. City retains the right to elect whether or not to proceed with actual construction of the project.

L. Suspension of Work

City may suspend, delay or interrupt all or any part of the work for such time as the City deems appropriate for its own convenience by giving written notice thereof to Consultant. An adjustment in the time of performance or method of compensation shall be allowed as a result of such delay or suspension unless the reason for the delay is within the Consultant's control. City shall not be responsible for work performed by any subcontractors after notice of suspension is given by City to Consultant. Should the City suspend, delay or interrupt the work and the suspension is not within the Consultant's control, then the City shall extend the time of completion by the length of the delay and the method of compensation shall be adjusted to reflect the Consultant's increase or decrease in its standard hourly rates.

M. Subconsultants and Assignments

M.1 Unless expressly authorized in Exhibit A or Paragraph I of this Agreement, Consultant shall neither subcontract with others for any of the work prescribed herein, nor assign any of Consultant's rights acquired hereunder without obtaining prior written approval from

City. Work may be performed by persons other than Consultant, provided Consultant advises City of the names of such subcontractors and the work which they intend to perform and the City specifically agrees thereto. Consultant acknowledges such services are provided to City pursuant to a subcontract(s) between Consultant and subcontractor(s). Except as otherwise provided by this Agreement, City incurs no liability to third persons for payment of any compensation provided herein to Consultant. Any attempted assignment of this contract without the written consent of City shall be void. Except as otherwise specifically agreed, all costs for services performed by others on behalf of Consultant shall not be subject to additional reimbursement by City.

M.2 City shall have the right to let other agreements be coordinated with this Agreement. Consultant shall cooperate with other firms, engineers or subconsultants on the project and the City so that all portions of the project may be completed in the least possible time within normal working hours. Consultant shall furnish other engineers and subconsultants and affected public utilities, whose designs are fitted into Consultant's design, detail drawings giving full information so that conflicts can be avoided.

N. Access to Records

City shall have access upon request to such books, documents, receipts, papers and records of Consultant as are directly pertinent to this Agreement for the purpose of making audit, examination, excerpts, and transcripts for a period of ten (10) years after completion of Consultant's services under this agreement unless within that time City specifically requests an extension. This clause shall survive the expiration, completion or termination of this Agreement.

O. Work is Property of City

A. Originals or Certified copies of the original work forms, including but not limited to documents, drawings, tracings, surveying records, mylars, papers, diaries, inspection reports and photographs, performed or produced by Consultant under this Agreement ("Work Products") shall be the exclusive property of City and shall be delivered to City prior to final payment. However Consultant shall retain ownership of its intellectual property developed independently by the Consultant including the procedures, processes, internal resources, tools and other means used by Consultant to prepare the Work Products Upon City's written approval and provided City is identified in connection therewith Consultant may include Consultant's work in its promotional materials. Drawings may bear a disclaimer releasing the Consultant from any liability for changes made on the as-buit drawings and for reuse of the drawings subsequent to the date they are turned over to the City.

B. Other than in connection with the Project, Consultant shall not be held liable for any damage, loss, increased expenses or otherwise caused by or attributed to the reuse, by City or their designees, of any work performed by Consultant pursuant to this contract without the express written permission of the Consultant.

C. Other than in connection with the Project City agrees it will indemnify and hold Consultant harmless for all losses or damages that may arise out of the reuse of specific engineering designs incorporated into extensions, enlargements or other City projects, without the express written permission of the Consultant.

P. Law of Oregon

The Agreement shall be governed by the laws of the State of Oregon. The Agreement provisions required by ORS Chapter 279A and 279C to be included in public agreements are hereby incorporated by reference and shall become a part of this Agreement as if fully set forth herein.

Consultant shall adhere to all applicable federal and state laws, including but not limited to laws, rules, regulations, and policies concerning employer and employee relationships, workers' compensation, and minimum and prevailing wage requirements. Any certificates, licenses or permits which Consultant is required by law to obtain or maintain in order to perform work described on Exhibit A, shall be obtained and maintained throughout the term of this Agreement.

Q. Adherence to Law

Consultant shall adhere to all applicable federal, state and local laws, including but not limited to laws, rules, regulations, and policies concerning employer and employee relationships, workers' compensation, and minimum and prevailing wage requirements. Any certificates, licenses or permits which Consultant is required by law to obtain or maintain in order to perform work described on Exhibit A, shall be obtained and maintained throughout the term of this Agreement.

R. Modification

Any modification of the provisions of this Agreement shall not be enforceable unless reduced to writing and signed by both parties. A modification is a written document, contemporaneously executed by City and Consultant, which increases or decreases the cost to City over the agreed sum or changes or modifies the scope of service or time of performance. No modification shall be binding unless executed in writing by Consultant and City. In the event that Consultant receives any communication of whatsoever nature from City, which communication Consultant contends to give rise to any modification of this Agreement, Consultant shall, within thirty (30) days after receipt, make a written request for modification to City's Project Manager. Consultant's failure to submit such written request for modification in the manner outlined herein may be the basis for refusal by the City to treat said communication as a basis for modification. In connection with any modification to the contract affecting any change in price, Consultant shall submit a complete breakdown of labor, material, equipment and other costs. If Consultant incurs additional costs or devotes additional time on project tasks which were reasonably expected as part of the original agreement or any mutually approved modifications, then City shall be responsible for payment of only those costs for which it has agreed to pay.

S. Other Conditions

S.1 Except as otherwise provided in paragraphs S.1.1, S.1.2, and S.1.3 Consultant represents and agrees that the contract specifications and plans, if any, prepared by the Consultant will be adequate and sufficient to accomplish the purposes of the project; and further, that any review or approval by the owner of the plans and specifications shall not be deemed to diminish the adequacy of Consultant's work.

S.1.1 Subsurface Investigations. In soils, foundation, ground water, and other subsurface investigations, the actual characteristics may vary significantly

between successive test points and sample intervals and at locations other than where observations, exploration, and investigations have been made. Because of the inherent uncertainties in subsurface evaluations, changed or unanticipated underground conditions may occur that could affect total Project cost and/or execution. These conditions and cost/execution effects are not the responsibility of the Consultant, except to the extent that a condition is determined and Consultant provides the solution.

S.1.2 Opinions of Cost, Financial Considerations, and Schedules. In providing opinions of cost, financial analyses, economic feasibility projections, and schedules for the Project, Consultant has no control over cost or price of labor and materials; unknown or latent conditions of existing equipment or structures that may affect operation or maintenance costs; competitive bidding procedures and market conditions; time or quality of performance by third parties; quality, type, management, or direction of operating personnel; and other economic and operational factors that may materially affect the ultimate Project cost or schedule. Therefore, Consultant makes no warranty that Owner's actual Project costs, financial aspects, economic feasibility, or schedules will not vary from Engineer's opinions, analyses, projections, or estimates.

S.1.3 Record Drawings. Record drawings, if required, will be prepared, in part, on the basis of information compiled and furnished by others, and may not always represent the exact location, type of various components, or exact manner in which the Project was finally constructed. Consultant is responsible for any errors or omissions about which the Consultant knew or should have known in the information from those employees or firms employed by the Consultant under the terms of the contract as stated therein that is incorporated into the record drawings.

S.2 Notwithstanding any acceptance or payments, City shall not be precluded or stopped from recovering from Consultant, or its insurer or surety, such damages as may be sustained by reason of Consultant's failure to comply with the terms of this Agreement. A waiver by City of any breach by Consultant shall not be deemed to be a waiver of any subsequent breach by Consultant.

T. Integration

This Agreement, including but not limited to Exhibits and Consultant's proposal submitted to City contains the entire and integrated agreement between the parties and supersedes all prior written or oral discussions, representations or agreements. In case of conflict among these documents the provisions of this Agreement shall control.

U. Miscellaneous / General

Consultant binds itself, its partners, officers, successors, assigns and legal representatives to the City under the terms and conditions of this agreement as described herein.

The CONSULTANT and the CITY hereby agree to all provisions of this AGREEMENT.

IN WITNESS WHEREOF, the parties by their signatures below enter into this Agreement this _____ day of _____, 2_____.

CONSULTANT:

_____
Name of Firm

By _____
Typed or
Printed Name:_____

Title: _____

Mailing
Address: _____

_____

_____

Employer I.D. No._____

CITY OF WILSONVILLE:

By_____
Arlene Loble
City Manager

Attest:

_____
Sandra C. King
City Recorder

Mailing
Address:
29799 SW Town Center Loop East
Wilsonville, OR 97070

Approved as to form:

_____
Michael E. Kohlhoff
City Attorney

EXHIBIT A
WWTP EXPANSION - OWNER'S REPRESENTATIVE
SCOPE OF WORK – PHASE A SERVICES

GENERAL

The role of the Owner Representative is to ensure that an alternative contracting method of Design-Build-Operate (DBO) for the project is properly solicited and awarded through a competitive RFQ/RFP process within the time constraints and that there is the expertise necessary to assist staff in the oversight and management of the DBO contract deliverables.

This following Scope of Services is for the first phase of the project (Phase A). Future phases will be negotiated separately and are discussed in summary below.

Phase A – Background Documentation

The Phase A Scope of Services identified below will yield the overall project management approach, identify key technical information including Facilities Plan Update, Influent Characterization, Procurement Strategy Development, Request for Qualifications (RFQ) and establish the foundation of the Design-Build-Operate (DBO) procurement process that will be implemented in Phase B.

Future Phase B – Request for Proposals (RFP) Solicitation

Phase B includes the development of the three-volume RFP document, the "front end" (VI), the draft DBO service contract (VII) and the technical appendices (VIII). Drawing on the analyses and findings of Phase A, Phase B will involve the development of all performance criteria, 10% conceptual design using Build-In-Model (BIM), detailed DBO scope of service and technical submittal requirements as well as other contractual requirements as presented in the DBO service contract. Phase B also includes the evaluation of proposals and negotiation of the service contract.

Future Phase C – DBO Contract Monitoring

During Phase C, the Owner's Representative will monitor the selected DBO team to ensure 1) compliance with the directives of the DBO service contract and its technical appendices, 2) adherence to schedule and cost guarantees, and 3) adequacy and compliance with contractual and industry requirements for design and construction.

Future Phase D – Services During Commissioning and Warranty / Reporting

During Phase D, the Owner's Representative will oversee and verify the findings of the DBO team's acceptance testing efforts to ensure the upgraded facilities and processes are performing as designed and are able to meet the performance requirements. This also includes ongoing support related to equipment performance testing and reporting

SCOPE OF SERVICES

R.W. Beck will maintain responsibility for the delivery of all activities in the Scope of Services, but will allocate specific task and subtask responsibilities to Brown and Caldwell, a Subconsultant. In general, Brown and Caldwell will direct all subtask activities associated with Tasks 1.2, 1.3, 1.4 and 1.5.

The Consultant agrees to perform this Scope of Services. On-call services shall be based on Formal Task Authorizations specifying the task scope, schedule, and budget, and be executed

by both parties. Task Authorizations shall be numbered consecutively as Task No.A, B, C and so on. All provisions and clauses of this Agreement shall be in full force and effect for each Task Authorization.

The Consultant agrees that its team as proposed in the SOQ submittal will be committed to the Project for its duration. In particular Kyle Rhorer will serve as the Project Manager for the duration of the Project. Any changes to the project team as proposed in the SOQ must be approved by the City per the provisions described in the Agreement.

SUB-CONSULTANTS

In addition to Brown and Caldwell, the following Subconsultants will provide various technical supporting services throughout Phase A. The Subconsultants identified below will report directly to Brown and Caldwell.

- AKS Engineering (Surveying)
- GeoDesign Inc. (Geotechnical)
- Gary Bley Architects, LLC (Architecture)
- Columbia Analytical Services, Inc. (Laboratory)

SUMMARY OF SCOPE OF SERVICES FOR PHASE A:

- Project Management (1.1)
- Facilities Plan Update (1.2)
- Risk Management (1.3)
- Influent Characterization (1.4)
- Site Survey/Document Existing Conditions (1.5)
- Create and Maintain Overall Schedule (1.6)
- Industry Forum and Stakeholder Input (1.7)
- Assist City with NPDES Permit Renewal (1.8)
- Procurement Strategy Development (1.9)
- Request for Qualifications (RFQ) (1.10)
- Statements of Qualifications (SOQ) Evaluation (1.11)
- Documentation Management (1.12)

1.1 Project Management

1.1.1 Manage all sub consultants on the team, directing the flow of information between the consultant team members and the City's project manager, and among subcontractors and City's internal and external legal counsel as well as other stakeholder groups as applicable. In addition to the responsibilities described in 1.1.2 and 1.1.3, the consultant shall:

- Communicate clearly and regularly with the City's project manager
- Provide exhibits, maps, figures, on an as needed basis as expeditiously as possible
- Provide, monitor and update overall project schedule
- Create, maintain and update monthly (min.) a detailed, critical path schedule as described in Task 1.6.

1.1.2 Prepare monthly invoices in accordance with City requirements. Status reports shall accompany invoices. Monthly billing and status reports shall be clearly

presented in an organized manner, with costs distributed among tasks and shall be submitted for payment no later than the 7th day of each month.

1.1.3 Plan, facilitate and attend regular project status and other stakeholder meetings (and/or conference calls) throughout Phase A. Specifically:

- Organize and conduct Project Kick-off meeting and monthly progress meetings at City Hall or WWTP
- Organize and conduct weekly progress conference calls
- Prepare materials for meeting and participate in City Council work session and public hearings meetings as requested by City staff
- Prepare materials and attend agency meetings as requested
- Coordinate with the City's System Integrator (minimum 3 meetings)
- Consultant's Project Manager is required to reside at the City offices and/or wastewater treatment plant (WWTP) at least 20 hours per week during major phase work as mutually agreed

1.1.4 Oversee and validate all work and deliverables, including those prepared by subcontractors, in accordance with Owner's Representative's established Quality Assurance / Quality Control (QA/QC) methodology and Standards of Practice (SOP). Subject to future request and negotiation, provide Value Engineering (VE) services for specific tasks lead (1.2, 1.3, 1.4 and 1.5) by Owner's Representative subcontractors.

1.1.5 Prepare key deliverables in accordance with City preferences and guidelines, as reflected in Task 1.12 – Documentation Management. Ensure that the pre-design report meets the DEQ plan review requirements.

1.1.6 List of Deliverables and Meetings

- Project Management Plan (Schedule, Budget, Risk Management, Staffing, Communications, QA/QC Standards of Practice, Photo log, etc.)
- Meeting Agendas and Minutes (throughout Phase A – 12 months)
- Monthly Status Reports (throughout Phase A – 12 months)
- Monthly Invoices/Pay Requests (throughout Phase A – 12 months)

1.2 Facilities Plan Update

The consultant team shall provide the following services:

1.2.1 **Background Review.** Thoroughly review the Wastewater Treatment Plant Facility Plan (WWTPFP), the Wastewater Collection Master Plan, Comprehensive Plan and any other plans and operational reports.

1.2.2 **Updated Recommendations.** Prepare a technical memorandum (TM) on the appropriateness of the suggested modifications as described in the WWTPFP, and updates as determined during this review process. Consider the selected treatment process given the review of reports, the testing results, review of the existing systems, and comparison of process train capacities to proposed flow and loading projections through 2040. Include a review of new developments in technology, new and potential regulations, energy saving considerations and sustainability components. Recommended capital improvements were outlined in the City's Request for Qualifications (RFQ) and include:

- Headworks
- Primary treatment
- Secondary treatment
- Filtration
- Disinfection
- Outfall
- Solids stabilization
- Biosolids dewatering
- Solids storage
- Specific areas for improvement include odor control and collection systems which will be considered in Task 1.3.2 and 1.2.3, respectively.

1.2.3 **Collection System Evaluation.** Review the collection system master plan and recommended operation of the collection and pumping systems of the City. Review the management and operational staff needs for the Collection System. Based on the above, develop a periodic monitoring plan for the collection system to be completed during subsequent phases of the project to track segment flows and condition as required.

- **Provide Technical Memorandum (TM) for Review of the Sanitary Collection System Master Plan.** The review will comment on the efficacy of the existing plan and recommend modifications and/or updates that should be made to the plan to meet the City's short- and long-term needs within the planned service area.

- **Provide TM for Review and Recommendations Regarding Sewer and Pump Station Operation and Maintenance (O&M) Practices.** Interviews will be held with maintenance superintendent and key line supervisors to capture and document staff knowledge and experience for current O&M practices. Recommendations will be based on developing an O&M Program that is consistent with proposed EPA Capacity, Management, Operation, and Maintenance (CMOM) regulations. This task will include an analysis of current O&M program resource and staffing levels. Recommendations will be made to identify optimum resource and staffing levels as required for moving the O&M Program towards CMOM compliance. Documentation will be provided showing current, recommended, and projected staffing levels based on system size and population served. The recommendations will include guidance on developing flow monitoring and closed-circuit television (CCTV) inspection programs to support the life-cycle needs (i.e., operations, maintenance, rehabilitation, and replacement) of the sanitary collection system..

1.2.4 **Design Criteria.** The process design criteria for the treatment facility will be updated and summarized based on the findings of Subtasks 1.2.2 and 1.2.3 above and provided in a separate TM.

1.2.5 **WWTP Hydraulic Profile.** An evaluation of the plant hydraulics is essential to ensure that the existing and future facilities can properly handle the planned flows.

A hydraulic analysis of the existing system will be performed to determine the potential bottlenecks to be considered in the design. The analysis will be conducted based on Brown and Caldwell's proprietary PROFILE software. The work product can be modified as required in future phases to address recommended WWTP modifications.

1.2.6 **Cost Estimating and Construction Phasing**. Planning level costs estimates will be updated based on revised facility plan recommendations. A phasing plan to determine required on-line date for completion of individual improvements will be provided, with recommendations on schedule for project completion. Recommended phasing will include consideration of revised planning recommendations and capacity assessment.

1.2.7 List of Deliverables

- Planning Level Cost Estimates
- Draft Reports
- TM described above
- Final Report

1.3 **Risk Management Activities**. A number of activities have been identified that require evaluation prior to development of the DBO procurement documents. These include evaluation site-specific issues like slope stability and odor, and backup power and service requirements. In addition, capacity issues will be addressed to ensure that the DBO procurement process is not unduly rushed by capacity thresholds defined in the previous plan where conditions (flow projections) may have changed and additional capacity can be achieved by optimizing existing processes like secondary clarification.

1.3.1 **Geotechnical Assessment.** Prepare a TM for the geotechnical support services to be required. The conceptual design phase will be to work with the structural engineers to perform an evaluation of the foundation conditions at the treatment plant. This information will be used for design and construction. The geotechnical engineer will obtain and review published and available geologic subsurface information. A senior geotechnical engineer will perform a reconnaissance level inspection of the proposed location of new structures. The assessment will also include an assessment of slope stability at the northern end of the property.

1.3.2 **Odor Control Evaluation.** Prepare a TM to review performance of existing odor control system and recommend any potential changes in plant operations, and/or performance criteria, or construction as necessary. The WWTP is situated next to a residential area, and odor control is essential. The review will specifically include a review of the potential impact of influent characteristics (i.e., low alkalinity) on plant operations, among other processes influencing odor control. The consultant team will consider findings of the influent characterization task (1.3) for this purpose. The feasibility of incorporating present odor control systems into the planned upgrade will be addressed. Recommended potential improvements and estimated cost will be provided.

1.3.3 **Electrical Review.** Prepare a TM of the evaluation of electrical equipment including metering, transfer switches, transformers, switchgear, MCCs, variable frequency drives, and large motors. A report will be generated with photos identifying the existing state of the electrical installation. A duty comparison will be performed to identify the equipment short circuit ratings, breaker parameters etc. Electrical load

measurements will be taken to establish a load flow baseline. Based on the power studies and input on the operating needs, the requirements for standby power will be identified.

1.3.4 **Plant Capacity Assessment and Secondary Clarifier Performance Review.** Consultant will combine the information from planning subtasks to form an integrated assessment of the plant capacity and develop a prioritized list of improvements to maximize existing plant capacity. The maximum capacity of the secondary clarifiers will be determined, including identification of inefficiencies, and the necessary adjustments to maximize secondary clarifier performance given the current configuration will be defined. Evaluation will be performed using a state of the art computation fluid dynamic (CFD) model. The consultant will provide the following services:

The Consultant will carry out the following:

- Conduct a solids mass balance using the data from Task 1.2
- Prepare a prioritized list of capacity limits and develop composite rating diagrams establishing the rated plant capacity
- Prepare draft report
- Review results and draft report with City staff
- Conduct field inspection of clarifiers
- Evaluate secondary clarifier performance data and conduct statistical analyses
- Evaluate influent and distribution hydraulics
- Develop and calibrate CFD model to evaluate the clarifier performance
- Perform full-scale stress testing to confirm the results of the model
- Improvements to the existing clarifiers will be modeled to determine if capacity can be increased without constructing new secondary clarifiers
- Summarize data and develop recommendations
- Discuss performance with City staff.
- Amend report based on City comments
- Amend report based on findings of Task 1.4 (Influent Characterization)

1.3.5. Deliverables:

- Draft Reports
- CFD model output
- TM describing secondary clarifier performance testing, results, and recommendations
- Final Report

1.4 Influent Characterization

1.4.1 **Gather Plant Performance and Wastewater Characterization Data–Winter.** Consultant will gather from the City flow and loading data for the last two years, and derived data. Since all wastewaters are unique, a wastewater characterization will be conducted to accurately determine the maximum plant capacity. The Consultant will carry out the following tasks:

- Prepare sampling protocol
- Set up protocol with lab and plant staff
- Verify suitability of sampling locations
- Daily composite sampling; this is performed every day over a two-week period. For each sampling day, raw influent, secondary influent (i.e., primary effluent inclusive of any supernatant return streams), and secondary effluent are sampled and analyzed for a wide range of constituents. Samples must be 24-hour composite samples.
- Grab samples of secondary influent and final effluent to provide information on the diurnal variability of critical parameters. Samples are collected at 2-hour intervals. Data are used in calibrating the dynamic portion of the simulator.
- Grab samples of the activated sludge and various important solids and internal recycle streams must also be collected for analysis for proper calibration of the simulator and evaluating plant performance. Grab samples must be take daily during the same 2-week period as the composite sampling listed above.

1.4.2 Calibration of Plant Simulator. The focus of this task is to identify the maximum biological treatment capacity, with respect to current wet and dry weather permit requirements, and operating conditions. The Consultant will calibrate the biological process simulator using the data collected in Task 1.4

1.4.3 Gather Plant Performance and Wastewater Characterization Data—Summer. Consultant will perform the wastewater characterization tasks defined in Task 1.4.1 but in the summer to capture the seasonal change in these parameters and provide data for verifying the calibration of the biological process simulator

1.4.4 Deliverables:

- Summary tables of data as for calibration of the simulator
- Calibrated biological process simulator results
- Assessment of biological system capacity
- TM describing testing results and results of analysis

1.5 WWTP Site Survey and Document Existing Conditions

The Owner's Representative shall provide the following surveying services for the WWTP site:

1.5.1 Retain a qualified State of Oregon Registered Land Surveyor (PLS) to perform all necessary surveys, to be utilized for this initial planning, and subsequently by the selected DBO team for final design.

1.5.2 Provide a boundary survey and legal descriptions of the WWTP site and adjacent properties, to be filed with appropriate City and County jurisdictions. Effort for this task, including purchase of title report, is included in the cost estimate. The need for this task will be determined upon review of the title report for the property (Tax Lots 100 and 200).

1.5.3 Prepare exhibit maps of the legal property, suitable for presentation at City Council.

1.5.4 Review City provided topographic survey and provide additional topographic survey of the WWTP for design purposes. Topographic survey to include the following:

- Property boundaries, easements, and rights-of-way
- Physical features such as curb lines, sidewalks, edges of asphalt, break lines, buildings (building outline and extent of roof overhangs), signs, and miscellaneous structures
- All above and below ground utilities (i.e., piping, casings, conduits, cables, air ducts, and utilidors)
- Tree inventory (location, size, and species)
- Location of shrubs and landscaping
- Sufficient ground shots to produce 1-foot contours

1.5.5 An arborist will prepare a tree inventory (as required by City) with location of trees identified by surveyor. A locate service will be used to assist in locating underground utilities. The Project Manager shall coordinate with City Public Works staff for potholing scheduling and observation. Extents of subsurface potholing and investigations will be determined in consultation with the ORep and City staff prior to topographic survey. All maps will be prepared in AutoCAD with format as determined in consultation with City staff.

1.5.6 Provide a laser survey of building interiors, as determined necessary for modification to existing features of building envelopes.

1.5.7 Vertical and horizontal control will be established during initial survey, with ties to appropriate City of Wilsonville, Oregon State Plane Coordinates, and NGVD datum's utilized by City. Control monuments will be readily retrievable for use of supplemental and construction survey efforts needed later in the project.

1.5.8 The consultant shall document the existing conditions of the facility in coordination with the updated Facility Plan and the future asset management criteria task order.

1.5.9 Document the structures, pipes and equipment. Develop an inventory matrix that can show equipment name, location, type, size and the existing useful life. Develop a strategy to evaluate the existing useful life of the structures, pipes and equipment through the DBO process.

1.5.10 Identify and document underground piping and conduit systems locations.

1.5.11 List of Deliverables and Meetings

- Legal boundary survey with updated vertical and horizontal control
- Updated topographic survey for design and presentation
- Utility location mapping
- Structure and equipment documentation

1.6 Create and Maintain Project Schedules

1.6.1 Create a detailed critical path schedule and maintain and update it monthly, at a minimum.

1.6.2 Estimate overall project costs on a monthly expenditure report and update actual costs, monthly as described in Task 1.1.

1.6.3 Coordinate and monitor all task orders with the overall schedule.

1.6.4 List of Deliverables and Meetings

- Overall detailed project schedule showing critical path, updated and submitted monthly with invoice
- Overall summary project schedule (for Council and larger group discussions) , updated and submitted monthly with invoice and as requested

1.7 Industry Forum and Stakeholder Input

1.7.1 Create a methodology and format for the City to implement an Industry Forum to share information and develop project interest in the DBO contracting community.

1.7.2 Develop and provide materials for one DBO Industry Forum.

1.7.3 Participate in one Industry Forum with the City and potential DBO teams. Provide staff with supporting technical expertise in wastewater treatment processes and operations.

1.7.4 Create a methodology and format for the City to obtain external and internal stakeholder input concerning the alternative project delivery approach, the DBO procurement process and WWTP project.

1.7.5 Develop and provide materials for three stakeholder input events (one internal, two external).

1.7.6 Participate in one internal (City-wide) stakeholder event.

1.7.7 Participate in two external stakeholder events.

1.7.8 List of Deliverables and Meetings

- Industry Forum methodology/format guidelines
- Presentation materials and attendance for one Industry Forum (in coordination with Task 1.8)
- Internal (City-wide) stakeholder event methodology/format guidelines
- Presentation materials and attendance for one internal (City-wide) stakeholder event
- External stakeholder event methodology/format guidelines
- Presentation materials and attendance for two external stakeholder events

1.8 Assist City with NPDES permit renewal process

1.8.1 City to perform work and consultant will review and comment using the information developed in the facilities update and existing conditions assessment, assist the city with completing the NPDES permit application. (The draft permit application is due in June 2009, and the final is due in December 2009.)

1.8.2 List of Deliverables and Meetings

- Negotiation meetings with the State of Oregon Department of Environmental Quality (DEQ)
- Meetings with engineering and WWTP staff

1.9 Procurement Strategy Development

1.9.1 Prepare materials and facilitate one half-day Procurement Strategy Workshop to be attended by City staff and selected stakeholders. Workshop will focus on developing approaches towards addressing key project issues within the procurement process including:

- Overall procurement process
- Schedule
- Preliminary risk allocation
- General evaluation factors and selection process
- Financing and ownership considerations
- General legal considerations
- Stakeholder concerns
- Key success factors
- Other issues TBD

1.9.2 Prepare draft and final versions of a summary report that outlines the findings of the Procurement Strategy Workshop. Incorporating the agenda and materials from the workshop, the summary report will serve as a guide for the procurement process.

1.9.3 List of Deliverables and Meetings

- Procurement Strategy Workshop outline (draft and final)
- Procurement Strategy Workshop materials
- Procurement Strategy Workshop (half-day)
- Procurement strategy summary report (draft and final)

1.10 Request for Qualifications (RFQ)

1.10.1 Prepare outline and conceptual framework for RFQ document, summarizing RFQ objectives, required minimum qualifications, enhanced qualifications and selection / short-listing process.

1.10.2 Facilitate a meeting to discuss and refine outline and conceptual framework in order to provide input to RFQ drafting process.

1.10.3 Prepare draft RFQ document for City review.

1.10.4 Coordinate with City legal counsel (internal and external) as requested.

1.10.5 Facilitate a meeting to address comments on draft RFQ and provide final direction on RFQ issuance draft

1.10.6 Incorporate City comments to prepare and issue RFQ document.

1.10.7 Provide support to City staff in addressing questions and comments from DBO contracting community.

1.10.8 Coordinate efforts described in Task 1.6 as necessary and appropriate during RFQ process.

1.10.9 Prepare up to two addenda to the RFQ (if necessary).

1.10.10 List of Deliverables and Meetings:

- RFQ outline and conceptual framework
- RFQ pre-drafting meeting
- Draft RFQ document
- Final RFQ document
- Two RFQ addenda (if necessary)

1.11 Statements of Qualification (SOQ) Evaluation

1.11.1 Prepare SOQ evaluation guidance for City Evaluation Committee

1.11.2 Facilitate one SOQ evaluation kickoff meeting with Evaluation Committee

1.11.3 Review up to six SOQs for completeness in accordance with RFQ provisions.

1.11.4 Evaluate up to six SOQs for compliance to the Minimum Qualifications in accordance with RFQ provisions.

1.11.5 Prepare formal requests to DBO contracting teams for additional information and/or submittal clarification.

1.11.6 Conduct evaluations of up to six SOQs in accordance with RFQ provisions.

1.11.7 Conduct due diligence and reference checks against up to six SOQs and summarize findings.

1.11.8 Prepare preliminary SOQ evaluation summary report for City review.

1.11.9 Facilitate one SOQ evaluation findings meeting to discuss Evaluation Committee evaluations.

1.11.10 Prepare final SOQ evaluation summary report.

1.11.11 Present findings to City Council (if requested)

1.11.12 List of Deliverables and Meetings

- SOQ evaluation guidance memo (one draft)
- SOQ evaluation kickoff meeting
- SOQ completeness check and minimum qualifications findings memo
- Requests for clarification / additional information to DBO contracting teams

- Preliminary SOQ evaluation findings summary report
- SOQ evaluation findings meeting
- Final SOQ evaluation findings summary report
- Presentation to City Council (if requested)

1.12 Documentation Management

1.12.1 All documents, files and photographic negatives shall be delivered to and be permanently retained by the City.

1.12.2 Prepare monthly archive quality construction photos in electronic format, provided and updated in searchable DVD. Also provide 4x6 matte finish photos in sleeved sheets in 8.5 x 11 photo albums (minimum of 90 photos monthly).

1.12.3 Prepare pre-construction photo documentation summary (Minimum of 360 photos).

1.12.4 All documents that include color figures shall be reproducible and legible in black & white. All electronic files created during the project are required to be in MS Word, MS Excel and other City-approved format(s). Provide documents in three (3) copies on CD with complete data, including an index, and in electronic format(s) as requested. Document formatting includes, but is not limited to; detailed table of contents; list of figures and tables; abbreviations and acronyms sheets; cross-referenced sections; index; glossary; custom labels on section tabs; and individual CD jewel boxes with labels.

1.12.5 Documents shall be printed on 8.5" x 11" heavy first quality paper with standard three-hole punching and bound in heavy-duty EZ-D three-ring binders, when necessary. Provide binders with titles on front and spine. Tab each section for easy reference with plastic-coated dividers. Provide index for each manual. Provide plastic sheet lifters prior to first page and following last page. Reduce drawings or diagrams bound in manuals to an 8.5" x 11" or folded 11" x 17" size. However, where reduction is not practical to ensure readability, fold larger drawings separately and place in archive-quality envelopes which are bound into the binder. Identify envelopes with drawing numbers.

1.13 City Responsibilities

- Review and comment on draft reports
- Attend and participate in workshops and meetings
- Coordinate with consultant on access for sampling and testing
- Provide as-built drawings and equipment performance data for the biological process. Including but not limited to clarifiers, aeration system configuration, blower performance data, diffuser data, tank configuration, and operating objectives (mixed liquor suspended solids [MLSS] and dissolved oxygen [DO] concentration, solids retention time (SRT) and hydraulic retention time (HRT).

1.14 Deliverables with schedule and primary responsible consultant (Beck/B&C)

The table below identifies deliverables by task/subtask with anticipated completion dates and responsibility. Estimated completion dates may require adjustment as the project progresses due to unforeseen circumstances opportunities for schedule efficiencies.

Task / Subtask	Deliverable	Estimated Date	Responsibility
1.1.2	Invoices, schedules & status reports	Monthly	R.W. Beck
1.1.3	Kick-off meeting	February 2009	R.W. Beck
1.1.3	Status meetings	Monthly	R.W. Beck
1.1.3	Project status conference calls	Weekly / As-needed	R.W. Beck
1.1.6	Project Management Plan	February 2009	R.W. Beck
1.1.6	Meeting agendas, minutes & photos	Monthly	R.W. Beck
1.2.2	Facilities plan update TM	November 2009	B&C
1.2.3	Collection system review TM	April 2009	B&C
1.2.3	Sewer/pump system O&M TM	April 2009	B&C
1.2.4	Design criteria TM	June 2009	B&C
1.2.5	Hydraulic analysis (PROFILE) software output	April 2009	B&C
1.2.6	Cost estimates and construction phasing plan	October 2009	B&C
1.3.1	Geotechnical assessment TM	June 2009	B&C
1.3.2	Odor control evaluation TM	May 2009	B&C
1.3.3	Electrical review TM	April 2009	B&C
1.3.4	Plant capacity assessment and secondary clarifier performance review report. (Final)	October 2009	B&C
1.3.4	Plant capacity assessment and secondary clarifier performance review model output.	September 2009	B&C
1.3.4	Plant capacity assessment and secondary clarifier performance review technical memorandum	August 2009	B&C
1.4.1	Wastewater characterization (winter) summary data	March 2009	B&C
1.4.2	Biological simulator results TM	August 2009	B&C
1.4.3	Wastewater characterization (summer) summary data	August 2009	B&C
1.5.2	Boundary survey	April 2009	B&C
1.5.3	Exhibit maps / topographic survey	May 2009	B&C
1.5.5	Tree inventory	April 2009	B&C
1.5.6	Laser survey	April 2009	B&C
1.5.8	Facility existing conditions documentation	July 2009	B&C
1.5.9	Structures, pipes and equipment documentation	June 2009	B&C
1.5.10	Underground piping/conduit documentation	April 2009	B&C
1.6.1	Critical path and project cost schedules	Monthly	R.W. Beck
1.7.1	Industry forum methodology	February 2009	R.W. Beck
1.7.2	Industry forum materials	March 2009	R.W. Beck
1.7.3	Industry forum	April 2009	R.W. Beck
1.7.4	Stakeholder input event methodology	March 2009	R.W. Beck

1.7.5	Stakeholder input event materials	March 2009	R.W. Beck
1.7.6	Stakeholder input event (internal)	March 2009	R.W. Beck
1.7.7	Stakeholder input event 1	April 2009	R.W. Beck
1.7.7	Stakeholder input event 2	June 2009	R.W. Beck
1.8.1	ODEQ meeting	June 2009	B&C
1.9.1	Procurement strategy materials and workshop	March 2009	R.W. Beck
1.9.2	Procurement strategy summary report (Final)	March 2009	R.W. Beck
1.10.1	RFQ outline	March 2009	R.W. Beck
1.10.2	RFQ outline/framework meeting	April 2009	R.W. Beck
1.10.2	RFQ draft	April 2009	R.W. Beck
1.10.6	RFQ final / issuance	May 2009	R.W. Beck
1.11.1	SOQ evaluation guidance	July 2009	R.W. Beck
1.11.2	SOQ evaluation kick-off meeting	July 2009	R.W. Beck
1.11.3 / 1.11.4	SOQ completeness check and minimum qualifications findings memo	August 2009	R.W. Beck
1.11.8	SOQ evaluation summary report – draft	September 2009	R.W. Beck
1.11.9	SOQ evaluation findings meeting	September 2009	R.W. Beck
1.11.10	SOQ evaluation summary report – final	October 2009	R.W. Beck

CITY OF WILSONVILLE
WWTP EXPANSION DBO - OWNER'S REPRESENTATIVE SERVICES
PROJECT BUDGET - PHASE A SERVICES

TASK / SUBTASK - PHASE A SCOPE OF SERVICES	*Kyle Rhorer*	*Robert Bingham*	*Neil Callahan*	*Jessica Guerrette*	*Alan Bushley*	*John Christopher*	*Keith Parker*	*Samantha Prociv*	*Rosita McGinley*	R.W. Beck Labor Hours	R.W. Beck Labor Cost	R.W. Beck Travel Expenses^	R.W. Beck Other Expenses^^	Subcontractor Labor Costs*	Subcontractor Expenses**	TOTAL COST
TASK 1.1 - PROJECT MANAGEMENT	514	0	119	468	94	0	0	48	48	1,290	$ 278,403	$ 25,200	$ 720	$ 60,082	$ 5,250	$ 369,655
TASK 1.2 - FACILITIES PLAN UPDATE	14	0	0	28	8	4	4	0	0	58	$ 11,391		$ -	$ 314,624	$ 10,920	$ 336,935
TASK 1.3 - RISK MANAGEMENT	6	0	0	10	2	0	0	0	0	18	$ 3,528		$ -	$ 133,815	$ 42,315	$ 179,658
TASK 1.4 - INFLUENT CHARACTERIZATION	8	4	0	16	8	2	2	0	0	40	$ 8,118		$ -	$ 63,993	$ 55,388	$ 127,499
TASK 1.5 - WWTP SITE SURVEY AND EXISTING CONDITIONS	8	4	0	16	0	0	0	0	0	28	$ 5,497	$ 2,100	$ -	$ 67,434	$ 69,353	$ 144,384
TASK 1.6 - CREATE AND MAINTAIN PROJECT SCHEDULES	80	0	0	70	0	0	0	0	0	150	$ 32,662		$ -	$ 9,270	$ -	$ 41,932
TASK 1.7 - INDUSTRY FORUM AND STAKEHOLDER INPUT	72	144	0	128	0	0	0	96	96	536	$ 92,346	$ 12,600	$ 750	$ 33,414	$ 1,050	$ 140,160
TASK 1.8 - ASSIST IN NPDES PERMIT RENEWAL PROCESS	8	0	0	8	4	0	0	0	0	20	$ 4,261		$ -	$ 18,225	$ 1,050	$ 23,537
TASK 1.9 - PROCUREMENT STRATEGY DEVELOPMENT	32	40	0	80	0	0	0	28	28	208	$ 35,438	$ 2,100	$ 100	$ 14,920	$ -	$ 52,558
TASK 1.10 - REQUEST FOR QUALIFICATIONS	112	8	0	184	0	0	0	44	44	392	$ 67,733	$ 4,200	$ 350	$ 14,200	$ -	$ 86,483
TASK 1.11 - STATEMENT OF QUALIFICATIONS EVALUATION	74	32	0	210	0	0	0	16	16	348	$ 61,070	$ 5,250	$ 200	$ 16,400	$ -	$ 82,920
GRAND TOTAL	928	232	119	1,218	116	6	6	232	232	3,088	$ 600,447	$ 51,450	$ 2,120	$ 746,378	$ 185,326	$ 1,585,721

EXHIBIT B
WWTP EXPANSION – OWNERS REPRESENTATIVE SERVICES
SCOPE OF WORK – PHASE A SERVICES

GENERAL

The role of the Owners Representative is to ensure that an alternative contracting method of Design-Build-Operate (DBO) for the project is properly solicited and awarded through a competitive RFQ/RFP process within the time constraints and that there is the expertise necessary to assist staff in the oversight and management of the DBO contract deliverables.

The following Scope of Services is for the first phase of the project (Phase A). Future phases will be negotiated separately and are discussed in summary below. Costs are in 2009 dollars.

Phase A – Background Documentation ($1.6M - $2.0M)

The Phase A Scope of Services will yield the overall project management approach, identify key technical information including Facilities Plan Update, Influent Characterization, Procurement Strategy Development, Request for Qualifications (RFQ) and establish the foundation of the Design-Build-Operate (DBO) procurement process that will be implemented in Phase B. (Duration estimate: 9 months)

Phase B – Request for Proposals (RFP) Solicitation ($1.3M - $1.5M)

Phase B includes the development of the three-volume RFP document, the "front end" (VI), the draft DBO service contract (VII) and the technical appendices (VIII). Drawing on the analyses and findings of Phase A, Phase B will involve the development of all performance criteria, detailed DBO scope of service and technical submittal requirements as well as other contractual requirements as presented in the DBO service contract. Phase B also includes the evaluation of proposals and negotiation of the service contract. (Duration estimate: 9 months)

Phase C – DBO Contract Monitoring ($500k - $800k)

During Phase C, the Owner's Representative will monitor the selected DBO team to ensure 1) compliance with the directives of the DBO service contract and its technical appendices, 2) adherence to schedule and cost guarantees, and 3) adequacy and compliance with contractual and industry requirements for design and construction. (Duration estimate: 2 years)

Phase D – Services During Commissioning and Warranty / Reporting ($750k)

During Phase D, the Owner's Representative will oversee and verify the findings of the DBO team's acceptance testing efforts to ensure the upgraded facilities and processes are performing as designed and are able to meet the performance requirements. This also includes ongoing support related to equipment performance testing and reporting. (Duration estimate: 2 years)

EXHIBIT C

CITY OF WILSONVILLE
PROFESSIONAL SERVICES AGREEMENT
WWTP Expansion – Owners Representative Services: Phase A

THIS AGREEMENT is made and entered into as of the date first indicated on the signature page, by and between the City of Wilsonville, Wilsonville, Oregon, (hereinafter referred to as the "City"), and R.W. Beck, Inc., a Washington corporation hereinafter referred to as "Consultant").

WHEREAS, City requires services which Consultant is capable of providing, under terms and conditions hereinafter described; and

WHEREAS, Consultant represents that it is qualified on the basis of specialized experience and technical competence and prepared to provide such services as City does hereinafter require;

NOW, THEREFORE, in consideration of those mutual promises and the terms and conditions set forth hereafter, the parties agreed as follows:

A. Term

The term of this Agreement shall be from the date of execution by both parties until tasks required hereunder are complete and accepted, unless earlier terminated in accordance herewith.

B. Consultant's Services

B.1 The scope of Consultant's services and time of performance under this Agreement are set forth in Exhibit A. All provisions and covenants contained in Exhibit A are hereby incorporated by reference and shall become a part of this Agreement as if fully set forth herein. The Request for Qualification (Exhibit B) and Statement for Qualification (Exhibit C) are included as part of the Scope of Work and incorporated into this contract.

B.2 All written documents, drawings, and plans submitted by Consultant and intended to be relied on for the project shall bear the signature, stamp or initials of Consultant or Consultant's authorized Project Manager. Any documents submitted by Consultant which do not bear Consultant's signature, stamp or initials or those of the Consultant's authorized Project Manager shall not be relied upon by City. Interpretation of plans and answers to questions covering Plans given by Consultant or Consultant's Project Manager need not be put in writing unless requested by the City and may be relied upon by City.

B.3 All agreements on the Consultant's part are contingent upon, and the Consultant shall not be responsible for damages or be in default or be deemed to be in default by reason of delays in performance due to third party: strikes, lockouts, accidents; acts of God; other delays unavoidable or beyond the Consultant's reasonable control, or due to shortages or unavailability of labor at established area wage rates or delays caused by failure of the City or City's agents to furnish information or to approve or disapprove the Consultant's work promptly, or due to late or slow, or faulty performance by the City, other

contractors, other consultants not under Consultant's control or governmental agencies, the performance of whose work is precedent to or concurrent with the performance of the Consultant's work. In the case of the happening of any such cause of delay, the time of completion shall be extended accordingly.

B.4 The existence of this Agreement between City and Consultant shall not be construed as City's promise or assurance that Consultant will be retained for future services unrelated to this public works project.

B.5 Consultant shall maintain confidentiality of any private confidential information and any public information which is exempt from disclosure under state or federal law to which the Consultant may have access by reason of this Agreement. Consultant warrants that its employees assigned to work on services provided in this Agreement shall maintain confidentiality. All agreements with respect to confidentiality shall survive the termination or expiration of this Agreement. Consultant will not be prohibited from disclosing or using any information which:

a. Is or becomes generally available to the public other than as a result of a disclosure by Consultant ;
b. Was already in Consultant's possession before any disclosure of the information by City;
c. Has been or is obtained by Consultant from a third party (other than one acting on behalf of City) who Consultant has no reason to believe is not lawfully in possession of the information and who Consultant has no reason to believe is in violation of any contractual, legal or fiduciary obligation to City with respect to the information;
d. Is required to be disclosed by a subpoena or other directive of a court, administrative agency, quasi-judicial body or arbitration panel (provided, Consultant notifies City as soon as reasonably possible after receiving the demand for disclosure. City may, at its sole cost, take steps it deems advisable to prohibit disclosure of the information provided. Further the City may recover all such costs and attorney fees if the subpoena or court directive was caused by Consultant failing to maintain confidentiality in the first place); or
e. is independently developed by Consultant.

C. City's Responsibilities

C .1 The scope of City's responsibilities, including those of its Project Manager, are set forth in Exhibit D, which is attached hereto and incorporated herein.

C.2 City certifies that sufficient funds are available and authorized for expenditure to finance costs of this Agreement.

D. Compensation

D.1 Except as otherwise set forth in this subsection D, City agrees to pay Consultant not more than $_____ for performance of those services provided hereunder. However, compensation may be less than such maximum amount and shall be actually determined on an hourly basis as shown on the Rate Schedule, Exhibit E,

which is attached hereto and incorporated herein. Compensation shall be only for actual hours worked on this project and related direct expenses. Consultant shall furnish with each bill for services an itemized statement showing the amount of hours devoted to the project by Consultant as well as any agents or employees of Consultant and any direct expenses.

D.2 During the course of Consultant's performance, if City or its Project Manager specifically requests Consultant to provide additional services which are beyond the scope of the services described on Exhibit A, Consultant shall provide such additional services and bill the City at the hourly rates outlined on the attached Standard Hourly Rate Schedule, provided the parties comply with the requirements of Section R. No compensation for additional services shall be paid or owing unless both parties specifically agree to such additional compensation and services.

D.3 Unless expressly set forth on Exhibit E as a reimbursable expense item, Consultant shall only be entitled to the compensation amount specified in subsections D.1 and D.2. Only those reimbursable expenses which are set forth on Exhibit E and itemized on Consultant's bills for services shall be the basis for which payment of those expenses by City shall be owing.

D.4 Except for amounts withheld by City pursuant to this agreement, Consultant will be paid for services for which an itemized bill is received by City within 30 days.

D.5 City shall be responsible for payment of required fees, payable to governmental agencies including, but not limited to plan checking, land use, zoning and all other similar fees resulting from this project, and not specifically covered by Exhibit A.

D.6 Consultant's compensation rate includes but is not limited to salaries or wages plus fringe benefits and contributions including payroll taxes, workers' compensation insurance, liability insurance, pension benefits and similar contributions and benefits.

D.7 In the event Consultant's responsibilities as described on Exhibit A have been separated into two or more phases, then Consultant shall not be entitled to any compensation for work performed directly on a later category of responsibilities unless and until City specifically directs that Consultant proceed with such work.

E. City's Project Manager

City's Project Manager is Jadene Stensland. City shall give Consultant prompt written notice of any redesignation of its Project Manager.

F. Consultant's Project Manager

Consultant's Project Manager is Kyle Rhorer. In the event that Consultant's designated Project Manager is changed, Consultant shall give City prompt written notification of such redesignation. In the event that City receives any communication from Consultant of whatsoever nature which is not executed by Consultant's designated Project Manager, City may request clarification by Consultant's Project Manager, which shall be promptly furnished.

G. Project Information

City shall provide full information regarding its requirements for the Project. Consultant agrees to share all project information, to fully cooperate with all corporations, firms, contractors, public utilities, governmental entities, and persons involved in or associated with the Project. No information, news or press releases related to the Project, whether made to representatives of newspaper, magazines or television and radio stations, shall be made without the authorization of City's Project Manager.

H. Duty to Inform

If at any time during the performance of this Agreement, or any future phase of this Agreement for which Consultant has been retained, Consultant becomes aware of actual or potential problems, faults or defects in the project or any portion thereof, any nonconformance with the federal, state or local law, rule, or regulation, or has any objection to any decision or order made by City with respect to such laws, rules or regulations, Consultant shall give prompt written notice thereof to City's Project Manager. Any delay or failure on the part of City to provide a written response to Consultant shall neither constitute agreement with nor acquiescence to Consultant's statement or claim, nor constitute a waiver of any of City's rights.

I. Consultant is Independent Contractor

I.1 Consultant shall be and herein declares that it is an independent contractor for all purposes and shall be entitled to no compensation other than compensation provided for under paragraph D of this Agreement. Consultant binds itself, its partners, officers, successors, assigns and legal representatives to the City.
Consultant shall be completely independent and solely determine the manner and means of accomplishing the end result of this Agreement, and City does not have the right to control or interfere with the manner or method of accomplishing said results. City, however, has the right to specify and control the results of the Consultant's responsibilities.

I.2 Subcontracting: City understands and agrees that only those special consulting services identified on Exhibit A may be performed by those persons identified on Exhibit A and not by Consultant. Consultant acknowledges such services are provided to City pursuant to a subcontract(s) between Consultant and those who provide such services. Consultant may not utilize any subcontractors or in any way assign its responsibility under the Agreement without first obtaining the express written consent of the City.

I.3 Consultant shall be responsible for and indemnify and defend City against any liability, cost or damage arising out of Consultant's use of such subcontractor(s) and subcontractor's negligent acts, omissions, or errors. Subcontractors will be required to meet the same insurance requirements of Consultant under this Agreement. Unless otherwise specifically agreed to by City, Consultant shall require that subcontractors also comply with and be subject to the provisions of this Section I.

I.4 Consultant shall make prompt payment of any claim for labor, materials or services furnished to the Consultant by any person in connection with this Agreement as such claim becomes due. Consultant shall not permit any lien or claim to be filed or

prosecuted against the City on account of any labor or material furnished to or on behalf of the Consultant. If the Consultant fails, neglects or refuses to make prompt payment of any such claim, the City may pay such claim to the person furnishing the labor, materials or services and charge the amount of the payment against funds due or to become due the Consultant under this Agreement.

I.5 No person shall be employed under the terms of this agreement as described herein in violation of all wage and hour laws.

I.6 Consultant shall make prompt payment as due to any person, co-partnership, association or corporation, furnishing medical, surgical and hospital care or other needed care and attention, incident to sickness or injury, to the employees of such Consultant of all sums which the Consultant agrees to pay for such services and all monies and sums which the Consultant collected or deducted from the wages of employees pursuant to any law, contract or agreement for the purpose of providing or paying for such service.

I.7 Should Consultant elect to utilize employees on any aspect of this Agreement, Consultant shall be fully responsible for payment of all withholding required by law, including but not limited to taxes, including payroll, income, Social Security (FICA) and Medicaid. Consultant shall also be fully responsible for payment of salaries, benefits, taxes, Industrial Accident Fund contributions and all other charges on account of any employees. Consultant shall pay to the Department of Revenue all sums withheld from employees pursuant to ORS 316.167. All costs incident to the hiring of assistants or employees shall be Consultant's responsibility. Consultant shall indemnify, defend and hold City harmless from claims for payment of all such expenses. Unless otherwise expressly set forth on Exhibit A as a reimbursable expense item, specific costs associated with items set forth in this paragraph shall be deemed as fully and conclusively included in the rate upon which consultants compensation is based.

I.8 No person shall be denied or subjected to discrimination in receipt of the benefits of any services or activities made possible by or resulting from this Agreement on the grounds of sex, race, color, creed, marital status, age, disability or national origin. Any violation of this provision shall be grounds for cancellation, termination or suspension of the Agreement in whole or in part by the City.

J. Indemnity and Insurance

J.1 Consultant shall hold City harmless from and indemnify City of any and all liability, settlements, loss, costs and expenses in connection with any action, suit, or claim to the extent caused by or allegedly caused by Consultant's negligent acts, omissions, errors or willful or reckless misconduct provided pursuant to this Agreement or from Consultant's failure to perform its responsibilities as set forth in this agreement. The review, approval or acceptance by City, its Project manager or City of Wilsonville employees of documents or other work prepared or submitted by Consultant shall not relieve Consultant of its responsibility to provide such materials in full conformity with City's requirements as set forth in this Agreement and to indemnify City from any and all costs and damages resulting from Consultant's failure to adhere to the standard of performance described in Section J.2.3. The provisions of this section shall survive termination of this Agreement. City agrees to indemnify and hold Consultant harmless from liability,

settlements, losses, costs, and expenses in connection with any action, suit or claim to the extent caused by or allegedly caused by City's negligent acts or omissions or from its willful or reckless misconduct as governed by ORS Chapter 30.

Except for intentional, grossly neglect or reckless act or failure to act, no employee of Consultant shall have individual liability to City. To the extent permitted by law, the total aggregate liability of Consultant, its officers, directors, shareholders, employees and subconsultants for any and all claims arising out of this Agreement, including attorneys' fees, and whether caused by negligence, errors, omissions, strict liability, breach of contract or contribution, or indemnity claims based on third party claims, shall not exceed the revenue received by Consultant under this Agreement or one hundred fifty thousand dollars (U.S. $150,000.00), whichever is greater. It is anticipated that Consultant services shall be provided in phase and over several years. It is estimated that the revenues to be received by Consultant over 5-7 years would be in the range of $5 million dollars or greater.

In no event and under no circumstances shall Consultant be liable to City for any principal, interest, loss of anticipated revenues, earnings, profits, increased expense of operation or construction, loss by reason of shutdown or non-operation due to late completion or otherwise or for any other economic, consequential, indirect, punitive or special damages.

J.2 Insurance Requirements and Consultant's Standard of Care.

J.2.1 Consultant shall provide City with evidence of the following insurance coverages prior to the commencement of the work. A certificate of insurance, issued by a company currently licensed in the State of Oregon, and signed by an authorized representative of the issuing company in a form satisfactory to City certifying to the issuance of such insurance shall be furnished to City. Unless specifically set forth on Exhibit A, expenses relating to the cost of insurance shall not be the basis for additional reimbursement to Consultant.

J.2.2 The City agrees that in accordance with generally accepted construction practices, the construction contractor will be required to assume sole and complete responsibility for job site conditions during the course of construction of the project, including safety of all persons and property.

J.2.3 In the performance of its professional services, the Consultant shall use that degree of care and skill ordinarily exercised under similar circumstances by reputable members of its profession practicing in the Portland Metropolitan Area. The Consultant will re-perform any services not meeting this standard without additional compensation. Consultant's re-performance of any services, even if done at City's request, shall not be considered as a limitation or waiver by City of any other remedies or claims it may have arising out of consultant's failure to perform in accordance with the applicable standard of care or this Agreement.

J.2.4 Consultant shall furnish the City a certificate evidencing the date, amount and type of insurance that has been procured pursuant to this Agreement. All policies

shall be written on an "occurrence basis," except for Consultant's Professional Liability Insurance which may be written on a "claims made" basis, provided it shall endeavor to be maintained in full force for not less than four (4) years following Consultant's performance under this Agreement. All policies shall provide for not less than 30 days' written notice to the City before they may be non-renewed, or canceled. The Consultant shall endeavor to provide for not less than 30 days' written notice to the City before the policy coverage may be reduced. In the event the policy lapses during performance, the City may: treat said lapse as a breach; terminate this Agreement and seek damages; withhold progress payments without impairing obligations of Consultant to proceed with work; pay an insurance carrier (either Consultants' or a substitute) the premium amount and withhold that amount from payments; and, use any other remedy provided by this Agreement or by law.

J.2.5 Insurance Requirements. The Consultant, its subcontractors, if any, and all employers working under this Agreement are subject employers under the Oregon Worker's Compensation Law and shall comply with ORS 656.017 which requires them to provide workers' compensation coverage for all their subject workers. The Consultant will maintain throughout this Agreement the following insurance:

J.2.5.1 Workers' compensation and employers liability insurance as required by the State where the work is performed.

J.2.5.2 Comprehensive automobile and vehicle liability insurance covering claims for injuries to members of the public and/or damages to property of others arising from the use of motor vehicles, including on-site and off-site operations, and owned, non-owned, or hired vehicles, with $500,000 combined single limits.

J.2.5.3 Commercial general liability insurance covering claims for injuries to members of the public or damage to property of others arising out of any covered negligent act or omission of the Consultant or of any of its employees, agents or subcontractors, with $5,000,000 per occurrence and in the aggregate.

J.2.5.4 Professional liability insurance of $5,000,000 per occurrence and in the aggregate, including contractual liability coverage. If Consultant proposes using subcontractors, in addition to any other requirements of this Agreement, City may require subcontractors to provide Professional Liability Insurance, provided the amount and form of coverage complies with the requirements of paragraphs J.2.1, J.2.2, J.2.3, J.2.4 and J.2.5.4.

J.2.5.5 City will be named as an additional insured with respect to Consultant's liabilities hereunder in insurance coverages. The following is included as additional insured: City of Wilsonville, its elected and appointed officials, officers, agents, employees and volunteers. Except professional liability and worker's compensation

coverage, all policies shall provide an endorsement.

J.2.6 The coverage provided by these policies shall be primary and any other insurance carried by City is excess. Consultant shall be responsible for any deductible amounts payable under all policies of insurance. In the event a dispute arises between City and Consultant for which Consultant has obtained insurance, the maximum amount which may be withheld by City for all such claims shall be no more than the amount of the applicable insurance deductible.

K. Early Termination

K.1 This Agreement may be terminated prior to the expiration of the agreed upon terms:

K.1.1 By mutual written consent of the parties;

K.1.2 By City for any reason within its sole discretion, effective upon delivery of ten (10) days written notice to Consultant by mail or in person; and

K.1.3 By Consultant, effective upon seven days prior written notice in the event of substantial failure by the City to perform in accordance with the terms through no fault of the Consultant.

K.2 If City terminates the Agreement in whole or in part due to default or failure of Consultant to perform services in accordance with this Agreement, City may procure, upon reasonable terms and in a reasonable manner, services similar to those so terminated. In addition to any other remedies the City may have, Consultant shall be liable for all costs and damages incurred by City in procuring such similar service, and the Contract shall be in full force to the extent not terminated.

K.3 If City terminates the Agreement for its own convenience, payment of Consultant shall be prorated to and include the day of termination and shall be in full satisfaction of all claims by Consultant against City under this Agreement.

K.4 Termination under any provision of this paragraph shall not affect any right, obligation or liability of Consultant or City which accrued prior to such termination. Consultant shall surrender to City items of work or portions thereof, referred to in Paragraph O for which Consultant has received payment, or City has made payment. City retains the right to elect whether or not to proceed with actual construction of the project.

L. Suspension of Work

City may suspend, delay or interrupt all or any part of the work for such time as the City deems appropriate for its own convenience by giving written notice thereof to Consultant. An adjustment in the time of performance or method of compensation shall be allowed as a result of such delay or suspension unless the reason for the delay is within the Consultant's control. City shall not be responsible for work performed by any subcontractors after notice of suspension is given by City to Consultant. Should the City suspend, delay or interrupt the work and the suspension is not within the Consultant's control, then the City shall extend the time of completion by the length of the delay and the method of compensation shall be adjusted to

reflect the Consultant's increase or decrease in its standard hourly rates.

M. Subconsultants and Assignments

M.1 Unless expressly authorized in Exhibit A or Paragraph I of this Agreement, Consultant shall neither subcontract with others for any of the work prescribed herein, nor assign any of Consultant's rights acquired hereunder without obtaining prior written approval from City. Work may be performed by persons other than Consultant, provided Consultant advises City of the names of such subcontractors and the work which they intend to perform and the City specifically agrees thereto. Consultant acknowledges such services are provided to City pursuant to a subcontract(s) between Consultant and subcontractor(s). Except as otherwise provided by this Agreement, City incurs no liability to third persons for payment of any compensation provided herein to Consultant. Any attempted assignment of this contract without the written consent of City shall be void. Except as otherwise specifically agreed, all costs for services performed by others on behalf of Consultant shall not be subject to additional reimbursement by City.

M.2 City shall have the right to let other agreements be coordinated with this Agreement. Consultant shall cooperate with other firms, engineers or subconsultants on the project and the City so that all portions of the project may be completed in the least possible time within normal working hours. Consultant shall furnish other engineers and subconsultants and affected public utilities, whose designs are fitted into Consultant's design, detail drawings giving full information so that conflicts can be avoided.

N. Access to Records

City shall have access upon request to such books, documents, receipts, papers and records of Consultant as are directly pertinent to this Agreement for the purpose of making audit, examination, excerpts, and transcripts for a period of ten (10) years after completion of Consultant's services under this agreement unless within that time City specifically requests an extension. This clause shall survive the expiration, completion or termination of this Agreement.

O. Work is Property of City

A. Originals or Certified copies of the original work forms, including but not limited to documents, drawings, tracings, surveying records, mylars, papers, diaries, inspection reports and photographs, performed or produced by Consultant under this Agreement ("Work Products") shall be the exclusive property of City and shall be delivered to City prior to final payment. However Consultant shall retain ownership of its intellectual property developed independently by the Consultant including the procedures, processes, internal resources, tools and other means used by Consultant to prepare the Work Products Upon City's written approval and provided City is identified in connection therewith Consultant may include Consultant's work in its promotional materials. Drawings may bear a disclaimer releasing the Consultant from any liability for changes made on the as-buit drawings and for reuse of the drawings subsequent to the date they are turned over to the City.

B. Other than in connection with the Project, Consultant shall not be held liable for any damage, loss, increased expenses or otherwise caused by or attributed to the reuse, by

City or their designees, of any work performed by Consultant pursuant to this contract without the express written permission of the Consultant.

C. Other than in connection with the Project City agrees it will indemnify and hold Consultant harmless for all losses or damages that may arise out of the reuse of specific engineering designs incorporated into extensions, enlargements or other City projects, without the express written permission of the Consultant.

P. Law of Oregon

The Agreement shall be governed by the laws of the State of Oregon. The Agreement provisions required by ORS Chapter 279A and 279C to be included in public agreements are hereby incorporated by reference and shall become a part of this Agreement as if fully set forth herein.

Consultant shall adhere to all applicable federal and state laws, including but not limited to laws, rules, regulations, and policies concerning employer and employee relationships, workers' compensation, and minimum and prevailing wage requirements. Any certificates, licenses or permits which Consultant is required by law to obtain or maintain in order to perform work described on Exhibit A, shall be obtained and maintained throughout the term of this Agreement.

Q. Adherence to Law

Consultant shall adhere to all applicable federal, state and local laws, including but not limited to laws, rules, regulations, and policies concerning employer and employee relationships, workers' compensation, and minimum and prevailing wage requirements. Any certificates, licenses or permits which Consultant is required by law to obtain or maintain in order to perform work described on Exhibit A, shall be obtained and maintained throughout the term of this Agreement.

R. Modification

Any modification of the provisions of this Agreement shall not be enforceable unless reduced to writing and signed by both parties. A modification is a written document, contemporaneously executed by City and Consultant, which increases or decreases the cost to City over the agreed sum or changes or modifies the scope of service or time of performance. No modification shall be binding unless executed in writing by Consultant and City. In the event that Consultant receives any communication of whatsoever nature from City, which communication Consultant contends to give rise to any modification of this Agreement, Consultant shall, within thirty (30) days after receipt, make a written request for modification to City's Project Manager. Consultant's failure to submit such written request for modification in the manner outlined herein may be the basis for refusal by the City to treat said communication as a basis for modification. In connection with any modification to the contract affecting any change in price, Consultant shall submit a complete breakdown of labor, material, equipment and other costs. If Consultant incurs additional costs or devotes additional time on project tasks which were reasonably expected as part of the original agreement or any mutually approved modifications, then City shall be responsible for payment of only those costs for which it has agreed to pay.

S. Other Conditions

S.1 Except as otherwise provided in paragraphs S.1.1, S.1.2, and S.1.3 Consultant represents and agrees that the contract specifications and plans, if any, prepared by the Consultant will be adequate and sufficient to accomplish the purposes of the project; and further, that any review or approval by the owner of the plans and specifications shall not be deemed to diminish the adequacy of Consultant's work.

S.1.1 Subsurface Investigations. In soils, foundation, ground water, and other subsurface investigations, the actual characteristics may vary significantly between successive test points and sample intervals and at locations other than where observations, exploration, and investigations have been made. Because of the inherent uncertainties in subsurface evaluations, changed or unanticipated underground conditions may occur that could affect total Project cost and/or execution. These conditions and cost/execution effects are not the responsibility of the Consultant, except to the extent that a condition is determined and Consultant provides the solution.

S.1.2 Opinions of Cost, Financial Considerations, and Schedules. In providing opinions of cost, financial analyses, economic feasibility projections, and schedules for the Project, Consultant has no control over cost or price of labor and materials; unknown or latent conditions of existing equipment or structures that may affect operation or maintenance costs; competitive bidding procedures and market conditions; time or quality of performance by third parties; quality, type, management, or direction of operating personnel; and other economic and operational factors that may materially affect the ultimate Project cost or schedule. Therefore, Consultant makes no warranty that Owner's actual Project costs, financial aspects, economic feasibility, or schedules will not vary from Engineer's opinions, analyses, projections, or estimates.

S.1.3 Record Drawings. Record drawings, if required, will be prepared, in part, on the basis of information compiled and furnished by others, and may not always represent the exact location, type of various components, or exact manner in which the Project was finally constructed. Consultant is responsible for any errors or omissions about which the Consultant knew or should have known in the information from those employees or firms employed by the Consultant under the terms of the contract as stated therein that is incorporated into the record drawings.

S.2 Notwithstanding any acceptance or payments, City shall not be precluded or stopped from recovering from Consultant, or its insurer or surety, such damages as may be sustained by reason of Consultant's failure to comply with the terms of this Agreement. A waiver by City of any breach by Consultant shall not be deemed to be a waiver of any subsequent breach by Consultant.

T. Integration

This Agreement, including but not limited to Exhibits and Consultant's proposal submitted to City contains the entire and integrated agreement between the parties and supersedes all prior written or oral discussions, representations or agreements. In case of conflict among these documents the provisions of this Agreement shall control.

U. Miscellaneous / General

Consultant binds itself, its partners, officers, successors, assigns and legal representatives to the City under the terms and conditions of this agreement as described herein.

The CONSULTANT and the CITY hereby agree to all provisions of this AGREEMENT.

IN WITNESS WHEREOF, the parties by their signatures below enter into this Agreement this _____ day of _____, 2____.

CONSULTANT:

_____
Name of Firm

By _____
Typed or
Printed Name:_____

Title: _____

Mailing
Address: _____

_____

_____

Employer I.D. No._____

CITY OF WILSONVILLE:

By_____
Arlene Loble
City Manager

Attest:

_____
Sandra C. King
City Recorder

Mailing
Address:
29799 SW Town Center Loop East
Wilsonville, OR 97070

Approved as to form:

_____
Michael E. Kohlhoff
City Attorney

EXHIBIT A

CONSULTANT'S SCOPE OF SERVICE
CITY OF WILSONVILLE
OWNERS REPRESENTATIVE FOR THE
WASTEWATER TREATMENT PLANT EXPANSION PROJECT

EXHIBIT B

REQUEST FOR QUALIFICATIONS
CITY OF WILSONVILLE
OWNERS REPRESENTATIVE FOR THE
WASTEWATER TREATMENT PLANT EXPANSION PROJECT

CITY OF WILSONVILLE

COMMUNITY DEVELOPMENT DEPARTMENT

REQUEST FOR STATEMENT OF QUALIFICATIONS

City of
WILSONVILLE
in OREGON

OWNER'S REPRESENTATIVE FOR THE WASTEWATER TREATMENT PLANT EXPANSION

CIP # 2051

AUGUST 26, 2008

Address proposals to:
City of Wilsonville, City Hall
Attn: Jadene Torrent Stensland, P.E., Project Manager
Location: 29799 Town Center Loop East Wilsonville OR 97070
503-570-1538
WWTP-owners-rep@ci.wilsonville.or.us

SOQ due: Tuesday, September 30, 2008, at 2:00 PM, local time
Envelopes must be sealed, plainly marked: "Owner's Representative for the WWTP Expansion Project", sent to the attention of the Project Manager, and includes the name and address of the proposer. Respondents must submit six (6) sets of the proposal. The City of Wilsonville reserves the right to reject any or all proposals.

REQUEST FOR STATEMENT OF QUALIFICATIONS

OWNER'S REPRESENTATIVE FOR THE
WASTEWATER TREATMENT PLANT (WWTP) EXPANSION PROJECT (2051)
CITY OF WILSONVILLE, OREGON

Proposals must be received by 2:00 p.m., Thursday, September 30, 2008

Please email any questions regarding this project to WWTP-owners-rep@ci.wilsonville.or.us

This document and related information will be available for download on August 26, 2008 via www.ci.wilsonville.or.us (from Home Page, select Doing Business, and then Bids and Proposals, RFQs).

(UPDATE THIS PAGE AFTER ALL CHANGES ARE INCORPORATED)

ADVERTISEMENT FOR REQUEST FOR STATEMENT OF QUALIFICATIONS

OWNER'S REPRESENTATIVE FOR THE WASTEWATER TREATMENT PLANT EXPANSION CIP #2051

Six (6) written proposals for the City of Wilsonville Owner's Representative (ORep) for the Wastewater Treatment Plant (WWTP) Expansion Project, CIP # 2051, will be accepted by Jadene Torrent Stensland, P.E., Project Manager, Wilsonville City Hall, Community Development Department, 29799 Town Center Loop East, Wilsonville, Oregon 97070, until **Tuesday, September 30, 2008, 2:00 p.m.** local time. The pre-conference and site tour is **Thursday, September 4, 2008 at 10:00 a.m.** at the WWTP located at 9275 SW Tauchman St.

The ORep will be an integral partner to ensure the successful outcome of a Design-Build-Operate (DBO) contract, from project conception through monitoring period. The ORep contract will be a task-oriented agreement, with each task negotiated independently. The ORep will perform overall project management, minor facility plan update, site survey, document existing conditions, develop performance and construction quality criteria, develop 10% conceptual design and Build-In Model (BIM), develop the DBO RFQ/RFQ and ensure the DBO contract is properly solicited and awarded through a competitive RFQ/RFQ process, provide oversight and management of the DBO contract deliverables as well as provide operations recommendations. Other tasks will be negotiated, as necessary.

This RFQ and related information will be available for download after Tuesday, August 26, 2008 via www.ci.wilsonville.or.us (from Home page, select Doing Business tab, select Bids & Proposals, select project link under RFQ/RFQ).

All correspondence pertaining to this RFQ should be directed to the project manager, at *WWTP-owners-rep@ci.wilsonville.or.us* . All questions shall be submitted in writing no later that seven (7) calendar days prior to the submittal deadline.

The City desires to have all of the wastewater treatment plant capital improvements completed as soon as possible, but no later than December 31, 2011. The ORep contract may extend thru 2015. The total expansion project costs are estimated at $50M. ORep services are expected to be $4.5M to $5M.

The City's Selection Committee will recommend to the Wilsonville City Manager that the contract award be made to the proposer that is in the Committee's opinion, best qualified. The Wilsonville City Council acting as the Local Agency Review Board approves the contract.

Within thirty (30) calendar days after the City Council approval of the selection, the City and proposer will finalize the professional services agreement.

As advertised in the Daily Journal of Commerce on August 22, 2008.

By Order of Michael A. Stone, City Engineer, City of Wilsonville, 29799 SW Town Center Loop E, Wilsonville, OR 97070

REQUEST FOR STATEMENT OF QUALIFICATIONS

OWNER'S REPRESENTATIVE FOR THE WASTEWATER TREATMENT PLANT (WWTP) EXPANSION PROJECT (2051)

SECTION 1.0
GENERAL INFORMATION

1.1 INTRODUCTION

The City of Wilsonville is seeking the services of a qualified and innovative consultant or consultant team to provide engineering and Owners' Representative (ORep) services for the City of Wilsonville Wastewater Treatment Plant (WWTP) Expansion Project.

The ORep will be an integral partner to ensure the successful outcome of a Design-Build-Operate (DBO) contract, from project conception through monitoring period. The ORep contract will be a task-oriented agreement, with each task negotiated independently. The ORep will perform overall project management, minor facility plan update, site survey, documents existing conditions, develop performance and construction quality criteria, develop 10% conceptual design and Build-In Model (BIM), develop the DBO RFQ/RFQ and ensure the DBO contract is properly solicited and awarded through a competitive RFQ/RFQ process, provide oversight and management of the DBO contract deliverables as well as provide operations recommendations. Other tasks will be negotiated, as necessary.

Currently, the WWTP is operating at or near hydraulic and biological process treatment capacity for various processes, including, but not limited to, the headworks and solids handling processes. Therefore, time is of the essence for implementation of the project.

The project will be accomplished by DBO contract, which could consist of multiple project phases. The 2005 City of Wilsonville Wastewater Treatment Plant Facilities Plan (WWTPFP, including an amendment on phasing) was approved by Council in adopting Ordinance 591 on November 7, 2005. The plan determined that by 2011 the plant would need to have peak day capacity of 7 MGD in order to serve the City's rate of growth and that several improvements were needed to obtain operational efficiencies, modernize equipment, meet anticipated regulatory performance requirements, change over systems to a drying of solids process in recognition of the lack of qualified land for application of the liquid bio-solids generated by the plant, and to meet growth demands.

The current estimate for the WWTP Expansion Project is in the range of $50 million. The City desires to select an ORep, to determine and award the contract option best suited to meet project goals, and be in a position to start the two years of construction in 2010 in order to have substantial completion in 2011. The project is locally funded by the City of Wilsonville's Capital Improvement Program (CIP) and will involve permitting with the City of Wilsonville and the State of Oregon DEQ.

By utilizing a DBO project delivery approach, the City expects to secure substantial benefits for its customers. These benefits include aggressive project design and construction scheduling, optimal risk allocation, competitive design selection, clear assignment of performance responsibilities to a single contracting entity, optimal design for ease of operation and maintenance, long-term facility operations and maintenance efficiencies and cost savings.

The Owners' Representative will ensure that the alternative contracting method for a complex project of this nature is properly solicited and awarded through a competitive RFQ process within the time constraints set forth above and there is the expertise necessary to assist staff in the oversight and management of the DBO contract deliverables.

The City prefers no change of lead personnel involved, if at all possible, throughout the duration of the project. Substitution of personnel on this contract will not be permitted without prior written approval by the City.

Limitation

It is anticipated that the project delivery mechanism for construction will include a Design-Build-Operate (DBO) delivery process. The Owner's Representative and its consultant team (including all sub-consultants) will NOT be allowed to be a participant in any capacity on the DBO team(s) selected for any or all phases of the project.

1.2 SITE DESCRIPTION

The Wastewater Treatment Plant is located at 9275 SW Tauchman Street, Wilsonville, Oregon. A series of pictures of the wastewater treatment plant is available at www.ci.wilsonville.or.us. The facility is a conventional activated sludge treatment plant. The aerobic digesters are designed into the center of the primary clarifiers. The secondary clarifier provide secondary treatment. The aeration basins were installed in the mid 1990's to replace rotating biological contactors. The plant uses sand filters and ultraviolet light prior to discharge of effluent to the Willamette River. The plant routinely meets or exceeds criteria for discharge to the Willamette River. Industrial users include Coffee Creek Prison and Coca-Cola Bottling Company.

1.3 PROJECT GOALS AND OBJECTIVES

The following outlines the overall City's goals and some of the objectives of the WWTP Expansion Project.

Goal 1 — WWTP functional expansion to at least 7 MGD peak day by 2011

Objectives:
* Efficient and expedient project delivery, timely to City's needs
* Meet regulatory requirements for 25 + years
* Flexibility, efficient use of capacity and footprint

Goal 2 — Integrate innovation in design and operations

Objectives:
* Increase plant efficiency resulting in lifecycle cost reduction
* Minimize short and long-term ratepayer costs
* Incorporate renewable energy components/sustainable practices
* Increase Automation
* Maximize lifecycle of facility

Goal 3 — Integrate operations and maintenance (O&M) in design, construction and commissioning

Objectives:
* Uninterrupted operation of plant during upgrade
* Modernize equipment and controls
* Minimize/eliminate plant odors
* Convert to Class 'A' sludge

* Guarantees for noise control and long-term bio-solids processing disposal

Goal 4 Reduce City Risk
Objectives:
* Schedule accountability (improvement completed before capacity required)
* Transfer of risk with DBO appropriately
* Clear understanding by all parties during all project phases of liabilities and risk factor allocations

Additionally, the following goals and objectives are specific to the ORep.

1. Provide a pro-active approach to the implementation of the project
2. Clearly understand and articulate the city's vision, desired outcome and protect our resources
3. Communicate and work through difficult issues in a timely and forthright manner (tell the city what we need to know, not what you think we want to hear)
4. Proven track record of innovative, sustainable business practices
5. Experience working with legal counsel and labor relations firms with expertise in DBO contracting
6. Staff with proven and relevant operational experience
7. "Cradle to Grave" experience as ORep for entire DBO process (contract development, construction and operations oversight)
8. Create and maintain overall project schedule. Meticulously track action items.
9. Staff with experience creating and using BIM (Build-In-Model)

1.4 PROJECT ELEMENTS

The 2005 WWTP-FP identified the following capital improvements that are necessary for the expansion and costs have been updated for 2008 dollars.

Project Element	*2008 Estimated Project Costs*
Reconstruct headworks: • Install additional screening channel and screen • Enclose the headworks and add odor control • Modify the flow split structure • After new screen and channel are operational, modify channel to existing fine drum screen to eliminate upstream blockage • Add a grit chamber or other added method of grit removal to the headworks • Add new washing and compaction unit for redundancy	$3,075,000
Primary Treatment: • Eliminate flow restriction in the effluent line from the north primary clarifier, so both clarifiers can be used at the same time, even with one digester down for maintenance • Modify plant influent meter location to improve accuracy • Demolition of the aerobic digesters within the clarifier structure	$5,156,000

Project Element	*2008 Estimated Project Costs*
• Expansion of the primary clarifiers • Stainless steel sludge-collector mechanisms • Odor control for the expanded primary clarifiers	
Secondary Treatment: • Add secondary clarifier • Add a third aeration basin	$14,691,000
Filtration: • Replace and expand effluent filters to increase capacity. (page 7-8 of WWTP FP)	$3,870,000
Solids Stabilization: • A belt drying system or equivalent which will process solids from the digesters and centrifuges by drying the solids to have less than 10% liquids and to kill pathogens to meet the requirements for a Class A sludge product • Two anaerobic digesters • A sludge storage tank • Control building • Gas flare and gas system (or Co-Gen facility)	$10,139,000
Biosolids Dewatering: • Two centrifuges • New building to house the centrifuges and belt drying system	$5,524,000
Liquid and Cake Storage: • Modification of the sludge drying basins for temporary storage to accommodate schedule for centrifuge operation • Add storage as needed to facilitate the centrifuge and belt drying schedules	$3,314,000
Disinfection • Removal of Parshall flume, added new effluent flow metering and adding a second Medium-pressure UV channel and UV system. • Outfall improvements	$2,174,000
Misc Site Management, Relocate Maintenance Shop, Landscaping, Mitigation, Etc. • Costs distributed to treatment systems	$0
Odor Control: • Costs not estimated at this time	$0

Project Element	*2008 Estimated Project Costs*
• **Major Collection System improvements adjacent to WWTP**	$0
TOTAL CAPITAL PROJECT COSTS (2008 Dollars)	**$47,943,000**

***** END OF SECTION ONE *****

SECTION 2.0
REQUESTED SERVICES

2.1 REQUESTED SERVICES

This Request for Qualifications (RFQ) outlines the information necessary to understand the requested services and responsibility, the consultant selection process and the required documentation in submitting a Statement of Qualifications (Proposal) for this project.

The City prefers no change of key personnel involved, if at all possible, throughout the duration of the project. Substitution of personnel on this contract will not be permitted without written approval by the City.

2.2 PROPOSED PHASING OF OWNERS REP WORK

It is anticipated that the services furnished by the ORep to the City will be performed under a series of task orders defining the specific services to be performed and the estimated cost for each phase of services. A more detailed list of requested services as currently understood is in Appendix A (Draft Scope of Work) to this request for proposal.

City staff recommends that the ORep essential items and timing are:

PHASE A: (months 1 - 9 months)

- Project Management
- Facilities Plan Update
- Influent Characterization
- Site Survey/Document Existing Conditions
- Asset Management criteria
- Performance and construction quality criteria
- 10% conceptual design
- Build-In-Model (BIM)
- Create and maintain overall schedule
- Develop Industry forums
- Obtain external/internal stakeholder input
- Assist city with NPDES permit renewal

PHASE B: (months 6 – 12)

- Draft RFQ
- Review qualification submittal
- Draft RFP
- Comment on Draft DBO contract
- Review proposals
- Assist with DBO contract negotiations

PHASE C: (months 12 – 36)

- DBO contract monitoring (2 years)

PHASE D: (months 36 – 72)

- Services during Commissioning and Warranty
- Annual Reports

The Consultant shall provide adequate personnel and resources to accomplish the objectives of the requested services and key personnel must be identified.

The Consultant shall provide a wide range of responsible and responsive ORep services and professional engineering services including, but not limited to, project management, engineering research and analysis of existing systems, long term municipal infrastructure planning, preparation of engineering and construction cost estimates, and other items that may be necessary to complete the Project. Cost estimates for any proposed capital improvements projects (CIP) shall be provided in total project costs in current dollar value with 30% conceptual design level contingency. The Consultant is expected to provide a highly qualified and experienced team and be able to deliver satisfactory products and services.

The Consultant is encouraged to propose changes or additions to the draft scope of work if the Consultant believes that these changes will provide added benefit to the project.

All recommendations and information produced for this project shall comply with Oregon Department of Environmental Quality (ODEQ) and other applicable State and Federal regulations and requirements.

The City anticipates the ORep services to be fully completed no later than June 30, 2015. The anticipated overall budget for the ORep is slightly under $5M.

***** END OF SECTION TWO *****

SECTION 3.0
PROPOSAL REQUIREMENTS AND EVALUATION

3.1 PROPOSAL REQUEST

Six (6) written proposals of the Statement of Qualifications for the City of Wilsonville Owner's Representative (ORep) for the Waste Water Treatment Plant Expansion Project, CIP # 2051, will be accepted by Jadene Torrent Stensland, P.E., Project Manager, Wilsonville City Hall, Community Development Department, 29799 Town Center Loop East, Wilsonville, Oregon 97070, until **Tuesday, September 30, 2008, 2:00 p.m.** local time.

This RFQ and related information will be available for download after August 26, 2008 via www.ci.wilsonville.or.us (from Home page, select Doing Business tab, select Bids & Proposals, select project link under RFQ/RFQ).

All correspondence pertaining to this RFQ should be directed to the project manager, at *WWTP-owners-rep@ci.wilsonville.or.us*

All questions shall include, "RE: Owner Rep WWTP Project – RFQ Questions" either in the subject line or written on the front of the envelope.

All questions shall be submitted in writing no later that seven (7) calendar days prior to the submittal deadline. As appropriate, questions and answers will be provided by email to all firms on the RFQ holders list.

3.2 NOTIFICATION OF INTENT TO SUBMIT

All consultant teams intending to submit a proposal shall submit applicable contact information to the Project Manager by email to *WWTP-owners-rep@ci.wilsonville.or.us* no later than **2:00 p.m. on Monday, September 15, 2008.**

3.3 PROPOSALS

Proposers responding to this RFQ request must follow the directions stated within this RFQ. Adherence to these rules will ensure a fair and objective analysis of your proposal. Proposals should provide a clear, concise description of your firm's capabilities to satisfy the requirements of the RFQ.

All responses must be made in the format outlined in Section 3.4. Failure to comply with or complete any part of this request may result in rejection of your proposal.

Each proposal will be judged on the completeness and quality of content, and as a demonstration of the consultant's qualifications.

The items of information to be included in each submittal, evaluation criteria, maximum points, and page limitations are described in Section 3.4. An explanation of each item appears immediately following the chart.

3.4 PROPOSAL CONTENTS

3.4.1 General:

The six (6) proposals shall include the information requested in each of the items identified in the following table and in the order indicated. The proposal shall describe the consultant's qualifications, intended performance, proposed time line for the proposed activities and the resources required to perform the activities. Each proposal must contain the criteria listed below. Proposals not meeting all pass/fail criteria will be considered nonresponsive and shall be rejected.

Each proposal will be limited in length and judged as a demonstration of the consultant's capabilities and understanding of the services requested. Evaluation factors and maximum points will be as follows. The maximum number of pages for each criterion is left to the discretion of the consultant but must not exceed the specified total.

3.4.2 Proposal Format and Length:

The proposal must be organized in accordance with the list of proposal contents. The core proposal must not exceed 12 sheets (24 pages), submitted on double sided typed 8-1/2" x 11" paper excluding supporting documents. One sheet is considered to be a single 8-1/2"x11" piece of paper and the minimum font size is 12 point for the main text. The Schedule sheets are allowed on one side of an 11"x17" and will count as a single 8-1/2"x11" page. The cover letter is NOT included in the above page count, however shall not exceed two (2) pages.

A proposal exceeding the specified number of pages or text font size will be considered non-responsive and the proposal will not be considered. Supporting information shall be in a separate section, at the end of the proposal, and not counted in the page limit requirements. However, all pertinent information shall be included in body of proposal as supporting information may not be reviewed. Front and back covers, as well as, section dividers are NOT counted in the page limit requirements. A one page table of contents is not counted in the page limit requirements.

Proposals should be prepared simply and economically, providing a straightforward, concise description of the key personnel's capabilities to satisfy the requirements of the City. Special bindings, colored displays, promotional materials, etc., are not necessary. Emphasis should be on completeness, brevity, and clarity of content.

CONTENT AND EVALUATION CRITERIA	MAXIMUM SCORE
1. Introductory letter	0
2. Project Understanding & Approach	35
3. Key Personnel Qualifications	30
4. Team Qualifications	25
5. Project schedule (11" x 17" allowed)	10
6. Resources	0
7. Additional Supporting Information	0
TOTALS	100

3.4.3 Introductory Letter (Pass/Fail):

The proposer may use this section to introduce the Proposal and/or to summarize the key provisions of the proposal.

The introductory letter shall include, but need not be limited to, the following information. The name of the firm, as well as, the signature, printed name and title, telephone and fax number of the officer authorized to represent the consultant in any correspondence, negotiations and sign any contract that may result. The address of the office that will be providing the service, a project manager's name, telephone number, fax number, and e-mail address. The federal and state tax ID numbers, and the state of incorporation, if applicable, must also be included.

A statement should be included that "the consultant accepts all the terms and conditions contained in the Request for Proposal and that the proposal is valid for one hundred and twenty (120) days after the submission deadline".

Include a statement that "all materials and documents acquired or produced by the consultant in conjunction with the resulting contract shall be delivered to and become property of the City of Wilsonville without restriction or limitation of their future use. All documents that include color figures shall be reproducible and legible in black & white copies".

This section should include the statement "All RFQ items have been covered in this Proposal".

3.4.4 Project Understanding and Approach (Score 35):

This section relates to the project understanding and approach of the requested services. This should include a clear and concise understanding of the project based on existing information, and a general description of the purpose of this project and the chief issues to be addressed. The consultant should be knowledgeable of standard solutions applicable to project issues as well as being able to offer innovative ideas. It is also important that the consultant demonstrate an ability to synthesize technical information and communicate this information in verbal, written or graphic form.

This section should also outline the approach to the project and how key issues identified in the requested services will be addressed. It should include major tasks to be completed as well as resources proposed to complete each task, identifying the consultant's ability to ensure expeditious completion of the work.

- Describe your firms overall approach to the project
- Provide a general work plan that describes how the consultant will organize and conduct the project by task, as defined in Section 2- Requested Services. This plan must include all major phases of the project. Identify any critical milestones for the project
- Provide a description of the consultant's approach and methodology of managing work tasks and coordination, sequencing and control of field operations used to accomplish the work in a timely manner. Describe how you would propose to use City management and operational personnel, if at all, to assist you during the project and indicate the approximate time requirement.
- Provide a definition of how the consultant will ensure project progress and quality control. Describe your firm's internal procedures and/or policies related to work quality and cost control
- Describe how your work plan addresses contingencies that may arise during the project
- Describe your firm's process/concept for managing scope, schedule & budget
- Describe your firm's process for interacting with your internal project team; and describe your firm's ability to provide interaction with your client and/or stakeholders

3.4.6 Key Personnel Qualifications (Score 30):

Provide information on each individual regarding related work experience, publications, education/training and demonstrated competence. The key qualifications and experience relative to the requested services should be addressed in the following areas:

- Provide an organization chart with all key personnel
- Identify the project principal, project manager, engineer of record, discipline leads, key staff and sub-consultants to be utilized in carrying out this project.
- List current assignments (% of time allocated in 2009) and location of key personnel
- Provide qualifications, registrations, certification and relevant individual experience of project key personnel including sub-consultants
- Demonstrate each of the project manager's ORep experience within 5 years, managing interdisciplinary teams, and managing controversial public involvement programs
- Identify DBO experience of key personnel
- Provide a listing of other key individuals on the team, as appropriate, that would support the completion of this project, with a summary of each team member's area of responsibility, expertise, experience and qualifications for this work.
- Demonstrate the ability of the key personnel to deliver projects on time and within budget

3.4.7 Team Experience (Score 25):

Provide a brief professional work history of relevant projects as it relates to the capabilities of the primary firm and any sub-consultants to provide the requested services. This work history will only cover projects undertaken by the same staff members to be utilized for this project. The response should address the following:

- Describe similar projects, by name, type, location and date, performed within the last ten years, that best characterize work quality and cost control. Detail the type of work done that supports the listed mandatory requirements in this RFQ. Please include the contact name, address, phone number, fax number and e-mail of the current contact person for each reference. Identify the key personnel roles and detailed specific responsibilities and the firm where they worked during the project.
- In addition, include a total public client list and contact person for the last two years or the last ten clients, whichever is least.
- Describe experience as a team on similar or related projects
- List the types of experience that each firm on you team can provide and indicate how long each firm has provide these types of service.
- Describe specific experience with understanding operations, design, and construction oversight of similar Wastewater Treatment Plants (WWTP)
- Describe specific experience of operating a WWTP during an expansion project
- Identify recent experience with existing WWTP expansions and transitions from government workforce to a DBO firm.
- Emphasis firm's area of expertise (facilities plan, site survey, asset mgmt, DBO contracting, BIM, etc.)
- Describe two projects in which an innovative solution was utilized to accomplish your client's goals.
- Describe experience with Oregon Department of Environmental Quality (ODEQ) and other agencies.
- Describe your firm experience with Build-In-Model (BIM).
- Describe your firm experience with creating a DBO contract as well as creating performance and construction quality criteria
- Demonstrate the ability of the team to deliver projects on time and within budget

3.4.8 Project Schedule (Score 10):

The proposal should include an aggressive, but feasible, schedule that shows how the project may be expedited and coordinated to benefit the City and other project stakeholders. The proposal should describe the approach to the overall project that supports the processes described in the Scope of Work/Requested Services section. This plan must include all major phases of the project, with targeted completion dates for each phase and tasks of the project, as well as for each required deliverable.

If the project can be completed in a shorter timeframe than the below mentioned schedule (see **3.5. SCHEDULE**), please indicate the proposed schedule.

City staff requires a minimum of **fifteen (15) business days** for review of documents and City Council requires forty-five (45) calendar days to approve contracts and amendments. The consultant shall include these time lines in their schedule.

3.4.9 Resources (No Score):

This relates to the ability of the consultant to provide materials consistent with City of Wilsonville formats. Upon completion of the project, copies of all materials generated by the consultant will be provided to the City in both reproducible hard-copy and electronic form. Design materials should be AutoCAD 2006 or ArcGIS 9.1 compatible and written materials should be in Word/Excel 2007.

All materials and documents acquired or produced by the consultant in conjunction with the resulting contract shall be delivered to and become property of the City of Wilsonville without restriction or limitation of their future use. All documents, including those with color figures shall be reproducible and legible in black & white copies.

3.4.10 Supporting Information (No Score):

Supporting materials could include graphs, full resumes, other references, charts, and photos. However, pertinent experience should be covered in the body of the proposal as this section may not be reviewed. Supporting information will not count toward the 24 page limit, but brevity is encouraged.

If there is no additional information to present in the supporting Information, then state "There is no additional information we wish to present".

3.5 SCHEDULE

First Advertisement	August 22, 2008
RFQ Available Online	August 26, 2008
Pre-Proposal Conference and WWTP Site Tour	10 AM, September 4, 2008
RFQ-holders list available	September 10, 2008
Notification of Intent to Submit (Prime Consultants)	September 15, 2008
Last Day to Submit Proposal Questions	September 23, 2008
Proposal Due	September 30, 2008
Notification for Interviews	October 3, 2008
Interviews	October 17, 2008
Notice of Intent to Award	October 22, 2008
Award Protest Deadline (seven days after notice of intent)	October 29, 2008
Contract Negotiations Due	November 21, 2008
Council Award	December 1, 2008
Contract NTP	December 15, 2008

*All dates are approximate and subject to change.

3.6 RESPONSE DATE

To be considered, proposals must arrive at the City on or before the date and time specified in this RFQ. Proposers mailing proposals should allow delivery time to ensure timely receipt of their proposals. ***No proposal or correction received after the closing date and time will be considered.***

3.7 REIMBURSEMENT

All costs for proposal and interviews to secure this project are the consultant's responsibility.

3.8 CLARIFICATIONS

The City may contact the consultant for any clarification it needs to understand the consultant's proposal. Any changes or clarifications will be made in writing before executing the contract and will become part of the final contract.

3.9 PROPOSAL WITHDRAWAL

Any proposal may be withdrawn at any time before the "Proposal Due" date and time specified in the Schedule, by providing written request for the withdrawal of the proposal to the City. The request shall be executed by a duly authorized representative of the firm. Withdrawal of a proposal will not prejudice the right of the proposer to file a new proposal.

3.10 INTERVIEW

Up to three firms, selected for final evaluation, may be required to make oral presentations of their proposals to the City's Selection Committee. Such presentations provide an opportunity for the firms to clarify the proposals and to ensure mutual understanding. The presentation will be an informal question and answer meeting; no power-point presentations are expected or desired. The City will schedule the times and location for this meeting. Firms selected will be required to provide an audited financial statement.

3.11 REJECTION OR ACCEPTANCE OF PROPOSALS

The City expressly reserves the following rights:

1. To reject any and/or all irregularities in the Proposals.
2. To reject any and/or all the Proposals or portions thereof.
3. To base awards with due regard to quality of services, experience, compliance with specifications, and other such factors as may be necessary in the circumstances.

3.12 SELECTION OF CONSULTANT

The City's Selection Committee will recommend to the Wilsonville City Manager that the contract award be made to the proposer that is in the Committee's opinion, best qualified. The Wilsonville City Council must approve any selection.

3.13 CONTRACT AWARD

The City will award a contract to the consultant whose proposal would be most advantageous to the City. The selected consultant will be required to assume responsibility for all services outline in the RFQ, whether the consultant or a representative of the consultant produces them. The City considers the selected consultant responsible for any and all contractual matters.

3.14 EXECUTION OF CONTRACT

Within 30 calendar days after the City Council approval of the selection, the City and proposer will finalize the professional services agreement.

If the selected proposer fails to execute a contract with the City within 30 calendar days after the award has been made, the City may give notice to the proposer of the City's intent to award the service contract to the next best proposal, or to call for new proposals. The 30-day time period may be extended at the City's sole option.

The successful consultant will be required to execute a professional services agreement, an example of which is attached as Appendix B. Appendix B also identifies the minimum types and amounts of insurance that the consultant is required to carry. The successful consultant must also submit documents addressing insurance, non-collusion, tax law, debarment and conflict of interest as part of the professional services agreement. The City will require the successful proposer to sign this contract.

3.15 AWARD PROTESTS

Protests concerning the consultant selection process must be delivered in writing to the City Attorney, Michael E. Kohlhoff, within 7 calendar days of the award announcement. Protests must specify the grounds upon which the protest is based. The City Council will review the protest, decide on appropriate action and contact all involved parties. The decision will be presented to the parties within 45 calendar days of receipt of the protest and will be the final City position.

3.16 PUBLIC RECORDS

Any material submitted by a proposer shall become the property of the City unless otherwise specified. During the evaluation of proposals and the selection of the consultant, the proposals shall be confidential. After the selection process has been completed, this proposal will be made a part of a file open to public inspection. If a proposal contains any information that is considered a trade secret under ORS 192.501(2), each sheet of such information must be marked with the following legend:

"This data constitutes a trade secret and shall not be disclosed except in accordance with the Oregon Public Records Law, ORS Chapter 192."

Nondisclosure 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 Oregon Public Records Law.

The City accepts no liability for the inadvertent or unavoidable release of any confidential information submitted, and claims arising out of any public record request for such information shall be at the consultant's expense.

Identifying the proposal in whole as a trade secret is not acceptable. Failure to identify a portion of the proposal as a trade secret shall be deemed a waiver of any future claim of that information as a trade secret.

3.17 TAX ID NUMBER

Proposals must state the proposer's Federal/State of Oregon Taxpayer Identification Number.

3.18 RECYCLED PRODUCTS STATEMENT

In accordance with ORS 279 A.125, Consultants shall use recyclable products to the maximum extent economically feasible in the performance of the contract work set forth in this document.

3.19 LOCAL/STATE/FEDERAL REQUIREMENTS

The selected proposer shall comply with all federal, state and local laws, regulations, executive orders and ordinances applicable to the work under this contract, including, without limitation, the provisions of ORS 279 A, B & C. In addition, proposers agree to comply with: (1) Title VI of the Civil Rights Act of 1964; (ii) Section V of the Rehabilitation Act of 1973; (iii) the American with Disabilities Act of 1990 and ORS 659.425; (iv) all regulations and administrative rules established pursuant to the foregoing laws; and (v) all other applicable requirements of federal and state civil rights and rehabilitation statutes, rules and regulations. Proposer is subject to the Oregon Worker's Compensation Law and shall comply with ORS 656.017, which requires the provision of Worker's Compensation coverage for all employees working under this contract. The City of Wilsonville's programs, services, employment opportunities and volunteer positions are open to all persons without regard to race, religion, color, national origin, sex, age, marital status, disability or political affiliation.

3.20 PAYMENT FOR SERVICES

The City will pay a consultant for services performed based on approved rates and scope of work. The City will make monthly progress payments within thirty (30) calendar days following receipt of proper invoices.

Payments for extra work not described in the agreed upon scope of services will only be made when authorized in advance and in writing by the City Project Manager.

Price proposals are not requested and should not be submitted. Fees for the ORep services will be negotiated with the selected firm.

3.21 PROJECT DOCUMENTS FURNISHED BY CONSULTANT

Prior to all submittals, the Consultant shall perform a complete quality control review of all documents to ensure they are complete and accurate. The City's review is only to determine general level of compliance with project scope and quality requirements and does not relieve the Consultant from producing complete, high quality documents.

3.22 PROJECT TASKS TO BE PERFORMED BY THE CITY OF WILSONVILLE

The City will:

a. Provide a project engineer/manager who is responsible for overall City project management and will provide coordination between the consultant and the City,

b. Provide City staff member(s) to provide timely response to any questions and to be available for any meetings requested by the Consultant. All meetings will take place at the Wilsonville City Hall Building,
c. Contract with legal counsel familiar with DBO contracting;
d. Contract with Labor Relations Firm
e. Make available mapping and design information previously developed,
f. Coordinate collection of data from City records such as as-built data,
g. Make available guidelines, policies and regulations to be used in developing design,
h. Conduct public hearings and prepare Council agenda items,
i. Conduct Council workshops,
j. Maintain records and process payment requests,
k. Pay all permit fees to agencies, by internal transfer at the City of Wilsonville, or by check to outside agencies, upon the request of Consultant,
l. Provide legal review of all contracts, bid forms, and real property conveyances,
m. Provide the base or template provisions for the construction contract to which the Consultant shall add terms and conditions unique to the project;
n. Provide the services of a Instrumentation and Controls System Integrator for the project (Portland Engineering, Inc.), and
o. Perform other tasks as negotiated.

3.23 PROJECT MATERIAL AVAILABLE

The City of Wilsonville will provide the following documents to firms that have complied with the Notification of Intent to Submit provision (below). These will be provided to the prime consultant listed only.

- 2005 WWTP Facilities Plan (WWTPFP)
- 2001 Collection system Master Plan
- NPDES PERMIT 2004
- Other pertinent information, upon request.

***** END OF SECTION THREE *****

OWNER'S REPRESENTATIVE FOR THE WASTEWATER TREATMENT PLANT EXPANSION

APPENDIX A

DRAFT SCOPE OF WORK

OWNER'S REPRESENTATIVE FOR THE WASTEWATER TREATMENT PLANT EXPANSION

APPENDIX B

PROFESSIONAL SERVICES AGREEMENT

SCOPE OF WORK
APPENDIX A

OWNER'S REPRESENTATIVE
WWTP EXPANSION

City of Wilsonville

APPENDIX A
WWTP EXPANSION - OWNER'S REPRESENTATIVE
SCOPE OF WORK

GENERAL

The scope of work identified is an example of the level of effort expected for the Owner's Representative (ORep). The final scope of work will be developed in a partnership with the Owner's Representative team. The ORep team is encouraged to propose revisions, additions or deletions to the scope of work that would valued added to the project.

SCOPE OF SERVICES

City staff recommends that the ORep essential items and timing are:

PHASE A: (months 1 - 9 months)

- Project Management (1.1)
- Facilities Plan Update (1.2)
- Influent Characterization (1.3)
- Site Survey/Document Existing Conditions (1.4)
- Asset Management Criteria (1.5)
- Performance and Construction Criteria (1.6)
- 10% Conceptual Design (1.7)
- Build-In-Model (BIM) (1.8)
- Create and Maintain Overall Schedule (1.9)
- Develop Industry Forums (1.10)
- Obtain external and internal stakeholder input (1.11)
- Assist City with NPDES Permit Renewal (1.12)

geotech investigation

PHASE B: (months 6 – 12)

- Draft DBO RFQ
- Review qualification submittal
- Draft DBO RFP
- Comment on Draft DBO contract
- Review proposals
- Assist with DBO contract negotiations

PHASE C: months 12 – 36)

- DBO contract monitoring (2 years)

PHASE D: (months 36 – 72)

- Services During Commissioning and Warranty Period
- Annual Reports

PHASE A

1.1 Project Management

1.1.1 The Owner's Representative will manage all sub consultants on the team, directing the flow of information between the consultant team members and the City's project

manager. Monthly billing and status reports should be clearly presented in an organized manner, with costs distributed among tasks and funding sources.

- Organize and conduct Project Kick-off meeting and progress meetings at City Hall
- Prepare materials for and participate in public meetings as requested by City staff
- Prepare materials for meeting and participate in City Council work session and public hearings meetings as requested by City staff
- Coordinate various members of the consultant team
- Coordinate with other City consultants, i.e., legal, labor, etc.
- Provide exhibits, maps, figures, on an as needed basis, with only 24 hours notice
- Consultant's Project Manager is required to reside at the City offices and/or WWTP at least 20 hours per week during major phase work,
- Provide, monitor and update schedule, including but not limited to Engineering Design and Construction Administration
- Communicate clearly and regularly with the City's project manager
- Provide monthly status reports to the City's project manager
- Separate costs by tasks
- Submit monthly pay requests no later than the 7th day of each month
- Create, maintain and update monthly (min.) a detailed, critical path schedule,

1.1.2 The ORep shall lead the project with a strong sustainability vision

1.1.3 The ORep shall assist the city to define appropriate allowances for aesthetics

1.1.4 The ORep shall be the City's advisor in terms of preparing documents which appropriately allocate risk between the City and the DBO entity.

1.1.5 All documents, files and photographic negatives shall be delivered to and be permanently retained by the City. All documents that include color figures shall be reproducible and legible in black & white. All electronic files created during the project are required to be in MS Word, MS Excel and other City-approved format(s). Provide three (3) copies on CD with complete data, including an index. Document formatting includes, but is not limited to; detailed table of contents; list of figures and tables; abbreviations and acronyms sheets; cross-referenced sections; index; glossary; labels on section tabs; and individual CD jewel boxes with labels.

1.1.6 Documents shall be printed on 8.5" x 11" heavy first quality paper with standard three-hole punching and bound in heavy-duty EZ-D three-ring binders, when necessary. Provide binders with titles on front and spine. Tab each section for easy reference with plastic-coated dividers. Provide index for each manual. Provide plastic sheet lifters prior to first page and following last page. Reduce drawings or diagrams bound in manuals to an 8.5" x 11" or folded 11" x 17" size. However, where reduction is not practical to ensure readability, fold larger drawings separately and place in archive-quality envelopes which are bound into the binder. Identify envelopes with drawing numbers.

1.1.7 List of Deliverables

- Overall schedule

- Project Execution Plan (Schedule, Budget, Risk Management, Staffing, Communications, Quality Management, etc.)
- Minutes, Kickoff Meeting and other Meetings
- Monthly Status Reports
- Monthly Pay Requests

1.2 Facilities Plan Update

The consultant team shall provide the following services:

1.2.1 Thoroughly review the WWTPFP, the Wastewater Collection Master Plan and any other plan operational report.

1.2.2 Provide engineering review and testing plans for evaluating the treatment system hydraulic and process capacities, and estimation of timelines for when loads exceed current capacities. One primary concern is whether the secondary clarifiers are underrated and if so, overall impact on the schedule. (See Capacity Review 1.2.12)

1.2.3 Prepare a technical memorandum (TM) on the appropriateness of the suggested modifications as described in the WWTPFP, and updates as determined during this review process. Consider the selected treatment process given the review of reports, the testing results, review of the existing systems, and comparison of process train capacities to proposed flow and loading projections through 2040. Include a review of new developments in technology, new and potential regulations, energy saving considerations and sustainability components.

1.2.4 Provide TM for review of the collection system master plan and recommendation of operation of the collection and pumping systems of the City. Review the management and operational staff needs for the Collection System. Develop a periodic monitoring plan for the collection system during the design and construction process.

1.2.5 The process design criteria for the treatment facility will be summarized as a liquids process balance and a solids process balance.

1.2.6 An evaluation of the plant hydraulics is essential to ensure that the existing and future facilities can properly handle the planned flows. A hydraulic analysis of the existing system will be performed to determine the potential bottlenecks to be considered in the design.

1.2.7 Prepare a technical memorandum (TM) to review performance of existing odor control system and incorporate any needed changes in plant operations or construction as necessary. The WWTP is situated next to a residential area, and odor control is essential. Another option could be to continue using the existing stacked tower and biological reactor for odor control since design parameters indicate they have adequate capacity to support odor free operation through 2020. Unfortunately, the plant periodically releases hydrogen sulfide and other odorous gases which are not completely removed in the odor control system. The review will specifically include a review of the impact of influent characteristics (i.e. low alkalinity) in the plant influent on plant operations, among other processes influencing odor control.

1.2.8 Prepare a technical memorandum (TM) of the evaluation of electrical equipment including metering, transfer switches, transformers, switchgear, MCCs, variable frequency drives, and large motors. A report will be generated with photos identifying the existing state of the electrical installation. A duty comparison will be performed to identify the equipment short circuit ratings, breaker parameters etc. Electrical load measurements will be taken to establish a load flow baseline. Based on the power studies and input on the operating needs, the requirements for standby power will be identified.

1.2.9 Prepare a technical memorandum (TM) for the geotechnical support services to be required. The conceptual design phase will be to work with the structural engineers to perform an evaluation of the foundation conditions at the treatment plant. This information will be used for design and construction. The geotechnical engineer will obtain and review published and available geologic subsurface information. A senior geotechnical engineer will perform a reconnaissance level inspection of the proposed location of new structures.

1.2.10 Develop a phasing plan to determine required on-line date for completion of individual improvements, with recommendations on schedule for project completion.

1.2.11 Secondary Clarifier Capacity Review TM

The WWTPFP suggests that capacity limitation of secondary clarifier project needs to be accomplished by the summer of 2012. Additional study will be required on the secondary clarifier monitoring, testing and potential change in rated capacity may allow the secondary clarifier delivery schedule to be relaxed or delayed. This should be a primary focus of a capacity review of the plant that encompasses hydraulic and biological/chemical processes.

Depending on the capacity review, the Owner's Representative will need to develop a revised schedule for construction which considers:

- Total cost of the project and impacts to the current CIP
- Annual debt service impacts
- Disruption on plant operations
- Capacity requirements in the various plant systems

DELIVERABLES:

1.2.12 List of Deliverables

- Detail schedule of this scope of work with city staff needs
- Technical Memos for items in Section 1.2
- Construction Phasing Plan

1.3 INFLUENT CHARACTERIZATION

Existing information represents chemical analysis performed to meet mandatory regulatory requirements imposed on the discharge of the existing sewage treatment plant. There is insufficient information available as to the chemical and material composition of the influent

coming into this plant. The implementation of task order will result in the phased consolidation of the influent, and treatment of that influent, characterization of the influent is required.

a) Gather existing data, testing information, flow data, plant data and reports on constituents and analyze this to determine any potential effects on wastewater treatment. Provide a work plan including a sampling and safety plan. Provide the physical sampling, lab testing and lab results. All the samples must be collected, preserved and analyzed per the standard methods. The lab doing the analysis must also be State of Oregon Certified. Provide QA/QC of lab results. Sampling shall be done for 25 weeks and shall include a 12 week period for storm event sampling (i.e. normal rainy season rather than specific storm events). Test for constituents as recommended in the wastewater study, toxics and heavy metals. Additional analysis should be based on the analytical data that is required by the regulatory agencies. The samples must also be analyzed for additional parameters that will be needed for the design of the tertiary treatment plant and any permitting requirements. Provide influent data collection, sampling and lab testing for existing TP. Assumed tests to be conducted are itemized on the enclosed table 1. 24-hr composite samples will be collected once a week from TP. Assumed total time for sampling is 6 months (dry and wet weather sampling period). In addition, grab samples will be collected at the TPs at 2-hour intervals over two non-consecutive 24-hr periods. Access will be available 24 hrs/day when needed for diurnal sampling.

b) Calculate the volume of flow and provide a blending analysis that takes into account the fact that the plant will have the influent to the current TP in stages. Provide influent characteristics for the interim design mixes and the final design mix. Provide in-depth influent characterization consisting of a blending analysis and report with an influent final design mix.

c) Provide field reports of reportable data in 4 bi-weekly (every two weeks) reports as data is collected. Provide monthly reports thereafter. Provide quarterly analysis and reporting of the progress of characterization including any access problems encountered during sampling.

d) Verify and validate existing flow data for adequacy to meet the accuracy requirements established in this delivery order. Provide flow data for each of the flow paths if necessary to increase the accuracy of the flow data. Flow measurement will be for a period of 14 days to verify current accuracy of flow measurement. Measurement of gravity flow in pipes less than 12-inches diameter is assumed. Access to the pipes via manholes suitable for installing additional temporary flow measuring devices is assumed. Eight (8) sites currently have permanent flow monitoring. Concurrent operation of existing TP flow meters is assumed. Flow data from existing flow meters will be provided for comparison to the data obtained from the temporary flow measuring devices. Comparison between the existing and temporary flow meters shall be documented and analyzed.

e) Attend one kickoff and three status meetings to obtain information from the city and to brief the city on the progress of the work.

f) Provide Bench Scale Testing of the influent characteristics. Provide a work plan including a sampling and safety plan. Bench testing shall be performed as close to the proposed plant as possible while minimizing interference with on-going operations. Co-

location is recommended. Bench testing shall include, but not be limited to, provision of a portable facility including utilities hook up at a point proposed and approved by the city. The city will approve final connections however any trenching, piping, cabling and other construction activities will be the responsibility of the contractor. Location in close proximity to a sanitary sewer is highly recommended. Ensure the facility is securable. Adequate space for a mobile office trailer, work area, and parking is assumed to be available. Utilities (potable water, electricity, and sewer) are not available within 100 feet of the trailer site. Access to the trailer and utilities will be available to the city 24 hr/day, 7 days/week. Bench testing shall include lab equipment and set up. Bench testing shall include the collection and mixing of the influent, and the operation of the lab process. Bench scale testing will include an acclimation period and a testing period. Set up and acclimation is assumed to take 90 days and testing is assumed to take 30 days. ORep's staffing shall be adequate to support these activities. Influent used for bench testing should be collected in dry weather. Use of influent collected during or immediately after storm events should be avoided.

g) Provide treatability analysis of the influent. Analysis of test data shall include screening for treatability problems. Determination of organism growth rates, inhibitors to growth rates, compensation measures for such inhibitions, process methodology and capacity sizing.

h) Provide a draft, two interim and a final report (approximately one per month). Reports to include tables of results with interpretation and analysis.

i) Provide "what if" scenerio's to reflect two discrete approaches. The first approach shall be to determine upstream system parameters that can be varied, and establish the range at which the plant operation is no longer viable (odor and biological). The second shall be downstream approach to determine methods of plant operation and/or associated mechanisms that would result in effluent that would meet some or all of the basin plan objectives, or offer substantially better performance in the attainment of the objectives. Provide 6 different influent and 4 different effluent scenarios. Specific "what if" scenarios will be proposed by the ORep.

j) Attend one kickoff and three status meetings to obtain information from the government and to brief the city on the progress of the work under the work element.

1.4 WWTP Site Survey and Document Existing Conditions

1.4.1 The Owner's Representative shall provide the following surveying services for the WWTP site.

1.4.1.1 Retain a qualified State of Oregon Registered Land Surveyor (PLS) to perform all necessary surveys, to be utilized for this initial planning, and subsequently by the DBO for final design.

1.4.1.2 If necessary, provide a boundary survey and legal descriptions of the WWTP site and adjacent properties, to be filed with appropriate City and County jurisdictions.

1.4.1.3 Prepare exhibit maps of the legal property, suitable for presentation at City Council. Prepare topographic survey of the WWTP for design purposes.

1.4.1.4 Review City provided topographic survey. All maps will require AutoCAD formats as determined in consultation with City staff. This will require identification of underground utilities and utilidors in addition to surface features. Extents of subsurface potholing and investigations will be determined in consultation with the ORep and City staff prior to surveys.

1.4.1.5 Provide a laser survey of building interiors, as determined necessary for modification to existing features of building envelopes.

1.4.1.6 Vertical and horizontal control must be established during initial surveys, with ties to appropriate City of Wilsonville, Oregon State Plane Coordinates, and NGVD datum's utilized in the area. Control monuments shall be readily retrievable for use of supplemental and construction survey efforts needed later in the project.

1.4.2 The consultant shall document the existing conditions of the facility.

1.4.2.1 Coordinate with the updated Facility Plan and the asset management criteria task orders.

1.4.3 Document the structures, pipes and equipment. Develop an inventory matrix that can show equipment name, location, type, size and the existing useful life. Develop a strategy to evaluate the existing useful life of the structures, pipes and equipment through the DBO process.

1.4.4 Locate underground piping and conduit systems

1.4.5 Develop a list of Deliverables

1.5 Asset Management Criteria

1.5.1 The ORep will be responsible for advising the Owner in Asset Management techniques and approaches, and specifically evaluating the fixed assets at the WWTP for the purpose of providing the DBO entity with estimated value of these assets to determine Operation, Maintenance and Replacement (OM&R) schedules in the DBO proposal.

1.5.2 The scope includes evaluation of the City's eight wastewater pumping stations, and the collection system.

1.5.3 Key functions of this task include:

- Asset Evaluation Program Design
- Data Framework, Asset Hierarchy and Initial Asset Register Development
- Asset Risk Assessment and Renewal/Replacement Forecasting

1.5.4 The Asset Management Design approach will help City staff, and eventually the DBO Operators quickly initiate a practical and achievable asset management evaluation program and make full use of the significant investments in information technology. At the end of this task, the Owner will achieve:

- An understanding of strategic asset management concepts among City staff,

- A clear vision of the benefits the City can achieve with a strategic asset management approach,
- An assessment of the roles and responsibilities required to support strategic asset management, and,
- A current-time valuation of the WWTP assets.

1.5.5 Asset Evaluation Kick-Off Meeting

The ORep will conduct meetings with the City's project manager to initiate the program. The primary purpose of the kickoff meeting is to:

- Discuss the project schedule, scope, milestones and dependencies with the selected implementation and integration software program
- Identify main contacts and communication lines
- Establish a detailed schedule of meetings and workshops
- Review and confirm deliverables

1.5.6 Based on the feedback from the program kick-off meeting, the ORep will revise the project schedule and develop a project execution and communications plan that includes tools and methodology to enable the achievement of successful project delivery.

1.5.7 Asset Management and Evaluation Workshop

Conduct an interactive workshop to introduce City staff to established asset management concepts as they specifically apply to this project. The objective of the workshop is to reach a common understanding among key staff about what strategic asset management is, and how the implementation of the program will achieve results. The workshop will outline the foundation concepts of the City's strategic asset management plans, specific business needs that can be addressed, and a vision of how it will be implemented.

1.5.8 Determine roles of staff from engineering, operations and maintenance, finance, IT and general management in preparing the Asset Evaluation and in the following areas:

- Strategic Management
- New Asset Planning and Building
- Managing Existing Assets
- Operations
- Maintenance
- Renewal planning
- Response to unplanned events
- Financial planning and reporting

1.5.9 Data Framework, Asset Hierarchy and Initial Asset Register Development

Develop a Data Framework, Asset Hierarchy and Initial Asset Register populated with pertinent data for asset evaluation purposes. The asset register developed under this task

order will be populated into an MS Access database and ultimately migrated by the City into either its existing GIS or a new Computerized Work Management System (CWMS).

1.5.10 Asset Data Assessment and Development of Asset Register and Hierarchy

1.5.10.1 Data Compilation and Assessment

Perform an initial asset data assessment related to the City's WWTP's assets. This will determine the quality, quantity, accuracy, accessibility and reliability of asset information including primary asset attributes (location, material, size, capacity and installed date) and secondary asset attributes (condition, failure history, cost history, maintenance history) held in City's databases including the existing GIS, hardcopy and electronic records. This assessment will be primarily geared towards determining the data suitability for the risk assessment and renewal forecasting efforts.

1.5.10.2 The ORep shall present this preliminary assessment through at a workshop, where discussions with City staff, as well as a review of readily available information sources, will be important input and review. The ORep shall then compile the available asset data, assess key data gaps and propose potential solutions to the City to fill the data gaps. This task is not intended to include field work (e.g., asset inspections or condition tests) or extensive data gathering from raw paper or electronic sources (e.g., through examination of record drawings or individual work order reports). The review of existing data sources will be for the most part limited to digital data that is readily available and transferable.

1.5.11 Compile Asset Register and Hierarchy

1.5.11.1 The ORep shall compile the list of assets and build the asset hierarchy for the City's initial asset portfolio. The level of detail will be determined based on the findings of the data assessment and discussions with City staff. For the purposes of scoping and budgeting it is anticipated that the facility assets will be assessed down to the process unit level (e.g. disinfection system), while the pipeline assets will be assessed at the individual pipe segment level. The asset register designed and documented during this effort will also serve as a foundation for future City asset inventory and maintenance management efforts (by the City and/or the DBO entity).

1.5.12 Data Collection Framework and Protocols Manual

The ORep shall develop a data collection framework for asset information needed to populate the asset register. The data collection framework will provide the City with methodology to assure that future asset data is consistently and repeatable collected with the aim that accurate data is input to the asset register. The data collection framework will include protocols for:

- Asset Physical Attributes
- Asset Condition Ratings
- Business Risk Exposure, including POF (probability-of-failure), COF (consequence-of-failure) & redundancy
- Failure modes (condition, level of service, physical mortality, Economic Efficiency)

- Asset performance
- Asset utilization
- Cost information including initial construction cost, current replacement cost and ongoing O&M cost

1.5.13 The MS Access database, developed above, will be structured to accept the asset information for each level of the asset hierarchy. The data collection framework and protocols manual will guide City staff (and/or DBO entity) in the collection of the appropriate information to be gathered on each asset type in the asset register.

1.5.14 Data Collection Training

The ORep will develop and deliver a training program to City staff, which will teach staff how to implement the Data Collection Framework and Protocols. Staff will receive training on how to evaluate and collect asset data, what specific data is needed for each asset type in the asset register, how to assess asset failure modes, and how to evaluate asset risk, performance, and utilization metrics. A workshop will be conducted by Owner's Representative as part of the training. The entire data collection framework and protocols will be explained to the staff as part of the training workshop.

1.5.15 Asset Risk Assessment and Renewal/Replacement Forecasting

This task has four primary purposes:

- Develop initial risk scores for the City's WWTP assets and identify high-risk assets
- Generate an initial risk-based asset renewal prioritization framework and cost forecast for the assets
- Document the asset risk assessment process to ensure repeatability in the future.

1.5.15.1 Initial Asset Risk Scoring

The ORep shall develop initial risk scores for the City's WWTP assets based on a review of readily available data collected during previous tasks. Initial risk scores will be calculated as the product of probability of failure and consequence of failure scores and will serve as the basis for subsequent asset inspection prioritization and renewal cost forecasting. Discussions will be held with City staff regarding potential future alternative consequence of failure scoring methodologies.

1.5.15.2 Development of Probability of Failure Scores

The ORep shall develop probability of failure scores for the City's WWTP assets through an examination of the available data. Critical modes of failure will be examined for each of the major asset groups from the following five failure mode categories:

- Economic failure (cost)
- Physical failure (condition)
- Capacity failure
- Technical/functional failure (obsolescence)

- Service failure (reliability)

The ORep shall compile the results and review the available data sources related to asset probability of failure. Where specific field-based data on asset condition and performance is not available, an initial probability of failure score will be assigned based on City staff knowledge, available work order information, and known or assumed age and material data. Where assumptions are made to develop probability of failure scores (e.g., filling data gaps related to asset age or material), these assumptions will be documented. All data assumptions shall be clearly distinguished in databases in order to prevent mixing up existing "actual" data with assumed figures. For the WWTP facility assets, it is assumed that probability of failure scores will be assigned down to the process unit level (e.g., aeration system, disinfection system) that would be pertinent for long term asset renewal planning (as opposed to maintenance planning which would warrant greater asset hierarchy detail). Where condition and performance information is not readily available for these assets, initial probability of failure scores will be assigned based on City staff knowledge and the ORep's experience.

1.5.15.3 Development of Consequence of Failure Scores

The Owner's Representative shall work with City staff to develop an appropriate consequence of failure scoring methodology that will be implemented. The Owner's Representative shall asses with City operations and engineering staff to better understand the key issues and potential consequences of failure of the assets. For the underground (piping) horizontal assets, initial consequence of failure scores will be developed through automated routines (utilizing the GIS) based on traffic and potential cost impacts of structural failures. For the facility assets, the development of consequence of failure scores for facility assets will be based on factors best known to staff such as facility/process impacts, permitting issues, health and safety issues, equipment redundancy, etc.

1.5.15.4 Compile and Review Risk Scores

Risk scores will be developed for the assets based on the results of the probability and consequence of failure scoring efforts. The ORep shall lead a Coordination Workshop with City staff to review the results and implications of the initial risk scoring effort.

1.5.16 Summary Report

The Owner's Representative shall prepare a Summary Asset Evaluation Report detailing the current evaluations as discussed above. The Summary Report will be made available to DBO proposers during the procurement process, and will serve as the basis for valuation of the WWTP assets currently in place.

1.5.17 List of Deliverables

- Asset Management Evaluation-Design Approach Memo
- Minutes, Kickoff Meeting and Other Meetings
- Project Execution and Communication Plan

- Agenda, Materials, and Minutes for Staff Workshops:
  - Define Foundation Concepts and Business Needs
  - Preliminary Assessment of Asset Data
  - Data Collection
  - Results/Implications of Initial Risk Scoring Effort
- Report on Staff Roles in Preparing an Asset Evaluation
- Data Framework, Asset Hierarchy and Initial Asset Register Development Document
- Initial Asset Data Assessment Report
- List of Assts and Asset Hierarchy
- Data Collection Framework and Protocols
  - Manual
  - Training
- Probability of Failure Score Approach Memo
- Consequence of Failure Score Approach Memo
- Compilation of Asset Risk Scores (List)
- Summary Asset Evaluation Report

1.6 Performance and Construction Quality Criteria

1.6.1 Arrange kick-off meeting to discuss city's desired outcomes and then document results in a TM.

1.6.2 Create "Know the Owner" document – confirming understanding of the Owner's priorities, defining roles/responsibility (by matrix) including person's name, function, and approximate time commitment to Project

1.6.3 Develop performance criteria (outcome based) to be used in creating the DBO RFQ and then document results in a TM.

1.6.4 Develop construction quality criteria to be used in creating the DBO RFQ and then document results in a TM

1.6.5 Develop aesthetic quality criteria to be used in creating the DBO RFQ and then document results in a TM The project will require approval by the City's citizen-led Design Review Board (DRB)

1.6.6 Develop testing criteria at full capacity (7 MGD) and recommend an acceptable methodology for the DBO firm performance

1.6.7 List of Deliverables

1.6.7.1 TMs listed above

1.7 Conceptual Engineering Design (10% design effort)

1.7.1 The ORep shall proceed with conceptual engineering design sufficient to conceptual engineering needs for the project.

1.7.2 The civil design task will develop the civil design criteria for the plant design and will prepare the base maps of the site. The base maps will include facility location

and major yard piping. The finished grades for the site will be determined that should meet a zero cut-and-fill requirement. A yard piping plan will be developed to show influent trunk sewers, major process piping, critical underground utilities, and major electrical duct banks.

1.7.3 Prepare a corrosion evaluation of the plant site, defining all potential sources of corrosion for metallic piping and structures. The evaluation will include review of soils data, onsite electrical resistance testing and stray current evaluation to define corrosion potential for the site.

1.7.4 Prepare conceptual plan to show traffic corridors, staging parking and egress into and off the site. Document local, off-site transportation issues due to capital and private projects in adjacent areas (Boones Ferry Rd)

1.7.5 Prepare a plant security plan. Recommendations will be developed that address fencing, plant access for public, staff, and deliveries, traffic flow, and parking. This information should also be summarized in a technical memorandum.

1.7.6 The structural work that will be performed in the predesign will be to coordinate with the Geotechnical Engineer to determine the foundation requirements for structures and conceptual structural systems.

1.7.7 The process and mechanical conceptual design will provide an evaluation of each of the unit processes and summarize the recommendations in a TM. Predesign of the recommended process options will be developed and documented in predesign drawings.

1.7.8 Develop process flow diagrams. Develop a conceptual process flow diagram in conjunction with the instrumentation discipline that depicts the major equipment, piping and valves for existing and proposed systems, including phasing, drawn in a format that can be used as the base for the development of the P&ID during design.

1.7.9 Major Equipment. Summarize the design criteria and key features of major equipment items for the process.

1.7.10 The conceptual design phase will not detail out the HVAC requirements for each structure, but will determine the design criteria that will be used in final design.

1.7.11 A bio-solids dryer will require added capacity for natural gas. Therefore, a natural gas site plan will be generated based on site layout plan background. The site plan will identify the location of all major equipment and main raceways. The equipment to be shown will be the incoming service, meters, etc.

1.7.12 A telephone site plan will be generated based on site layout plan background. The site plan will identify the location of all major equipment and main conduits to each process center. The equipment to be shown will be the incoming service, meters, conduits, etc.

1.7.13 A new power system plan will be developed for upgrading power to the site, if necessary. An electrical design criteria document will be produced to describe the design parameters to be used. This will include the available short circuit capacity,

the connected load, the voltages to be used for distribution, motors, lighting, the general types of equipment, conduit and cabling to be used, etc. Include discussions with PGE about added load needs and dispatch-able power generation.

1.7.14 An electrical site plan will be generated based on site layout plan background. The electrical site plan will identify the location of all major electrical equipment and main conduit raceways. The equipment to be shown will be the incoming service, meters, transformers, switchgear and MCCs.

1.7.15 Develop conceptual power distribution diagram that depicts the service entrance, metering, substations, transformers, switchgear, load centers, and major conduit runs. The power distribution diagram will also include the standby power configuration. Investigate the potential to coordinate with PGE dispatchable power generation.

1.7.16 Develop a new electrical single line to provide power for all four phases of the project scope. Existing items and items to be removed will be identified. All major loads down to MCC will be shown with corresponding protection and power monitoring devices.

1.7.17 Develop conceptual instrumentation control block diagram for the new and/or upgraded processes that depicts the configuration of the operator/machine interface workstations, supervisory computers, programmable logic controllers, and data highway.

1.7.18 Prepare the conceptual process flow control diagrams in conjunction with the process mechanical. The process flow diagrams will be used as the basis for the development of Process and Instrumentation Diagrams (P&IDs) during the predesign.

1.7.19 Prepare performance and/or outline specifications (as appropriate) for all improvements anticipated in design and construction phases to follow.

1.7.20 Cost estimating will be required at the completion of this conceptual engineering phase.

1.7.21 Prepare a Conceptual Design Report (CDR) summarizing the project information and concepts developed in the pre-design.

1.7.22 The quality assurance / quality control (QA/QC) activities planned during the preparation of the PDR will should be presented in this proposal.

1.7.23 List of Deliverables

- Proposed Plant Process Evaluation Report
- Conceptual Design Drawings (3D Model basis), including Base Civil Drawings
- Conceptual Outline/Performance Specifications
- Opinion of Profitable Construction Cost
- Conceptual Design Report
    - Basis of Design Criteria for Process and all Disciplines
    - Corrosion Evaluation Report

- Conceptual Transportation Plan
- Plant Security Plan
- Construction Cost Estimating and Associated Phasing Plan

1.8 Built-In-Model (BIM)

1.8.1 Consultant shall design (and update weekly) in three-dimension model, similar to Built-In-Model (BIM) and the model shall be used by DBO contractor for Final Design Phase. Software shall be readily available and standard use in WW design industry. All files shall be the property of City. 3D-PDF format (Adobe Acrobat) files shall be maintained on FTP sites for immediate review during meetings, and review by City staff.

1.9 Create and Maintain Overall Schedule

1.9.1 Create a detailed critical path schedule and maintain and update it monthly, at a minimum.

1.9.2 Estimate overall project costs on a monthly expenditure report and update actual costs, monthly

1.9.3 Coordinate and monitor all task orders with the overall schedule

1.9.4 Coordinate and monitor BIM with overall schedule

1.10 Develop Industry Forums

1.10.1 Create a methodology and format for the City to implement two Industry Forums

1.10.2 The ORep will participate in Project Development Workshops with the City and potential DBO teams. The ORep will provide staff with technical expertise in wastewater treatment processes.

1.11 Obtain external and internal stakeholder input

1.11.1 The Industry Forums will develop interest of the DBO firms in the project and provide feedback for internal and external stakeholders

1.12 Assist City with NPDES permit renewal process

1.12.1 Using the information developed in the facilities update and existing conditions assessment, assist the city with completing the NPDES permit renewal

1.12.2 The draft permit application is due in June 2009, and the final is due in December 2009.

2 PHASE B

2.1 Develop Design-Build-Operate (DBO) RFQ

2.1.1.1 Draft DBO RFQ
2.1.1.2 Review qualification submittal

2.1.1.3 Draft DBO RFP
2.1.1.4 Comment on Draft DBO contract
2.1.1.5 Review proposals
2.1.1.6 Assist with DBO contract negotiations

2.1.2 Support functions of the ORep to the City:

- Assist the City to determine potential and preferred DBO team, based on experience, size, local familiarity, etc. Provide input to City on selection alternatives and scoring criteria
- Advise City on determining appropriate stipends for proposers
- Advise City on addressing unknowns in a DBO contract
- Prepare the RFQ document
- Prepare DBO scope of work for conformance to DBO-RFQ, to ensure that contractor does not shift liability back to Owner
- Organize, conduct and participate in a pre-submittal meeting and conduct site tours in conjunction with City staff
- Participate in DBO selection using the criteria and DBO submittals as described in the RFP to assist the City with determining the most qualified proposer, and selecting the DBO entity
- Work with City staff to establish selection criteria and weighting of each criterion
- Working with City staff and management as an extension of the City, manage the project through final completion
- Develop asset ethics performance standards
- Identify necessary staff level for collection system monitoring and maintenance
- Assist city in evaluation of capital asset phasing for future expansion thru 2040

2.1.3 Requests for Statement of Qualifications

The draft RFQ will be developed and reviewed with the City staff. Changes will be incorporated and a final RFQ will be prepared for review by the City Council. Once approved by the City Council, the RFQ will be distributed by the City to select DBO entities. The ORep will prepare materials for Addenda to the RFQ as needed and requested by the City.

2.1.4 Pre-Submittal Meeting

A tour of the existing plant facilities and a discussion of the proposed project will be held to provide Design-Builders with information about the City submittal process and requirements and to provide background information on the project. The ORep will attend and participate in, the meeting. Information presented and/or obtained at the conference, including questions and respective answers would be recorded by the ORep and distributed to DBO proposers.

2.1.5 Survey of DBO Experience

Prepare a survey of owners of similar projects which utilized DBO procurement. The survey should include questions regarding schedule, budget, quality, change order experience, and who comprised the DBO team. Contact representatives of these owners

(municipalities preferred), where similar DBO projects have been completed. Conduct the survey and determine their perspective of how successful the project delivery method was, and whether they would use the method again. Present the results in a brief report. Include a discussion of the findings and conclusions.

2.1.6 Interim Conceptual Design Contract

Work with City Legal Council to assist in preparing design development contract under which the DBO contractor can initiate the design, the neighborhood and stakeholder meetings, and the permitting and approval processes. This will likely be the first task of the design build contract that will be negotiated subsequently with the DBO entity. The intent is to provide a means by which the DBO entity can start work immediately upon the notice to proceed being authorized while negotiations proceed on the broader DBO contract.

2.1.7 DBO Contract:

Assist the City in development of criteria and materials for the DBO Contract. Items to be developed may include:

- Project Delivery Plan
- Terms and Conditions
- Bond and insurance requirements
- Process for development of Guaranteed Maximum Price (GMP)
- Life cycle cost
- Risk Allocation
- Documentation Requirements (Record Drawings, O&M Manuals)
- Performance Criteria
- Startup Testing Requirements
- Construction Phasing
- Operations Period Terms
- Risk Allocation
- Approach to Shared Cost Savings

Note: Actual contractual requirements and areas for ORep participation will be determined by the City during the DBO design phase. Scope and budget for Support Services will be modified to reflect the actual Work required.

2.1.8 Evaluation of Qualification and Proposal Submittals

The submittals will be reviewed by the City's selected Technical Review Committee. The Owner's Representative will provide staff experienced in wastewater treatment plant processes and design-build construction to participate in the Technical Review Committee, either on the committee itself or in an advisory role to the committee, as directed by the City. An evaluation form will be prepared for use by evaluation team members during the review process. The team will meet to discuss and summarize the submittal findings. Requests for additional information and presentations by the potential DBO entities may occur to complete the evaluation process. The outcome of the evaluation will be summarized and presented to the Wilsonville City Council and other

participants as determined by the City. Actual contract award will follow negotiations of a contract and approval by the City Council.

2.1.9 Selection Results Debriefing

Once approved, the DBO will be notified of the results of the evaluation. The ORep will prepare a format by which to review the results of the selection process with the design-build team participants after the contract has been awarded to the selected team. Also discuss outcome and reasoning with non-selected contractors. Participate with the City staff in meetings with the DBO teams as requested.

2.1.10 Financial and Cash Flow Model

Develop a suggested guaranteed maximum price and financial and cash flow model in coordination with the City or its financial consultant to develop criteria for project funding and DBO drawdown rate.

2.1.11 Permitting Assistance

Assist the City as requested in reviewing DBO permit applications and responding to agency questions. Permitting of the Project will be the responsibility of the DBO Entity.

2.1.12 Other Services as Requested

Perform other services not specifically defined herein as requested and authorized by the City. An allowance of $10,000 per task order shall be provided in the proposer's budget for these services.

2.1.13 List of Deliverables

- Procurement Approach Recommendations Report
  - Risk Matrix
  - Proposed Procurement Stages
  - Selection Alternatives/Scoring Criteria Weighting
  - Stipends Recommendations
- DBO Scope of Work
- DBO Request For Proposal Document
- Minutes, Pre-Submittal Meeting and Other Meetings
- Verification of Monthly DBO Firm Progress Reports
- Compilation of Findings Memo (Based on Survey of Other Owners That Have Used DBO Procurement)
- Design Development Technical Information Document (Supporting Conceptual Design Contract)
- DBO Contract Support of Various Items Identified in Section 2.7.6 – As Required
- Evaluation of Proposal Submittals (Technical)
  - Prepare Evaluation Form For Review Committee
  - Summary of DBO Firm Evaluation
- Memo Summarizing Evaluation Process (For DBO Firms)
- Suggested Guaranteed Maximum Price, Financial and Cash Flow Model Documents

3.0 PHASE C

3.1 Construction Administration Services during Bidding and Construction

The ORep will provide full construction administration and observation during construction to ensure the DBO entity complies with the intent of the performance specifications, conceptual designs, and conceptual design report (and subsequent final designs); permit compliance, phasing constraints, and other limiting factors of the project. To that end, the ORep shall:

- Perform constructability review of DBO construction plans
- Organize and lead the pre-construction conference(s)
- Track design changes by red lines on construction drawings and then review and comment on record drawings for upgrades
- Ensure the DBO employs quality control procedures required by the procurements documents
- Provide QA during design and construction
- Develop and document how the City determines performance specifications were met
- Develop and document how the City determines construction criteria were met
- Develop and document how the City determines permitting requirements were met
- Review cost breakdowns of the DBO entity's cost estimates
- Periodically review the 3D model provide comments to DBO design team
- Manage and provide construction observation of the project through final completion
- Monitor the DBO's bidding services and packages for work tasks not being self-performed by the DBO entity
- Review monthly invoices from the DBO entity and prepare monthly pay estimates for the City throughout construction
- Lead weekly progress meetings during construction
- Process and track modifications to GMP, Requests for Clarifications/Information (RFC/RFI) Work Change Directives (WCDs) and Change Orders (COs)
- Review and process daily on-site construction inspection reports
- Review material submittals
- Review certified payrolls
- Monitor Contractor's progress and adherence to the project schedule
- Coordinate with DBO design team throughout the project to interpret plans and specifications or modify design as necessary
- Provide centralized documentation and handling of project communication
- Coordinate with City on project close-out and transfer of all original documents
- Archive pre-construction and weekly photo log and supply to City on searchable DVD
- Perform daily field inspections of work performed
- Provide daily work reports of work performed
- Review work for compliance with plans and specifications

3.1.1 Provide services during construction to City staff and assist City staff with coordination of DBO entity activities during construction. Provide Resident Engineering and Inspection of construction activities and progress.

3.1.2 Construction Kickoff Meeting

A construction kickoff meeting will be held with City staff and its representatives, and the DBO entity.

3.1.3 Construction Management

During construction, coordination of DBO entity provided services will be provided to assure that the Performance Specifications, Design Report and Design Build Contract requirements are met.

3.1.4 Weekly progress meetings will be held.

3.1.5 Resident Observation and Inspection

The ORep will provide a full-time Resident Observer (RO) and inspection team to provide field services. The RO will observe DBO entity activities to determine general compliance with the contract documents, document construction progress, coordinate communication between all parties, and coordinate with the DBO entity to facilitate continuous plant operation during the construction period. The RO will also coordinate and communicate with the City's office staff and others as needed.

3.1.6 Oversight of Functional and Performance Testing and Startup Plan Implementation

During construction, the Operations and Maintenance Manual outline, Facilities Functional and Performance Testing Plan, and the Certification of Operability will be reviewed by the ORep. Assistance will be provided during functional testing to determine compliance with the Performance Specifications, Conceptual Design Report, and Design Build Contract. A memorandum summarizing the review will be provided for each review.

Following the execution of a contract with the DBO entity, the ORep shall provide services to City during the Design phase as follows:

3.1.7 Review of DBO prepared contract documents for adherence to Performance Specifications and Conceptual Design Report (CDR).

3.1.8 The ORep will monitor the DBO firm compliance to the agency permits

3.1.9 Design Kickoff Meeting

A kick-off meeting will be held to discuss roles/responsibilities and anticipated schedule during the initial phases of the project.

3.1.10 Design Development and Operations Workshops

The ORep will participate in Design Development Workshops with the City and DBO team. The ORep will provide staff with technical expertise in wastewater treatment processes.

3.1.11 Operability Reviews

The ORep will provide review of the proposed treatment plant facilities for operability in co-operation with the City's operators and the DBO entity. The ORep will provide coordination with other concurrent technical reviews. Two operability reviews are anticipated during the design phase and will be coordinated with the Design Development Workshops, as appropriate.

3.1.12 Constructability Review and Value Engineering

The ORep will perform a Constructability and Value Engineering Workshop in conjunction with the DBO entity to review the design prior to the DBO entity's submission of the Guaranteed Maximum Price (GMP). Workshops are planned to address the submittals independently.

3.1.13 Final Design Review Workshops

The ORep will also participate in final design review workshops conducted by the DBO entity.

3.1.14 The ORep shall prepare applications to obtain necessary permits to complete the project. Permit applications shall be submitted in a timely manner, and ORep will be responsible for monitoring the issuance of permits for the proposed project. ORep will be responsible for coordination with outside agencies and sub consultants, which may include:

- Landscape and lighting design services
- Geotechnical engineering and soils analysis
- Local permitting requirements
- Consultation with the Oregon Department of Environmental Quality (DEQ)
- Provides schedule with detailed steps of process permitting issues
- Check state procurement laws to allow DBO

3.1.15 Experience Required:

Consultant shall submit a list of previous projects that demonstrate experience with federal, state and local permitting within the last 5 years.

3.1.16 Schedule

These activities will parallel construction by the DBO entity.
List of Previous Projects with Federal, State and Local Permitting within Last 5 Years

3.1.17 List of Deliverables

- Memo Summarizing Review of DBO Prepared Documents (vs. Performance Specs and Conceptual Design Report)

3.1.18 Assistance with final inspection will be provided to determine substantial completion.

3.1.19 ORep will arrange for specialty inspections and consultants (e.g. concrete, welding, etc.).

3.1.20 List of Deliverables

- Constructability Review Memos
- Quality Assurance Review Memos
- Audit Report, DBO Entity Compliance with City's Performance Specification
- Monthly DBO Entity Pay Estimates
- Memos Summarizing Findings Based on Review of:
    - Operations and Maintenance Manual Online
    - Facilities Functional and Performance Testing Plan
    - Compliance with Performance Specifications, Conceptual Design Report and Design-Build Contract
    - Certification of Operability
- Minutes
    - Kickoff
    - Preconstruction Conferences
    - Weekly Progress Meetings
    - Design Development Technical Workshops
    - Operability Workshops
    - Constructability Workshops
    - Construction Kickoff Meeting
    - Final Design Review Workshops
- Value Engineering Report

4.0 PHASE D

4.1 Services during Commissioning and Warranty

Provide assistance to City staff during Plant commissioning and construction warranty period.

4.1.1 Performance Validation

Once the treatment facilities have undergone Functional and Performance Testing, the upgraded facilities will be ready for operation by the operating contractor of the DBO firm. The ORep will provide transition services based on knowledge of the treatment processes and testing. This knowledge will be used to help address difficulties in initial operation and to verify that the plant is operating consistent with the Performance Specifications. If the plant is not meeting specifications, Warranty Work Requests will be generated as described below. ORep will meet with City and Operations Contractor staff as needed in the field, but will not provide fulltime field services during this portion of the work.

4.1.2 Warranty Request Processing

Warranty services will be provided by the DBO entity for a length of time determined in the DBO Contract. The ORep will assist the City in preparing Warranty Work Requests, logging and tracking requests, and verifying satisfactory completion of the warranty work. For the purposes of this scope, this phase is assumed to cover a period of 1 year.

4.1.3 Final Warranty Period Inspection

The ORep will assist the City in the final warranty inspection of the facilities approximately 1 month before the warranty period expires. A final warranty period inspection list will be generated for the DBO entity to complete prior to termination of the warranty services.

4.1.4 Contract Close-Out

The ORep will assist the City with final contract close-out activities including processing final payment requests and preparing documentation to serve as the basis for termination of the construction contract.

4.1.5 Project Promotion

Working with City staff, the ORep shall actively market opportunities to present "lessons learned" at local, regional and national venues, to promote DB experience.

4.1.6 Annual Reports

This task will be completed in coordination with the DBO Contract.

4.1.7 List of Deliverables

- Performance Validation Report
- Final Warranty Period Inspection List
- "Lessons Learned" Communications in association with the City, to Local, Regional and National Venues
- Annual Reports

PROFESSIONAL SERVICES AGREEMENT

OWNER'S REPRESENTATIVE WWTP EXPANSION

City of Wilsonville

CITY OF WILSONVILLE
PROFESSIONAL SERVICES AGREEMENT
(ORIGINAL FORM)

THIS AGREEMENT is made and entered into as of the date first indicated on the signature page, by and between the City of Wilsonville, Wilsonville, Oregon, (hereinafter referred to as the "City"), and _____ _____, (hereinafter referred to as "Consultant").

WHEREAS, City requires services which Consultant is capable of providing, under terms and conditions hereinafter described; and

WHEREAS, Consultant represents that it is qualified on the basis of specialized experience and technical competence and prepared to provide such services as City does hereinafter require;

NOW, THEREFORE, in consideration of those mutual promises and the terms and conditions set forth hereafter, the parties agreed as follows:

A. Term

The term of this Agreement shall be from the date of execution by both parties until tasks required hereunder are complete and accepted, unless earlier terminated in accordance herewith.

B. Consultant's Services

B.1 The scope of Consultant's services and time of performance under this Agreement are set forth in Exhibit A. All provisions and covenants contained in Exhibit A are hereby incorporated by reference and shall become a part of this Agreement as if fully set forth herein.

B.2 All written documents, drawings, and plans submitted by Consultant and intended to be relied on for the project shall bear the signature, stamp or initials of Consultant or Consultant's authorized Project Manager. Any documents submitted by Consultant which do not bear Consultant's signature, stamp or initials or those of the Consultant's authorized Project Manager shall not be relied upon by City. Interpretation of plans and answers to questions covering Plans given by Consultant or Consultant's Project Manager need not be put in writing unless requested by the City and may be relied upon by City.

B.3 All agreements on the Consultant's part are contingent upon, and the Consultant shall not be responsible for damages or be in default or be deemed to be in default by reason of delays in performance due to third party: strikes, lockouts, accidents; acts of God; other delays unavoidable or beyond the Consultant's reasonable control, or due to shortages or unavailability of labor at established area wage rates or delays caused by failure of the City or City's agents to furnish information or to approve or disapprove the Consultant's work promptly, or due to late or slow, or faulty performance by the City, other contractors, other consultants not under Consultant's control or governmental agencies, the performance of whose work is precedent to or concurrent with the performance of the Consultant's work. In the case of the happening of any such cause of delay, the time of

completion shall be extended accordingly.

B.4 The existence of this Agreement between City and Consultant shall not be construed as City's promise or assurance that Consultant will be retained for future services unrelated to this public works project.

B.5 Consultant shall maintain confidentiality of any private confidential information and any public information which is exempt from disclosure under state or federal law to which the Consultant may have access by reason of this Agreement. Consultant warrants that its employees assigned to work on services provided in this Agreement shall maintain confidentiality. All agreements with respect to confidentiality shall survive the termination or expiration of this Agreement.

C. City's Responsibilities

C .1 The scope of City's responsibilities, including those of its Project Manager, are set forth in Exhibit B, which is attached hereto and incorporated herein.

C.2 City certifies that sufficient funds are available and authorized for expenditure to finance costs of this Agreement.

D. Compensation

D.1 Except as otherwise set forth in this subsection D, City agrees to pay Consultant not more than $_____ for performance of those services provided hereunder. However, compensation may be less than such maximum amount and shall be actually determined on an hourly basis as shown on the Rate Schedule, Exhibit C, which is attached hereto and incorporated herein. Compensation shall be only for actual hours worked on this project and related direct expenses. Consultant shall furnish with each bill for services an itemized statement showing the amount of hours devoted to the project by Consultant as well as any agents or employees of Consultant and any direct expenses.

D.2 During the course of Consultant's performance, if City or its Project Manager specifically requests Consultant to provide additional services which are beyond the scope of the services described on Exhibit A, Consultant shall provide such additional services and bill the City at the hourly rates outlined on the attached Standard Hourly Rate Schedule, provided the parties comply with the requirements of Section R. No compensation for additional services shall be paid or owing unless both parties specifically agree to such additional compensation and services.

D.3 Unless expressly set forth on Exhibit C as a reimbursable expense item, Consultant shall only be entitled to the compensation amount specified in subsections D.1 and D.2. Only those reimbursable expenses which are set forth on Exhibit C and itemized on Consultant's bills for services shall be the basis for which payment of those expenses by City shall be owing.

D.4 Except for amounts withheld by City pursuant to this agreement, Consultant will be paid

for services for which an itemized bill is received by City within 30 days.

D.5 City shall be responsible for payment of required fees, payable to governmental agencies including, but not limited to plan checking, land use, zoning and all other similar fees resulting from this project, and not specifically covered by Exhibit A.

D.6 Consultant's compensation rate includes but is not limited to salaries or wages plus fringe benefits and contributions including payroll taxes, workers' compensation insurance, liability insurance, pension benefits and similar contributions and benefits.

D.7 In the event Consultant's responsibilities as described on Exhibit A have been separated into two or more phases, then Consultant shall not be entitled to any compensation for work performed directly on a later category of responsibilities unless and until City specifically directs that Consultant proceed with such work.

E. City's Project Manager

City's Project Manager is Michael A. Stone. City shall give Consultant prompt written notice of any redesignation of its Project Manager.

F. Consultant's Project Manager

Consultant's Project Manager is _____. In the event that Consultant's designated Project Manager is changed, Consultant shall give City prompt written notification of such redesignation. In the event that City receives any communication from Consultant of whatsoever nature which is not executed by Consultant's designated Project Manager, City may request clarification by Consultant's Project Manager, which shall be promptly furnished.

G. Project Information

City shall provide full information regarding its requirements for the Project. Consultant agrees to share all project information, to fully cooperate with all corporations, firms, contractors, public utilities, governmental entities, and persons involved in or associated with the Project. No information, news or press releases related to the Project, whether made to representatives of newspaper, magazines or television and radio stations, shall be made without the authorization of City's Project Manager.

H. Duty to Inform

If at any time during the performance of this Agreement, or any future phase of this Agreement for which Consultant has been retained, Consultant becomes aware of actual or potential problems, faults or defects in the project or any portion thereof, any nonconformance with the federal, state or local law, rule, or regulation, or has any objection to any decision or order made by City with respect to such laws, rules or regulations, Consultant shall give prompt written notice thereof to City's Project Manager. Any delay or failure on the part of City to provide a written response to Consultant shall neither constitute agreement with nor acquiescence to Consultant's statement or claim, nor constitute a waiver of any of City's rights.

I. Consultant is Independent Contractor

I.1 Consultant shall be and herein declares that it is an independent contractor for all purposes and shall be entitled to no compensation other than compensation provided for under paragraph D of this Agreement. Consultant binds itself, its partners, officers, successors, assigns and legal representatives to the City.
Consultant shall be completely independent and solely determine the manner and means of accomplishing the end result of this Agreement, and City does not have the right to control or interfere with the manner or method of accomplishing said results. City, however, has the right to specify and control the results of the Consultant's responsibilities.

I.2 Subcontracting: City understands and agrees that only those special consulting services identified on Exhibit A may be performed by those persons identified on Exhibit A and not by Consultant. Consultant acknowledges such services are provided to City pursuant to a subcontract(s) between Consultant and those who provide such services. Consultant may not utilize any subcontractors or in any way assign its responsibility under the Agreement without first obtaining the express written consent of the City.

I.3 Consultant shall be responsible for and indemnify and defend City against any liability, cost or damage arising out of Consultant's use of such subcontractor(s) and subcontractor's negligent acts, omissions, or errors. Subcontractors will be required to meet the same insurance requirements of Consultant under this Agreement. Unless otherwise specifically agreed to by City, Consultant shall require that subcontractors also comply with and be subject to the provisions of this Section I.

I.4 Consultant shall make prompt payment of any claim for labor, materials or services furnished to the Consultant by any person in connection with this Agreement as such claim becomes due. Consultant shall not permit any lien or claim to be filed or prosecuted against the City on account of any labor or material furnished to or on behalf of the Consultant. If the Consultant fails, neglects or refuses to make prompt payment of any such claim, the City may pay such claim to the person furnishing the labor, materials or services and charge the amount of the payment against funds due or to become due the Consultant under this Agreement.

I.5 No person shall be employed under the terms of this agreement as described herein in violation of all wage and hour laws.

I.6 Consultant shall make prompt payment as due to any person, co-partnership, association or corporation, furnishing medical, surgical and hospital care or other needed care and attention, incident to sickness or injury, to the employees of such Consultant of all sums which the Consultant agrees to pay for such services and all monies and sums which the Consultant collected or deducted from the wages of employees pursuant to any law, contract or agreement for the purpose of providing or paying for such service.

I.7 Should Consultant elect to utilize employees on any aspect of this Agreement, Consultant shall be fully responsible for payment of all withholding required by law,

including but not limited to taxes, including payroll, income, Social Security (FICA) and Medicaid. Consultant shall also be fully responsible for payment of salaries, benefits, taxes, Industrial Accident Fund contributions and all other charges on account of any employees. Consultant shall pay to the Department of Revenue all sums withheld from employees pursuant to ORS 316.167. All costs incident to the hiring of assistants or employees shall be Consultant's responsibility. Consultant shall indemnify, defend and hold City harmless from claims for payment of all such expenses. Unless otherwise expressly set forth on Exhibit A as a reimbursable expense item, specific costs associated with items set forth in this paragraph shall be deemed as fully and conclusively included in the rate upon which consultants compensation is based.

I.8 No person shall be denied or subjected to discrimination in receipt of the benefits of any services or activities made possible by or resulting from this Agreement on the grounds of sex, race, color, creed, marital status, age, disability or national origin. Any violation of this provision shall be grounds for cancellation, termination or suspension of the Agreement in whole or in part by the City.

J. Indemnity and Insurance

J.1 Consultant acknowledges responsibility for liability arising out of the performance of this Agreement and the attachments thereto only and shall hold City harmless from and indemnify City of any and all liability, settlements, loss, costs and expenses in connection with any action, suit, or claim resulting or allegedly resulting from Consultant's negligent acts, omissions, errors or willful misconduct provided pursuant to this Agreement or from Consultant's failure to perform its responsibilities as set forth in this agreement. The review, approval or acceptance by City, its Project manager or City of Wilsonville employees of documents or other work prepared or submitted by Consultant shall not relieve Consultant of its responsibility to provide such materials in full conformity with City's requirements as set forth in this Agreement and to indemnify City from any and all costs and damages resulting from Consultant's failure to adhere to the standard of performance described in Section J.2.3. The provisions of this section shall survive termination of this Agreement. City agrees to indemnify and hold Consultant harmless from liability, settlements, losses, costs, and expenses in connection with any action, suit or claim resulting or allegedly resulting from City's negligent acts, omissions or from its willful misconduct as governed by ORS Chapter 30.

J.2 Insurance Requirements and Consultant's Standard of Care.

J.2.1 Consultant shall provide City with evidence of the following insurance coverages prior to the commencement of the work. A copy of each insurance policy, issued by a company currently licensed in the State of Oregon, and certified as a true copy by an authorized representative of the issuing company or at the discretion of the City, in lieu thereof, a certificate in a form satisfactory to City certifying to the issuance of such insurance shall be furnished to City. Unless specifically set forth on Exhibit A, expenses relating to the cost of insurance shall not be the basis for additional reimbursement to Consultant.

J.2.2 The City agrees that in accordance with generally accepted construction

practices, the construction contractor will be required to assume sole and complete responsibility for job site conditions during the course of construction of the project, including safety of all persons and property.

J.2.3 In the performance of its professional services, the Consultant shall use that degree of care and skill ordinarily exercised under similar circumstances by reputable members of its profession practicing in the Portland Metropolitan Area. The Consultant will reperform any services not meeting this standard without additional compensation. Consultant's reperformance of any services, even if done at City's request, shall not be considered as a limitation or waiver by City of any other remedies or claims it may have arising out of consultant's failure to perform in accordance with the applicable standard of care or this Agreement.

J.2.4 Consultant shall furnish the City a certificate evidencing the date, amount and type of insurance that has been procured pursuant to this Agreement. All policies shall be written on an "occurrence basis," except for Consultant's Professional Liability Insurance which may be written on a "claims made" basis, provided it shall endeavor to be maintained in full force for not less than four (4) years following Consultant's performance under this Agreement. All policies shall provide for not less than 30 days' written notice to the City before they may be revised, non-renewed, or canceled. The Consultant shall endeavor to provide for not less than 30 days' written notice to the City before the policy coverage may be reduced. In the event the policy lapses during performance, the City may: treat said lapse as a breach; terminate this Agreement and seek damages; withhold progress payments without impairing obligations of Consultant to proceed with work; pay an insurance carrier (either Consultants' or a substitute) the premium amount and withhold that amount from payments; and, use any other remedy provided by this Agreement or by law.

J.2.5 Insurance Requirements. The Consultant, its subcontractors, if any, and all employers working under this Agreement are subject employers under the Oregon Worker's Compensation Law and shall comply with ORS 656.017 which requires them to provide workers' compensation coverage for all their subject workers. The Consultant will maintain throughout this Agreement the following insurance:

J.2.5.1 Workers' compensation and employers liability insurance as required by the State where the work is performed.

J.2.5.2 Comprehensive automobile and vehicle liability insurance covering claims for injuries to members of the public and/or damages to property of others arising from the use of motor vehicles, including on-site and off-site operations, and owned, non-owned, or hired vehicles, with $500,000 combined single limits.

J.2.5.3 Commercial general liability insurance covering claims for injuries to members of the public or damage to property of others arising out of any covered negligent act or omission of the Consultant or of any of its employees, agents or subcontractors, with $5,000,000 per occurrence and in the aggregate.

J.2.5.4 Professional liability insurance of $2,000,000 per occurrence and in the aggregate, including contractual liability coverage. If Consultant proposes using subcontractors, in addition to any other requirements of this Agreement, City may require subcontractors to provide Professional Liability Insurance, provided the amount and form of coverage complies with the requirements of paragraphs J.2.1, J.2.2, J.2.3, J.2.4 and J.2.5.4.

J.2.5.5 City will be named as an additional insured with respect to Consultant's liabilities hereunder in insurance coverages. The following is included as additional insured: City of Wilsonville, its elected and appointed officials, officers, agents, employees and volunteers. Except professional liability and worker's compensation coverage, all policies shall provide an endorsement.

J.2.6 The coverage provided by these policies shall be primary and any other insurance carried by City is excess. Consultant shall be responsible for any deductible amounts payable under all policies of insurance. In the event a dispute arises between City and Consultant for which Consultant has obtained insurance, the maximum amount which may be withheld by City for all such claims shall be no more than the amount of the applicable insurance deductible.

K. Early Termination

K.1 This Agreement may be terminated prior to the expiration of the agreed upon terms:

K.1.1 By mutual written consent of the parties;

K.1.2 By City for any reason within its sole discretion, effective upon delivery of written notice to Consultant by mail or in person; and

K.1.3 By Consultant, effective upon seven days prior written notice in the event of substantial failure by the City to perform in accordance with the terms through no fault of the Consultant.

K.2 If City terminates the Agreement in whole or in part due to default or failure of Consultant to perform services in accordance with this Agreement, City may procure, upon reasonable terms and in a reasonable manner, services similar to those so terminated. In addition to any other remedies the City may have, Consultant shall be liable for all costs and damages incurred by City in procuring such similar service, and the Contract shall be in full force to the extent not terminated.

K.3 If City terminates the Agreement for its own convenience, payment of Consultant shall be prorated to and include the day of termination and shall be in full satisfaction of all claims by Consultant against City under this Agreement.

K.4 Termination under any provision of this paragraph shall not affect any right, obligation or liability of Consultant or City which accrued prior to such termination. Consultant shall surrender to City items of work or portions thereof, referred to in Paragraph O for which Consultant has received payment, or City has made payment. City retains the right to elect whether or not to proceed with actual construction of the project.

L. Suspension of Work

City may suspend, delay or interrupt all or any part of the work for such time as the City deems appropriate for its own convenience by giving written notice thereof to Consultant. An adjustment in the time of performance or method of compensation shall be allowed as a result of such delay or suspension unless the reason for the delay is within the Consultant's control. City shall not be responsible for work performed by any subcontractors after notice of suspension is given by City to Consultant. Should the City suspend, delay or interrupt the work and the suspension is not within the Consultant's control, then the City shall extend the time of completion by the length of the delay and the method of compensation shall be adjusted to reflect the Consultant's increase or decrease in its standard hourly rates.

M. Subconsultants and Assignments

M.1 Unless expressly authorized in Exhibit A or Paragraph I of this Agreement, Consultant shall neither subcontract with others for any of the work prescribed herein, nor assign any of Consultant's rights acquired hereunder without obtaining prior written approval from City. Work may be performed by persons other than Consultant, provided Consultant advises City of the names of such subcontractors and the work which they intend to perform and the City specifically agrees thereto. Consultant acknowledges such services are provided to City pursuant to a subcontract(s) between Consultant and subcontractor(s). Except as otherwise provided by this Agreement, City incurs no liability to third persons for payment of any compensation provided herein to Consultant. Any attempted assignment of this contract without the written consent of City shall be void. Except as otherwise specifically agreed, all costs for services performed by others on behalf of Consultant shall not be subject to additional reimbursement by City.

M.2 City shall have the right to let other agreements be coordinated with this Agreement. Consultant shall cooperate with other firms, engineers or subconsultants on the project and the City so that all portions of the project may be completed in the least possible time within normal working hours. Consultant shall furnish other engineers and subconsultants and affected public utilities, whose designs are fitted into Consultant's design, detail drawings giving full information so that conflicts can be avoided.

N. Access to Records

City shall have access upon request to such books, documents, receipts, papers and records of Consultant as are directly pertinent to this Agreement for the purpose of making audit,

examination, excerpts, and transcripts for a period of four (4) years unless within that time City specifically requests an extension. This clause shall survive the expiration, completion or termination of this Agreement.

O. Work is Property of City

A. Originals or Certified copies of the original work forms, including but not limited to documents, drawings, tracings, surveying records, mylars, papers, diaries, inspection reports and photographs, performed or produced by Consultant under this Agreement shall be the exclusive property of City and shall be delivered to City prior to final payment. Any statutory or common law rights to such property held by Consultant as creator of such work shall be conveyed to City upon request without additional compensation. Upon City's approval and provided City is identified in connection therewith Consultant may include Consultant's work in its promotional materials. Drawings may bear a disclaimer releasing the Consultant from any liability for changes made on the original drawings and for reuse of the drawings subsequent to the date they are turned over to the City.

B. Consultant shall not be held liable for any damage, loss, increased expenses or otherwise caused by or attributed to the reuse, by City or their designees, of all work performed by Consultant pursuant to this contract without the express written permission of the Consultant.

C. City agrees it will indemnify and hold Consultant harmless for all losses or damages that may arise out of the reuse of specific engineering designs incorporated into extensions, enlargements or other projects, without the express written permission of the Consultant.

P. Law of Oregon

The Agreement shall be governed by the laws of the State of Oregon. The Agreement provisions required by ORS Chapter 279A and 279C to be included in public agreements are hereby incorporated by reference and shall become a part of this Agreement as if fully set forth herein.

Consultant shall adhere to all applicable federal and state laws, including but not limited to laws, rules, regulations, and policies concerning employer and employee relationships, workers' compensation, and minimum and prevailing wage requirements. Any certificates, licenses or permits which Consultant is required by law to obtain or maintain in order to perform work described on Exhibit A, shall be obtained and maintained throughout the term of this Agreement.

Q. Adherence to Law

Consultant shall adhere to all applicable federal and state laws, including but not limited to laws, rules, regulations, and policies concerning employer and employee relationships, workers' compensation, and minimum and prevailing wage requirements. Any certificates, licenses or permits which Consultant is required by law to obtain or maintain in order to perform work described on Exhibit A, shall be obtained and maintained throughout the term of this Agreement.

R. Modification

Any modification of the provisions of this Agreement shall not be enforceable unless reduced to writing and signed by both parties. A modification is a written document, contemporaneously executed by City and Consultant, which increases or decreases the cost to City over the agreed sum or changes or modifies the scope of service or time of performance. No modification shall be binding unless executed in writing by Consultant and City. In the event that Consultant receives any communication of whatsoever nature from City, which communication Consultant contends to give rise to any modification of this Agreement, Consultant shall, within thirty (30) days after receipt, make a written request for modification to City's Project Manager. Consultant's failure to submit such written request for modification in the manner outlined herein may be the basis for refusal by the City to treat said communication as a basis for modification. In connection with any modification to the contract affecting any change in price, Consultant shall submit a complete breakdown of labor, material, equipment and other costs. If Consultant incurs additional costs or devotes additional time on project tasks which were reasonably expected as part of the original agreement or any mutually approved modifications, then City shall be responsible for payment of only those costs for which it has agreed to pay.

S. Other Conditions

S.1 Except as otherwise provided in paragraphs S.1.1, S.1.2, and S.1.3 Consultant represents and agrees that the contract specifications and plans, if any, prepared by the Consultant will be adequate and sufficient to accomplish the purposes of the project; and further, that any review or approval by the owner of the plans and specifications shall not be deemed to diminish the adequacy of Consultant's work.

S.1.1 Subsurface Investigations. In soils, foundation, ground water, and other subsurface investigations, the actual characteristics may vary significantly between successive test points and sample intervals and at locations other than where observations, exploration, and investigations have been made. Because of the inherent uncertainties in subsurface evaluations, changed or unanticipated underground conditions may occur that could affect total Project cost and/or execution. These conditions and cost/execution effects are not the responsibility of the Consultant.

S.1.2 Opinions of Cost, Financial Considerations, and Schedules. In providing opinions of cost, financial analyses, economic feasibility projections, and schedules for the Project, Consultant has no control over cost or price of labor and materials; unknown or latent conditions of existing equipment or structures that may affect operation or maintenance costs; competitive bidding procedures and market conditions; time or quality of performance by third parties; quality, type, management, or direction of operating personnel; and other economic and operational factors that may materially affect the ultimate Project cost or schedule. Therefore, Consultant makes no warranty that Owner's actual Project costs, financial aspects, economic feasibility, or schedules will not vary from Engineer's opinions, analyses, projections, or estimates.

S.1.3 Record Drawings. Record drawings, if required, will be prepared, in part, on the basis of information compiled and furnished by others, and may not always represent the exact location, type of various components, or exact manner in which the Project was finally constructed. Consultant is responsible for any errors or omissions about which the Consultant knew or should have known in the information from those employees or firms employed by the Consultant under the terms of the contract as stated therein that is incorporated into the record drawings.

S.2 Notwithstanding any acceptance or payments, City shall not be precluded or stopped from recovering from Consultant, or its insurer or surety, such damages as may be sustained by reason of Consultant's failure to comply with the terms of this Agreement. A waiver by City of any breach by Consultant shall not be deemed to be a waiver of any subsequent breach by Consultant.

T. Integration

This Agreement, including but not limited to Exhibits and Consultant's proposal submitted to City contains the entire and integrated agreement between the parties and supersedes all prior written or oral discussions, representations or agreements. In case of conflict among these documents the provisions of this Agreement shall control.

U. Miscellaneous / General

Consultant binds itself, its partners, officers, successors, assigns and legal representatives to the City under the terms and conditions of this agreement as described herein.

The CONSULTANT and the CITY hereby agree to all provisions of this AGREEMENT.

IN WITNESS WHEREOF, the parties by their signatures below enter into this Agreement this _____ day of _____, 2____.

CONSULTANT:

_____
Name of Firm

By _____
Typed or
Printed Name:_____

Title: _____

Mailing
Address: _____

_____

_____

Employer I.D. No._____

CITY OF WILSONVILLE:

By_____
Michael A. Stone
City Engineer

Attest:

_____
Sandra C. King
City Recorder

Mailing
Address:
29799 SW Town Center Loop East
Wilsonville, OR 97070

Approved as to form:

_____
Michael E. Kohlhoff
City Attorney

EXHIBIT A

CONSULTANT'S SCOPE OF SERVICE
CITY OF WILSONVILLE
PROJECT NAME

EXHIBIT B

REQUEST FOR PROPOSALS
CITY OF WILSONVILLE
PROJECT NAME

EXHIBIT C

RATE SCHEDULE
CITY OF WILSONVILLE
PROJECT NAME

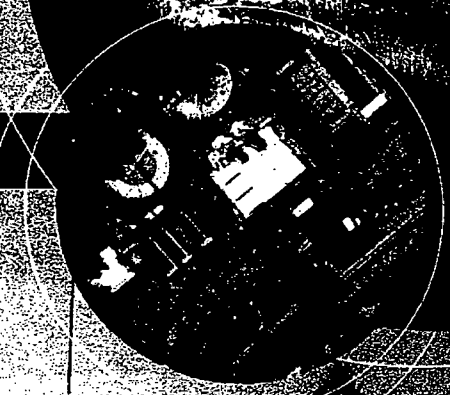
EXHIBIT C

STATEMENT OF QUALIFICATIONS
CITY OF WILSONVILLE
OWNERS REPRESENTATIVE FOR THE
WASTEWATER TREATMENT PLANT EXPANSION PROJECT

PREPARED FOR:
CITY OF WILSONVILLE, OREGON

Owner's Representative for the Wastewater Treatment Plant Expansion

STATEMENT OF QUALIFICATIONS | September 2008



City of WILSONVILLE in OREGON

R·W·BECK

September 30, 2008

Delivery via FedEx

R·W·BECK

Jadene Torrent Stensland, P.E.
City of Wilsonville, City Hall
29799 Town Center Loop
East Wilsonville, Oregon 97070

Subject: Request for Statement of Qualifications for Owner's Representative for the Wastewater Treatment Plant Expansion (CIP # 2051)

Dear Ms. Stensland:

R. W. Beck is pleased to submit our qualifications to provide Owner's Representative services to the City of Wilsonville for the expansion and upgrade of its wastewater treatment plant. While the attached submittal demonstrates our qualifications and experience in response to the City's solicitation, we truly believe the team we have assembled will provide the City with the highest probability of success in securing a long-term design-build-operate (DBO) public-private partnership.

- Our project team has completed more DBO owner's representative assignments in the western United States than any other firm, including numerous landmark projects in the Pacific Northwest. And as your project manager, I bring unmatched experience in overseeing the development of public-private partnerships for water, wastewater, and solid waste infrastructure and can apply an enormous spectrum of lessons learned from across the United States.
- We have acquired more than a year of knowledge about the specific issues facing the City as it pursues its second public-private partnership, and we have provided counsel and guidance to help the City develop an approach that, if properly implemented, will yield a successful infrastructure improvement project. We believe our in-depth understanding of your issues and objectives clearly sets us apart in the ability to provide you with immediate insight and impact as your owner's representative.
- Our local presence means immediate communication and interaction with the City. This attribute is essential when implementing a public-private partnership, as schedule requirements mandate consistent responsiveness to both the municipal owner and the DBO contractors throughout the procurement process.

We appreciate the opportunity to submit our qualifications and look forward to serving the City on this important project. Should you have any questions about the material submitted herein, please do not hesitate to contact me directly at (510) 301-5066 or via email at krhorer@rwbeck.com.

Sincerely,

R.W. BECK, INC.

Kyle Rhorer
Vice President
Project Manager

R. W. Beck, Inc., the prime consultant presented in the attached Statement of Qualifications, was founded in 1942, and later incorporated in the State of Washington in 1995.

Should a contract be awarded to R. W. Beck as a result, the services will be provided from our Corporate Headquarters in Seattle, Washington: 1001 Fourth Avenue, Suite 2500, Seattle, Washington 98154-1004

R. W. Beck's Federal Tax Identification Number: 91-0883905

R. W. Beck's State Tax Identification Number: 044599108 (Seattle, Washington office)

Kyle Rhorer will serve as project manager for this project and can be contacted via the following:

Office, direct: (206) 695-4785

Mobile: (510) 301-5066

Fax: (206) 695-4701

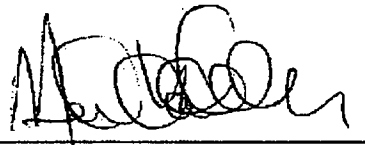
Email: krhorer@rwbeck.com

This statement certifies that R. W. Beck accepts all the terms and conditions contained in the Request for Qualifications and maintains that the Statement of Qualifications is valid for one hundred and twenty (120) days after the submission deadline.

We further understand that all materials and documents acquired or produced by the consultant in conjunction with the resulting contract shall be delivered to and become the property of the City of Wilsonville without restriction or limitation of their future use.

In creating this document we have taken into account your request that all documents that include color figures shall be reproducible in black & white, and have worked to accommodate said request.

We also certify that, to the best of our ability, all RFQ items have been covered in this Proposal.



Officer and Authorized Representative of R. W. Beck, Inc.

Neil Callahan
Vice President, Utility Services Practice
Phone (813) 282-9797
Fax: (813) 282 9744

RW·BECK

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September 2008

City of
WILSONVILLE
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R·W·BECK

Project Understanding and Approach

The City of Wilsonville has benefited from the alternative delivery approach implemented for the City's drinking water plant, and now looks to a similarly efficient solution to address its capacity-limited wastewater treatment plant (WWTP). After more than a year of diligent analyses, the City has chosen to harness the benefits provided by the design-build-operate (DBO) approach. Properly implemented, the public-private partnership will exceed the City's key goals – providing a timely solution that fully addresses the operational and capacity limitations of the current treatment process.

The R. W. Beck team (R. W. Beck, Brown and Caldwell [BC]) clearly understands the City's goals and objectives for this undertaking. The highly experienced Owner's Representative (ORep) team we have assembled is committed to addressing the goals the City has identified, but will also look to identify and respond to other key issues and subtleties the City may not have considered but invariably arise during DBO projects like this.

By uniting your goals and objectives with the our vast experience in providing ORep services, the R. W. Beck team has identified the following four issues and corresponding strategies that will yield a successful public-private partnership.

Issue 1: The improved, expanded WWTP must be operational by 2011

The City's existing WWTP is experiencing capacity limitations, as well as operational challenges related to solids handling and odor control. Moreover, the limited footprint will make concurrent operation and construction activities quite challenging for the DBO contractor. While the proposed schedule is extremely aggressive, it is feasible if proper strategies are employed.

Strategy1A: An efficient DBO procurement process will optimize project schedule

One of the keys to meeting the 2011 deadline is the implementation of a highly efficient procurement process. While this efficiency must not come at the expense of implementing a thorough, supportable procurement process, an experienced ORep can take measures to optimize the schedule through:

For the Tolt Water Treatment Plant (WTP) DBO Project, Seattle Public Utilities (SPU) faced the challenge of completing its procurement before the scheduled sunset date of the state authorizing legislation for alternative contracting. R. W. Beck used parallel RFQ/RFP development and a streamlined submittal process to effectively complete the process in 12 months and before the sunset.

- Concurrent tasking – By deploying a multi-disciplinary team of technical and procurement specialists, many tasks can be completed concurrently as opposed to the sequential approach implied in the City's ORep Request for Qualifications (RFQ). For example, the RFQ process, as well as significant development of the Request for Proposals (RFP), can likely take place during Phase A as the technical aspects of the project are being fully developed.
- Expedited short-listing – Because the City anticipates implementing a "two-stage" selection process for the DBO contractor, the RFQ document can be efficiently developed, focusing on obtaining succinct qualifications information from the DBO community.
- Appropriate, balanced contracting – The initial public-private risk allocation and draft DBO service contract shall be developed from a well-balanced risk perspective sensitive to market conditions, thus minimizing the time needed for contract negotiations.

Strategy 1B: Early and significant DBO contractor involvement promotes schedule efficiency throughout the procurement process

By involving the DBO contracting community in the project at an early stage, the City can create schedule efficiencies as DBO contractors educate themselves on WWTP facility and operational considerations. This is an especially important strategy for this project, as facility upgrades and operations must occur concurrently. Implementing this strategy will involve:

- Access to information – Prior to issuance of solicitation documents, DBO contractors should be provided access to technical information concerning the WWTP as well as access to the WWTP itself (under a controlled process) to create efficiencies in response preparation.

The construction market in the King County area has become highly competitive, with the average number of bidders falling from 5.2 to 3.6 on projects valued over $25 million. To address conditions, R. W. Beck implemented a contractor outreach program that included a pre-RFQ open house and one-on-one meetings with prospective respondents. As a result, SPU received six SOQs for its Cedar WTP DBO project.

- Suggestions for further studies – Recommendations by the DBO contractors for additional technical analyses and/or studies should be considered to promote further efficiency by reducing ambiguity during the solicitation.

Strategy 1C: A coordinated, established working relationship between the ORep and legal counsel creates efficiency by establishing clear lines of responsibility

The relationship between the ORep and the legal counsel, secured to develop the DBO agreement, is a very important one. A considerable amount of communication and integration of work products is required in order to develop a supportable procurement and DBO service contract that protects City interests. Efficiency will be promoted through:

- Prior working experience – Members of the R. W. Beck project team have worked with the City's outside legal counsel, Hawkins Delafield & Wood (HDW), for more than two decades, and we have constructed landmark DBO projects across the country. R. W. Beck has designed this ORep project team in such a way that allows these long-standing, successful relationships between professionals to continue.
- Allocation of responsibility – R. W. Beck and HDW will apply our jointly-derived and proven methodology to the development of DBO procurement documents. Our "three volume approach" will be utilized and development responsibilities will be clearly assigned to the appropriate technical or legal experts.

Members of our team have worked closely with Wilsonville's selected legal advisor, HDW, on numerous landmark DBO and DB projects including SPU's Tolt WTP DBO Project, Tacoma's Central Treatment Plant Upgrade and Expansion DB Project, Hawai'i County's Solid Waste Reduction Facility DBO Procurement Project, and SPU's Seattle South Recycling and Disposal Station DB Project. Established working relationships and familiarity with the type of contract structure developed by HDW will help expedite the development of procurement documents and technical attachments to the contract.

Issue 2: WWTP design improvements and facility operations must be innovative and sustainable

Now, more than ever, we have a responsibility to develop technical solutions that protect the environment and promote sustainability. Wastewater treatment is no exception and we know the City is committed to engaging a private sector partner that will develop approaches that are not only technically innovative, but sustainable as well.

For the City of Tacoma's Central Treatment Plant Upgrade and Expansion Project, R. W. Beck and BC worked closely to develop robust performance specifications. The combination of R. W. Beck's understanding of alternative delivery processes and BC's technical expertise resulted in an efficient process and created a balance between innovation and long-term sustainability for the project.

Strategy 2A: Harnessing industry-leading experts to develop performance specifications will result in long-term compliance solutions that address environmental stewardship and sustainability objectives

The R. W. Beck team was assembled to bring the most current industry knowledge on effective and innovative WWTP design and operations to the development of performance specifications for this project. R. W. Beck will involve its sustainability experts to define parameters of environmental responsibility. Performance specifications will address:

- Regulatory compliance – Rigorous and effective performance specifications that meet or exceed regulatory requirements will protect the fragile ecosystem.
- Operational reliability – Specifications relating to maximizing facility life, automation, operational efficiency, life-cycle cost efficiency, etc. will encourage robust design, construction, and operations solutions from the private sector.
- Sustainability – Specifications requiring sustainable design, energy and water efficiency, minimization of

chemical usage, co-gen, and beneficial reuse of WWTP products, such as biosolids, will make this project a fine example of environmental stewardship.

- Long-term focus – Performance specifications will be developed to be enduring - yet sensible - and achievable for the 25-year service contract term.

Strategy 2B: Applying thoughtful evaluation criteria to the procurement process will promote innovative, sustainable wastewater treatment solutions

Evaluation criteria utilized throughout the procurement process shall clearly reflect the City's goals of innovation and sustainability. DBO contractors shall be evaluated not only on their ability to reliably and efficiently treat wastewater in compliance with discharge requirements, but also on their ability to incorporate features that will make the upgraded WWTP a model of sustainability. This strategy will be implemented throughout both stages of the solicitation.

- RFQ stage - Minimum qualification requirements shall mandate DBO contractors possess experience in developing innovative and efficient solutions to treating wastewater. Submittals will also be evaluated on demonstrated application of sustainable design, construction, and operations practices.
- RFP stage - DBO contractor proposal evaluation criteria will include specific, appropriately weighted factors related to: design and construction processes and materials (e.g. green building practices and LEED); energy efficiency and recovery; chemical usage; beneficial reuse of biosolids, etc.

Issue 3: Operations and maintenance (O&M) considerations must be integrated with WWTP design, construction, and commissioning

One of the key benefits of the DBO approach is the integration of O&M considerations with facility design and construction. "Operations-driven design" promotes long-term reliability and efficiency as unique operational requirements are literally built into the infrastructure. Least life-cycle cost benefits are inherent in the DBO approach since the selected contractor is responsible for both the capital and the O&M budget for the contract's duration.

On the Cedar WTP DBO Project, R. W. Beck worked with SPU to develop evaluation criteria and contract requirements that rewarded innovation and sustainability, such as including LEED requirements among the technical evaluation criteria.

For Hawai'i County's Solid Waste Reduction Facility DBO Procurement Project, R. W. Beck, with HDW, developed contractual incentive structures designed to encourage long-term environmental sustainability and promote capital investment to increase efficiency over the 20-year contract term.

Strategy 3A: A thorough understanding by the ORep of current operational challenges will drive a robust operations-based technical solution

The R. W. Beck team will work closely with the City WWTP operations staff to identify, analyze, and convey the current operational challenges that will need to be addressed by the DBO contractor concurrent with the design and construction activities. Implementing this strategy will require:

- Information review – Our WWTP operations experts will conduct a thorough review of all prior facility capital improvements and operations studies implemented by the City.
- Site visits and interviews – The R. W. Beck team will confer with City operations staff to get a first-hand assessment of the WWTP's operational challenges.
- Additional analyses – We will likely recommend additional analyses that would benefit the procurement process, such as an asset condition assessment.

Strategy 3B: Long-term operational performance guarantees will encourage thoughtful design and construction solutions

Operational performance guarantees will serve as the contractual backbone of the public-private partnership and will promote a durable operations-based design and construction solution. Working closely with HDW, the R. W. Beck team will contractually address:

- State-of-the-art technology – Coupled with the innovation strategies of Issue 2, long-term operational performance guarantees will encourage the DBO contractor to more heavily rely on modern, automated equipment and controls to assist the operators in meeting contractual requirements.
- Good neighbor responsibilities – Good performance will also mean being a good neighbor. Performance guarantees and significant contractual penalties for

noise and odor exceedances will play a key role in achieving this objective.

- Asset preservation – By contractually requiring adherence to long-term operational performance criteria, the DBO contractor will be forced to utilize robust equipment that will stand the test of time. Asset condition and useful life guarantees will also play a key role in the contract, helping to make certain that the WWTP infrastructure remains sound when the contract term expires.

Strategy 3C: A long-term contract that promotes continuous operational improvement throughout its term encourages efficiency and sustainability

The City's DBO partner should be incentivized to continually improve operational efficiency and sustainability parameters. The long-term DBO contract developed by HDW and the R. W. Beck team will contain provisions that mutually encourage investment for operational gains. Specifically, this contracting approach will include:

- Contract openers – The City and the DBO contractor should each have the opportunity to revisit performance guarantees in light of new technical innovations that promote efficiency and sustainability.
- Performance incentives – Subject to applicable tax law, the contract should include provisions that reward the DBO operator for high levels of efficiency, performance, and environmental stewardship.
- Investment/benefit sharing – Investments in capital to improve efficiency should be approached jointly by the City and its DBO partner, with each sharing the benefits.

Issue 4: City risk must be minimized and appropriately allocated

Developing a public-private partnership that protects the interests of City stakeholders while not over-burdening the private sector is a delicate exercise in risk allocation: transferring too much risk to the private sector will result in an unmarketable project, while retaining too much risk may yield dire consequences for the City.

For the San Diego County Water Authority WTP DBO project, R. W. Beck, working with HDW, solicited and incorporated input from the DBO community to develop a marketable risk allocation methodology.

Strategy 4A: Addressing short-term solutions for current capacity constraints will reduce project schedule risk

In our opinion, the greatest challenge facing the City is meeting the 2011 deadline. However, the schedule risk associated with this aggressive deadline can be managed. The experienced wastewater design and operations experts on the R .W. Beck/BC team will explore short-term solutions to mitigate capacity challenges such as:

- Facility plan review – Our team will scrutinize the City's 2005 WWTP Facility Plan to determine the validity of various capacity-related assumptions and consider how changes to those assumptions may impact schedule-driving capacity conclusions.
- Develop interim measures – The R. W. Beck team will study and recommend specific interim approaches to mitigate capacity constraints, potentially re-rating the WWTP to provide schedule flexibility for upgrades and expansion.

Strategy 4B: An optimal risk initial allocation between the City and its DBO partner will result in fair contracting and efficient pricing

The fundamental principle of alternative contracting, such as DBO, is that risk should be allocated to the party that is best able to manage that risk. While City interests must be protected, overburdening the DBO contractor with uncontrollable risk will create an inefficient and thus expensive partnership. The R. W. Beck team will develop a balanced risk approach through:

- Early communication of risk posture – A preliminary risk allocation approach will be incorporated in the RFQ process to provide DBO contractors early notice of the City's preferred risk profile. This will allow the City ample time to recalibrate the risk allocation in response to market feedback, if necessary.
- Draft DBO contract – The R. W. Beck team and HDW will work together to develop a draft DBO contract for inclusion in the RFP. DBO contractors will be given the opportunity to review and comment on the agreement, allowing the City to again consider the optimal allocation of risk.

General Work Plan

We understand the City may still be considering aspects of their draft scope of work and therefore agree that a "task order"-based contract is a good solution for undertaking the ORep services. R. W. Beck has extensive experience in task order contracting. Our assigned project manager is an expert in this contracting methodology and is supported by robust project management processes and systems that will enable him to manage this project extremely well in the City's preferred contracting methods.

Under this model, the R. W. Beck team anticipates working closely with the City to develop more refined and detailed task-level scopes. It is likely that some of the services identified within the RFQ's draft scope of work may not be appropriate or necessary for this ORep engagement. The R. W. Beck team will apply its extensive knowledge of ORep services to help the City develop the best possible approach.

Exhibit 1. General Work Plan

	Task	Description	Key Subtasks	Primary Deliverables & Milestones	Responsibility
Phase A	Project Management	Management of all day-to-day project activities and oversight of all subcontractor activities Oversight of all project deliverables	▪ Conduct project kick-off meeting ▪ Submit monthly status reports ▪ Hold regular conference calls / meetings ▪ Provide invoice management ▪ Mange and coordinate subcontractor services ▪ Ensure QA/QC compliance ▪ Promote City Council interaction	▪ Communication plan ▪ Project management plan (PMP) ▪ Monthly status reports ▪ Monthly invoices ▪ Other deliverables TBD based on negotiated PMP	R. W. Beck (Rhorer)
	Influent Characterization	Verify flows and loads, and provide process modeling to confirm future facility design requirements	▪ Conduct sampling and testing ▪ Conduct blending analysis ▪ Validate flow data ▪ Provide bench testing and treatability analysis ▪ Evaluate treatment scenarios	▪ Test results ▪ Process model output ▪ Updated flow and load assessment TM with coordinated input on process design criteria	BC (Wilson)
	Facilities Plan Update	The 2005 facilities plan requires review and updating to clarify recommended alternatives and design criteria	▪ Review and re-rate WWTP capacity and optimization potential ▪ Incorporate new technologies into alternatives analysis ▪ Evaluate odor control ▪ Evaluate solids handling ▪ Evaluate slope stability ▪ Identify electrical/power requirements ▪ Update design criteria	▪ TM for WWTP capacity, revised alternatives assessment, collection system monitoring, odor control, and site geotechnical per negotiated work scope ▪ Update estimate capital costs and rate impact ▪ Determine appropriate construction phasing ▪ Updated project schedule	BC (Wilson)

	Task	Description	Key Subtasks	Deliverables & Milestones	Responsibility
Phase A	Site Survey/ Document Existing Conditions	Determine boundaries, elevation, and location of existing utilities	▪ Perform baseline survey including buildings and control ▪ Document structures, piping, key equipment, and process units ▪ Coordinate with condition assessment (asset management) and planning update	▪ Site survey and location mapping of structures, piping, and process units ▪ Inventory matrix (names and locations of WWTP components) for documenting condition assessment	BC (Wilson)
	Asset management criteria	Provide training and a framework for establishing an asset management program that will benefit the City and future contract operations	▪ Design asset evaluation program ▪ Develop data framework ▪ Quantify risk and replacement requirements ▪ Develop "as is" condition valuation as baseline for condition assessment at contract term	▪ Workshop facilitation ▪ Initial asset register development ▪ Database of assets and hierarchy ▪ Compiled asset risk scores ▪ Summary evaluation report	BC (Warburton)
	Performance and construction quality criteria	Facilitate development of outcome-based performance criteria that will form the basis of the DBO contract	▪ Hold meetings and workshops with Owner's staff ▪ Define performance criteria for effluent quality, biosolids, odor, noise, erosion, aesthetics, sustainability, and other relevant criteria	▪ Technical memos defining criteria for project performance, construction quality, aesthetics, sustainability, and testing protocol	BC (Wilson)
	10% conceptual design	Provide design services appropriate to support the DBO RFP	▪ Develop site/civil base maps and yard piping ▪ Develop applicable P&ID and process flow diagrams ▪ Assess traffic, security, utilizes, and other pertinent issues ▪ Update construction costs estimates	▪ Plant process evaluation report ▪ Conceptual drawings, including 3D base civil ▪ Updated design data and performance criteria ▪ Cost estimate ▪ Conceptual plans to address process design and applicable disciplines	BC (Wilson)

	Task	Description	Key Subtasks	Deliverables & Milestones	Responsibility
Phase A	BIM	Establish goals and objectives of BIM initiative, define 3D software platform, success measures and data boundaries. Develop procedures and training for implementation	▪ Define goals and objectives ▪ Determine appropriate 3D software platform and criteria in coordination with 10% design effort ▪ Provide training on BIM procedures	▪ Defined objectives and BIM framework for incorporation into the DBO RFP	BC (Wilson)
	Create and maintain overall schedule	Provide detailed scheduling for the consultant effort in Phases A and B plus a framework for DBO construction scheduling	▪ Provide R. W. Beck/BC project schedule and updates ▪ Develop Primavera schedule and performance criteria for construction management	▪ ORep project schedule and updates addressing all task orders ▪ Criteria for DBO contractors construction schedule including critical path and basis for monitoring	R. W. Beck (Rhorer) BC (Wilson) with Pinnell-Busch
	Develop industry forums	Support project development workshops with the City and potential DBO firms	▪ Create methodology and format ▪ Provide technical support	▪ Workshop participation with effective communication of project requirements	R. W. Beck (Rhorer) BC (Wilson)
	Obtain external / internal stakeholder input	Document feedback from industry forums to benefit DBO project	▪ Revise conceptual design and performance criteria where applicable	▪ Updated design and performance criteria	R. W. Beck (Rhorer) B&C (Wilson)
	Assist City with NPDES permit renewal	Incorporate updated recommended plan and condition assessment into permit renewal application	▪ Meet with ODEQ for plan review and information transfer ▪ Address ODEQ concerns in conceptual design and performance criteria	▪ Permit renewal application with updated facility information and understanding of ODEQ requirements that affect project design	BC (Wilson)

	Task	Description	Key Subtasks	Primary Deliverables & Milestones	Responsibility
Phase B	Draft RFQ	Establish overall procurement approach, risk allocation and selection process Implement first stage of procurement process to pre-qualify DBO teams	▪ Develop procurement strategy ▪ Allocate initial risk ▪ Develop conceptual scope of services ▪ Develop minimum and enhanced qualifications requirements ▪ Develop selection process ▪ DBO contractor outreach	▪ Preliminary risk allocation ▪ Procurement strategy plan ▪ Draft and final RFQ document ▪ RFQ addenda (if necessary) ▪ Pre-Submittal meeting(s) ▪ DBO contractor outreach meetings	R. W. Beck (Rhorer)
	Review qualification submittal	Evaluation of SOQ submittals in accordance with RFQ selection process	▪ Perform technical evaluation of SOQ submittals ▪ Perform financial evaluation of SOQ submittals ▪ Perform due diligence investigations / reference checks ▪ Form evaluation committee and conduct meetings ▪ Hold evaluation and short listing workshop(s)	▪ SOQ evaluation report ▪ Evaluation committee recommendation for short listing	R. W. Beck (Rhorer)
	Draft RFP	Implementation of second stage of procurement process Identification of baseline capital and operational inputs and conditions and development of technical performance standards, proposal submittal requirements, evaluation criteria and selection process	▪ Develop RFP outline (3 volume approach) ▪ Establish baseline operational parameters (influent characteristics, capital asset conditions, etc.) ▪ Develop long-term operational performance requirements (discharge, odor, noise, biosolids, etc.) ▪ Develop mutil-discipline evaluation criteria and selection process ▪ Define acceptance testing and commissioning requirements ▪ Conduct DBO contractor outreach ▪ Support public involvement meetings	▪ RFP outline ▪ Draft and final RFP "Front End" (Volume 1) ▪ Draft and final RFP technical appendices to DBO service contract (Volume 3) ▪ RFP addenda (if necessary) ▪ Pre-Submittal meeting(s) ▪ DBO contractor outreach meetings ▪ RFP public involvement meetings ▪ Client issues workshops	R. W. Beck (Rhorer)

Phase B

Task	Description	Key Subtasks	Primary Deliverables & Milestones	Responsibility
Draft RFP (continued)	(see above)	▪ Develop RFP "front end" (Volume 1) ▪ Coordinate and provide input to Draft DBO Contract (RFP Vol 2) ▪ Develop technical appendices for Draft DBO Contract (RFP Volume 3) ▪ Prepare draft RFP for internal and external review and comment ▪ Prepare and issue final RFP	(see above)	R. W. Beck (Rhorer)
Comment on draft DBO contract	Provide input to HDW on draft DBO service contract	▪ Hold legal workshop with HDW and City to review contract outline and general terms and conditions ▪ Review and comment on draft DBO service contract to ensure compliance with RFP Volumes 1 and 2 and City objectives	▪ Workshop and meetings with HDW and City ▪ Written comments to HDW service contract ▪ Development of RFP Volume 3 – technical appendices to DBO service contract) (see above)	R. W. Beck (Rhorer)
Review proposals	Evaluate proposal submittals in accordance with RFP selection process	▪ Conduct proposal completeness review and RFI process ▪ Provide technical evaluation ▪ Perform life-cycle cost evaluation ▪ Provide business and legal terms / exceptions analysis ▪ Perform additional due diligence ▪ Conduct DBO contractor outreach and hold interviews ▪ Support public involvement meetings ▪ Brief the board, union, and other stakeholders ▪ Support evaluation committee	▪ Completeness summary ▪ Proposal evaluation report ▪ Life-cycle cost model ▪ Proposal public involvement meetings ▪ Evaluation committee recommendation for award	R. W. Beck (Rhorer)

	Task	Description	Key Subtasks	Primary Deliverables & Milestones	Responsibility
Phase B	Assist with DBO contract negotiations	Provide analytical support to HDW to negotiate technical and financial deal points of DBO contract	▪ Analyze proposed financial, business and risk allocation terms/exceptions to draft DBO service contract ▪ Hold preparation workshops with HDW ▪ Hold contract negotiations meetings with DBO contractor ▪ Provide additional life-cycle cost analyses ▪ Provide additional technical analyses for suggested changes to performance requirements	▪ HDW coordination workshops ▪ Contract negotiations meetings ▪ Revised drafts for DBO contract technical appendices	R. W. Beck (Rhorer)
Ph. C	DBO contract monitoring	TBD pending final RFP language and negotiation with DBO contractor	--	--	R. W. Beck (Rhorer) BC (Wilson)
Phase D	Services during Commissioning and Warranty	TBD pending negotiation with DBO contractor	--	--	BC (Wilson)
	Annual reports	TBD pending negotiation with DBO contractor	--	--	BC (Wilson)

Note: Task-specific information has not been provided for Phases C and D, as they are largely dependent on the final language of the DBO RFP document as well as the terms and conditions of the negotiated DBO service contract.

Project Management

Effective project management is crucial to any engagement, but ORep projects require an even greater degree of care due to challenging project schedules and the need to provide thorough, supportable procurement services and deliverables that can withstand the most intense scrutiny. The R. W. Beck team is well versed in utilizing project management techniques for ORep assignments that promote:

- Delivery of high quality services and work products
- Maintenance of project schedule and cost control
- Successful management of contingencies
- Consistent, open communication
- Effective coordination among team members subconsultants
- True partnering with the municipal client

Quality Control

R. W. Beck's project management process and procedures emphasize meticulous attention to quality and provide organizational flexibility required to meet each client's specific needs. The process also proactively addresses scope, budget, and schedule contingencies that often arise during the implementation of an ORep project.

The project manager will be responsible for ensuring that the scope of work is completed to the City's satisfaction, and that project deliverables are produced on schedule and within the allocated budget. The project manager is also responsible for obtaining the client's review and approval of deliverables and for developing contingency plans, including adjustments to scope and schedule, and to address unforeseen issues. A principal-in-charge will also be assigned to the project. It is the responsibility of the person in this role to make sure that the project team is fully meeting the needs of the client.

It is R. W. Beck's policy to dedicate a percentage of the project budget to quality assurance. An expert in ORep services will be assigned to perform quality assurance on all aspects of the project, reviewing all solicitation documents, and other deliverables, to make certain that the approach and results are defensible and well-presented. This person will also be responsible for ensuring the services and deliverables provided to the City comply with R. W. Beck's Standards of Practice for ORep services. It is also the job of the principal-in-charge to ask questions and challenge assumptions, so that potential issues can be resolved before results are shared with the public.

Communication

With regard to keeping clients informed of project progress, R. W. Beck will develop a communication plan as a component of the Project Management Plan. This plan will identify contacts for each party and establish communication protocols. On similar ORep projects, the R. W. Beck project manager has:

- Communicated with the client's point of contact regularly, but no less than weekly, during periods of greatest activity.
- Submitted monthly summary reports to the client, to accompany the monthly invoice, documenting the activities that were undertaken in the prior month, including any problems that were encountered and how they were addressed. Issues requiring City action would be highlighted

In addition to regular and timely communication with City staff, the R. W. Beck team will make key team members and subconsultants available, as needed, to participate in client updates, conference calls, and address questions as a matter of course throughout the project. This organizational flexibility will help maintain the timeliness and responsiveness of our team to City requests, and removes the need for multiple layers of feedback for addressing concerns and project contingencies.

Project Team Coordination

Project Manager, Kyle Rhorer, is a utility industry professional with a comprehensive understanding of utility operations management, strategic planning, organizational restructuring, and is a specialist in developing public-private partnerships and contract management. Applying experience gained from providing ORep services on more than a dozen DB and DBO projects, he will manage a diverse team of highly qualified experts to the successful execution of this WWTP expansion project. Mr. Rhorer has extensive experience managing major alternative delivery projects, and has been involved in the delivery of over half a billion dollars in assets over the last 10 years.

Under Mr. Rhorer's direction our team's sub-consultants will work side by side with R. W. Beck to address specialized elements of the project and provide their local resources and experience specific to the project's needs.

Partnering with the City

One of R. W. Beck's key brand attributes is to be a "True Partner" to our clients. More than most assignments, ORep projects measurably benefit from a significant amount of partnering between consultant and client. The R. W. Beck team will unquestionably share in the City's ownership and outcome of the WWTP DBO partnership. The R. W. Beck team will work closely with City management and operational personnel to:

- Develop an overall procurement strategy that best addresses the City's needs as well as the expectations and commitments made to elected officials and

stakeholders, including labor representatives, regulators, and WWTP neighbors.

- Optimize the preliminary scope of work and project schedule to implement the most appropriate and effective suite of services to meet the City's objectives.
- Obtain all relevant WWTP facility and operations information and input concerning operational challenges, recommendations, and areas that may benefit from additional analyses.
- Establish an evaluation committee and selection process that yields the most advantageous DBO solution.

As task orders are developed, the R. W. Beck team will provide clear direction to the City as to how City management and operational personnel will ideally be utilized to implement the scope(s) of work, including level of effort and time commitment expectations.

Key Personnel Qualifications

R. W. Beck and BC have assembled a highly experienced, local team to deliver the ORep services to the City of Wilsonville. Collectively, the professionals selected for this engagement possess the vast majority of alternative delivery experience in the western US, particularly in the DBO arena.

Core Project Team

We propose utilizing a locally-based, "Core Team" approach to heavily utilize our most experienced ORep professionals but also to create a nimble, efficient method of service delivery. The members of the Core Team possess a wealth of directly-applicable experience and have worked together on similar assignments. Exhibit 2 provides a snapshot of the related experience held by the Core Team.

In addition to technical partner BC, R. W. Beck has selected industry-leading subconsultants to provide specialized expertise, see Exhibit 3.

The organization chart, Exhibit 4, on the following page illustrates how the R. W. Beck team will be organized. Each phase will have a "lead," directly responsible for that phase and will be supported by senior technical consultants (as indicated by the names that appear below the phase lead) from either R. W. Beck or BC, as appropriate. A pool of additional technical support personnel with specialized experience will be available as required.

Core Team members have been assigned in their areas of expertise, per project phase, with several assigned to multiple roles; we have used this organization on similar engagements, including the Central Treatment Plant Upgrade and Expansion DB Project for the City of Tacoma, and find that it brings effectiveness and efficiency to the entire process through a clear and shared understanding of responsibilities.

Exhibit 2. Qualifications of Core Team personnel

Qualifications / Core Team Personnel	Kyle B. Rhorer	Robert J. Bingham, P.E.	Neil V. Callahan	Steve A. Wilson	Jack Warburton, P.E.
Years of Experience	16	25	30	30	35
DBO Experience	X	X	X	X	X
Procurement Strategy Development	X	X	X	X	X
Permitting	X	X	X	X	
Risk Assessments	X	X	X		X
Create RFQ/Review SOQ	X	X	X	X	X
Create RFP/Evaluate Proposals	X	X	X	X	X
Performance Requirements	X	X	X	X	X
Contract Negotiation	X	X	X	X	X
Design & Construction Oversight	X	X	X	X	
O&M	X	X	X	X	

Exhibit 3. Team firms, services to be provided and years of experience

Firm & Years in Service	Services to be Provided
R. W .Beck, 66	Program management; procurement design and implementation
BC, 61	Technical analyses; conceptual design; technical performance requirements; construction monitoring assistance
Geotechnical Resources, 25	Geotechnical services
ESA Adolfson, 20	Environmental permitting
Pinnell Busch, 30	Program management

Kyle Rhorer - Project Manager/Phase B & C Lead

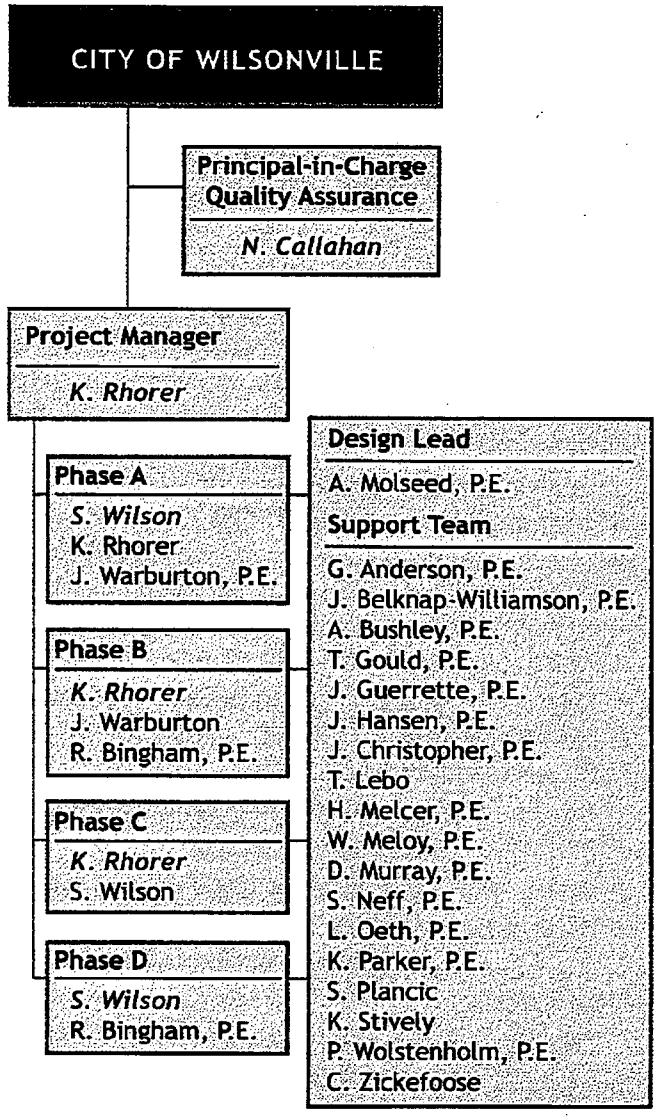
Location:	Seattle, WA
Availability & 2009 Commitments:	80 % available DBO Procurement, County of Kauai DB Procurement, SPU
Education:	M.B.A. in Environmental and Natural Resources Management B.A. Quantitative Economics

Kyle Rhorer is a Vice President and Senior Client Manager for R. W. Beck's Northwest Region. He has more than 16 years of experience in providing management consulting services to utilities and municipalities. Mr. Rhorer specializes in the development of public-private partnerships for the design, construction and operation of water, wastewater and solid waste utility infrastructure. He possesses extensive experience in delivering ORep services, having managed more alternative delivery procurements in the western United States than any other individual. Mr. Rhorer was responsible for the development and implementation of the first two DBO projects in the state of California and oversaw the implementation of the largest DBO project ever implemented in that state. He also has considerable experience in applying the DBO approach to smaller systems (2- to 10-mgd) as well as to projects involving upgrades to existing treatment facilities.

ORep Experience within the Last Five Years:

- Bajagua Wastewater Treatment DBO Project, Bajugua LLC /MX – QA/QC Manager
- Solid Waste Reduction Facility DBO, County of Hawai'i, HI – Project Manager
- Transfer Station DB, SPU/WA – Project Manager
- Drinking Water Treatment Plant DBO Procurement, San Diego County Water Authority/CA - Senior Consultant
- Wastewater Treatment Plant DBO Procurement, Clovis, CA – Project Manager (Malcolm Pirnie, Inc./Red Oak Consulting)
- Drinking Water Treatment Plant DBO Procurement, San Diego County Water Authority/CA – Project Manager (Malcolm Pirnie, Inc.)
- Groundwater Recovery Facility DBO, City of San Juan Capistrano, CA – Project Manager (Malcolm Pirnie, Inc.)

Exhibit 4. Project Organization Chart



● *Phase Leader*

Additional Relevant Experience

- WWTP DBO Upgrade, Avalon, CA – Project Manager (Malcolm Pirnie, Inc.)
- Biosolids Recycling Facility DBO, Sacramento Regional Sanitation District/CA – Project Manager (Malcolm Pirnie, Inc.)
- WWTP DBO Upgrade, Woonsocket, RI – Task Manager (Malcolm Pirnie, Inc.)
- Deep Aquifer Treatment System DB, Irvine Ranch Water District/CA – Project Manager (Malcolm Pirnie, Inc.)

Robert J. Bingham, P.E. - Phase B & D Support

Location:	Seattle, WA
Availability & 2009 Commitments:	100% available
Education:	B.S. in Civil Engineering B.A. in Interdisciplinary Studies
Registrations:	Civil Engineer, WA

Bob Bingham is experienced in developing public-private partnerships including DBO for water and wastewater infrastructure. He has served as project manager or key technical advisor in the procurement, and development of facilities, including wastewater treatment, water treatment, energy recovery, material processing, waste disposal, and solid waste facilities. Mr. Bingham has represented more than 15 public utilities in the negotiation and/or administration of contracts with private sector firms to provide municipal utility facilities and services. He has managed landmark alternative delivery on more than 15 projects – many in the Pacific Northwest - with a capital value in excess of $2 billion including SPU's projects.

Relevant Project Experience:

- Central Treatment Plant Upgrade and Expansion DB Project, City of Tacoma, WA – Project Manager
- Cedar River Water Treatment DBO Project, SPU/WA – Project Manager–Phases 2 and 3
- Tolt Water Treatment Plant DBO Project, SPU/WA – Project Manager
- Bajagua Wastewater Treatment DBO Project, Bajugua LLC/MX – Preliminary Financial Planner
- Wastewater Treatment Plant Improvements Alternative Project Delivery Evaluation, City of Everett, WA – Project Manager
- WWTP Expansion General Contractor/Construction Manager Support Services, City of Everett, WA – Project Manager
- Brightwater Program Oversight Monitoring, King County Department of Natural Resources/WA – Project Manager
- County of Hawai'i Solid Waste Reduction Facility DBO Procurement– County of Hawai'i/HI – Technical Support

Neil V. Callahan - Principal-in-Charge; QA/QC

Location:	Orlando, FL
Availability & 2009 Commitments:	40% available Existing contract work; quality and resource management; project development
Education:	M.S. in Environmental Science B.S. in Environmental Science; Grad. Study in Water Resources

Neil Callahan has 30 years of experience in the water and wastewater industry and oversees all ORep services for R. W. Beck. He assists municipal utilities in capital improvement project (CIP) planning and implementation, alternative delivery program management, and plant operations. His expertise is providing project development, utilities management, and operations consulting for water and wastewater projects and has managed DBO engagements nationally.

Mr. Callahan has served as project manager for utility planning, permitting, and construction projects with values ranging from $50,000 to $158 million, drawing on his comprehensive knowledge of state and federal regulations, project development, scheduling and contract management.

Mr. Callahan will serve as a client advocate, responsible for making sure R. W. Beck resources are applied to the benefit of the client and a particular project.

Prior to joining R. W. Beck, Mr. Callahan was a VP in a global water utility services company, developing bids for, and implementing the privatization of water and wastewater facilities around North America.

Mr. Callahan was also a principal consultant for an engineering firm specializing in the troubleshooting and design of treatment processes, utility operations, facilities planning, permitting, and facility start-up.

Relevant Project Experience:

- Owner's Advisor for the Replacement of DBO Contractor and Upgrades to an Existing 25 mgd Desalination Treatment Plant, Tampa, FL – Project Manager
- Evaluation of Project Delivery Alternatives for Implementation of the Master Water Plan, Tampa Bay Water, Florida – Project Manager
- Oversight Committee – Water Treatment DBO Project, San Diego County Water Authority/CA – Senior Advisor

Steve Wilson - Phase A & D Lead

Location:	Portland, OR
Availability & 2009 Commitments:	70% available Warranty Services, Three Rivers Regional Wastewater Authority Facility Plan and Biosolids Design, City of Eureka, CA
Education:	M.S. in Soils B.A. in Environmental Studies
Certifications:	Certified Professional Soil Scientist

Steve Wilson is a project manager with BC, and recently led biosolids upgrade projects for the Three Rivers Regional Wastewater Authority and the City of Portland. He has participated in numerous local planning and design projects including the Cities of Newberg, Redmond, and Woodburn, and has significant experience in an ORep role for the Cities of Toronto and Atlanta; the Toronto project went to completion with over $70 million in improvements including a biosolids dryer, digester heating, and truck load-out facilities. Working in partnership with a local firm, BC completed applicable studies, 20 percent design, and three separate DB RFPs in a short time frame leading to a successful procurement. For the City of Wilsonville, Mr. Wilson will lead BC's engineering effort and work closely with R. W. Beck to meet project goals. Mr. Wilson's local knowledge and technical expertise will contribute to effective project delivery.

Relevant Project Experience:

- City of Atlanta DBO Biosolids Procurement, Atlanta, GA – Technical Lead
- Central WWTP Biosolids Processing Improvements, Three Rivers Regional Wastewater Authority/Kelso, WA – Project Manager
- Class A Biosolids Workplan, King County Department of Natural Resources/WA – Project Advisor
- 100 Percent Biosolids Utilization Program Implementation, City of Toronto, Ontario, Canada – Project Manager
- TAGRO Processing Facility Expansion, City of Tacoma, WA – Project Advisor

Resumes for all personnel are provided in the Additional Supporting Information section

Jack Warburton, P.E. - Phase A & B Support / Asset Management / Engineer of Record

Location:	Seattle, WA
Availability & 2009 Commitments:	40% available Halifax Harbour Solutions Project, Due Diligence Review Team, City of Halifax, Nova Scotia CSO project, SPU/WA Lakehaven I/I, WA WTE project, City of Tacoma, WA
Education:	B.S. in Civil Engineering
Registrations:	Civil Engineer, OR, CA, WA, AK, ID P.E. MN and British Columbia Chartered Civil Engineer, UK

Jack Warburton is a Senior Vice President of BC's Business Consulting Practice, with more than 35 years of extensive management and technical leadership experience in water, wastewater and surface water planning, design, construction, and operations. Over the last decade he has focused on the business aspects of utility operations including alternative project delivery, metric and business process benchmarking, organizational development, optimizing work practices, and CIP program development and prioritization. He specializes in integrating new technologies and work processes to achieve service level enhancements, cost efficiencies, cost of service, rates and financing, and asset management. He possesses a good working knowledge of BIM and its potential application to WWTP design.

He brings a national perspective on master planning, capital program development, implementing asset management processes, and data management systems to support effective decision making.

Relevant Project Experience:

- Central Wastewater Treatment Plant Wet Weather Expansion, City of Tacoma Environmental Services Division, WA – Senior Technical Advisor Owners Representative
- Asset Management and CIP Prioritization and Optimization, City of Tacoma Environmental Services Division, WA – Project Lead

Support Personnel

The Core Team will draw on the collective depth of R .W. Beck and BC. Support personnel members and their areas of responsibility are summarized in the table below. Their individual expertise and experience are presented in a supplemental table and resumes in the Additional Supporting Information section

Exhibit 5. Support team personnel

Team Member, Area of Responsibility, and Years of Experience			
Gary Anderson, P.E. Electrical/Power 34 years of experience	**Jessica Guerrette, P.E.** DBO Procurement Document Support 14 years of experience	**Art Molseed, P.E.** Design Lead 21 years of experience	**Steve Plancic** BIM 27 years of experience
Jennifer Belknap Williamson, P.E. Sustainability 8 years of experience	**Jim Hansen, P.E.** Collection Systems 25+ years of experience	**Dave Murray, P.E.** Disinfection 30 years of experience	**Kevin Stively** Automation 20 years of experience
Alan Bushley, P.E. Technical WWTP Performance Specifications 48 years of experience	**Tom Lebo** Constructability/Estimating 29 years of experience	**Steffran Neff, P.E.** Asset Management 15+ years of experience	**Phil Wolstenholme, P.E.** Odor Control 29 years of experience
John Christopher, P.E. WWTP Performance Specifications and Technical Proposal Evaluation 30 years of experience	**Henryk Melcer, P.E.** Waste Characterization, Process Modeling 20 years of experience	**Larry Oeth, P.E.** Structural 30+ years of experience	**Chuck Zickefoose** Operations Specialist 50+ years of experience
Terry Gould, P.E. NPDES Permit/Future Issue 35 years of experience	**Bill Meloy, P.E.** Cogeneration 45 years of experience	**Keith Parker, P.E.** Procurement Document Support - Technical WWTP Performance Specifications 32 years of experience	

Team Experience

The exhibit below list the projects presented in this section and the Core Team personnel that worked on each. R. W. Beck and BC worked in conjunction on the Central Treatment Plant Upgrade and Expansion Design-Build Project for the City of Tacoma, Washington resulting in the successful expansion of that city's wastewater treatment facility. As requested, only projects undertaken by key personnel from either firm are presented herein.

Exhibit 6. Core Team project experience table

	Projects and Core Team Personnel Roles and Responsibilities									
R. W. Beck	Key Personnel	Central Treatment Plant Upgrade and Expansion DB Project, City of Tacoma, WA	Cedar Water Treatment Plant DBO Project, SPU/WA	Tolt Water Treatment Plant DBO Project, SPU/WA	Bajagua Wastewater Treatment DBO Project, Bajagua LLC/Tijuana, MX	WWTP Expansion GC/CM Project Owner's Advisor, City of Everett, WA	Brightwater Program Oversight Monitoring, King County Department of Natural Resources/WA	Solid Waste Reduction Facility DBO Procurement Assistance, County of Hawai'i/Hilo, HI	WTP DBO - BOSC/CA	South Recycling and Disposal Station Design-Build Project, SPU/WA
	Kyle B. Rhorer	QA/QC		CS	QA/QC	PS		PM	PM/SA	PM
	Robert J. Bingham, P.E.	PM	PM	PM	FP	PM	PM	TA		
	Neil V. Callahan				PS		QA/QC		SA	
Brown and Caldwell	Key Personnel	Central Treatment Plant Upgrade and Expansion DB Project, City of Tacoma, WA	CBWTP Facilities Plan Update, and Anaerobic Digester Design, City of Portland, OR	Facilities Plan Update, City of Newberg, OR	Water Pollution Control Facility, City of Redmond, WA	WWTP Improvements, City of Woodburn, OR	100 Percent Biosolids Utilization Program Implementation, City of Toronto, Ontario, Can	WPCP Biosolids DB, Clackamas County, Water Environment Services, OR	WWTP Expansion and Facilities Plan, City of Gresham, OR	Asset Management Program Development, Pierce County Public Works and Utilities, WA
	Steve Wilson	[redacted]				SA	PM	SA	SA	
	Jack Warburton, P.E.	TA					SA	SA		SA

Key: PM - project manger; QA/QC - quality assurance; FP - financial planner; TA - technical advisor; CS - contract support; PS- procurement strategy; SA - senior advisor; TL - task lead;

On-time Delivery

R. W. Beck has established an excellent track record of successfully completing alternative delivery projects on time and within budget, as demonstrated on past assignments, including the landmark Tolt DBO project in Seattle, and will be responsible for maintaining budget and schedule on this project.

R. W. Beck & BC Project Experience

R. W. Beck and BC's professional working relationship goes back over 40 years and since those early years the two firms have continued to collaborate where it delivered value to our clients.

R. W. Beck teamed with BC to assist the City of Tacoma review alternative project delivery options for a $70 million upgrade/expansion of its WWTP

Project 1: Central Treatment Plant Upgrade and Expansion Design-Build Project, Ongoing

City of Tacoma, Washington

The City of Tacoma implemented an upgrade and expansion of its WWTP to meet the requirements of its NPDES permit and provide 20 years of capacity for future growth. R. W. Beck helped the City review numerous alternative contracting options for the upgrade, including: DB and CM-at-Risk. Based on this evaluation, the City elected to use a DB contracting approach coupled with options for a short-term operations optimization contract and an extended performance warranty.

The team of R. W. Beck and BC helped the city implement the procurement process; assisted with the evaluation of technical and business aspects of the proposals; assisted with contract negotiations; and provided technical support during design, construction, and acceptance testing.

The project is currently in the final phases of construction, and a portion of the acceptance testing has been conducted. BC oversaw the technical aspects of the procurement and implementation of the DB team. The upgraded facility will handle peak wet weather flows of 150 mgd in what is currently a 75-mgd secondary plant.

Project Highlights:

- Developed overall DB procurement strategy
- Prepared DB procurement documents (RFQ, RFP, and technical requirements)
- Evaluated SOQs and proposals
- Assisted with contract negotiations
- Providing technical support during design, construction, and acceptance testing

R. W. Beck Project Experience

2. Cedar W[redacted], 2004

Seattle Public Utilities/Washington

Approximately two-thirds of the drinking water for 1.25 million people in the Seattle metropolitan area originates in Seattle's Cedar River water supply system. With the goal of improving water treatment for the system, R. W. Beck recommended developing the Cedar Treatment Facility using an overall DBO approach with certain DB elements turned over to SPU for operation. Additional recommendations included phased development with major hydraulic features installed at the 275 mgd ultimate capacity and treatment works installed at 180 mgd.

R. W. Beck tailored a DBO/DB procurement approach for water treatment and conveyance improvements to the Cedar River system. R. W. Beck assisted with procurement strategy development, preparation of procurement documents, evaluation of proposals, negotiations, and oversight of design and construction.

R. W. Beck also reviewed development strategies and alternative project delivery methods for fish passage facilities, a hatchery, and other improvements to the city's water supply diversion dam on the Cedar River.

Project Highlights:

- Developed procurement strategy and prepared procurement documents (RFQ, RFP, and performance specifications)
- Evaluated SOQs and proposals
- Assisted with contract negotiation
- Assisted with oversight during design, construction, and acceptance testing
- Ongoing assistance related to contract compliance during operations

3. Tolt WTP DBO, 1998

Seattle Public Utilities/Washington

Faced with the challenges of more stringent drinking water standards, improving water system flexibility, and minimizing rate increases, SPU elected to develop the 120-mgd Tolt water treatment facilities using an innovative DBO contracting approach.

R. W. Beck led the project's implementation. R. W. Beck conducted workshops with SPU and its legal and financial advisors to develop an overall strategy and approach for a DBO procurement. The workshops determined a balance between city control and DBO contractor flexibility on a variety of technical, risk, and financial issues. From this, SPU developed its preferred risk posture, established the schedule for the solicitation process, and selected a performance-based approach to developing specifications.

R. W. Beck prepared the RFQ documents, reviewed SOQs, and recommended teams for shortlisting. We prepared the RFP, established the characteristics and costs of the benchmark facility, evaluated proposals, provided SPU with support throughout the negotiations process, and provided assistance with facility startup testing. In the end, SPU saved $70 million on this project when compared to projects designed using a conventional DBB, City-operated approach.

Project Highlights:

- Developed overall procurement strategy and approach
- Prepared RFQ, RFP, and performance specifications
- Evaluated SOQs and proposals
- Assisted with contract negotiations
- Assisted with oversight during design, construction, and acceptance testing
- Ongoing assistance related to contract compliance during operations

4. Bajagua WWTP DBO, Ongoing

Bajagua, LLC/Tijuana, Mexico

R. W. Beck is serving as the owner's engineer for the development of the 59-mgd Bajagua WWTP that will protect the Tijuana estuary, reduce ocean pollution in Mexico and the US, and provide water for industrial reuse. The Bajagua project also includes developing 25-mgd and 34-mgd pump stations, 12 miles of pipelines to deliver primary-treated and raw wastewater to the treatment plant site, and a return gravity pipeline to deliver the treated wastewater to an existing ocean outfall. R. W. Beck is developing an overall project implementation plan; providing technical assistance to support concession negotiations, preliminary engineering, and cost estimating; and preparing an environmental information document; prepared a DBO RFQ and is preparing a DBO RFP for the project.

The international aspects of the project pose a number of complex regulatory, technical, political, and procurement challenges. The owner will need concession agreements from the United States and Mexico, as well as a DBO contract for the design, construction, and operation. Assuring reasonable allocation of project technical, economic, and legal risks via these agreements will be key to project success.

Project Highlights:

- Developed an overall implementation plan, including a strategy for dealing with cross-border challenges
- Prepared RFQ, RFP, and performance specifications
- Providing negotiation support

5. WWTP Expansion GC/CM Project Owner's Advisor, 2005

City of Everett, Washington

The City of Everett completed an evaluation and planning effort to upgrade and expand their WWTP. As part of implementation planning, R. W. Beck evaluated the alternative project delivery options that offered benefits over the DBB approach that the city traditionally uses, and recommended the GC/CM (CM-at-Risk) approach for the $75 million improvement project.

After preparing a quantitative ranking of project delivery methods based on weighted criteria, the team prepared project delivery recommendations on how the city could develop the project to meet its needs, including a comprehensive plan to develop the project using the GC/CM approach.

R. W. Beck assisted the city in implementation of the project using the GC/CM approach, including preparing the RFP, determining a short list of qualified firms, evaluating cost proposals, and selecting the contractor. R. W. Beck continues to advise the City through the preconstruction and construction phases.

Project Highlights:

- Prepared a comprehensive plan for project development utilizing the GC/GM (CM-at-Risk) method
- Evaluated alternative project delivery options
- Implemented selected project approach

6. Brightwater Program Oversight Monitoring Consultant, Ongoing

King County Dept of Natural Resources/Washington

R. W. Beck is providing independent oversight monitoring for the King County Council on this project that involves a MBR treatment plant, miles of tunnels, pump station, and marine outfall. R. W. Beck developed an initial project overview report, provided oversight during design, and is now providing oversight during construction. One focus of our initial review was to compare the Brightwater program with other similar large municipal wastewater programs in order to identify areas for improvement.

The program includes seven major construction contracts. One contract, for the marine outfall, is using DB delivery, while a majority of the treatment plant work is using GC/CM contracting. R. W. Beck is monitoring overall project management, estimated vs. actual costs for individual construction contracts, status of project construction schedules, major risks and the county's approach to managing them, and overview of the master construction schedule. R. W. Beck provides quarterly reports to the county council that include a review of the overall scope, schedule, and budget for the project and identify areas of concern and/or risk.

Project Highlights

- Independent oversight of the largest public works project ever implemented by King County, Washington
- Providing quarterly project status updates to the City Council

7. WTP DBO, 2005

San Diego County Water Authority/California

R. W. Beck provided senior oversight to the Twin Oaks Valley WTP DBO project. R. W. Beck was responsible for ensuring the DBO procurement process was designed and implemented in a way that provided the most robust and supportable DBO contractor selection for the largest DBO project in California history.

R. W. Beck worked with the Authority to design a sound procurement strategy and oversaw the development of all solicitation documents and the evaluation process. R. W. Beck worked closely with the Authority's legal advisor HDW to craft a long-term DBO service contract based on robust performance requirements and guarantees.

Project Highlights

- QA/QC oversight of RFQ and RFP documents
- Evaluation committee, public involvement support
- Contract negotiations assistance

8. Solid Waste Reduction Facility DBO, Ongoing

County of Hawai'i/Hilo, Hawai'i

R. W. Beck provided procurement services for the DBO development of a reduction facility to reduce the amount of solid waste requiring landfill disposal.

R. W. Beck provided all DBO procurement services for the design, construction, and long-term operation of a waste reduction facility, from alternative delivery strategy development to DBO service contract preparation and negotiation. Project tasks included preliminary planning to verify the procurement approach and project requirements, preparing the procurement documents, evaluating proposals, and assisting with contract negotiations.

Project Highlights

- Developed DBO procurement strategy
- Developed the RFQ and RFP
- Evaluated SOQ and proposal submittals

9. Recycling and Disposal Station DB, Ongoing

Seattle Public Utilities/Washington

SPU is replacing its aging South Recycling and Disposal Station solid waste transfer station using DB contracting. R. W. Beck helped SPU develop an overall procurement strategy, where key issues included balancing innovation with a desire for quality and functionality, and how to incorporate neighborhood stakeholders into the design process, using DB contracting. R. W. Beck also developed the RFQ and assisted with the evaluation of proposer qualifications. R. W. Beck is currently preparing RFP documents including technical requirements, will assist with the review of technical proposals and pricing, and will assist with contract negotiations. R. W. Beck will also provide oversight assistance during design, construction, and acceptance testing.

Exhibit 7. R. W. Beck's Client Contact Information

Project 1

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Environmental Services Division Manager
2201 Portland Avenue, Tacoma WA 98421-2711
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Project 3

Elizabeth Kelly, Director, Strategic Asset Management
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Project 4

Jim Simmons, Consultants Collaborative
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Project 5

James Miller, P.E., Engineering Superintendent
3200 Cedar Street, Everett, WA 98201
P: (425) 257-8800 F: (425) 257-8882
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Project 6

Gunars Sreibers, Brightwater Program Manager, King
County Department of Natural Resources
Address: Unavailable
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E: gunars.sreibers@kingcounty.gov

Project 7

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Project 8

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E: bjtodd@co.hawaii.hi.us

Project 9

Fred Aigbe, P.E., Alternative Contracting Program Mgr
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E: fred.aigbe@seattle.gov

Exhibit 8. R. W. Beck's Public Client List

Seattle Public Utilities, Washington

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P: (206) 386-0091

City of Tacoma, Washington

Eric Johnson, P.E., Public Works Department,
Environmental Services Division Manager
P: (253) 502-2106

King County Department of Natural Resources, Washington

Gunars Sreibers, Brightwater Program Manager
P: (206) 684-2113

Bajugua, LLC, Tijuana, Mexico

Jim Simmons, Consultants Collaborative
P: (760) 471-2365

County of Hawai'i, Hawai'i

[redacted] Leithead-Todd, Director of Environmental Management
P: (808) 981-8313

County of Kaua'i, Hawai'i

Troy Tanigawa, Environmental Services Management Engineer, Division of Solid Waste Management
P: (808) 241-4838

Tampa Bay Water, Florida

Chuck Carden, Director
P: (727) 725-7046

City of Hialeah, Florida

Armando Vidal, Director, Public Works
P: (305) 556-3800

San Antonio Water System, Texas

Kevin Morrison, Planner IV - Water Resources Department
P: (210) 233-3667

San Diego County Water Authority, California

Tim Suydam, Senior Engineer
P: (858) 522-6870

Brown and Caldwell Project Experience

10. CBWTP Facilities Plan Update, and Anaerobic Digester Design, 2007

City of Portland, Oregon

The Facilities Plan Update determined requirements to expand CBWTP capacity and addressed solids handling efficiency improvements.

The update took into account changes in existing and projected sanitary loadings since the update. In order to address immediate solids handling deficiencies, the solids capacity analysis was fast-tracked and recommendations for new digesters were adopted that are now being designed. The liquids process improvements are still being analyzed. Opportunities to increase operational reliability, add redundancy for maintenance ease, and ensure any future regulatory requirements are met are included.

11. Facilities Plan Update, 2006

City of Newberg, Oregon

Placed into service in 1987, the Newberg WWTP is a Class IV oxidation ditch-type, activated sludge plant with Class A in-vessel biosolids composting. The treatment train is comprised of influent pumping, screening and grit removal, oxidation ditch activated sludge, clarification, solids dewatering, composting, odor control, chlorination, dechlorination, discharge to the Willamette River, and Level IV reuse on a nearby county-owned golf course. Key improvements since 1987 include the BC-designed 2004 headworks project. Other recommended immediate improvements included increasing hydraulic capacity and composter capacity improvements. The Newberg City Council adopted the facilities plan unanimously.

12. Water Pollution Control Facility Plan Update, Ongoing

City of Redmond, Oregon

BC updated the Redmond Water Pollution Control Facility Plan, designed the first phase recommended improvements, and is providing services during construction. The purpose of the update is to provide planning of the required modifications to obtain positive certification and maintain the water pollution control facility in compliance with its permit. When the last facilities were put online, they were immediately out of compliance due to an unpredicted increase in influent loadings. In addition, the Redmond area was experiencing a rapid increase in population. Operations assistance, permitting negotiations with ODEQ to relax the permit, process optimization through process modeling, recommendations for expansion of the existing facility, use of new technologies, reuse, and biosolids management planning were provided. Evaluations, using process modeling, of existing wastewater treatment and solids handling facilities showed existent plant capacity and future treatment limitations, as related to population increase. Plant optimization field work and process modeling assisted in recommending the cost-effective facilities for phased expansion. Based on the Facilities Plan Update recommendations, BC designed the Phase 1 improvements and is providing services during construction.

13. WWTP Improvements, 2004

City of Woodburn, Oregon

BC coordinated with ODEQ on the upgrade and expansion of the Woodburn WWTP, and completed preliminary design planning and detailed design. This project included the design of a headworks expansion, blower building, secondary clarifiers, effluent filtration, medium-pressure ultraviolet disinfection, septage receiving, dissolved air flotation thickening of WAS, anaerobic digester rehabilitation, facultative sludge lagoons, and chemical feed facilities. Also, a split-stream treatment incorporated existing facilities for wet weather treatment during sustained peak flow events that allows effluent blending prior to discharge.

14. 100 Percent Biosolids Utilization Program Implementation, 2001

City of Toronto, Ontario, Canada

The City of Toronto faced a political mandate to cease incineration and implement a biosolids land application program. BC was retained to evaluate available technologies for biosolids processing and utilization and develop RFPs for private sector implementation of selected technologies. A combination of direct land application and drying/pelletization was selected to provide a diverse, cost-effective overall program. Private sector contractors were selected based on qualifications and price through a process that included citizen involvement and an independent technical review committee. A second phase of the project was to

produce a 20 percent design and RFPs for DB construction of ancillary improvements to the Ashbridges Bay treatment facility, including truck load-out for dewatered biosolids, digester heating, and odor control. BC handled the permitting for this project. All work was completed on schedule under very tight time constraints.

15. WPCP Biosolids Design-Build, 2003

Clackamas County, Water Environment Services/Oregon

BC was responsible for the design, procurement, and construction of a biosolids thickening and dewatering facility for the Tri-City WPCP located in Oregon City. This $4.45 million project added two gravity belt thickeners for waste activated sludge and recuperative thickening and a high-speed centrifuge for dewatering. The project also included a truck loading area, improvements to the existing digester mixing, electrical, controls, start-up, testing, and modifications to the computerized operations and maintenance manual.

16. WWTP Expansion and Facilities Plan, 2004

City of Gresham, Oregon

BC assisted the City of Gresham to develop a facilities plan for its WWTP. Tasks included the evaluation of the existing plant condition, flows and loadings, as well as an analysis of future impacts including population growth and treatment requirements. BC then developed plant expansion alternatives as well as planning level construction cost estimates and an environmental assessment for the recommended plan. The project involved coordination with ODEQ for renewal of the plant NPDES permit, as well as with public information and outreach participation

17. Asset Management Program Development, 2007

Pierce County Public Works and Utilities/Washington

BC is currently developing an Asset Management (AM) program to incorporate best management practices in the form of AM business principles. An AM program evaluation was conducted that compared current utility practices to asset management best practice. From this evaluation, BC developed a gap analysis which led to a prioritized action plan. Priorities included developing a criticality model for both collections and plant assets. BC has developed a criticality model with the County based on the likelihood and consequence of failure factors. With criticality assigned, Pierce County is developing a maintenance strategy based on RCM principles. BC is also using a risk assessment approach to develop a prioritization model for asset replacement

Exhibit 9. BC's Client Contact Information

Project 1
Dan Thompson, Division Manager, City of Tacoma 2201 Portland Ave., Tacoma, WA 98421 P: (253) 502-2191 F: Unavailable E: dthompso@cityoftacoma.org
Project 10
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Project 11
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Project 12
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Project 13
Curtis Stultz 2815 Molalla Road, Woodburn, OR 97071 P: (503) 982-5280 F: Unavailable E:curtis.stultz@ci.woodburn.or.us
Project 14
Kiyo Oka, former Biosolids Program Manager for City of Toronto (presently with Region of Halton, Ontario) Address: Unavailable E: Unavailable P: (905) 825-6000 ext. 7602 F: Unavailable
Project 15
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Project 16
Alan Johnston, Engineer1333 NW Eastman Parkway, Gresham, OR 97030 P: (503) 618-2431 F: (425) 742-4562 E: johnston@ci.gresham.or.us
Project 17
Tam Ramsaur, Utility Manager9850-64th Street West, University Place, WA 98467 P: (253) 798-4050 F: Unavailable E: tramsau@co.pierce.wa.us

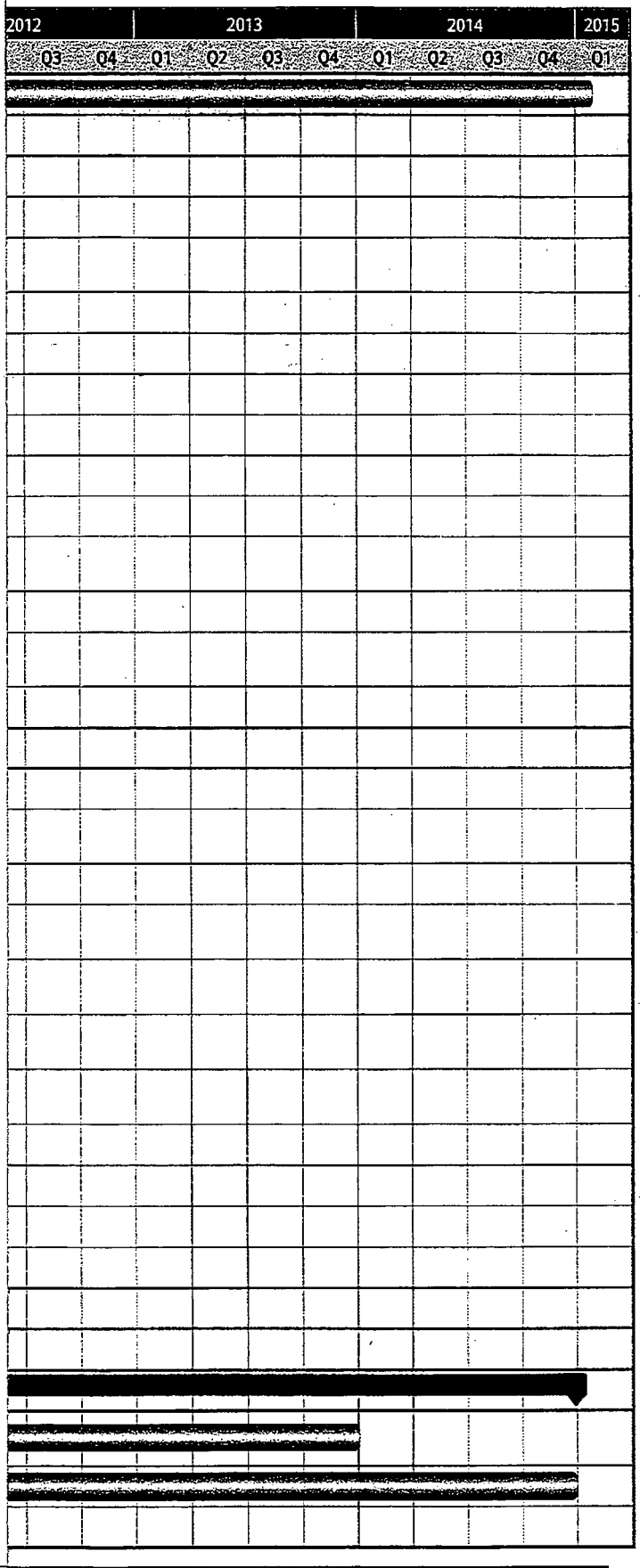
Project Schedule

As requested in the City's RFQ, we have provided an "aggressive but feasible" project schedule that incorporates the phased ORep tasks and results in completion of WWTP capital improvements by the end of December, 2011. As reflected in the schedule, we have modified the City's suggested phasing to overlap Phases A and B, as a variety of Phase B tasks can be executed concurrent with Phase A activities.

While the schedule below shows the deadline established by the City, we must point out that based on our considerable experience in designing and implementing DBO procurement projects, this schedule is extremely ambitious and ironically may result in some inefficiencies in the long run. Specifically:

- This schedule does not allow for review and comment of the draft RFP and DBO service contract by the short-listed DBO contractors. In our experience, this is a very important component of developing a marketable public-private partnership, and has become somewhat standard in the industry.
- In our opinion, the submittal preparation time provided to the DBO contractors in both the RFQ and RFP phases is only marginally sufficient. It is very likely that the respondents, especially during the proposal development phase, will request additional time to prepare thoughtful, responsive submittals.
- The schedule assumes an extremely efficient DBO contract negotiations period. Should major disagreements concerning key contract terms and conditions arise, the overall schedule will be impacted. The fact that the short-listed DBO contractors will not be able to review the draft DBO service contract prior to RFP issuance magnifies this risk.
- The schedule allowed for design and construction of the facilities assumes DB efficiencies that may not be fully realized due to the concurrent "operate-design-construct-operate" approach that must be implemented by the DBO contractor.

As reflected in Issue 4, Strategy 4A, we strongly believe the R. W. Beck team will be able to identify short-term WWTP capacity improvements that may provide the City relief to its ambitious schedule. In addition, as we work with the City to further refine the ORep scope of services on a task order basis, we will likely be able to find additional efficiencies within the procurement process.

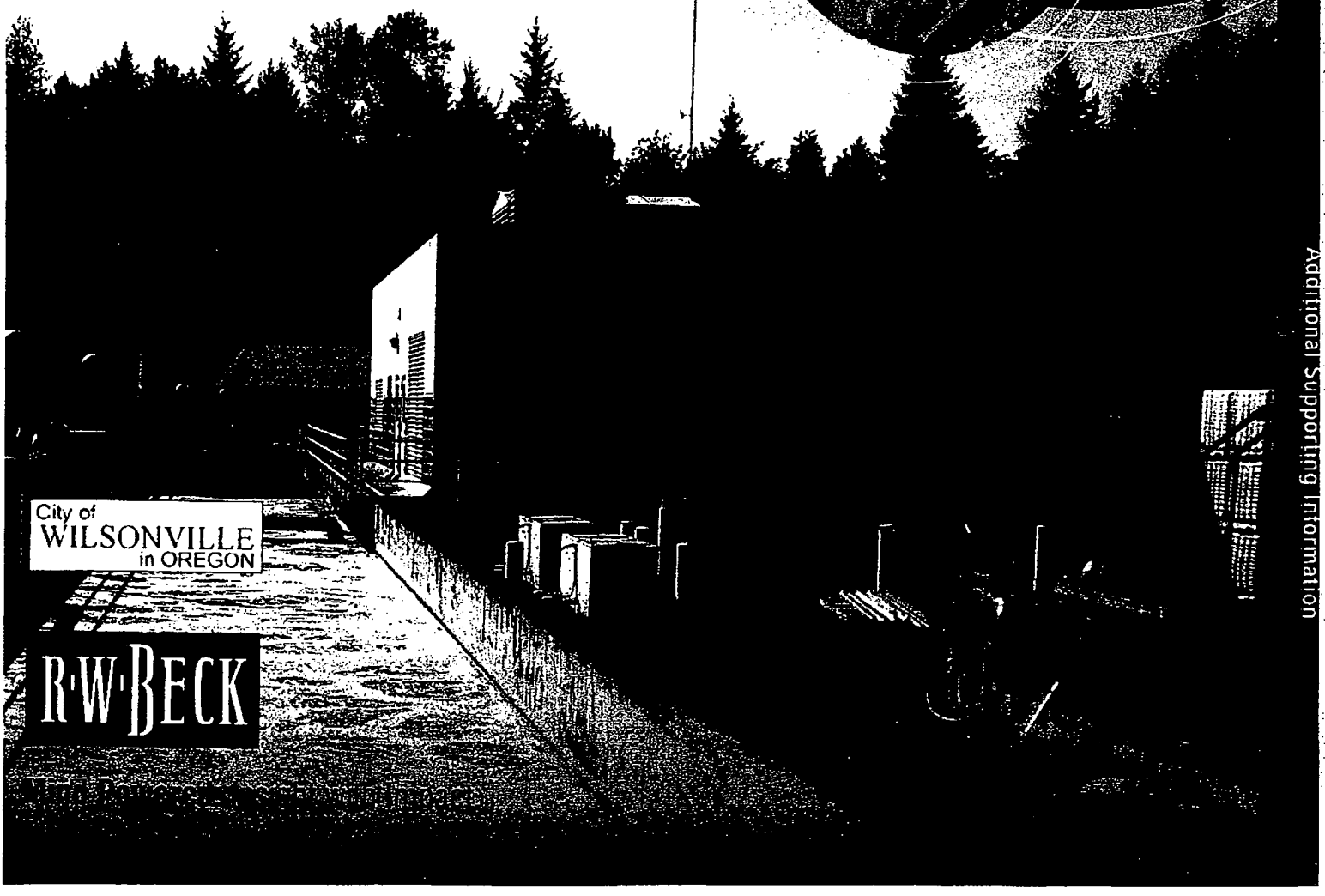


Owner's Representative for the
Wastewater Treatment Plant Expansion

WASTEWATER POLLUTION CONTROL
FACILITY

Additional Supporting Information

September 2008



City of
WILSONVILLE
in OREGON

R·W·BECK

Additional Supporting Information

ADDITIONAL SUPPORTING INFORMATION

SECTION A

ADDITIONAL R. W. BECK ALTERNATIVE DELIVERY PROJECT EXPERIENCE

R·W·BECK

Additional R. W. Beck Alternative Delivery Project Experience

	Project	DB	DBO	DBOOT	CM at-Risk	Procurement Strategy	Permitting	Risk Assessment	Create RFQ/Review SOQ	Create RFP/Review Proposal	Performance Requirement	Contract Negotiation	Construction Oversight	O&M
Wastewater	Owner's Advisor Services for Central Treatment Plant Expansion Project, City of Tacoma, WA		X			X				X		X	X	
	Bajagua Wastewater Project, Bajagua LLC/Tijuana, Mexico		X			X		X	X					
	Owner's Advisor Services for WTP Expansion, City of Everett, WA				X	X		X		X				
	Brightwater Oversight Monitoring Program, King County Department of Natural Resources/WA				X	X	X	X			X		X	
	DB Designer for Zero Discharge RO Industrial Wastewater Treatment System, FM Global	X					X			X	X			
	Independent Enginee'rs Report for Juarez Wastewater DBOOT Privatization, North American Development Bank/Mexico			X		X		X						
	Management Program/Delivery Analysis, Regional WWTP Authority/Adams, Denver, and Weld Counties/CO	X				X			X	X	X	X	X	
Water	Cedar WTP DBO, SPU/WA		X		X	X								
	Tolt WTP DBO, SPU/WA		X			X			X	X	X	X		
	Owner's Engineer Feasibility Report Seawater Desalination Project, San Diego County Water Authority/CA			X				X	X		X	X		

	Project	DB	DBO	DBOOT	CM-at-Risk	Procurement Strategy	Permitting	Risk Assessment	Create RFQ/Review SOQ	Create RFP/Review Proposal	Performance Requirement	Contract Negotiation	Construction Oversight	O&M
Water	WTP DBO Procurement Services, San Diego Water Authority/CA		X			X		X	X			X		
	Seymour Filtration Plant DBO, Greater Vancouver Regional District/ Canada		X			X			X	X	X	X		
	Brackish Groundwater Desalination Facility Assessment, San Antonio Water System/TX	X		X		X	X							
	Owner's Advisor of the DBO Project Delivery of a 66-mgd Surface Water Treatment Facility, Tampa Bay Water/FL		X			X	X	X	X	X	X	X	X	X
	Owner's Advisor for the Replacement of a DBO Contractor for an Existing 25-mdg Desalination Treatment Plant, Tampa Bay Water/FL		X			X	X		X	X	X	X	X	X
	Procurement Support Services for Alternative Delivery Evaluation, Tampa Bay Water/FL	X	X	X		X	X	X						
	Owner's Advisor of the DBO Project Delivery for the Gulf Coast Seawater Desalination Project, Tampa Bay Water/FL		X	X		X	X	X	X	X	X			
	Independent Engineers Report for Seawater RO Desalination DBOOT, ABN-AMRO Bank/FL			X			X	X					X	X
	Seawater Desalination Plant Independent Engineering Services, Inter-American Development Bank/Chile			X								X	X	X

	Project	DB	DBO	DBOOT	CM at-Risk	Procurement Strategy	Permitting	Risk Assessment	Create RFQ/Review SOQ	Create RFP/Review Proposal	Performance Requirement	Contract Negotiation	Construction Oversight	O&M
Solid Waste	Solid Waste Reduction Facility Procurement Assistance, County of Hawai'i/Hilo, HI		X			X		X	X	X		X	X	
	Project Delivery Study and Program Implementation for Solid Waste Facilities, Seattle Public Utilities/WA	X	X	X	X	X		X						
	Seattle South Recycling and Disposal Station DB, Seattle Public Utilities/WA	X				X	X	X	X	X	X	X	X	
	Montgomery County Resource Recovery Facility, Northeast Maryland Waste Disposal Authority/MD		X									X	X	
	Waste-to-Energy Facility Procurement, Onondaga County Resource Recovery Authority/NY		X							X		X		
	Materials Recovery Facilities Procurement, Sarasota County, FL	X				X				X	X	X		

ADDITIONAL SUPPORTING INFORMATION

SECTION B

CORE TEAM RESUMES

R·W·BECK

Kyle B. Rhorer

University of California, Davis
M.B.A. Environmental and Natural Resources Management

University of California, San Diego
B.A. in Quantitative Economics

Mr. Rhorer has over 16 years of experiences in the development and implementation of public-private partnerships for the design, construction, operation, and financing of water, wastewater and solid waste infrastructure. Experienced in all facets of alternative project delivery methods, Mr. Rhorer has assisted municipalities in successfully implementing landmark infrastructure projects. He designed and executed the first two design-build-operate projects under new California law, and oversaw the implementation of the largest DBO project ever developed in the state. He has provided infrastructure procurement services throughout the United States as well as Puerto Rico, where he negotiated the largest public-private partnership for water and wastewater services to-date.

Project Experience

Bajagua Wastewater/Water Reclamation DBO Project

Confidential Client/Tijuana, Mexico

Quality Assurance Manager. R. W. Beck is serving as the owner's engineer for the development of a 59-mgd secondary wastewater treatment plant for Tijuana, Mexico. The Bajagua project includes a 25-mgd pump station, a 34-mgd pump station, 12 miles of pipelines to deliver primary-treated and raw wastewater to the treatment plant site in Tijuana, and a return gravity pipeline to deliver the treated wastewater to an existing ocean outfall.

R. W. Beck's work includes developing an overall project implementation plan, technical assistance to support concession negotiations, preliminary engineering, cost estimating, preparation of an environmental information document, and preparation of a draft DBO RFQ for the project. Mr. Rhorer provided quality assurance/quality control review on all solicitation documents to ensure they were in compliance with industry standards and with R. W. Beck's quality control requirements.

Design-Build-Operate Procurement for Wastewater Treatment

City of Avalon, California

Project Manager. Mr. Rhorer managed the procurement process for the City's DBO engagement to replace its aging wastewater treatment system. Under this engagement, he worked with the City to design a sound, long-term privatization strategy that addressed financial and risk concerns.

Mr. Rhorer led development of the Request for Qualification, evaluation of the bidder Statements of Qualifications, and selection of a pre-qualified group of proposers. Subsequently, he managed the development of the Request for Proposal document, including performance specifications and evaluation criteria. He also assisted the City in securing a $14 million funding package from United States

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Department of Agriculture — the first ever USDA-funded DBO privatization project.

Advanced Wastewater Treatment/Water Reclamation Facility Design-Build-Operate Procurement

City of Clovis, California

Project Manager. Mr. Rhorer managed the development and implementation of a public-private partnership for the design, construction, and operation of an 8 mgd advanced wastewater treatment facility that will provide treatment capacity for the growing City as well as a source of reclaimed water. Project activities included implementing a two-stage selection process, developing project performance specifications, performing technical evaluation, and contract negotiation.

Procurement of Wastewater Design-Build-Operate Services

City of Woonsocket, Rhode Island

Task Leader. Mr. Rhorer worked with the City to develop a public-private partnership strategy, including a long-term analysis of capital financing options and user rate impacts. He led the financial review of proposal finalists for the long-term DBO engagement, and developed a cost-risk methodology to determine the financial implications of various risk allocations. As a result, Mr. Rhorer was able to determine the ability of the proposers to provide financial considerations and competitive service fees, while maintaining a stable and affordable user-rate structure.

Biosolids Recycling Facility Design-Build-Own-Operate Procurement

Sacramento Regional County Sanitation District/California

Project Manager. Mr. Rhorer managed the procurement process for the design, construction, operation, and private sector ownership of a biosolids recycling facility. He directed the development of all procurement documents (Request for Qualifications/Request for Proposal), and designed and led the proposal evaluation process. He also assisted SRCSD in developing a long-term management plan based on per-unit costs of solids treatment alternatives, and successfully negotiated a 20-year DBOO service agreement. Mr. Rhorer's management of the procurement strategy development process resulted in a DBOO approach that significantly reduced SRCSD's project risk while achieving a high quality biosolids management solution.

Water Treatment Plant Design-Build-Operate Procurement Services

San Diego County Water Authority/California

Project Manager. Mr. Rhorer managed the comprehensive design-build-operate (DBO) procurement for the development of a public-private partnership for the design, construction, and long-term operation of a 100 mgd surface water treatment plant. A landmark project for SDCWA, this project is the first treatment project the Authority has undertaken. When completed in 2008, it will be the largest DBO water treatment facility in California.

As part of his responsibilities, Mr. Rhorer served as the architect of the procurement. He developed the procurement strategy, risk allocation and service contract terms, and solicitation documents. He also served on the Board of Senior Consultants for SDCWA, overseeing the development of the public-private partnership.

Phase I Desalter Project, Design-Build-Finance-Operate Procurement Services

Capistrano Valley Water District/San Juan Capistrano, California

Project Manager. Mr. Rhorer managed the design-build-finance-operate public-private partnership for the Capistrano Valley Water District's 4.4 mgd desalination project. He directed all project activity, and was responsible for the completion of project deliverables.

In the early stages of this engagement, Mr. Rhorer conducted numerous strategy workshops with CVWD stakeholders to determine the best alternative service delivery approach, considering CVWD's risk allocation position. After selecting the DBFO approach, he led the team of technical, financial, and legal experts in the design of the procurement process.

Mr. Rhorer also played a key role in the contractual coordination between CVWD and its wholesale water supplier, Metropolitan Water District of Southern California under an MWD groundwater subsidy agreement. In the end, he successfully led the negotiations for a 20-year DBFO service agreement for CVWD.

Solid Waste Reduction Facility Procurement Assistance

County of Hawai'i/Hilo, Hawai'i

Project Manager. Mr. Rhorer is working with the County of Hawaii to secure a long-term public/private partnership by providing consulting services for the procurement of the design, construction, and long-term operation of a waste reduction facility in Hilo that will reduce the amount of solid waste requiring landfill disposal. R. W. Beck's project tasks include evaluation and feasibility analysis for alternative waste disposal techniques, planning of the procurement approach and project requirements, qualifications solicitation and shortlisting, developing the Request for Proposal and conducting the proposals process, proposal evaluation and contract negotiations assistance, and project management.

Seattle South Recycling and Disposal Station Design-Build Project

Seattle Public Utilities/Washington

Project Manager. R. W. Beck is assisting SPU develop an overall procurement strategy for the replacement of its South Recycling and Disposal Station. R. W. Beck also developed the RFQ and assisted with the evaluation of proposer qualifications. Mr. Rhorer is leading the SOQ evaluation phase and is overseeing the RFP development. R. W. Beck will assist with the review of technical proposals and pricing, and will assist with contract negotiations. The R. W. Beck team will also provide oversight assistance during design, construction, and acceptance testing.

Liquid Natural Gas Design-Build-Operate-Finance Procurement

Sacramento County Department of Waste Management & Recycling/California

Project Manager. Mr. Rhorer is developing a public-private partnership between Sacramento County and the private sector for the design, construction, financing, and long-term operation of a facility to convert landfill gas into liquid natural gas. As a key component of the County's long-term landfill management program, this project will allow the County to harness a valuable energy resource from its large regional landfill as well as use the liquid natural gas output to fuel collection vehicles. This project will create an additional revenue source for the County, as the fuel will be marketed and sold to other public and private sector entities. Mr. Rhorer was responsible for the preparation of all solicitation documents, and is assisting the County in negotiating a long-term service agreement with the successful private sector team.

Deep Aquifer Treatment System Design-Build Procurement

Irvine Ranch Water District/California

Project Manager. Mr. Rhorer managed the District's Design-Build procurement process for its Deep Aquifer Treatment System project. He worked with the District to develop a procurement strategy that minimized risk to stakeholders while maximizing the efficiencies of a public-private partnership.

Mr. Rhorer was responsible for developing the overall privatization strategy of all procurement documents, and the evaluation of private sector submittals. This innovative project provided the District with a reliable source of supply to augment deliveries from Metropolitan Water District of Southern California.

Privatized Operations Service Agreement Development

City of Chandler, Arizona

Task Lead – Risk Allocation. Mr. Rhorer assisted the City of Chandler and its attorneys in authoring a long-term service agreement for the City's Airport Wastewater Reclamation Plant. Specific tasks included the development of performance specifications, financial requirements, and provisions to allow City employees to bid on the engagement and operate the facility under a memorandum of understanding. This was one of the nation's first 'managed competition' service agreements that addressed contractual requirements for both private and public sector contract operations.

Water Utility Privatization Studies

Various Clients Nationwide

Project Manager. Working on behalf of municipalities across the country, Mr. Rhorer developed a number of economic feasibility models to present the cost implications of various privatization alternatives. As a crucial component to this modeling, he performed rate sensitivity analyses to provide public utilities with the answer to one of the most important questions: "What will this do to the rates?" These projects required close analysis of operating budgets and capital financing plans to determine the various impacts privatization may have on the utility's "true cost" of providing water, and subsequently, the impact on the user rate schedule.

Utility Privatization

Naval Facilities Engineering Command, Southwest Division/Camp Pendleton, California

Task Leader. Mr. Rhorer assisted in the privatization of all water, wastewater, electric, and natural gas utility facilities at the Navy's Camp Pendleton and Mountain War installations. This project involved a comprehensive privatization feasibility analysis, an infrastructure inventory assessment, the development of technical specifications and procurement documents, and the evaluation of proposals for long-term public-private partnerships. Mr. Rhorer's responsibilities included procurement management and oversight of all economic and life-cycle costing analysis to identify the long-term financial impacts of the Navy's privatization of these installations.

Privatization Feasibility Study

Passaic Valley Sewerage Commission/New Jersey

Task Lead. Mr. Rhorer determined the feasibility of privatized drinking water and wastewater system operations through detailed economic modeling and cost-benefit analyses. This effort provided the Commission with valuable information concerning the long-term financial feasibility of alternative project delivery models.

Negotiation of Public-Private Contract

Puerto Rico Aqueduct and Sewer Authority/San Juan

Task Lead. Mr. Rhorer conducted detailed financial analyses to assist the Puerto Rico Aqueduct and Sewer Authority in renegotiating a long-term contract with the utility's private sector service provider for the continued operation of all water and wastewater treatment facilities on the island. His assistance included budget analysis and projection, cash flow forecasting, and capital financing strategy development. The finalized contract under this engagement is the largest public-private partnership ever established in the world.

Management Program/Delivery Analysis

Regional Wastewater Treatment Plant Authority/Adams, Denver, and Weld Counties, Colorado

Delivery Assessment Lead. The Regional Wastewater Treatment Plant Authority consists of three member agencies in the Denver metropolitan area. The member agencies are experiencing rapid growth in their respective service areas and formed the RWTPA to develop regional wastewater treatment facilities. Mr. Rhorer assisted RWTPA in determining the best project delivery method to implement the project. He also analyzed opportunities for project efficiencies through use of alternative project delivery methods.

Publications

Rhorer, K. B., "Developing a Waste Reduction Facility DBO – The Hawaii County Experience," presented at the Statewide Municipal Attorneys Training Conference, Waikoloa, HI, August 2008.

Rhorer, K. B., Callahan, N., Dysard, J., "Project Risk Allocation: Untapped Opportunities," Design-Build Dateline, February 2006.

Rhorer, K. B., Christopher, J.B., "DB - A Better Approach to Procuring MBR Technology," Onsite Water Treatment, November/December 2005.

Rhorer, K. B., Dassanayake, C., Kerstiens, J.M., "Achieving Utility Cost Savings through Performance Assessments," presented at Texas Water 2004 (Joint Conference of the Water Environment Association of Texas and American Water Works Association, Texas Section), Arlington TX, April 5-8, 2004.

Rhorer, K. B., "Sacramento's DBOO Solution - A Mutually Beneficial Approach to Biosolids Management," presented at the 74th Annual Conference and Exposition of the Water Environment Federation (WEFTEC 2001), Atlanta, GA, October 2001.

Rhorer, K. B., "Desalination and the DBO Public-Private Partnership - A Case Study of Risk Transfer," presented at the Center for Business Intelligence Water and Wastewater Summit, Washington DC, January 2001.

Rhorer, K. B., "Conservation: It's Not Just for Big Systems," Journal, American Water Works Association, May 1996.

Rhorer, K. B., "Drinking Water Budgeting, Accounting, and Rate Setting," presented at the National Conference of the Rural Community Assistance Corporation, Lake Tahoe, NV, April 1996.

Rhorer, K. B., "The Business of Running Your Drinking Water System," presented at the National Conference of the American Water Works Association, Anaheim CA, June 1995.

Rhorer, K. B., "How to Conduct Field Tests," E-Train - National Environmental Training Center, December 1994.

Rhorer, K. B., "State Financial Viability Programs Evolve Slowly, but Surely," On Tap -- National Drinking Water Clearing House, Fall 1994.

Rhorer, K. B., "A Window into State Financial Viability Programs," presented at the National Conference of the American Water Works Association, New York NY, June 1994.

Rhorer, K. B., "Communicating Drinking Water Issues for State and Local Regulatory Officials," Curriculum, National Environmental Training Center, 1994.

Robert J. Bingham, P.E.

University of Washington
B.A. in Interdisciplinary Studies
B.S. in Civil Engineering

Since joining R. W. Beck in 1976, Mr. Bingham has provided planning and engineering services for municipal utilities, particularly in the area of facility and program development. He has served as project manager or key technical advisor in the financing, procurement, and development of facilities, including wastewater treatment, water treatment, energy recovery, material processing, waste disposal, and solid waste facilities. Mr. Bingham has represented more than 15 public utilities in the negotiation and/or administration of contracts with private sector firms to provide municipal utility facilities and services. He has implemented alternative delivery on more than 15 projects with a capital value in excess of $2 billion.

Relevant Project Experience

Owner's Advisor Services Central Treatment Plan DB Project

City of Tacoma, Washington

Project Manager. Mr. Bingham is assisting the City in a major expansion to its existing central wastewater treatment plant. The $70 million project will use the design build process and R. W. Beck is serving as Owner's Engineer. The first phase of the project involves development of an overall project implementation strategy including identification of the preferred alternative project delivery approach. Mr. Bingham led a team of advisors and city staff through a series of workshops to set future direction for the project.

General Contractor/Construction Manager Wastewater Treatment Plant Facility Expansion Support Services

City of Everett, Washington

Project Manager. Mr. Bingham assisted in evaluating alternative project delivery approaches that offer promise of cost savings and other benefits over the design-bid-build approach the City typically uses. He is currently assisting in the implementation of the project approach.

Brightwater Program Oversight

King County Department of Natural Resources/Washington

Project Manager. Mr. Bingham is the project manager for Oversight Consultant services to the King County DNR for the $1.5 billion Brightwater Regional Wastewater Management Program. The focus of the project is to compare the Brightwater program with other similar large municipal wastewater programs in order to identify areas for improvement and to catch developing problems early so significant impacts to the program can be minimized. The oversight review includes a comprehensive assessment of program organization, management policies and practices, accountability and decision-making, communication, and overall budget and schedule performance.

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Bajagua Wastewater Treatment and Water Reclamation Project

Confidential Client

Preliminary Financial Planner. Mr. Bingham was part of a multidisciplinary team of attorneys, engineers, and scientists for this project that will treat wastewater from the City of Tijuana, Mexico and provide the capacity for water reclamation. Primary treatment is currently provided at an International Boundary Water Commission plant in San Diego. The Bajagua project will provide a pump station, pipeline, and treatment facilities in Tijuana. One key issue is application of NEPA to trans-boundary projects such as this one. The project is being developed using the design-build-operate approach.

County of Hawai'i Solid Waste Reduction Facility Procurement Assistance

County of Hawai'i, Hawai'i

Technical Support. The County of Hawai'i has provided disposal for solid waste generated within the County at two landfills. The landfill in Hilo is scheduled to close in the near future. As part of its integrated approach to solid waste management, the County identified a need to reduce the amount of solid waste delivered requiring landfill disposal. To meet this objective, Mr. Bingham supported the County of Hawai'i in the development of the Request for Proposal including developing technical and performance requirements for waste to energy equipment systems. Mr. Bingham also assisted in evaluation of proposals and provided response to vendor questions.

Owner's Advisor Tolt Water Plant DBO Project

Seattle Public Utilities/Washington

Project Manager. Mr. Bingham worked with City staff and their legal counsel through the procurement process to select a Design Build Operate contractor to develop a new 120 mgd water treatment plant. He managed preparation of requests and evaluation of submittals for both the vendor qualifications and proposals. For this, the city's first water treatment facility and the first-of-its-kind DBO development in Washington State, Mr. Bingham assessed the potential risks and requirements for water quality, capacity, reliability, future regulatory changes, and present and future costs.

Owner's Advisor Cedar River Water Treatment DB/DBO Project

Seattle Public Utilities/Washington

Project Manager–Phases 2 and 3. Mr. Bingham was part of a multi-disciplinary team to determine the best approach to develop water treatment and other needed improvements on the City of Seattle's Cedar River system. In addition to the 275 mgd treatment plant, the project includes fish passage, facilities, and improvements to the dam at the City's headwork diversion. Mr. Bingham led the team in preparing RFQ documents and evaluating technical and financial qualifications.

City of Everett Wastewater Treatment Plant Improvements Alternative Project Delivery Evaluation

City of Everett, Washington

Project Manager. Mr. Bingham assisted the City in evaluating alternative project delivery approaches that offer promise of cost savings and other benefits over the Design Bid Build aproach the City typically uses. R. W. Beck assisted the City in identifying alternative project deliver approaches and selection of the preferred approach.

Project Delivery Evaluation Bull Run Water Treatment Project

Portland Water Bureau/Oregon

Technical Advisor. Mr. Bingham assisted the Bull Run Advisory committee in evaluating various options for the project delivery including Design Build, Design Build Operate, Design Build Maintain, and others. Several workshops were held to provide information and identify project objectives. The project is on-going.

Wastewater Facilities Plan

City of Yakima, Washington

Project Engineer. Mr. Bingham prepared technical portions of the City's facilities plan, which included an evaluation of aeration processes, sludge digestors, sludge dewatering, and final disposal. The facilities plan was completed and grant funding obtained for the construction of facilities.

Wastewater Facilities Plan

City of Richland, Washington

Project Engineer. Mr. Bingham conducted pilot field treatability studies of the City's municipal and industrial wastewater to determine treatment parameters for facility design. He also evaluated facility requirements for sludge processing and disposal, and prepared the portions of the wastewater facilities plan that addressed these topics. The facility was constructed and includes belt filter presses for sludge dewatering.

Contract Procurement and Negotiations Services for Water Supply Development Program Projects

Tampa Bay Water/Florida

Technical Support. R. W. Beck is providing technical assistance to Tampa Bay Water with the development of alternative procurement programs including DBO, DB, and BOOT procurements. The work has included development of the procurement program, procedures, and schedule; development of DBO terms and conditions and procurement documents; assistance with development of terms and conditions and documents for BOOT procurement; development of risk allocation methodology, preparation of a Risk Matrix, and risk-based cost impact analysis for DBO procurement; development and assistance with the pre-qualification and evaluation of contractors and proposals for DBO; and assistance with the negotiations of the DBO procurement.

Productivity Program for Wastewater Treatment Division

King County, Washington

Technical Performance Consultant. Mr. Bingham is part of a team that was recently hired by King County to help the Wastewater Treatment Division of the Department of Natural Resources achieve its goal of becoming the best and most competitive wastewater utility (public or private) in the country. The project was conducted to achieve three basic objectives: develop a comprehensive performance optimization plan, apply effective leadership practices to the Wastewater Treatment Division, and sustain high performance by building employee commitment to the plan.

Capital Improvement Program On-Call Services

King County Wastewater Treatment Division, Washington

Project Manager. R. W. Beck has completed the first year of a 3-year arrangement with the Capital Improvement Program Section for an on-call contract to provide a broad range of services including: program management/organizational development, quality control/quality assurance, cost analysis,

information technology services, and construction management services. The focus of the project is to improve the productivity of capital project development activities including consideration of alternative project delivery approaches.

Owner's Advisor Seymour Filtration Plant DBO Project

Greater Vancouver Regional District/British Columbia

Project Delivery Specialist. R. W. Beck assisted GVRD with implementation planning for a DBO project delivery approach for a new 265-mgd ozonation and filtration plant for its Seymour water source—one of three major sources serving the region around Vancouver. GVRD made a preliminary decision to use the DBO approach was based on consideration of water quality, cost, and schedule requirements. R. W. Beck's services included refining the project concept, and assisting development of a project implementation strategy. Following completion of the plan implementation and issuance of the RFQ, the project came under intense scrutiny and opposition by GVRD's union employees. The project has been restructured so it will be publicly operated.

Department of Public Works Operational and Organizational Review

City of Tacoma, Washington

Technical Support. R. W. Beck performed a comprehensive management and organizational review of the City of Tacoma's Public Works Department, including the City's refuse, sewer and wastewater utilities; streets engineering and maintenance; and several central service functions. The study placed special emphasis on organizational effectiveness, duplication of services, potentials for privatization and environmental regulation and compliance. Productivity measures were developed for most functions and concepts for productivity reporting and Continuous Improvement Teams were developed. Several recommendations addressed city-wide concerns in areas such as facilities management and maintenance.

Year 2000 Compliance Projects

City of Los Angeles, California

Project Manager. Mr. Bingham managed this eight-month assignment, working in City of Los Angeles offices alongside City staff to develop and implement Year 2000 remediation projects for water transmission and treatment, wastewater conveyance and treatment, and power plants throughout the Los Angeles basin. The project involved the City's Department of Water and Power, Department of Streets, and the Bureau of Sanitation.

Neil V. Callahan

Rutgers University
B.S. in Environmental Science
M.S. in Environmental Science
Graduate Studies in Water Resources

KEY EXPERTISE

- Strategic and Business Planning/Change Management
- Operational Efficiency Studies/Performance Enhancements
- Management Assessments
- Independent Engineer's Review of Water/Wastewater Facilities
- Public/Private Partnerships
- Regulatory Compliance for Water and Wastewater Utilities
- Expert Testimony/Litigation Support

Mr. Callahan is a Principal in the Water & Wastewater Resource sector of R.W. Beck. He is the Vice President of the Utility Services practice, a national group which assists municipal utilities and authorities in the areas of CIP Planning and Project Implementation, Alternative Project Delivery methods and Management Consulting. Mr. Callahan specializes in Desalination Project Development and Implementation and utility management and operations consulting. He has 30 years' experience in the water and wastewater industry including participation as Project Principal or Senior Project Manager for desalination program management, project implementation and plant operations.

Mr. Callahan has served as project manager for utility planning, permitting and construction projects with values ranging from $50,000 to $158 million, drawing on his comprehensive knowledge of state and federal regulations, project development, scheduling and contract management.

Prior to joining R. W. Beck, Mr. Callahan was an Executive Vice President (EVP) in a U.S. subsidiary of one of the top five global water utility services companies. He has participated in developing bids for, and implementing the privatization of water and wastewater facilities around North America. As an EVP, Mr. Callahan has participated in the public/private partnership arena from the privatizer's perspective. As a privatizer, he has been a corporate decision-maker, senior technical strategist and/or project manager for over a dozen major national and international procurements.

Mr. Callahan was also a principal consultant for an engineering firm specializing in the troubleshooting and design of treatment processes, utility operations, facilities planning, permitting and facility start-up.

Selected examples of relevant project Mr. Callahan has worked on are as follows.

Relevant Experience

Owner's Advisor for the Replacement of Design-Build-Operate Contractor for an Existing 25-mgd Desalination Treatment Plant

Tampa, FL

Project Manager for a DBO procurement to qualify and select a replacement contractor to re-design and repair Tampa Bay Water's 25-mgd desalination plant. Developed vendor pilot agreements, RFQ, RFP, service agreement, performance specifications and owner's criteria. Evaluated the technical and financial components of the vendor proposals during the proposal evaluations. Following the selection of a contractor, assisted in contract development, led technical negotiations for the contract. Also developed the construction completion and operations service agreements.

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Gulf Coast Seawater Desalination Project

Tampa Bay Water – Pasco County, Florida

Project Manager. Mr. Callahan was the firm's manager for planning the development of Tampa Bay Water's second seawater desalination project. The proposed project is a Design Build Operate (DBO) project delivery for a 25 to 35 MGD seawater reverse osmosis desalination plant co-located with a power plant. The Gulf Coast Project involves the overall project planning, development of the procurement documents, permitting, public relations, design review, contract development assistance, and contract negotiations.

Independent Engineer's Report, Wastewater BOOT Privatization

Aguas Tratadas de Minatitlan S. de R.L. de C.V. – Minatitlan, Mexico

Task Manager. Mr. Callahan was the Lead for the Design, Operations, Maintenance and Management Assessment and for assisting with the development of the Project Operating Results (Utility Operating Budget Model) analysis for the Minatitlan BOOT Wastewater Treatment Project. The project consisted of the construction and operation of an industrial wastewater treatment plant containing two wastewater treatment process approximately 2.5 and 7.8 MGD in size. R. W. Beck reviewed the project including design efficacy, construction costs, operating costs, risks of default, and costs of replacement contractor. R W. Beck was retained to conduct an evaluation of the project prior to the bank approving a loan. Mr. Callahan performed a staffing analysis and verified the O&M cost proposal by use of cost models and by producing a bottom-up independent O&M budget. The design review entailed an assessment of the technology and processes employed and related costs.

Independent Engineer's Report, Wastewater BOOT Privatization

North American Development Bank – Juarez, Mexico

Task Manager. Mr. Callahan was the Lead for the Operations, Maintenance and Management Assessment and for the development of the Project Operating Results (Utility Operating Budget Model) analysis for the Juarez BOOT Wastewater Treatment Project. The project consisted of the construction and operation of trunk sewers, pump stations and two treatment plants approximately 57 and 23 MGD in size by an international privatization consortium. R. W. Beck reviewed the project including design efficacy, construction costs, operating costs, risks of default, and costs of replacement contractor. R. W. Beck was retained to conduct an evaluation of the project prior to making a loan and committing US EPA grant funds. Mr. Callahan performed a staffing analysis and verified the O&M cost proposal by use of cost models and by producing a bottom-up independent O&M budget.

Independent Engineers Report - Seawater RO Desalination DBOOT Project

Interim Construction Loan

ABN-AMRO Bank – Apollo Beach, Florida

Mr. Callahan was the Technical Manager for the Independent Engineer's Report review of the Contracts, Design, Permitting, Land Acquisition, Operations and Maintenance for the development of the Project Operating Results (Utility Operating Budget Model) analysis for the Tampa Desal DBOOT Seawater Desalination Water Treatment Project. The project consisted of the construction and operation of multiple tie-ins to a power plant's cooling water discharge tunnels, two seawater pump stations, a proprietary DualSand™ sand filter pretreatment system, a unique two pass reverse osmosis treatment process, lime softening, chlorination, sludge handling, water storage tanks, a product water pump station and a 14.5 mile pipeline to produce 25 MGD. The project was being developed and financed by a private project developer. R. W. Beck reviewed the project including design efficacy, construction costs, project

schedule, operating costs, and risks of default. R. W. Beck was retained to conduct an evaluation of the project prior to the bank approving an interim construction loan. Mr. Callahan performed an analysis and verified the O&M cost proposal by use of cost models and by producing a bottom-up independent O&M budget. The design review entailed an assessment of the technology and processes employed.

Regional Surface Water Treatment Plant Project

Tampa Bay Water – Hillsborough County, Florida

Project Manager for the Design Build Operate (DBO) project delivery for a 66MGD surface water treatment plant. This project included the development of a national procurement process, including all procedures and schedule; development of DBO terms and conditions and procurement documents; development of risk allocation strategy, preparation of a Risk Matrix; assistance with community relations; development and assistance with the contractor pre-qualification, evaluation of qualifications and proposals for DBO; and assistance with the negotiations of the DBO procurement. Tampa Bay Water acknowledges saving over $85 million dollars during the term of the agreement.

Evaluation of Project Delivery Alternatives for Implementation of the Master Water Plan

Tampa Bay Water – Clearwater, Florida

Project Manager. Mr. Callahan managed an Alternative Project Delivery Evaluation Study to determine the most effective project delivery methods for Tampa Bay Water's Capital Improvement Plan. The evaluation considered the merits of: Traditional Design/Bid/Build; Design/Build; Design/Build/Operate; EPC or Design/Build; and Build/Own/Operate/Transfer. The project included extensive review of eleven projects with total estimated costs in excess of $900 million dollars. The projects reviewed included a 50 MGD desalination plant, a 78 MGD blended surface/ground water treatment plant, a raw water reservoir exceeding 17 billion gallons and a high river flow conjunctive use scheme. Mr. Callahan performed staff interviews, workshops, meetings, report preparation and the presentation of recommendations to the Board of Directors.

Wastewater Utility Development

Environmental Disposal Corp. (EDC)

President. Mr. Callahan was responsible for the green-field development of a world-class publicly regulated Investor-Owned wastewater utility. Mr. Callahan worked for a national real estate development management company to get all approvals, design, build and operate a wastewater treatment utility with performance requirements unmatched by any facility nationally. Mr. Callahan managed the environmental permitting, community relations, the facility construction, and start-up. The facility was completed on time and on budget. Mr. Callahan directed the effort to secure long-term financing for the facility via two industrial development bonds and directed the rate case for the utility. The facility was recognized by the state environmental regulatory agency as the only successful example of level V treatment (advance treatment with total nitrogen and phosphorus control) and its performance has been presented in EPA publications on Biologic Nutrient Removal (BNR) technologies.

Rutgers University, Kean University

New Jersey

Instructor. Mr. Callahan was an instructor at Rutgers and Kean University in water and wastewater technologies, facility performance assessments, and water quality.

Publications

- Competition – Are you Ready and Willing?, NEAWWA , April 1998
- "D/B/O Approach Can Save Local Dollars," American City & County, May, 1998.
- Tampa Bay Seawater Desalination DBOOT Project: Lessons Learned, FSAWWA, 2003
- Seawater Desalination, Panacea or Pandora's Box? CA AWWA, Sept., 2003
- Reality Desalination: Start-up of a Seawater Desalination Plant, AWWA, June 2004
- Ownership, Financing, Procurement Alternatives, Desal Workshop, AWWA, June 2005
- "Integration of Power Generation and Water Desalination Operations," TWDB Report 363.
- Tampa Bay Water Project Status Update, Water Reuse Conference, Sept. 2005

Experience Summary

Steve Wilson is a managing scientist with 30 years of professional experience in treatment and beneficial reuse of process wastewater, effluent, and biosolids. Steve has managed major design and construction projects for Brown and Caldwell's Portland office. He also has substantial experience with design/build procurement in and owner's representative role. He is an active member of the Water Environment Federation (WEF) Residuals Management Committee and serves board of directors for the Northwest Biosolids Management Association (NBMA). He is also active on Oregon ACWA's Biosolids and Reclaimed Water committee. Steve's extensive experience with the wastewater industry plus local knowledge will benefit Wilsonville's challenging DBO project. He will bring Brown and Caldwell resources together to effectively meet the City's project goals.

Assignment

Project manager

Education

M.S., Soils, Washington State University, 1978

B.A., Environmental Studies, Whitman College, 1975

Registration

Certified Professional Soil Scientist, ARCPACS No. 1728, 1981

Experience

30 years

Joined Firm

1991

Relevant Expertise

- *Managing significant design and construction projects*
- *Biosolids management regulatory and technical issues*
- *Solids processing and handling alternatives*
- *Land application cost and operational experience*
- *Reclaimed water irrigation and management*

Municipal Biosolids Management

Central Wastewater Treatment Plant (WWTP) Biosolids Processing Improvements, Three Rivers Regional Wastewater Authority, Kelso, Washington

Project Manager. A predesign evaluation of solids stabilization and dewatering, and biosolids marketing alternatives was conducted to replace outdated thermal conditioning and vacuum filters. Several processes were considered including anaerobic digestion, lime pasteurization, and thermal drying. Lime pasteurization was determined to be the most cost-effective technology. Detailed design of new facilities including sludge screening, centrifuge dewatering, and lime pasteurization was completed and the project was bid in the spring of 2006. The facility is presently in operation, producing Class A biosolids product.

TAGRO Processing Facility Expansion, City of Tacoma, Washington

Project Advisor. The City of Tacoma is undertaking a major design/build WWTP facility expansion. An important component is to enlarge the biosolids/topsoil blending operation for the TAGRO program. Operational needs were considered in developing a new layout for processing and product storage areas. The expansion includes capacity to handle 7,500 dry tons of biosolids on an annual basis with raw feedstock storage and 20,000 cubic yards (3 months) of covered product storage, as well as conveyance, handling, and screening equipment.

Class A Biosolids Workplan, King County Department of Natural Resources, (KCDNRP), Washington

Project Advisor. Steve led the evaluation of potential Class A biosolids markets for King County and contributed to a comprehensive report recommending the appropriate technology to produce Class A biosolids at the county's two major West Point Treatment Plant (WPTP) and South Treatment Plant (STP). Alternatives considered were temperature phased anaerobic digestion (TPAD) and the proprietary Cambi Thermal Hydrolysis Plant at WPTP and TPAD and thermal drying at STP. TPAD was selected

at each plant with the notation to consider implementing thermal drying on a smaller scale at STP in the near future.

Triangle Lake Solids Storage Lagoon Reconstruction, City of Portland, Oregon Project Manager. The City of Portland has historically used the 37-acre Triangle Lake lagoon for treatment of side-streams (gravity belt and belt filter filtrate, primarily) and storage of digested solids. The lagoon was constructed in 1970 as an unlined structure with few amenities. A predesign study identified design elements that will improve operational performance and flexibility. Improvements include a new synthetic membrane liner, interior dikes and compartmentalization, and new solids distribution/return flow piping. The ultimate objective is to maximize the function and capacity of the lagoon as a process unit while eliminating potential environmental effects such as groundwater contamination or odor emission. Recommendations included finding practical uses for residual solids and bottom sediments as well as construction phasing to control construction costs.

100 Percent Biosolids Utilization Program Implementation, City of Toronto, Ontario, Canada

Project Manager. The City of Toronto faced a political mandate to cease incineration and implement a biosolids land application program. Brown and Caldwell was retained to evaluate available technologies for biosolids processing and utilization and develop requests for proposals (RFPs) for private sector implementation of selected technologies. A combination of direct land application and drying/pelletization was selected to provide a diverse, cost-effective overall program. Private sector contractors were selected based on both qualifications and price through a process that included citizen involvement and an independent technical review committee. A second phase of the project was to produce a 20 percent design and RFPs for design/build construction of ancillary improvements to the Ashbridges Bay treatment facility, including truck load-out for dewatered biosolids, digester heating, and odor control. All work was completed on schedule under very tight time constraints.

City of Atlanta DBO Biosolids procurement

Technical lead. The City of Atlanta retained Brown and Caldwell to assist in the selection of a DBO contractor for upgrade and operation of solids processing and management. Based on experience with the Toronto project, Steve Wilson served as Brown and Caldwell's technical lead. Proposals from 3 national DBO firms were reviewed and evaluated. Steve coordinated discipline reviews pertaining to technology, energy efficiency, odor control, product quality, and operations. He also represented Brown and Caldwell at contractor interviews. Subsequently, he provided assistance during negotiation with the selected firm.

Foster Farms, Creswell OR

Project manager. Steve managed design and construction for a new SBR treatment system with effluent reuse utilizing negotiated procurement with a pre-selected contractor.

SENIOR VICE PRESIDENT

JACK WARBURTON, P.E.

Experience Summary

Jack Warburton is a Senior Vice President of Brown and Caldwell's Business Consulting Practice, with over 35 years of management and technical leadership experience in wastewater, water and surface water planning, design, construction, and operations. Over the last decade he has focused on the business aspects of utility operations including alternative capital project delivery, regulatory strategy, asset management, metric and business process benchmarking, organizational development, optimizing work practices, CIP program development, integrating new information technologies and work processes to achieve service level enhancements and cost efficiencies.

Assignment
Asset Management

Education

B.Sc. (Eng.), Civil Engineering, London University, 1965

Registration
Chartered Civil Engineer, United Kingdom, 1969

Civil Engineer, No. 21122, California, 1971

Civil Engineer, No. 15910, Washington, 1976

Civil Engineer, No. 9526, Oregon, 1978

Civil Engineer, No. 4311E, Alaska, 1979

Civil Engineer, No. 5287, Idaho, 1985

Professional Engineer, No. N1647, British Columbia, 1991

Professional Engineer, No. 23233, Minnesota, 1994

Experience

40 years

Joined Firm
1970

Relevant Expertise
30 years of experience working with Northwest municipal water, wastewater and drainage agencies

Skilled at presenting technical information and working with diverse groups to efficiently achieve sustainable and effective decisions

A national perspective on Master Planning, capital Program Development and implementing Asset Management processes and data management systems to support effective decision making

Central Wastewater Treatment Plant Wet Weather Expansion, City of Tacoma Environmental Services Division, WA
Senior Technical Advisor Owners Representative. Lead technical consultant for the RW Beck / BC team for the alternative delivery evaluation, selection and procurement of a capital delivery team for the $90 million upgrade for doubling plant peak treatment capacity by the addition of twin 36 mgd treatment capacity units with a combined peak hydraulic capacity of 100 mgd dedicated peak wet weather treatment facilities. The city selected a Design/Build delivery option. Key aspects in the development of the SOQ/RFP were to balance opportunities for innovation with potential risk of not meeting permit limits with a blended effluent. Utilizing Tacoma pilot testing data from Actiflo, DensaDeg as well as data from other BC projects a risk evaluation was conducted that moved increasing risk to the DB team for deviation from base requirements. To protect the City a detailed test plan was developed for assessing the performance of the constructed facilities with defined sampling protocols, influent conditions, and effluent performance requirements. Jack facilitated the client team in their team selection evaluations and contract award. BC provided technical review of final design, technical oversight during construction and the Acceptance Testing. Project final completions are projected for December 2008.

Halifax Harbour Solutions Project,Due Diligence Review Team (DDRT), City of Halifax, Nova Scotia, Canada Technical Lead. Technical lead member of the DDRT for the evaluated bid proposal process and contract award of a $300 million (Canadian) Design/ Build/Operate project for implementation of three new treatment plants and related influent sewers, control of combined sewer overflows, and marine outfalls. The DDRT role was advisory to the owner on procurement protocols, risk sharing, development of the reference bid, and the financial and technical requirements of the RFP. Following opening of the initial bids, the DDRT conducted a due diligence of the evaluation criteria and whether the reviewer's bid assessment conforms to the evaluation criteria. Bids were initially received in October 2000; the highest ranked team withdrew their bid due to changed financial metrics dictated by the off-shore parent company. Assisted City in repackaging project to a Design/Build contracting packages. All contracts have been awarded, the Halifax Plant is on line and the Dartmouth Plants is scheduled to be on line in 2009. We are currently providing warranty consulting for the Halifax plant.

Asset Management Program Pierce County Public Works and Utilities, Sewer Utility, WA Project Principal. The Sewer Utility is implementing a Utility-wide asset management program to maintain level of service in its collection and treatment system at the lower cost of ownership. The Strategic Asset Management Plan (SAMP) completed in early 2005 developed the prioritized action plan currently being implemented. The introduction of the Business Case Evaluation process for CIP decision making has resulted in reprioritization of planned projects and allows both new capital facilities and major refurbishments of existing facilities to be evaluated on a common basis. A recently completed Asset Criticality analysis has identified and categorized County conveyance and treatment assets as the foundation for quantifying risk and redefining O&M refurbishment and replacement timing and budgeting and Hansen CMMS data support strategies.

Asset Management and CIP Prioritization and Optimization, City of Tacoma Environmental Services Division, WA Project Lead. The City retained BC to lead in an initiative of Asset Management training, development of decision support tools and business process improvements. Criticality and Economic life assessments were completed that identified asset criticality and asset economic life. This information has provided the frame work for implementation of Reliability Centered Maintenance and refurbishment and replacement strategies. The CIP process was also enhanced by the creation of a Level of Service (LOS) driven CIP prioritization process. A key element of this task was development of LOS metrics for the wastewater. A key element of the CIP process improvements was development of a formal risk register process from conceptual planning through project commissioning. The CIP process was beta tested earlier this year for the 2009/2010 CIP.

Regional Wastewater Services Plan (RWSP)
Department of Natural Resources and Parks, Wastewater Treatment Division, King County, Washington Project Manager. Development of a 50-year wastewater services master plan for the Greater Seattle area. The $1.7 billion plan includes the addition of a new regional wastewater treatment plant (Brightwater) and marine discharge outfall to Puget Sound, control of CSOs, regional control of I/I, phased implementation of a direct nonpotable water reuse and streamflow augmentation program, Class A biosolids transition program and expansion of energy production capacity. The plan was adopted in 1999, acted as a senior advisor for plant siting and design of a 'green field' $0.5 billion 54 mgd advanced wastewater treatment plant and 170 mgd Influent Pumping Station to serve King County's northern service area. All aspects of the project are now in construction with an on-line date of 2011.

Wastewater Systems Plan, Seattle Public Utilities (SPU), City of Seattle, WA Project Delivery Officer &Policy Analyst. Development of a Wastewater Systems Plan that incorporates multiple ongoing SPU initiatives including alignment of policies, elimination of capacity limitations, control of combined sewer overflows (CSO's), refurbishment and replacement of existing infrastructure, optimizing operations and maintenance practices, developing levels of service and the development of the CIP process that incorporates the principles of Asset Management.

ADDITIONAL SUPPORTING INFORMATION

SECTION C

SUPPORT PERSONNEL RESUMES

R·W·BECK

Support Team Personnel

Team Member and Area of Responsibility	Expertise and Experience
Gary Anderson, P.E. **BC** Electrical/Power	▪ 34 years in the electrical industry as an electrician, facility engineer, field and start-up engineer for medium voltage power distribution systems and as a consultant has been an asset to his clients ▪ Extensive experience in back-up power and variable frequency drive installations at both 480 volt and 15kV projects ▪ Has field experience and is familiar with the National Electrical Code
Jennifer Belknap Williamson, P.E. **BC** Sustainability	▪ Civil and environmental engineer specializing in applying sustainable practices to the planning and design of water, wastewater, and energy projects ▪ 8 years of experience successfully addressing client needs as a project manager and technical lead for projects including renewable energy feasibility studies at wastewater and water facilities
Alan Bushley, P.E. **R. W. Beck** Technical WWTP Performance Specifications	▪ Nationally and internationally recognized expert with 48 years of experience in water supply planning, project implementation, and the operation and maintenance of water and wastewater systems ▪ Frequently retained as a consultant and has reviewed the technical features and expected economic performance of milestone public/private partnerships including DBO ▪ Experience includes both municipal and industrial wastewater treatment ▪ Has guided numerous large capital improvement projects from their inception through the planning, design, financing, construction, start up, and operating phases
John Christopher, P.E. **R. W. Beck** WWTP Performance Specifications and Technical Proposal Evaluation	▪ 30 years of experience as a project manager and project engineer providing planning, design, construction management, and value engineering services for a variety of new, expanded, and/or retrofitted wastewater facilities ▪ Experienced in alternative delivery approaches to WWTP improvements, including DB ▪ Experienced in all phases of project development, conceptual planning through construction contract administration ▪ Experience includes repair, rehabilitation, and expansion of older facilities to meet codes, standards, or capacity requirements
Terry Gould, P.E. **BC** NPDES Permit/Future Issue	▪ 35 years of experience in a range of environmental engineering projects including wastewater and water resources ▪ Managed the Crescent City, California Wastewater Facilities Plan and Plant Upgrade Design Project ▪ Currently serving as a task leader for Water Environment Services, Kellogg Treatment Plant Upgrades where he is leading the discussion with the ODEQ concerning flow management provisions on their NPDES permit
Jessica Guerrette, P.E. **R. W. Beck** DBO Procurement Document Support	▪ 14 years of experience, with extensive experience in alternative delivery project solicitation document development ▪ Experience includes surface water management with a specialization in hydraulic analyses, computer modeling, stormwater facility design, and temporary erosion and sediment control (TESC)

Team Member and Area of Responsibility	Expertise and Experience
Jim Hansen, P.E. **BC** Collection Systems	▪ 25+ years of engineering experience in the planning, design, O&M, and general management of municipal sanitary infrastructure facilities and programs ▪ Project experience includes all facets of sanitary collection system management, including master planning, pipe inspection and condition assessment, sewer system design and rehabilitation, pump station rehabilitation and design, maintenance program development and optimization, and regulatory compliance
Tom Lebo **BC** Constructability/Estimating	▪ 29 years of experience in operations and construction of process facilities, including construction management, project management, project engineering, field supervision, and estimating ▪ Has served as construction manager on numerous water and wastewater treatment plant upgrades ▪ Currently providing construction management for two projects that are part of the Salmon Creek Wastewater Management System Phase 4 Expansion for Clark County, Washington
Henryk Melcer, P.E. **BC** Waste Characterization, Process Modeling	▪ Wastewater treatment process specialist with 20 years of experience in the biological treatment of municipal wastewater ▪ Focused on process modeling of biological treatment systems and the control of toxic contaminants in WWTP liquid and air emissions ▪ Has completed the preliminary designs of a 36-mgd average wet weather flow greenfield plant for King County comparing biological aerated filtration, MBRs, and conventional activated sludge as biological treatment alternatives ▪ Evaluated the Central Kitsap plant capacity by calibrating BioWin™ simulator and stress-testing clarifiers, optimized plant performance to increase rated capacity from 6 to 7.5 mgd
Bill Meloy, P.E. **BC** Cogeneration	▪ 45 years of experience in engineering design; 34 in wastewater specializing in digestion and cogeneration projects ▪ Has managed major projects ranging from pump stations to complete plant design, including energy studies, feasibility studies, design, construction management, and review board participation ▪ Served as project manager for secondary treatment projects for the Columbia Boulevard WWTP in Portland, and cogeneration design lead for West Point WWTP 4.3 MW plant for King County in Seattle
Art Molseed, P.E. **BC** Design Lead	▪ 21 years of experience in the design and construction support for wastewater treatment systems ▪ Specific tasks have included pre-design/design of pumping stations, pipelines, WWTPs, construction management support, environmental compliance services, pilot studies and plant process evaluations, and odor control studies ▪ Recently completed design of the Alderwood SD MBR facility and biosolids dryer
Dave Murray, P.E. **BC** Disinfection	▪ 30 years of experience in the study and design of facilities for wastewater collection, treatment, and disinfection ▪ Expertise in the evaluation and design of UV disinfection and effluent filtration processes
Steffran Neff, P.E. **BC** Asset Management	▪ 15+ years of environmental engineering and asset management program development experience ▪ Conducts asset management program evaluations, develops strategic asset management plans, provides asset management training, conducts asset risk analysis, and facilitates project business case evaluations (BCEs) using life-cycle benefit/cost analysis methodology and asset management principles to facilitate capital, O&M, rehabilitation and refurbishment, and policy decisions

Team Member and Area of Responsibility	Expertise and Experience
Larry Oeth, P.E. **BC** Structural	▪ 30+ years of civil and structural design services experience ▪ Combines high-reliability design quality typical of municipal projects, while maintaining the budget and schedule constraints typical of industrial process work ▪ Responsibilities have included structural design of municipal and industrial projects with specific expertise in seismic analysis and design ▪ Projects include large (up to 150 mgd) municipal water and WWTP, heavy and high-tech industrial facilities, commercial buildings to 200,000 SF and numerous remodel projects
Keith Parker, P.E. **R. W. Beck** Procurement Document Support - Technical WWTP Performance Specifications	▪ 32 years of experience in the overall planning, design, cost estimating, and construction management of water and wastewater infrastructure projects ▪ Primary project experience includes sanitary sewer collection system design, water treatment, supply, distribution, and storage, has worked on more than 45 pump station designs and upgrades
Steve Plancic **BC** BIM	▪ 27 years of experience transmitting technical information through drawings ▪ Accomplished in organizing large jobs and scheduling staff to complete them on time ▪ Experienced AutoCAD operator, currently using AutoCAD 2006 and ADT 2006 ▪ Experience includes numerous wastewater treatment plant designs, pumping stations, management plans, and facilities layouts
Kevin Stively **BC** Automation	▪ 20 years of experience in planning, designing, configuring, and starting up automation systems for process systems, including both wastewater and industrial markets ▪ Experience in designing and replacing control systems for treatment plants
Phil Wolstenholme, P.E. **BC** Odor Control	▪ 29 years of mechanical engineering experience ▪ Instrumental in the design of over 100 odor control and biosolids systems ▪ Serves as a managing engineer and associate with BC and is their national practice leader in odor control ▪ Specializes in sludge handling processes for wastewater treatment facilities ▪ Additional experience in energy/cogeneration, environmental, solid waste, and industrial material handling projects ▪ Member of the Water Environment Federation air quality and odor control committee.
Chuck Zickefoose **BC** Operations Specialist	▪ 50+ years of extensive wastewater treatment operation and engineering office management experience in environmental and wastewater engineering ▪ Has managed design projects, conducted seminars on plant operations, managed wastewater treatment plant start-ups and written O&M manuals for many wastewater plants

Experience Summary

Gary Anderson has 34 years of experience in the electrical industry. His career has included electrical engineering management, analysis, estimating, design, commissioning, hands-on electrical installation, maintenance, troubleshooting, and the repair of electrical power and lighting systems. Mr. Anderson has extensive experience in backup and redundant power systems design, including standby and emergency power generation and switching. With 17 years as an electrician Mr. Anderson is familiar with working with and around electrical equipment first as a licensed Washington State Maintenance Electrician and now as a card carrying Journeyman Electrician.

With his unusual combination of skill and experience as an engineer and electrician, Mr. Anderson has managed projects as an owner's facility maintenance and design engineer, as a consulting design and field engineer, electrical contractor; including work as design manager for multi-discipline projects involving building systems and utility systems. He has prepared, negotiated, and administered engineering design contracts, facility OSHA reviews on electrical safety for the Puget Sound Naval Shipyard, completed first principle design and the reviews of design and construction submittal documents including commissioning and start-up of low and medium voltage power systems. He has gained a reputation for thorough and complete reviews.

Assignment
Electrical/Power

Education
B.S., Electrical Engineering, Cum Laude, Seattle University, 1990

Registration
Electrical Engineer No. 33269, Washington, 1996

Electrical Engineer No. 59588, Oregon, 1998

Electrical Engineer No. 9900, Alaska, 1999

Electrical Engineer No. 16044, California, 1999

Electrical Engineer No. 13338, Idaho 2008,

Journeyman Electrician, Washington, 1987

Experience
34 years

Joined Firm
2001

Relevant Expertise

- *Design solids handling upgrades to the associated electric distribution systems*
- *8 years experience as a maintenance and design engineer for the owner of a very large industrial installation*
- *Assisted City of Tacoma in WWTP design-build documentation for power and variable frequency drive procurement.*

Design-Build Owners Engineer, Portland Ave WWTP upgrades, Tacoma, Washington, (Completion date: Construction in progress)

Electrical Engineer. Part of a multi-consultant team to create design-build documents for a major upgrade to the process facilities. Work included upgrades to the influent and effluent pumping buildings. Responsible for all low voltage and medium voltage variable frequency drive upgrade specifications, assisted in utility coordination for new electrical service equipment, assisted in new underground duct bank and manhole design as well as upgrade to major underground distribution feeders.

Major Waste Water Treatment Plant Upgrade, Everett Washington (Completion date: 2006)

Electrical Engineer of Record. Led the electrical design for this $43 M project. The upgrade included additions or renovations to the facility's administrative building, headworks facility, operations building, trickling filters, primary clarifiers, and substantial upgrades to the medium and low voltage underground distribution systems.

High Solids Dewatering Centrifuges, South Treatment Plant, King County, Renton, Washington, (Completion date: 2005)

Lead Electrical Engineer. Led electrical design and construction support of the electrical installation. Exceptional technical difficulties in routing additional power conduits for the new motor control room and the additional feeder conductors from the service transformers to the existing service equipment. Work included the demolition of seven belt presses, the installation of; 3 centrifuges, new motor control center, modifications to two motor control centers, temporary power via back-up generation, replacement of two 750 kVA service transformers with 1000 kVA transformers, transient voltage

equipment, underground conduit and cable systems, broad base control system interface, extension of building ground system, 480 volt switchgear modifications and additions, variable frequency drive installations, and several motor replacements. Favorably resolved UL Listing and National Electrical Code issues with the Electrical Inspector and the contractor.

King County's Standby Generator Replacement Projects, Various sites throughout King County (Completion date: On-going design. 7 stations designed and constructed 2003-2005)

Electrical Engineer of Record and Project Manager. Four separate projects covering 28 individual generator replacement or new installation sites. Provided design development guidance, oversight, and design elements, site coordination, document review, electrical engineering liaison, and project management. This work includes electrical engineering analysis and design for the replacement and sometimes upgrade of the King County's pumping and regulator stations. Challenges include automatic transfer switch installations into existing spaces where equipment footprints are at a premium, generator alarm and status control point interface with existing newly installed SCADA systems.

King County's Cogeneration Project's Preliminary Short Circuit Analysis, South Treatment Plant, Renton(Completion date: 2005)

Mr. Anderson was the Electrical Engineer of Record and lead electrical designer for the project. The scope of the analysis included an 8 Megawatt and 67 Megawatt plants situated on the Facility, and immediately outside the Facility at various sites. The analysis involves the use of an electrical engineering analysis program also used by the County. Work included the translation of County's data base files from the previous DOS version to the County's current Windows version and conducting and analyzing numerous short circuit scenarios involving different electrical locations within the Facility's electrical distribution system.

City of Snohomish Waster Water Treatment Plant Sand Filter Investigations, Snohomish Washington (Completion date: 2008)

Mr. Anderson conducted field harmonic analysis and trouble shooting successfully starting up the effluent sand filter(s) which had been off line for 12 years due to power quality issues. Work included evaluation of the existing power distribution system, conducting live voltage and harmonic tests, operational testing, working around energized equipment, and recommendations for system repairs and improvements.

Honors/Societies

Tau Beta Pi, National Engineering Honor Society, Life Member

Alpha, Sigma, Nu, National Jesuit Honor Society, Life Member

2007-2009 Chairman IEEE Industrial Application Society IAS-34 (On the Executive Board for 9 years)

IEEE Senior Member receiving an Award for Service, IEEE Industrial Application Society

SENIOR PROJECT ENGINEER

JENNIFER BELKNAP WILLIAMSON, PE

Experience Summary

Jennifer Belknap Williamson is a civil and environmental engineer specializing in applying sustainable practices to the planning and design of water, wastewater, and energy projects. Jennifer has over eight years of experience successfully addressing client needs as a project manager and technical lead for projects including renewable energy feasibility studies at wastewater and water facilities, Low Impact Development (LID) stormwater design, watershed planning, and permitting compliance. Jennifer is the leader of Brown and Caldwell's Portland office Sustainability Program, and helps clients align their economic, social, and environmental goals with project outcomes. Jennifer is a licensed assessor for SCORE (Sustainability Competency and Opportunity Rating and Evaluation) and is trained in the LEED project certification process.

Jennifer's work includes assessing the effects of energy policy changes on clients, including identifying the availability of funding for renewable energy projects and evaluating energy policy impacts on large energy users. She has performed regulatory compliance to meet NEPA EIS and EA requirements as well as local and state requirements for major energy development projects and other construction projects. Her background also includes developing TMDL Implementation Plans and addressing NPDES permit compliance, performing water quality data analysis, river restoration planning, groundwater and surface water analysis and modeling, public involvement for water quality projects, and sustainability program implementation.

Assignment

Sustainability

Education

University of Portland: B.S., Civil Engineering, 2001

University of Wisconsin-Madison: M.S., Water Resource Management, 2007
M.S., Civil & Environmental Engineering, 2008

Registration

Professional Engineer OR #65428

Professional Engineer WI #39259-006

Experience

8 years

Joined Firm

2007

Relevant Expertise

- *Civil and Environmental Engineering*
- *Permitting and Regulatory Compliance*
- *Sustainability Program Development*

Previous Employment

URS Corporation, Water Resources Engineering, 2000-2007 & Environmental Ethics Program Coordinator, 2003-2004

Pacific Northwest National Laboratory, Project Assistant and Research Fellow, 1999-2000

Gresham Wastewater Treatment Plant Outfall Micro-Hydropower Feasiblity Study, City of Gresham, Oregon

Deputy Project Manager. Conducting a feasibility study of a small-scale hydropower facility on the Columbia River outfall for the Gresham wastewater treatment plant under an Energy Trust of Oregon renewable energy study grant. Defining permitting requirements for the potential project, evaluating power generation options and associated technology, assessing power use and sale options, researching available tax incentives and other funding sources, and performing life-cycle cost analysis.

Oregon City Water Distribution System Micro-Hydropower Feasiblity Study Preliminary Analysis and Grant Application, City of Oregon City, Oregon

Deputy Project Manager. Conducted a preliminary feasibility analysis and developed a grant application to the Energy Trust of Oregon for the further study of small-scale hydropower facilities on the water distribution system. Defined opportunities and constraints for the potential project, evaluated power generation options and associated technology, assessed power use and sale options, researched available funding sources and responded to questions from the Energy Trust of Oregon.

Sustainability Program Development, Brown and Caldwell

Program Leader for Portland Office. Developing sustainability program goals, metrics, and implementation processes for Brown and Caldwell's internal sustainability program. Researching and evaluating opportunities to reduce impacts related to energy use, transportation, and supply purchasing. Developing internal sustainability training program to continually expand staff knowledge of current legislation, incentives, and engineering design opportunities related to sustainability for our clients.

BROWN AND CALDWELL

Oak B Basin Relief and Construction Project LID Design, City of Portland, Oregon

Task Manager. Designing 14 vegetated stormwater facilities that will collect, filter, infiltrate and convey storm water run off from existing streets. Writing construction specifications for facilities using a combination of ODOT and City of Portland specifications, as requested by client. Developing passive stormwater quality control facility designs that meet water quality and quantity goals as a part of Portland's "Green Streets" Low Impact Development (LID) initiative while also addressing parking and pedestrian needs.

Kellogg-Mt. Scott and Rock Creek Watershed Action Plans, Clackamas County WES, Oregon

Deputy Project Manager. Developing watershed assessment and action plans to improve watershed health and assist Clackamas County WES in meeting sustainability goals. Evaluating design standards for opportunities to incorporate additional innovative Low Impact Development (LID) stormwater treatment into new development. Evaluating modeling results, GIS data, prior studies, and field data to determine opportunities for LID projects and other stormwater solutions to improve watershed health. Analyzing alternative solutions using a Level-of-Service driven prioritization process to create a clear implementation plan. Integrating asset management tools such as work process mapping to improve the effectiveness of surface water management program activities and policies.

Consolidated Stormwater Master Plan, City of Fairview, Oregon

Project Engineer. Developed a master plan identifying capital improvement projects for flood control and water quality requirements, including wetland and stream design projects. Reviewed existing information and modeling results, performed field assessments of potential project sites, developed construction cost estimates for projects, and prioritized projects with City.

TMDL Implementation Plans, Clackamas County, Oregon

Project Manager. Collaborated with Clackamas County staff to develop TMDL Implementation Plans for the Willamette and Sandy watersheds to address temperature, bacteria, and toxics. Evaluated potential sources of water quality parameters of concern, identified County management strategies that address parameters of concern, and set measurable milestones and timelines for implementation of strategies.

White River, Key Peninsula and Gig Harbor Basin Plans, Pierce County, Washington

Project Manager. Performed multi-objective watershed assessment and developed Basin Plans with prioritized CIPs and programmatic solutions to address flooding, water quality, and habitat problems.

Federal Energy Policy Analysis, Pacific Northwest National Laboratory, Richland, Washington

Task Lead. Evaluated the impacts of state energy deregulation policy on federal energy users including military bases, federal agencies, national parks, and other entities. Researched legislation, analyzed electric rate structures, summarized renewable energy requirements.

R. Alan Bushley, P.E.

University of Washington
B.S. in Civil Engineering
M.S. in Civil Engineering

Mr. Bushley is a nationally and internationally recognized expert in water supply planning, project implementation, and the operation and maintenance of water systems. He has guided numerous large capital improvement projects from their inception through the planning, design, financing, construction, start up, and operating phases.

Mr. Bushley has been responsible for numerous financing reports and independent evaluations of water resource projects. He has served as the technical lead for financial and organizational management studies of major water and wastewater utilities in the United States. He is knowledgeable regarding prevailing standards and practices in the utility industry, staffing requirements, and operation and maintenance requirements.

Since 1994, Mr. Bushley has also led much of the international water resource business for R. W. Beck. His projects include technical and economic reviews; construction monitoring; and designs for large water supply, wastewater treatment, and hydroelectric projects.

Mr. Bushley is the senior project manager at R. W. Beck for wastewater facilities planning, project design and construction. He has been either the project manager or principal-in-charge for most of the firm's large wastewater projects. His experience includes both municipal and industrial wastewater treatment. The industrial experience involves wastewater from industrial process plants as well as leachate from solid waste landfills. He has supervised projects incorporating most of the available treatment processes used to achieve primary, secondary, and advanced wastewater treatment.

He is frequently retained as a consultant and has reviewed the technical features and expected economic performance of milestone public/private partnerships.

Relevant Project Experience

Bajagua Wastewater Treatment and Water Reuse Project

Confidential Client, Tijuana

Project Manager. Mr. Bushley is managing the development of wastewater treatment/disposal alternatives as well as a number of related technical issues for the Tijuana Master Plan. To date, R. W. Beck's work includes: developing an overall project implementation plan, technical assistance to support concession negotiations, preliminary engineering, cost estimating, preparation of an environmental information document, and preparing a draft design-build-operate RFQ for the project.

Cadereyta Pemex Refinery Wastewater Services

Chase Manhattan Bank/Monterrey, Mexico

Project Manager. Mr. Bushley is serving as project manager for an independent review and the construction monitoring of the state-of-the-

art wastewater treatment plant being constructed under a design-build-operate-transfer (DBOT) approach for the Cadereyta Refinery near Monterrey, Mexico owned by Mexico's PEMEX oil cartel. This consists of a 10 mgd treatment plant that will purify water for reuse in the refinery. The waste streams include municipal wastewater from a nearby city, refinery wastewater, and runoff from the refinery site. The treatment processes include biological, physical/chemical, reverse osmosis, evaporation, and crystallization to recover all of the wastewater and to treat it to a level acceptable for reuse in the refinery process, boilers, and cooling towers.

The project is being developed under an agreement between PEMEX and a private contractor. The plan was built during a 24-month construction period, and the contractor will operate it for a 12-year period, and then either deliver the plant to PEMEX or the agreement may be renewed.

Pemex Minatitlan Refinery Wastewater Services

ABM AMRO Bank/Minatitlan, Mexico

Project Manager. Mr. Bushley was responsible for a technical and economic review of a wastewater treatment plant at the Minatitlan refinery. The plant actually consists of two separate treatment systems, one for refinery wastewater and the other for sewage from the City of Minatitlan. The refinery waste stream averages 5 mgd and receives biological and physical chemical treatment followed by microfiltration and reverse osmosis. The raw municipal sewage is given biological treatment followed by filtration. All of the treated municipal and refinery wastewater is reused as cooling water in the refinery processes.

Since biological sludge is classified as hazardous waste in Mexico, the contractor has elected to incinerate the sludge so the ash can be disposed to a municipal landfill. Mr. Bushley is currently monitoring the final design and construction of the project.

The project is being implemented by a private contractor under a concession agreement with PEMEX. This includes a two-year construction period followed by operation for 12 years. At the end of the contract, the facilities will either be delivered to PEMEX or the company may decide to renegotiate the contract for an additional operating period.

Monterey County Water Resources Agency

Credit Local De France/Monterey, California

Project Manager. Mr. Bushley recently served as the project manager for an independent review on behalf of Credit Local de France for a water reuse project near Monterey, California. This $75 million project uses effluent from a regional wastewater treatment plant, provides tertiary treatment with filtration, and then delivers 30 mgd of flow to a system irrigating 12,000 acres of food crops in the area. The bank was lending money to the project on a nonrecourse basis and needed to confirm the technology and operating performance of the system.

Juarez Wastewater Project

North American Development Bank/Juarez, Mexico

Project Manager. Mr. Bushley was responsible for an independent engineering review of two wastewater treatment plants for Juarez, Mexico as well as certain supplementary works to reroute the sewage to the new plants. The plants will provide advanced primary treatment in accordance with Mexican standards to approximately 87 mgd of wastewater from the 1.1 million residents of Juarez. The review evaluated the treatment plant design, the construction approach, proposed operation and maintenance, and the level of construction and operating costs projected in the build/operate/transfer (BOT) contract for the treatment plants. Working in concert with the North American Development

Bank, R. W. Beck prepared a financial model for the expected performance under the BOT agreement considering the sources and application of funds for the project.

Madero Pemex Plant

Chase Manhattan Bank/Tampico, Mexico

Project Manager. Mr. Bushley served as the project manager for the independent review of a wastewater treatment plant being designed and constructed to reuse process wastewater from the Madero Refinery owned and operated by PEMEX, the Mexican oil cartel. The treatment plant receives process wastewater, boiler blowdown, and spent cooling water from the refinery, which is supplemented by surface water from a neighboring river. The plant includes biological, physical/chemical, filtration, reverse osmosis, and evaporation/ crystallization processes to treat the water so that it can be reused in the refinery. Mr. Bushley is currently providing construction monitoring services for this facility.

Cranston Wastewater Project - John Hancock Mutual Life Insurance Company, 2006 Annual Review

City of Cranston, Rhode Island

Project Manager. R. W. Beck performed Independent Engineer services at the start of this project, with a requirement for an annual review. The project included improvements to the City of Cranston, Rhode Island sewer system and treatment facilities, as well as the operation and maintenance of the facilities for a 30-year period.

Our Annual Report was prepared pursuant to the terms and conditions set forth in the Professional Services Agreement dated October 24, 1997 between R. W. Beck and the John Hancock Mutual Life Insurance Company. The scope of the annual review included:

- Conducting an annual site visit of the project to observe the condition of the facilities and the operation of the project.
- Reviewing the general compliance of the performance of the Company with the terms of the Service Agreement.
- Reviewing the annual operating budget and major maintenance plan for the purpose of commenting on whether the operation and maintenance expenses are reasonable and necessary in accordance with the applicable agreements and in accordance with good wastewater practices.
- Determining whether or not revenue forecasts are reasonable.
- Preparing and submitting an annual report.

Yakima Wastewater Project

City of Yakima, Washington

Project Manager/Principal-in-Charge. Mr. Bushley served as the project manager, and later as the principal-in-charge, for the $30 million Yakima wastewater project. This program began with the preparation of a facilities plan and special studies, which recommended a regional treatment plant. The project subsequently included the design and construction management of sewer interceptors and a regional wastewater treatment plant to serve a population of 100,000. Mr. Bushley's services included crafting a four-party agreement for participation in the regional treatment plant, projecting staffing levels and organization for the plant, conducting a sewer rate study, and preparing an industrial cost recovery report.

During the feasibility planning phase, Mr. Bushley investigated the feasibility of applying treated effluent to 3,200 acres of arid land, creating a grass crop that would be used for grazing cattle. The

project also included the design and construction of an 80-acre spray field for the application and treatment of industrial wastewater. The cattle grazing was coordinated with the operation of the spray field.

Water and Wastewater Services

Brownsville Public Utilities Board, Texas

Project Manager. Mr. Bushley prepared a water master plan for the Brownsville Public Utilities Board. The plan included source evaluation, analysis of water treatment facilities, hydraulic modeling of the water distribution system, preparation of a five-year capital improvement program, and review of service policies. The study addressed future growth, forecasting a population of approximately 200,000 by the year 2005. The plan also involved examining unusual water quality issues associated with using the Rio Grande River as a source of supply. R. W. Beck continues to serve as consulting engineer for the Brownsville Public Utilities Board. In this capacity, Mr. Bushley has prepared engineers' reports for financing improvements to the Board's water and sewer systems and has conducted periodic reviews of system operations and performance.

Lower Snohomish Basin Wastewater Management Study

Snohomish County, Washington

Project Manager/Partner-in-Charge. Mr. Bushley served first as project manager and later as principal-in-charge for a wastewater management study of the metropolitan Everett area. The study involved 11 different sewerage agencies serving a population of approximately 150,000. The scope of the investigations included projecting wastewater collection and treatment requirements for this rapidly growing area, developing alternatives for regionalizing treatment, and recommending implementation plans. A special study was conducted to investigate the feasibility of joint treatment of wastewater from Scott Paper Company's Everett plant with municipal wastes. The scope also included extensive environmental studies with water quality modeling of the Snohomish River estuary.

Richland Water and Sewer Services

City of Richland, Washington

Project Manager/Partner-in-Charge. R. W. Beck has served as water and wastewater consultant to the City of Richland since 1976. Mr. Bushley initially served as the project manager for the preparation of wastewater facilities and sewer plans for new sewer interceptors and a new City wastewater treatment facility. He later served as partner-in-charge for the design and construction of these facilities. Mr. Bushley was also involved in sewer rate studies and prepared the engineer's report for financing the $25 million project.

At the present time, Mr. Bushley and R. W. Beck are involved in the design and construction management of approximately 12 miles of large-diameter water mains and sewer interceptors. Mr. Bushley is serving as the partner-in-charge for this work. He has also served as the project director for the preparation of comprehensive water and sewer plans for the City of Richland.

Comprehensive Water Plan and Operation Analysis

Los Alamos County, New Mexico

Project Manager. Mr. Bushley directed the preparation of a comprehensive water plans for Los Alamos County in New Mexico. Recently, he was retained by the U.S. Department of Energy to study management and technical alternatives for improving the efficiency of the water supply system serving the DOE laboratories and the County.

Water and Wastewater System Services

Servicio Autonomos Nacional Aqueductos y Alcantarillados, Honduras

Project Engineer/Systems Analyst. Mr. Bushley participated in extensive strategic planning and management studies conducted by R. W. Beck over a five-year period for the Servicio Nacional Aqueductos y Alcantarillados. His responsibilities included reviewing the system capital programs, the condition of the facilities, system operation, and the organization for managing and operating water system facilities. The primary emphasis was on the water system serving the capital, Tegucigalpa. As part of the services, Mr. Bushley and R. W. Beck also reviewed and provided advice on other water and wastewater systems being developed and operated by SANAA.

Water and Wastewater System Services

Island County, Washington

Project Manager. Mr. Bushley has served as consultant to Island County for more than 25 years in planning and developing water and wastewater service for two islands in the Puget Sound. This has included preparing comprehensive plans, feasibility studies for local and regional service, design and implementation programs for improvements, and management approaches for county-wide service. The challenge is providing water and sewer service to a number of separate systems around the islands, many of which have inadequate water supply and must discharge treated wastewater into a sensitive marine environment.

John B. Christopher, P.E.

Southern Methodist University
B.S. in Civil Engineering

University of Texas, Austin
M.S. in Environmental Health Engineering

Mr. Christopher has more than 30 years of experience as a project manager and project engineer providing planning, design, construction management, and value engineering services for a variety of new, expanded, and/or retrofitted wastewater facilities. His background includes all phases of project development from the conceptual planning stage through the construction contract administration phase.

Mr. Christopher has served as an instructor of material science at the community college level and provided expert witness testimony before regulatory agencies. He is also a former President of the Southern California Chapter of the Society of American Value Engineers. In addition, Mr. Christopher was co-chair of the Wastewater Committee for the 2006 California ASCE Infrastructure Report Card, and served on the Wastewater Committee for the 2005 San Diego ASCE Infrastructure Report Card. He has recently served as co-editor for one chapter of ASCE's Manual 60 – Gravity Sewer Design and Construction. Mr. Christopher is a Registered Civil Engineer in the State of California.

His experience includes the repair, rehabilitation, and expansion of older facilities to meet current codes, standards, or capacity requirements. Several projects have also involved the upgrading of facilities due to regulatory compliance issues, including detailed evaluation of existing facilities to achieve the most efficient use of available funds.

Mr. Christopher has designed a wide range of water/wastewater facilities ranging from pipelines using trenchless technology to Title 22 advanced wastewater treatment facilities with biological and chemical nutrient removal for live stream discharge. He has also served on value engineering teams for large design projects. Mr. Christopher has performed more than 30 designs of wastewater treatment plants, most of which produced recycled water, and 60 wastewater lift/pump stations.

Mr. Christopher's experience includes the repair, rehabilitation, or expansion of older facilities to meet current codes, standards, or capacity requirements. Several projects have also involved the upgrading of facilities due to regulatory compliance issues including detailed evaluation of existing facilities to achieve most efficient use of available funds.

Relevant Project Experience

Design Review of Wastewater Treatment Plant

City of Rialto, California

Project Manager. Mr. Christopher was the leader of the recent design review for the expansion of the City's 6-MGD wastewater treatment plant. In this capacity he became aware of various facets of the City's wastewater infrastructure. More importantly, he also became aware of the unique opportunities created by the City's approach to working with private entities such as Chevron. He hopes to continue exploring these

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types of opportunities with the City in the creation of a planning document that reflects the creativity of the City's vision.

B 649 Wastewater Pump Station Rehabilitation at Naval Air Station North Island, San Diego

San Diego Gas and Electric, California

Project Manager. With R. W. Beck serving as the design engineer for this design build project, Mr. Christopher was responsible for providing scoping services and project direction for retrofitting of an existing wastewater pump station for the purpose of increase energy efficiency and minimizing maintenance manpower requirements. Work involved providing new high efficiency motors and pumps, inlet and discharge headers, ventilation systems and various wet well and dry well modifications.

Bajagua Wastewater Treatment and Water Reuse Project

Confidential Client/Tijuana, Mexico

Planning and Technical Advisor. R. W. Beck is serving as the owner's engineer for the development of a 59-mgd secondary wastewater treatment plant for Tijuana, Mexico. The Bajagua project includes a 25-mgd pump station, a 34-mgd pump station, 12 miles of pipelines to deliver primary-treated and raw wastewater to the treatment plant site in Tijuana, and a return gravity pipeline to deliver the treated wastewater to an existing ocean outfall.

Project goals include protecting the Tijuana estuary, reducing ocean pollution in Mexico and the United States, and providing water for industrial reuse in Tijuana, which suffers from a water supply shortage. R. W. Beck has assisted the owner with these and a number of related technical issues. R. W. Beck 's work includes: developing an overall project implementation plan, technical assistance to support concession negotiations, preliminary engineering, cost estimating, preparation of an environmental information document, and preparation of a draft Design-Build-Operate RFQ for the project.

The cross-border aspects of the project pose a number of complex regulatory, technical, and procurement challenges. For example, the owner will need concession agreements from the United States and Mexico, as well as a DBO contract for the design, construction, and operation. Assuring that project technical, economic, and legal risks are reasonably allocated via these agreements will be key to the success of this project. The project also involves complex regulatory issues such as the applicability of NEPA and CEQA to the contracts and the facilities developed under those contracts both in the United States and Mexico.

Wastewater Master Plan

Lafayette Utilities System, Louisiana

Project Manager. This Master Plan is a comprehensive review of the utility's system. Mr. Christopher will be leading the effort to streamline and simplify their collection system that, like most systems, has grown over time in an irregular fashion as it was driven by development. One focus is the reduction of O&M costs. Potential cost reductions are anticipated in the elimination of pump stations and the re-consideration of drainage basins to confirm that wastewater is being handled in the most cost effective manner.

Palm Springs Wastewater System Appraisal

City of Palm Springs, California

Project Manager. Mr. Christopher was responsible for developing facilities replacement costs for the appraisal of existing wastewater collection and treatment facilities owned and operated by the city.

Wastewater system facilities included an 11 mgd wastewater treatment plant, five sewage lift stations, and approximately 230 miles of gravity sewers/force mains.

Livermore Highlands WWTP Study

Pardee Homes, California

Project Manager. R. W. Beck developed and screened planning/engineering alternative concepts for providing wastewater treatment for a housing development of 2,450 new homes. Mr. Christopher served as the client interface and provided planning and engineering direction for the project team. Project work included review of disposal issues, performing a recycled use analysis, review of treatment process alternatives, and preparation of a final report. The recycled use analysis includes a cost analysis to determine the cost of building a treatment plant, versus the cost of tying into the Cities existing plant.

Meadowood Wastewater Treatment Plant Study and Design

Pardee Homes, California

Client Liaison. R. W. Beck prepared a facility study and the provided preliminary design and permitting for the upgrades to the existing Rainbow WWTP as part of a large single-family home development. Mr. Christopher served as the client liaison and provided planning and engineering direction for the project team. Work included wastewater treatment alternative evaluation, capacity assessment, process selection, site development, inlet piping assessment, and preliminary hydraulic analysis. The plant capacity of the first phase was estimated to be 0.667 mgd and the ultimate phase at 1.3 mgd. Permitting agencies included the Regional Water Quality Board and Air Pollution Control District.

Additional Projects

Wastewater Treatment Plants

- MILCON P-529 Sewage Effluent Compliance Study and Design (1999), US Navy Southwest Division/MCB Camp Pendleton, California
- Improvements to Sewage Treatment Plant No. 1 (1996), US Navy Southwest Division/MCB Camp Pendleton, California
- Improvements to Sewage Treatment Plant No. 2 (1996), US Navy Southwest Division/MCB Camp Pendleton, California
- Henry N. Wochholz WRP Expansion (1994), Yucaipa Valley Water District, California
- San Luis Rey WWTP Phase 1 Modifications (1995), California
- Sun City Regional WRP (1987), Eastern Municipal Water District, California
- Sun City WRP Optimization (1991), Eastern Municipal Water District, California
- La Salina Lift Station and Odor Control, California (1993)
- Perris Valley Regional WRF Optimization (1988), Eastern Municipal Water District, California
- Oso Creek WRP, Santa Margarita Water District, California (1991)
- Temecula Valley WRP Exp. 1 and 2, Eastern MWD, California (1991)
- San Luis Rey 1 mgd, AWT, City of Oceanside, California (1994)
- Coachella Valley WRP 10 – Phase 5, California (1995)

- Perris Valley WRP Exp 1, Eastern MWD, California (1991)
- Hemet-San Jacinto WWTP, Eastern MWD, California (completed prior to 1990)
- Sunneymead MRP, Expansion No. 4, Eastern MWD, California (1990)
- La Salina WWTP .5 MGD Package Treatment Plant (1994), California
- San Luis Rey Hydraulic Modifications, California (1995)
- Repair Plant on San Clemente Island, Military Southwest Division, California
- Repair Digester Covers and Shut-off Valve, Camp Pendleton, California

Papers and Presentations

Procurement Approach for MBR Wastewater Treatment Plants, Onsite Wastewater Treatment, The Journal of Decentralized Wastewater Treatment Solutions, November-December 2005.

Rincon's New Recycled Water Distribution System, Presented at the California Section Water Reuse Association 2004 Annual Conference, Los Angeles, California February 27, 2004.

Development of the Rincon del Diablo Municipal Water District Recycled Water System, Escondido, California, presented at the AWWA Cal-Nevada Section 2003 Fall Conference, San Diego, California, October 6-9, 2003.

Development of the Rincon del Diablo Municipal Water District Recycled Water System, Escondido, California, presented at the Water Reuse Association California Section 2004 Annual Conference, Universal City, California, February 25-27, 2004.

Development of the Rincon del Diablo Municipal Water District Recycled Water System, Escondido, California, presented at the San Diego County Water Works Group, Oceanside, California, July 21, 2004.

Disposal of Treated Sewage Effluent Using Injection Wells, Design versus Operational Performance, Las Flores Basin, Camp Pendleton, California, presented at 10th Biennial Symposium on Artificial Recharge of Groundwater, Tucson, Arizona, June 7-9, 2001.

Designing a Selector for Activated Sludge, presented at CWPCA Southern Regional Training Conference, Anaheim, California, November 1991.

Carneros Pumping-Generating Facility, California, presented at Energy 87, ASCE Energy Specialty Conference, Atlantic City, New Jersey, April 1987.

What to Consider in Selecting a Consultant for a Hydroelectric Facility, presented at Association of California Water Agencies Fall Conference, San Diego, California, 1985.

Virus Concentration Using Diatomaceous Earth and Bentonite Filtration, Masters Thesis, University of Texas, Austin, Texas, October 1976.

Experience Summary

Terry Gould has 35 years of experience in a broad range of environmental engineering projects including wastewater and water resources. He worked with the firm for over 31 years before taking a 2-year leave of absence to serve in the Peace Corps in Mexico. Since returning as a vice president of the firm, his specific responsibilities primarily include acting as the Principal-in-Charge, Technical Director, Senior Advisor or Project Manager on major projects. He also continues in a service role as an at large Board Member of the Eugene-Springfield Metropolitan Wastewater Management Commission (MWMC).

Assignment

NPDES Permit/Future Issues

Education

M.S., Civil Engineering (Environmental), Stanford University, 1971

B.S., Civil Engineering, Stanford University, 1971

Registration

Professional Engineer No. 6578, Idaho, 1991

Professional Engineer No. 19138, Arizona, 1986

Professional Engineer No. 8268, Oregon, 1974

Professional Engineer No. E141-62, Wisconsin, 1974

Experience

35 years

Joined Firm

1973

Rejoined 2006

Relevant Expertise

- *Wastewater planning and design*
- *Water quality planning and design*

Relevant Experience

New Plant Siting Study, Water Environment Services (WES), Clackamas County, Oregon

Senior Advisor. This ongoing project involves predesign of a new plant for Clackamas County Service District No 1. to ultimately replace the existing Kellogg Creek Water Pollution Control Plant. It will involve development of the technical information necessary for the Site Selection Steering Committee.

Kellogg Treatment Plant Upgrades, WES, Clackamas County, Oregon

Task leader, wet weather permit issues. Lead the discussion with the Department of Environmental Quality concerning flow management provisions of the Kellogg NPDES permit.

Design/Build Solids Management Program, WES, Clackamas County, Oregon Principal-in-Charge. This project included a new dewatering centrifuge, digester mixing, and gravity thickeners.

Martin Slough Pump Station and Force Main, City of Eureka, California Principal-in-Charge. Brown and Caldwell provided predesign services for a 13-mgd pump station and 9,000 feet of 28-inch-diameter force main with total estimated construction cost of approximately $13 million. The force main alignment includes a 1,600-foot crossing of a slough and Highway 101 by horizontal directional drilling as well as three other highway, slough, and railroad crossings by bore and jack methods. The alignment passes through numerous seasonal wetlands requiring extensive environmental permitting work, and passes near businesses along Highway 101. Capital cost savings of using a single pipe are being weighed against operations and maintenance cost savings of using a dual force main to accommodate wide flow range. The pump station will be wet well/dry well with self-cleaning trench-style wet well. Odor control facilities are included for both the pump station and force main. The project included extensive hydrologic modeling efforts to develop flows from wet-weather and future growth.

Collection System Analysis and Facilities Plan Update, City of Eureka, California

Senior Advisor. This ongoing project will include not only an analysis of the collection system but also an update of the Eureka WWTP facilities

plan to assess the need for expansion and upgrade. Terry is facilitating the NPDES renegotiations for the City.

WWTP Upgrade, City of Crescent City, California
Project Manager. The project design elements included a membrane bioreactor to generate effluent quality adequate for golf course irrigation, a new outfall with greater hydraulic capacity, liquid stream processing capability for high wet weather flows and solid processing upgrades. Terry facilitated the NPDES renegotiations for the City.

Wastewater Reclamation Plant (5-mgd) Design, City of Eureka, California Project Manager. The project scope involved a 150-acre multifaceted wetlands system and a TF/SC process. Subsequent to the plant construction and startup, an odor control project was implemented. Design of a 6-mgd secondary treatment plant was also included.

Water Reclamation Plant (4-mgd) Design, Turner Ranches Water and Sanitation Company, Mesa, Arizona
Project Manager. This plant used the TF/SC process and had significant odor control features, including Brown and Caldwell's first recycled air trickling filter system.

Wastewater Facility Plan, City of Sweet Home, Oregon
Principal-in-Charge. Brown and Caldwell managed a planning effort to determine how best to reduce I/I and treat peak wet weather flows to bring the city into compliance with National Pollutant Discharge Elimination System permit conditions and a DEQ order.

Secondary Treatment Plant Design for the Greater Vancouver Regional District, Vancouver, British Columbia, Canada
Board of Control. This project included the design of two secondary treatment plants, both employing the TF/SC process with a total construction cost in excess of $400 million. The program was implemented over a 10-year time frame and included multiple bid packages. Given the location of both of these plants, odor management was an important aspect of the effort.

Integrated Water Quality Management Strategy, City of Klamath Falls, Oregon Project Manager. Brown and Caldwell worked with the City of Klamath Falls to develop a comprehensive strategy to address ammonia, nutrient, dissolved oxygen, and temperature total maximum daily loads (TMDLs) on the lake and the river, upcoming Phase II stormwater permitting requirements, and decisions about where to discharge recycled wastewater to meet both quantity and quality needs. To help provide a scientific basis for the strategy, Brown and Caldwell designed a water quality monitoring program for the river and is evaluating the results of the ongoing program. Brown and Caldwell also acted as an advocate for the city in the TMDL process, reviewing existing data and information, collecting and evaluating new data from the river, and working directly with DEQ to review draft TMDL documents and provide input.

Jessica Guerrette, P.E.

Cornell University
B.S. in Civil and Environmental Engineering

Ms. Guerrette has 14 years of experience in surface water management, specializing in hydraulic analyses, computer modeling, stormwater facility design, and temporary erosion and sediment control (TESC). Ms. Guerrette has been responsible for performing hydrologic and hydraulic analyses using computer models developed for stormwater drainage systems, drainage basins, and culvert crossings. She is also skilled in evaluating flooding problems and development and design of erosion and sediment control plans. Ms. Guerrette has provided engineering support for stormwater planning projects. She has also provided construction assistance for TESC. She is a member of the American Society of Civil Engineers and the American Water Works Association.

Relevant Project Experience

Pump Station and Wastewater Treatment Plant Improvements

City of Taunton, Massachusetts

Civil Engineer. Ms. Guerrette conducted hydraulic analyses to evaluate three alternative treatment trains for a proposal to design improvements to this pumping station and wastewater treatment plant. She determined the required weir elevations in the proposed aeration tanks in order to increase the existing capacity from 17.4 mgd to 22.4 mgd.

Modifications to Hayden Udall Water Treatment Plant

City of Tucson, Arizona

Civil Engineer. Ms. Guerrette was involved in preparing contract documents for modifications to this $70 million treatment plant required because of design and construction deficiencies during the original contract. The deficiencies included cracks in the water-bearing concrete tanks, site subsidence, site drainage problems, problems with the ozone disinfection system, and contamination of the finished water reservoir. This project includes design for structurally retrofitting the filter complex, constructing an access tunnel for sampling ozone residuals, installing soil drains to alleviate saturated soil conditions, and installing sunshades to shield the ozone piping from the sun.

Water Treatment Facility

City of Danbury, Connecticut

Civil Engineer. Ms. Guerrette served as engineer for the design of a 5.5-mgd water treatment facility that incorporated dissolved air flotation, granular activated carbon filtration, and chemical feed systems. She prepared a hydraulic profile and backwater curves for the plant; designed sewers for plant residuals; performed storm drainage calculations for the application for site plan approval; conducted a two-season treatability study; and prepared a report on combined raw water sources to evaluate chemical requirements, settled water quality, filtered water quality, TOC removal, particle counts, and disinfection by-products. Dissolved air flotation was simulated using bench-scale equipment.

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Water Treatment Plant

City of Augusta, Maine

Civil Engineer. Ms. Guerrette conducted a coagulation study to screen ferric chloride and ferric sulfate as coagulants as a comparison with the current alum treatment. She evaluated settled water quality, filtered water quality, TOC removal, particle counts, disinfection by-product formation potential, and sludge characteristics. Ms. Guerrette was also responsible for preparing the final report.

Water Treatment Plant

City of Lawrence, Massachusetts

Civil Engineer. Ms. Guerrette prepared a report summarizing short- and long-term recommendations for the upgrade of this 15 mgd water treatment plant. She prepared specifications for the cleaning and inspection of the 3 million-gallon water treatment plant clearwell, and prepared an application for a waiver from the filtration requirement of the Surface Water Treatment Rule for an uncovered finished water reservoir.

Tracer Study

Massachusetts-American Water Company

Civil Engineer. Ms. Guerrette conducted a tracer study to confirm that the 7 mgd water treatment plant meets the disinfection contact time requirements specified in the Surface Water Treatment Rule.

Water Treatment Plant

City of Northampton, Massachusetts

Civil Engineer. Ms. Guerrette performed calculations for determining filter and clarifier backwash rates, static mixer size, pipe sizes, headloss, and hydraulic profile for the design of this 6.5 mgd water treatment plant. She also provided the design for the preliminary site layout.

Water Treatment Plant

City of Augusta, Maine

Civil Engineer. Ms. Guerrette determined the concentration of sludge solids from the water treatment plant based on solids in the raw water and solids produced by coagulation.

Water Treatment Plant

City of Danbury, Connecticut

Civil Engineer. Ms. Guerrette prepared the hydraulic profile for this 5.3 mgd water treatment plant to evaluate the existing rapid mix, flocculation, sedimentation, and filtration processes in order to recommend required plant upgrades.

Water Distribution System

Massachusetts-American Water Company

Civil Engineer. Ms. Guerrette conducted a water distribution system analysis to generate system curves for sizing the raw and finished water pumps for the Hingham water treatment plant. She also calibrated the model and prepared a letter report summarizing the results.

Pump Station and Sewer Distribution System

City of Ridgefield, Connecticut

Civil Engineer. Ms. Guerrette designed the layout for 195 gpm pump station, two miles of sewer, and a 1,500-foot force main.

Experience Summary

Jim Hansen has over 25 years of engineering experience in the planning, design, operations and maintenance (O&M), and general management of municipal sanitary and stormwater infrastructure facilities and programs. Jim's project experience includes all facets of sanitary and stormwater collection system management, including master planning, pipe inspection and condition assessment, sewer system design and rehabilitation, pump station rehabilitation and design, maintenance program development and optimization, stormwater utility development, and regulatory compliance, as well as other water resource and infrastructure projects. In addition, he has been assisting agencies/cities with establishing and implementing asset management programs for their sanitary and stormwater collection systems with a focus on improving level of service, maximizing efficiency, and optimizing the public's investment in the infrastructure.

Assignment

Collection Systems

Education

B.S., Civil Engineering, Oregon State University, Corvallis, Oregon, 1983

B.S., Biology, Salisbury State College, Salisbury, Maryland, 1974

Registration

Professional Engineer No. 6965, Idaho, 1993

Professional Engineer No. 34027, Washington, 1997

Professional Engineer No. 13681PE, Oregon, 1987

Experience

25 years

Joined Firm

1991

Relevant Expertise

- Sewer master planning and CIP Development
- Application of asset management principles to collection system management
- O&M program optimization
- Sewer and pump station design
- Rate and SDC development

Sanitary Sewer Master Plan, City of Newberg, Oregon
Project Manager. Brown and Caldwell was retained to update the Sanitary Sewer Master Plan for the City of Newberg. A new capacity analysis was performed that predicts flows for existing and proposed future build-out conditions. From this analysis and consideration of structural and operational issues within the system, a capital improvement program (CIP) was developed to accommodate the City's growth through 2040.

The hydrologic model was calibrated to flow monitoring data and peak design events were developed based on a historical rainfall data analysis. A GIS-based, fully-dynamic hydraulic model was used to predict the response and required pipe sizes for the existing trunkline system under current and future peak flow events. A focused infiltration and inflow rehabilitation program was developed with systematic, long-term monitoring, collection system maintenance, and condition assessment. The existing operations and maintenance program for the collection system was assessed and recommendations made for improvement. This analysis recommended the hiring of additional FTEs in order to satisfy CMOM requirements.

Capacity, Maintenance, Operation, and Management (CMOM) Assessment/Compliance Strategy, City of Portland
Project Task Manager. Brown and Caldwell assessed the city's wastewater collection system management program in regards to the EPA CMOM requirements. Recommendations were made to improve program performance and effectiveness that will substantially help the city comply with the regulations. Currently, Jim is leading an effort to develop a CMOM Program Report documenting all city activities that will be submitted to EPA this fall.

Sanitary Sewer O&M Program, Business Practices Assessment, City of Albany, Oregon Project Manager. Brown and Caldwell assessed current business practices employed for the management of the sanitary collection system. The city's methods of inspection, condition assessment, and rehabilitation and replacement (R&R) decisions for the sanitary sewer system were reviewed. A process was recommended for assessing the structural and operational condition of the sanitary sewers and for using that information along with other risk and consequence of sewer failure information to develop a priority ranking of sewer R&R projects. The

results of this effort will help the city improve customer service and comply with upcoming sanitary sewer over-flow regulations.

Collection Systems, Business Practices Assessment, Clean Water Services, Washington County, Oregon Project Manager. Brown and Caldwell was retained to provide an assessment of current O&M activities performed on the wastewater and stormwater collection systems. The assessment process compared current practices with those of highly performing utilities that use an asset management approach. The comparison provided the basis for O&M program recommendations. When implemented, the recommendations will help Clean Water Services achieve program goals, including improved level of service, regulatory compliance, protection of safety and health of public, and protecting the environment. Follow-on activities included the inspection and condition assessment of over 300,000 feet of their trunk line system.

Sanitary Sewer Master Plan, City of Medford, Oregon Project Manager. Jim developed a comprehensive sanitary sewer master plan for the city. The master plan was based on an asset management/CMOM perspective that focused on level of service, cost of service, infrastructure value, and regulatory compliance. Phase 1 of the project assessed the current program, identified areas requiring improvement, and defined a strategy for developing the sanitary master plan. An inspection and condition assessment program was developed based on the NASSCO PACP system. The priority ranking process for CIP and rehabilitation projects was developed based on concepts of risk and consequence of failure. Phase 2 developed the master plan and established the program and tools for managing the city's collection system assets.

Conveyance System Management Study, Clean Water Services Team Member. Jim participated as part of a team organized by Shaun Pigott & Associates to assist Clean Water Services and partner cities with improving the structure and delivery of conveyance system maintenance within the service area. The results of the project helped clarify conveyance system maintenance responsibility, identified the most efficient maintenance practices, determined optimal crew configurations and standards, established a common approach to maintenance job costing, and quantified cost-effective service levels for maintenance activities.

Sanitary Sewer Overflow (SSO) Compliance, Orange County Sanitation District, Orange County, California Project Engineer. The California Regional Water Quality Control Board specified in the district's General Waste Discharge Requirements a number of activities that are required to lessen the potential for SSOs. Brown and Caldwell was retained to assist in complying with the requirements. Required activities included development of an SSO response plan, update of a worker training program, evaluation of adequacy of administrative structure, development of a sanitary sewer master plan, development of a fats, oils, and grease program, performance of a capacity, management, operations and maintenance assessment, development of an implementation plan for portable aeration, development of a reporting process for exfiltration, development of standard O&M procedures, and evaluation of the current management program.

Experience Summary

Tom Lebo has 29 years of experience in operations and construction of process facilities. His responsibilities include construction management, project management, project engineering, field supervision, and estimating. Tom served as Brown and Caldwell's construction manager on numerous water treatment and wastewater treatment plant upgrades. Tom is currently providing construction management for two projects that are part of the Salmon Creek Wastewater Management System Phase 4 Expansion for Clark County, Washington.

Assignment

Constructability/Estimating

Education

B.S., Construction Engineering, Iowa State University, 1979

Experience

29 years

Joined Firm

1992

Construction Management Services, Klineline Pump Station Project and Phase 4 Expansion of the Salmon Creek Wastewater Treatment Plant, Clark County, Washington

Construction Manager. Tom is providing construction management for the Klineline Pump Station and the Salmon Creek Wastewater Treatment Plant Phase 4 Expansion. Both of these projects are part of the Salmon Creek Wastewater Management System Phase 4 Expansion for Clark County, Washington. Klineline Pump Station is an 18.4-million gallon per day peak flow sewage pumping station. It is being constructed within an existing county park . It includes a reinforced concrete wet well/dry well and superstructure, 5-250 hp raw sewage pumps, standby generator, underground piping, and a residence for the park watchperson. The Salmon Creek WWTP Phase 4 Expansion Project will increase the capacity of the Salmon Creek Wastewater Treatment Plant from 10.3 million gallons per day to 14.95 million gallons per day. It includes a new primary clarifier, aeration basin, secondary clarifier, digester mixing improvements, increasing the capacity of the UV disinfection system, addition of effluent pumps, and other process improvements at the existing treatment plant. Both projects are under construction at the same time and are expected to be completed by mid 2009.

Construction Management Services, Little Cottonwood Water Treatment Plant, Metropolitan Water District of Salt Lake and Sandy, Utah

Construction Manager. Tom provided construction management services for all work at the Little Cottonwood Treatment Plant during a 3 year, $35 million program to upgrade process and increase plant capacity. The project includes conversion of the facility from chlorine to ozone for primary disinfection, adding grit and screening facilities, addition of a 10-million-gallon finished water storage reservoir, and 120 million gallons per day finished water pumping station.

Design/Build Construction Services Biosolids Facility Upgrade Project, Clackamas County, Oregon

Project Manager. Tom was responsible for design, procurement, and construction of a biosolids thickening and dewatering facility for the Tri-City Water Pollution Control Plant (WPCP) located in Oregon City, Oregon. This $4.45 million project added two gravity belt thickeners for waste activated sludge and recuperative thickening, and a high speed centrifuge for dewatering. The project also included a truck loading area,

improvements to the existing digester mixing, electrical, controls, start-up, testing, and modifications to the computerized operations and maintenance manual.

Construction Management Services, Facility Improvements Project, City of Woodburn, Oregon
Construction Manager. Tom provided construction management during the renovation and expansion of the existing treatment plant. The project included construction of a new headworks, an upgrade to the two existing primary clarifiers, and the addition of a complete secondary treatment system, including aeration basins, blower building, three secondary clarifiers, effluent filters, and ultraviolet (UV) disinfection. Solids processing was also upgraded with renovated digesters, new dissolved air flotation thickeners, new facultative sludge lagoons, and new storage lagoons.

Construction Management Services, Facility Upgrade, City of Florence, Oregon
Construction Manager. Tom provided construction management services for the $10 million upgrade of the treatment facility comprised of major improvements and the expansion of existing activated sludge plant. Upgrades included new headworks, aeration, secondary clarifiers, UV disinfection, outfall, fixed submerged cover anaerobic digester, and centrifuge dewatering.

Construction Management Services, Green River/Rock Springs Water Plant, Green River, Wyoming
Construction Manager. Construction management assistance was provided during the construction of this $30 million drinking water treatment facility for the cities of Green River and Rock Springs, and Sweetwater County.

Construction Management Services, Pollution Control Facility Upgrade, City of Grants Pass, Oregon
Construction Manager. This was a design/build, fast-track project to add a second UV disinfection channel to the existing treatment facility. Brown and Caldwell Constructors was the general contractor for design and construction of these improvements.

Construction Management Services, UV Disinfection System Expansion, City of Seaside, Oregon
Construction Manager. Tom provided construction management services for this design/ build project to add a UV disinfection system to the existing treatment facility. Brown and Caldwell Constructors was the general contractor for design and construction of these improvements.

Experience Summary

Henryk Melcer is the Northwest regional senior process engineer for Brown and Caldwell with over 29 years of experience in wastewater treatment plant process analysis. His work has focused on biological treatment systems with and without nitrogen and phosphorus removal, the design of aeration systems, and plant capacity assessment through the use of computer simulation tools, and stress testing of clarifiers and solid handling equipment. His specific design experience includes membrane bioreactors (MBRs), sequencing batch reactors (SBRs), oxidation ditches, nitrification, denitrification, biological phosphorus removal and aeration systems. He has participated in numerous plant designs and upgrades in the Northwest.

Assignment

Process Technical Advisor

Education

Ph.D., Chemical Engineering, University of Birmingham, U.K., 1972

M.Sc., Biological Engineering, University of Birmingham, U.K., 1970

B.Sc., Chemical Engineering, University of Birmingham, U.K., 1969

Registration

Registered Professional Engineer No. 36173, Washington US, 1999

Registered Professional Engineer No. 31301500, Ontario, Canada, 1980

Experience

29 years

Joined Firm

1993

Relevant Expertise

- *Wastewater Treatment*
- *Process Analysis*
- *Biological Nutrient Removal*
- *Membrane Bioreactors*
- *Facility Planning*

Biological Process Analysis and Design

Conducted biological process analysis and design of wastewater treatment facilities in Oregon, Washington and Idaho. The following examples illustrate the range and complexity of processes evaluated:

- Showed, through treatability studies, that the poor perfomance of the 6 mgd ADF Orbal ditch at McMinnville OR (in terms of nitrogen and phosphorus removal) was caused by industrial dischargers.
- Assessment of load sharing between Clackamas County's Tri-City and Kellogg Creek plants, OR to accommodate industrial dischargers using biological process simulators calibrated at the plants.
- Designed anaerobic selectors to control sludge settleability at King County's 108 mgd ADF activated sludge plant in Renton, WA.
- Performance assessment of Department of Correction facilities in Shelton (oxidation ditch), Larch and Clallam Bay (aerated lagoons), Olympic (activated sludge), WA. Designed upgrades to these plants.
- Determined through biological treatability testing that the failure of the City of Tacoma's Central Treatment Plant WA to meet permitted effluent TSS levels was due to the deflocculation of mixed liquor caused by excessively high flows of sludge pressate under dry weather flow conditions.

Plant Capacity Assessments

Over the past decade, developed science-based treatment plant capacity assessments and re-rating that have received approval by the regulatory authorities. The approach includes wastewater characterization, stress testing of primary and secondary clarifiers and solids processing facilities, determination of hydraulic bottlenecks through hydraulic profiling, solids mass balancing, oxygen transfer testing and biological process computer simulation. The information from these tests is used to construct composite capacity charts that provide a progressive disclosure of which unit processes will exceed its capacity and when.

Capacity assessments and re-rating evaluations have been completed for the Cities of Everett (24 mgd ADF), Richland (11 mgd), Sultan (1.5 mgd), and Tacoma (20 mgd), Washington and Redmond (3mgd) Oregon; Kitsap (6

mgd) and Pierce (28 mgd) Counties, Washington, and the LOTT Alliance, Olympia (12 mgd) Washington.

Currently, we are working on the capacity assessment of treatment plants in the Cities of Boise, Idaho, Eureka, California and the Public Utility District of Lakehaven in Washington.

Facility Planning

Provided process analysis of alternative treatment processes for the Facility Plans that were prepared for the Cities of Newberg, Redmond and Portland, Oregon, and Kitsap County, Washington. As part of this analysis, capacity assessments of the Redmond and Kitsap County plants were carried out. Unusual aspects of these plants included the analysis of biological nitrogen removal in the Orbal ditches at the 3 mgd ADF Redmond plant, the control of sludge bulking with an anoxic selector and biological nitrogen removal at the 6 mgd ADF Central Kitsap plant.

Currently, we are working on the Facility Plan for the Columbia Boulevard Wastewater Treatment Plant, Portland Oregon. We are evaluating the applicability of small footprint MBR and MBBR technologies versus conventional activated sludge to determine the best utilization of the limited land available at the treatment plant site.

Membrane Bioreactor Design

Conducted the process design of MBRs for the Cities of Blaine (1.4 mgd ADF) and Sultan (1.3 mgd ADF), Washington, the District of Alderwood, Washington (6 mgd ADF), Crescent City, California (1.0 mgd constant flow), King County Brightwater, Washington (39 mgd ADF), the LOTT Alliance, Olympia, Washington (5 mgd constant flow), and a number of Indian Communities in Washington.

For the District of Alderwood and King County's Brightwater plants, conducted a process analysis of alternative treatment technologies including biological aerated filtration, MBRs, and conventional activated sludge. Developed the concept of using ballasted sedimentation technology and chemically enhanced primary treatment to treat storm flows thereby minimizing the cost of the hydraulically constrained MBRs.

Master Planning

Completed a Master Plan for wastewater treatment facilities for the LOTT Alliance in Olympia Washington. The main plant at Budd Inlet had received a cap on flow discharge so a wide range of options were evaluated to address this constraint, including the complete upgrade of the existing 18 mgd ADF activated sludge plant, the provision of reclaimed water facilities, and the provision of MBR equipped satellite water reclamation plants with indirect aquifer recharge. In all cases, stringent discharge requirements of 3 mg/L of total inorganic nitrogen were applied.

Currently, we are working on the Master Plan for Pierce County, WA. Alternative technologies to produce reclaimed water are being evaluated that include biological nutrient removal, IFAS, MBRs, and reverse osmosis.

Experience Summary

Bill Meloy is Supervising Engineer in Brown and Caldwell's Portland, Oregon, office. He has 45 years of experience in engineering design, the last 34 of which are in wastewater specializing in digestion and cogeneration projects. Bill has managed major projects ranging from pump stations to complete plant design, including energy studies, feasibility studies, design, construction management, and review board participation. He has been project manager for secondary treatment projects for the Columbia Boulevard Wastewater Treatment Plant (CBWTP) in Portland, and cogeneration design lead for West Point WWTP 4.3 MW plant for King County in Seattle, Washington.

Assignment

Cogeneration

Education

B.S., Mechanical Engineering, Oregon State University, 1963

Registration

Mechanical/Environmental Engineer No. 6830, Oregon, 1970

Mechanical Engineer No. 18794, Washington, 1979

Experience

45 years

Joined Firm

1974

King County Power Generation Studies and Design, Seattle, Washington.

Project Technical Lead. Mr. Meloy lead energy studies to developed gas availablility and power requirements for cogeneration. Engine-generator technology was researched for the best fit for digeater gas to provide approximately 2.5 megawatts of power production with a backup engine-generator that could also operate when gas production is significantly higher. It was decided to bid the engine-generators separately and Bill lead the effort to develop the necessary specifications. A number of challenges were faced in the installation design. The system had to fit into and existing building without triggering a seismic upgrade of the building. Very tight noise restrictions had to be met and emissions control was difficult, given the location of the building and the size of the system.

Cogeneration System Evaluation for the Eugene/Springfield Wastewater Treatment Plant.

Project Manager. The study projected gas availablity and resulted in recommendations for upgrading the existing cogeneration system, designed by Brown and Caldwell, to include a backup engine-generator and redundancy in the gas conditioning system. The existing system has an 800 kW GE-Jenbacher engine-generator and a new GE-Jenbacher was recommended to capitalize on plant experience and standardize on spare parts.

Methane Gas Utilization Report, CBWTP, City of Portland

Project Manager. The objective of this preliminary study was to examine two alternative methods of methane gas utilization and determine if they would be cost-effective for the City of Portland. The alternatives were cogeneration and cogeneration and vehicle fuel use. Cogeneration showed the lowest life-cycle cost and a payback period of about 8 years. Based on this, it was recommended that the city monitor the hydrogen sulfide levels in its methane gas and conduct a predesign study for the cogeneration alternative.

Cogeneration Design, Annacis Island Wastewater Treatment Plant, Greater Vancouver Regional District, Vancouver British Columbia, Canada

Project Engineer, Principal Mechanical Designer. For this project, Bill examined alternative engine technologies, which led to the recommendation and selection of the innovative Jenbacher Energiesysteme cogeneration system, resulting in a 3.2-megawatt cogeneration plant. The facility is designed to provide a continuously operating source of on-site electric power in order to meet standby power requirements established in the plant's operating permit. Utilization of digester gas-fueled cogeneration as a means of meeting standby power requirements was demonstrated to be a lower total cost than by simply providing standby diesel powered generator sets. The system is designed to provide power to the influent pumps quickly enough after a power failure to avoid an overflow in the sewer system.

Temperature-Phased Anaerobic Digestion Digester Design, Western Lake Superior Sanitary District, Duluth, Minnesota

Principal Mechanical Engineer. Bill designed the gas management system and sludge heating and cooling systems for this new four-digester thermally-phased anaerobic digestion complex.

Design of Digester Upgrades, WWTP, City of Woodburn, Oregon

Project Engineer. The Woodburn WWTP was upgraded and expanded to accommodate an average dry weather flow of 3.3 million gallons per day (mgd) and a peak hydraulic flow of 16 mgd. The project included conversion of secondary digester to primary, and upgrade of the existing primary digester and new sludge heating systems. The digester complex was upgraded to include gas mixing and a new sludge blending system.

Six Studies of Methane Use as a Vehicle Fuel, a Sales Product, or for Cogeneration

Project Engineer. Clients include:

- City of Eureka, California
- City of Tolleson, Arizona
- City of Salem
- City of Corvallis
- City of Portland
- City of Eugene

Cogeneration System Design, City of Eureka, California

Project Engineer. The City of Eureka's new WWTP was designed with cogeneration engine-generators to take advantage of high revenues offered through special regulations at the time. Heat recovered from the gas engine-generators was used to heat buildings and digesters. No other method of plant heating was necessary.

Fuel Cell Installation Design, CBWTP, City of Portland
Project Engineer. For this project, cutting-edge fuel cell technology was used to produce power for CBWTP. Bill worked with the fuel cell manufacturer to cut fuel pretreatment costs in half. Fuel cells convert waste gas generated by the anaerobic digestion process into electrical power and heat energy. After observing and reviewing two existing fuel cell installations on the East Coast, Bill designed a heat recovery system, which uses the low-grade heat produced by the fuel cell to help heat the anaerobic digesters.

WWTP Digester Gas Utilization Study, Cities of Littleton and Englewood, Colorado
Project Engineer. The study evaluated cogeneration versus selling unscrubbed gas to a power plant, which led to the decision to use cogeneration and design of two 1-megawatt engines with heat recovery for the plant.

Memberships

CECO

American Society of Heating, Refrigerating and Air Conditioning Engineers

Publications

1. "Tapping the Resource and Not the Till," with Floyd W. Collins, Paul L. Eckley, and Eugene D. Johnson, presented at the Pacific Northwest Clean Water Association's annual meeting in Eugene, Oregon, November 1989.
2. "Planning a Cogeneration System for a Wastewater Treatment Plant," The Cogeneration Journal, Vol. 1, No. 1, September 1985.
3. "Eureka, California, Wastewater Treatment Plant-Cogeneration System," presented at the Pacific Northwest Clean Water Association's annual meeting, Vancouver, British Columbia, November 1982.
4. "The Cleaning and Use of Digester Gas as a Vehicle Fuel," presented at the National Conference on Energy Conservation Retrofit of Municipal Wastewater Treatment Facilities, Los Angeles, California, June 1981.

ART MOLSEED, P.E.

Experience Summary

Art Molseed is a Supervising Engineer with Brown and Caldwell. He has 21 years experience in the design and construction support for wastewater treatment systems. Specific tasks have included predesign and design of pumping stations, pipelines, wastewater treatment plants, construction management support, environmental compliance services for industry, pilot studies and plant process evaluations, and odor control studies.

Assignment
Design

Education
M.S., Mechanical Engineering, University of Washington, 1996

M.S., Environmental Engineering, University of California at Berkeley, 1985

B.A., Environmental Sciences, University of California at Berkeley, 1982

Registration
Professional Civil Engineer No. CE15224, Oregon, 1990

Professional Mechanical Engineer No. 27617, Washington, 1995

Professional Civil Engineer No. 27617, Washington, 1991

40-hour and current 8-hour Health and Safety Training in accordance with 29 CFR 1910.120

Experience
21 years

Joined Firm
1986

Relevant Expertise
- *Wastewater Facilities Planning*
- *Wastewater Treatment Plant and Pump Station Design*
- *Construction Management Assistance.*
- *Design-build*

Detailed Design and Construction Engineering Support for the Juanita Bay Pump Station and Force Mains Upgrade Project, King County Department of Natural Resources and Parks (KCDNRP), Washington

Project Manager. Brown and Caldwell was the prime consultant for a team of seven consulting firms in the design of a $19 million two-stage raw sewage pump station with a peak hydraulic capacity of 30.6 mgd against a head of 278 feet. The design included a four-level pump station to replace an existing pump station. The sub-structure design was based on a secant pile compression ring to provide shoring as well as an element of the building foundation. A 60-inch microtunnel connected the new pump station to the existing influent sewer lines. The pump station also included an activated carbon odor control system and a standby generator. Project activities also included permit and community involvement assistance. Art also provided oversight for pre-design of a 10,000 foot long force main to replace one of the existing two force mains and replacement of air-vacuum relief valves for the two existing force mains. The design was completed in April 2005. Art has managed the consultant team in providing construction engineering support to King County since the fall of 2005. Construction is expected to be complete by the fall of 2008.

Facilities Planning and Permit Support, Predesign, Detailed Design, and Construction Engineering Support for the Picnic Point WWTF, Alderwood Water and Wastewater District, Snohomish County, Washington

Project Manager. Brown and Caldwell was a subconsultant to URS on the Picnic Point WWTF upgrade project. The project design included significant modifications to all liquid and solids stream unit processes and provided for an increase in plant capacity from 3 to 6 mgd. The Washington State Department of Ecology (Ecology) approved the Engineering Report in April 2005. Art managed the Brown and Caldwell team during the facilities planning phase of the project. Although Brown and Caldwell remained a subconsultant on the team, Art assumed management of the five firm consultant team during the predesign and design of the $72 million dollar upgrade that will increase plant capacity from 3 to 6 mgd. Project activities included funding assistance and MBR and solids dryer equipment procurement. Art also assisted with significant permitting activities including conditional use and other local permits as

well as coordination with Ecology for approval of plans and specifications. Art provided oversight for the QA/QC for the design deliverables and coordinated with an independent constructability reviewer. As project manager, Art served as primary contact for the client and made several presentations to the Alderwood Board of Commissioners on project status. The design was completed in October 2007. Art served as the District contact during the bidding phase and assisted with evaluation and award of the bid. Art is currently managing the consultant team in providing construction engineering support to the District and the District's Construction Manager. The project is using electronic construction management software. Construction is expected to last three years.

Predesign and Design Modifications for South Plant Enlargement III2B.1, King County Department of Natural Resources and Parks (KCDNRP), Washington

Lead Project Engineer. Responsibilities included design modifications to grit and screenings handling systems, primary treatment system, secondary clarification system, and return activated sludge pumping system. Construction value: 14.7 million dollars.

Predesign and Design, South Plant, Eastside Interceptor Biofilter King County Department of Natural Resources and Parks (KCDNRP), Washington

Project Engineer. Managed design of foul air collection and biofilter system. Design included off-site foul air pipeline, biofilter and blower building located at the Renton site.

Wastewater Treatment Plant Improvements for Central Kitsap County WWTP, Kitsap County, Washington

Project Engineer. Design modifications to primary sludge and waste activated sludge pumping systems.

Design Modifications, South Plant, Enlargement IIIB, King County Department of Natural Resources and Parks (KCDNRP), Washington

Project Engineer. Responsibilities included design modifications to the mechanical bar screening system, screenings pumping system, thickened bottom sludge return pumping system, and digester cleanings return system. Performed hydraulic profile analysis of flow through treatment plant.

Design Modifications to Existing Disinfection System and Design of New Sulfur Dioxide Dechlorination and Polymer Systems for Appleton Wastewater Treatment Plant, City of Appleton, Wisconsin

Project Engineer. Design modifications to increase capacity of gaseous chlorine disinfection system, add sulfur dioxide dechlorination system, and new polymer systems for solids processing.

Design of Effluent Pumping Station for Santa Cruz Wastewater Treatment Plant, Santa Cruz, California

Project Engineer. Design for new 85-mgd station and also design modifications for the potable and nonpotable water systems.

PRINCIPAL ENGINEER

DAVID S. MURRAY, P.E.

Experience Summary

Dave Murray has 30 years of experience in the study and design of facilities for wastewater treatment, water supply, and distribution. He is Brown and Caldwell's technology leader in disinfection, and has worked on many municipal water and wastewater projects. His expertise includes the evaluation and design of effluent filtration, chemical disinfection, and UV disinfection for municipal wastewater reclamation facilities.

Assignment

Disinfection

Education

M.S., Civil Engineering, Purdue University, 1970

B.S., Civil Engineering, Clarkson University, 1967

Registration

Professional Engineer No. 9185, Oregon, 1977

Professional Engineer No. 16606, Washington, 1977

Professional Engineer No. 28652, California, 1977

Professional Engineer No. 18174-F, Pennsylvania, 1974

Experience

30 years

Joined Firm

1990

Relevant Expertise

- *Disinfection*
- *Pump Station Design*
- *Water Reclamation*
- *Filtration*
- *Pipe/Outfall Design*

Disinfection Evaluation, Hoodland and Boring Water Pollution Control Plants, Water Environment Services (WES), Clackamas County, Oregon

Project Engineer. Dave evaluated existing disinfection practices and provided recommendations for future modifications, including possible use of UV disinfection. The study recommended the use of sodium hypochlorite for interim disinfection.

Effluent Disinfection and Standby Power Project, City of Seaside, Oregon

Project Engineer. Dave designed a 6.7-mgd peak flow capacity medium-pressure UV disinfection system, a sodium hypochlorite storage and feed system for return activated sludge (RAS) chlorination, and provision of a chlorine residual in the plant water system. He was also responsible for the design of a plant-wide emergency power generation system, associated noise abatement structures, and UV disinfection equipment; and he completed the evaluation of the plant outfall dispersion requirements.

Preparation of Facilities Plan, Columbia Boulevard Wastewater Treatment Plant (CBWTP), City of Portland, Oregon

Environmental Engineer. As part of the Facilities Plan, Dave prepared an evaluation of UV disinfection (low- and medium-pressure) for secondary and wet weather primary effluents for flows of up to 450 mgd. He prepared a conceptual analysis of the alternative needs for a second and third outfall from CBWTP and investigated alternative routes, including undercrossings at the Columbia Slough and Oregon Slough and new Columbia River outfalls.

UV Disinfection, City of Woodburn, Oregon

Project Engineer. Dave completed the design of a 12-mgd medium-pressure UV disinfection system for filtered secondary effluent as part of the overall Woodburn WWTP expansion project. The disinfected effluent is reclaimed during the dry weather period for irrigation of an adjacent poplar plantation for beneficial reuse. A small sodium hypochlorite feed system was included for RAS chlorination.

UV Disinfection System Design, Hillsboro WWTF, Clean Water Services, Washington County, Oregon

Project Engineer. Dave completed design and specifications for a 14-mgd medium-pressure secondary effluent UV disinfection system. The system

meets discharge standards during wet weather and Oregon Level II reuse standards during dry weather conditions.

Wastewater Reclamation Facility Upgrade, City of Lompoc, California

Engineer–Effluent Filters and UV Disinfection. Dave provided design of effluent filters and UV disinfection for a 5.5-million gallons per day (mgd) facility to meet California Title 22 requirements for reuse and/or stream discharge.

Reclaimed Water Disinfection, Randolph Park Water Reclamation Facility, Pima County, Arizona

Design Engineer. A low-pressure, high-output UV disinfection system for membrane bioreactor effluent was designed for the production of Class A+ water for golf course/park irrigation in Tucson, Arizona. This is a state-of-the-art in-vessel UV system for high quality reused water applications. A sodium hypochlorite feed system was included in the design for membrane maintenance.

Water Reclamation Facility Disinfection Improvements Project, City of San Luis Obispo, California

Technical Advisor. Dave is providing technical support for the assessment of alternative technologies for elimination of disinfection byproducts (trihalomethanes) in water discharged to San Luis Obispo Creek.

Groundwater Replenishment (GWR) Project, Orange County Water District, Fountain Valley, California

Process Engineer. Dave provided process design and engineering for the evaluation and design of the UV disinfection portion of the GWR project, which will provide microfiltration, reverse osmosis, UV disinfection, and project water distribution for flows up to 100 mgd for reclamation under California Title 22. Project water will replenish the water supply aquifer for up to 1.5 million Orange County residents.

Design Modifications to the Pure Oxygen Activated Sludge System for Sacramento Regional Wastewater Treatment Plant, Cit of Sacramento, California

Project Engineer. Modifications included addition of blowers and piping modifications.

Predesign of Disinfection Modification for Dublin San Ramon Wastewater Treatment Plant, City of Dublin, California

Project Engineer. Predesign included selection of disinfection alternatives including gaseous chloride, sodium hypochlorite, ozone, and ultraviolet oxidation.

Experience Summary

Steffran Neff leads BC's Seattle office asset management and business consulting group. She is a chemical engineer with over 15 years of experience in environmental engineering and asset management program development for public clients. She conducts asset management program evaluations, develops strategic asset management plans, provides asset management training, conducts asset risk analysis, and facilitates project business case evaluations (BCEs) using life-cycle benefit/cost analysis methodology and asset management principles to facilitate capital, operations and maintenance, rehabilitation and refurbishment, and policy decisions. BC's asset management process includes triple-bottom-line analyses to balance of social, environmental, and financial considerations and quantify costs, benefits, and risks. These techniques provide detailed and defensible assessments that can be used to prioritize CIPs and forecase replacement needs. Steffran has facilitated multiple successful asset management analyses and business case evaluations (BCEs) for clients, including the City of Klamath Falls, King County Wastewater Treatment Division, the City of Olympia, the LOTT Alliance, Pierce County, and Highline Water District.

Assignment
Asset Management

Education
B.S., Chemical Engineering, 1991

Professional licenses/registration
ISO 14001 Lead Auditor, 2000
RAM-W Risk Assessment Training, 2003

Years of Experience
15 Years

Joined Firm
2003

Relevant Expertise

- *Asset Management*
- *Business Case Evaluation*
- *Environmental Management Systems*

Asset Management Program Development, LOTT Alliance, Olympia, Washington

Project Manager for the development of an Asset Management Program at LOTT Alliance. Brown and Caldwell assessed LOTT's current business practices with regards to asset management and provide recommendations for implementing both management and information technology solutions to increase level of service while minimizing the life-cycle costs of asset ownership. Specific responsibilities include workshop facilitation, and asset management program evaluation (AMPE) development and the development of a strategic asset management plan (SAMP). In addition to strategic asset management plan development, the BC team worked with the LOTT Asset Management Team to develop a BCE process for operations and capital expenditures and guide decisions for implementing the LOTT Wastewater Resource Management Plan. In addition, risk assessments were developed to define asset criticality ranking for all treatment plant assets.

Asset Management Program Development, King County, Seattle, Washington

Assistant Project Manager for the development of an Asset Management Program at King County's Wastewater Treatment Division. Steffran is responsible for coordinating a multi-disciplinary team of Asset Management Practitioners who are located throughout the U.S. and Australia in the development of the Asset Management Program at King County. The project assessed King County's current business practices with regards to asset management and is in the process of providing recommendations for implementing both management and information technology solutions to increase level of service while minimizing the life-cycle costs of asset ownership. A key recommendation was focused on the features and the fit of the County's CMMS, specifically Mainsaver. The recommendation is to maintain Mainsaver while the County focuses on optimization of its work processes. The issue of Mainsaver will be revisited after implementation of the new processes.

Asset Management Program Development, Pierce County, Washington

Project Engineer. Brown and Caldwell is assisting Pierce County in developing an asset management program with a main objective of incorporating best management practices in the form of asset management business principles. Steffran developed an AMPE and action plan for asset management implementation. Brown and Caldwell is currently developing criticality models and documenting asset detail business processes for the organization. The asset management program developed included risk analysis and a replacement planning model.

Business Case Evaluation, City of Olympia Public Works, Olympia, Washington

Project Engineer for the Facilitation of two BCEs at the City of Olympia. Steffran facilitated and developed BCE reports for determining whether septic tank effluent pumps should be permitted in new development as well as determining the best long-term alternative for meeting water supply needs for the City. The BCEs included full life-cycle costs as well as social, environmental and risk considerations.

Business Case Evaluations, City of Klamath Falls Public Works, Klamath Falls, Oregon

Project Engineer for the Facilitation of of the water supply BCE. Steffran facilitated three workshop sessions and and developed a BCE report for determining the best long-term alternative for meeting water supply needs for the City. The BCEs included full life-cycle costs as well as social, environmental and risk considerations.

Asset Management Training, City of Salem, Salem, Oregon

Project Manager for training the water, wastewater, and transportation division of the City of Salem on Asset Management principles. Steffran developed a three part training session which included an asset management overview, introduction to level of service, risk management, and business case evaluation. The sessions were held in a workshop format and included case studies and break out sessions.

Work Order Management Consulting Services, King County, Seattle, Washington

Project Manager for the Management Consulting Work Order contract for King County. Ms. Neff is responsible for reviewing work assignments; assigning project staff; and developing scopes, schedules, and budgets for the contract. The contract has had sixteen work orders and seven subcontractors to date. Work performed has included maintenance training, facilitation services, cost estimation, engineering cost validation, and reclaimed water analysis.

MANAGING ENGINEER

LAURENCE B. OETH, P.E.

Experience Summary

Laurence has provided civil and structural design services for a wide range of clients for over 30 years. His responsibilities have included structural design of municipal and industrial projects with specific expertise in seismic analysis and design. Projects include large (up to 150 million gallons per day [mgd]) municipal water and wastewater treatment plants (WWTP), heavy and high-tech industrial facilities, commercial buildings to 200,000 square feet (SF) and numerous remodel projects. He combines high-reliability design quality typical of municipal projects, while maintaining the budget and schedule constraints typical of industrial process work.

Assignment

Structural

Education

M.S., Structural Engineering, University of California, Berkeley, 1978

M.B.A. and B.S. Civil Engineering, Washington University, 1977

Registration

Professional Engineer No. 34064, North Carolina

Professional Engineer No. 36862, Arizona, 2001

Professional Engineer No. 32015, California, 1980

Structural Engineer No. 2672, California, 1984

Professional Engineer No. 35793, Florida, 1985

Professional Engineer No. 29801, Georgia, 2004

Professional Engineer No. 11303, Oregon, 1981

Professional Engineer No. 36773, Washington, 2000

Structural Engineer No. 36773, Washington, 2001

Experience

30 years

Joined Firm

1998

Relevant Expertise

- *Extensive municipal design projects completed for both wastewater and potable water.*
- *Seismic resistant design expertise.*
- *Utilizes geotechnical means to minimize structural cost.*
- *High tech facility design experience with fast track scheduling.*
- *Strong construction cost experience and value engineering.*

Nancy Creek Pump Station, City of Atlanta, Georgia Structural Engineer. This $33 million design-build project delivered a 110-mgd pump station, with approximately 150 feet of lift on time and on budget. The 66-foot diameter shaft descends through soil, loose rock and weathered rock requiring varied construction techniques. Soil shoring utilizing the NATM system, slipform concrete shaftwall construction, hydrostatic forces over 10,000 pounds per square foot resisted by both the shaftwall and rock. This design-build project included continuous value engineering during construction.

Biosolids Facility Upgrade, Water Environment Services, Clackamas County, Oregon Project Engineer. This project was a design/build project for an existing WWTP, including installation of new gravity belt thickeners, installation of a new centrifuge, load-out conveyor, polymer system, 10-ton capacity bridge crane, and associated improvements. Structural work includes new code-compliant interior masonry walls, aluminum support framing for gravity belt thickeners, and centrifuge access and wall panel modification to install a 10-foot by 10-foot roll-up door.

Lake Townsend Raw Water Intake Pump Station, City of Greensboro, North Carolina Structural Engineer. Project consists of a three hundred foot long, three pipe intake system and a new pumping station. Raw water passes through fish protection screens, enters the clear well, and is then pumped by five 100-horsepower pumps and one 500-horsepower pump. The pump house is a single-story structure including a 7.5 ton bridge crane and meets architectural requirements set by the existing water treatment plant and park/recreation area site. 3D-CADD was used to model the facility, th intake zone lakebed rock profile, and prevent equipment run conflicts.

CBFT3 and Cogeneration System, City of Columbus, Georgia Structural Engineer. Project modified three, 100-foot diameter mesophilic digesters to increase gas storage and improve operation. Design included submerged, fixed concrete covers and inflatable dome-type covers (Duo-Sphere). The recovered gas is conditioned and then generates electricity in two 1,750-kilowatt generators. A new, two-story generator

building and designed to resist flood waters up to the second floor houses the generators.

Spring Street Wastewater Treatment Plant Reliability Improvements, City of Klamath Falls, Oregon Project Engineer. Larry was responsible for all structural and architectural design elements, including extensive modifications to an existing aeration basin; new secondary clarifier; new 4,400 SF control, lab, and administration building; enclosed dissolved air flotation thickener facility; hypochlorite facility; reclaimed wastewater pump station; and other associated structures on poor soils, necessitating use of piles for support. In addition, close consultation with the geotechnical engineer resulted in design of two major structures without piles, saving approximately $300,000 in construction costs.

Elk River Odor Control, City of Eureka, California Project Engineer. This project consisted of odor control mitigation for two existing trickling filters and improvements to primary clarifier off-gassing. Each trickling filter received a 98-foot-diameter aluminum geodesic dome, and was analyzed for Magnitude 7 seismic events under the increased loading. To prevent concrete degradation under sulfuric acid attack, special coating applications were designed for installation inside each trickling filter, with only 8 hours of (process) operational downtime each shift.

Value Engineering, Tallman Island Water Pollution Control Plant, City of New York, New York Structural Engineer. This treatment plant serves the northeast portion of the Borough of Queens, and was originally constructed in the 1930's. With major expansions the plant now consists of two parallel treatment batteries and has a design flow of 80 mgd. The city is designing an improvement project to provide more reliable wastewater treatment and implement biological nitrogen removal. The purpose of the value engineering effort was to provide construction alternatives which will maintain functionality while reducing the estimated construction cost from $164 million to $150 million. Larry's recommendations are estimated to provide $9 million in construction cost savings, as well as life-cycle O&M savings.

Welded Tube Mill Facility, WTC America, Portland, Oregon Project Lead. Larry was project lead and structural engineer for this 250,000 SF steel slitting and fabricating facility. WTC manufactures hollow, structural steel members. Design features included driven grout pile foundations, 50-ton by 120-feet span high-speed bridge cranes, custom veerindeal truss mill building, provision for extensive truck and rail traffic, and strict Port of Portland development guidelines and review.

Fire Station No. 6 Remodel & Seismic Upgrade, Portland, Oregon Lead Structural Engineer. This project was a 1950's concrete, masonry and steel joist building, which needed strengthening to IBC/Essential Facility strength levels. In addition, the Dept's space programming policies have changed considerably. The building was gutted, and then rebuilt utilizing a structural metal studwall system for gravity and lateral loads. Directional drilling was employed to install new, below slab plumbing. These innovations allowed the exterior walls and foundation system to be re-used, saving resources for programming needs.

Keith S. Parker, P.E.

Washington State University
B.S. in Civil Engineering

Mr. Parker is a senior engineer with more than 32 years of experience in the overall planning, design, cost estimating, and construction management of engineering projects. His primary project experience includes water supply, distribution, storage, treatment, and sanitary sewer collection system design. Mr. Parker has worked on both new and trenchless rehabilitation for pipelines and more than 45 pump station designs and upgrades. Mr. Parker has designed 15 new well facilities and treatment facilities for groundwater supplies. His experience also includes water comprehensive plans and other water planning studies.

Relevant Project Experience

Bajagua Wastewater Treatment and Water Reuse Project

Confidential Client/Tijuana, Mexico

Project Engineer. R. W. Beck is serving as the owner's engineer for the development of a 59-mgd secondary wastewater treatment plant. The Bajagua project includes a 25-mgd pump station, a 34-mgd pump station, 12 miles of pipelines to deliver primary-treated and raw wastewater to the treatment plant site in Tijuana, and a return gravity pipeline to deliver the treated wastewater to an existing ocean outfall. Mr. Parker is providing engineering support for the pipelines and pump stations associated with this project.

Lift Station 9

City of Lacey, Washington

Project Manager/Resident Engineer. Mr. Parker managed the design of this new wastewater lift station that replaced an interim station that served the growing southeast portion of the City. The new station was constructed in the corner of a regional stormwater facility that was to be further developed into a park facility. The lift station and incorporated trails and landscaping to integrate with the proposed park improvements. The facility also included a soil bed odor scrubber to address problems caused by upstream STEP systems. To avoid impacts to the existing stormwater pond and nearby homes, the design incorporated cassion-type construction for the main wet well facility.

General Sewer Plan Update

City of Redmond, Washington

Senior Engineer. As senior engineer on the City's Sewer Plan update, Mr. Parker completed a condition assessment for the City's 10 oldest lift stations. The condition assessment considered equipment, electrical, instrumentation and controls, safety, and access. The deficiencies were identified, along with ranking and recommended improvements.

R·W·BECK

Lift Station 16

City of Lynwood, Washington

Project Manager/Resident Engineer. Mr. Parker is managing the design of this new wastewater lift station that will reduce sanitary sewer overflows (SSO) in the City's system as well as provide additional capacity for growth. The new station will also incorporate a pump maintenance and repair facility for the City's wastewater division. The project involved the evaluation of a number of potential solutions to address the SSO's in the Scriber Creek Basin and a number of decision analysis workshops were conducted with City staff to achieve the most desirable alternative.

Martin Way Lift Station/North Lacey Sewer Interceptor Facilities

City of Lacey, Washington

Project Engineer/Resident Engineer. Mr. Parker served as project engineer during the planning and design of this $4 million sanitary sewer project, and as resident engineer during the construction. The work was bid in two contracts and included gravity sewers, force main, and a major pumping station with an ultimate capacity of 15-MGD. This project received the local ASCE Chapter's award for "Project of the Year." Mr. Parker oversaw the design team and had a major role in the hydraulic design and pump selection.

Lincoln Avenue Pump Station

City of Tacoma, Washington

Project Manager/Lead Engineer. The under capacity of the existing Lincoln Avenue Pump Station led to CSO events in the upstream collection system, and the overall age of the station caused increased maintenance and reliability concerns to the City. Mr. Parker led the team retained to design the replacement of the existing 14-MGD sanitary sewer pump station with a new 24-MGD station. The overall project included standby power, variable speed pumps, a self-cleaning wet well design, and a new higher capacity force main. Mr. Parker's responsibilities included conceptual layouts of alternatives, direction and oversight of the design team and subconsultants, presentations to the City staff, and overall management of the project.

Monroe Street Sewer Rehabilitation

City of Tacoma, Washington

Project Manager. Mr. Parker served as project manager for this major sewer rehabilitation project. As part of the City's CSO control program, major interceptors with excessive infiltration and inflow were targeted for rehabilitation. Mr. Parker led the team that evaluated videotapes of the existing sewer, reviewed flow data and record drawings, and developed a rehabilitation design. The design and bid documents allowed optional rehabilitation methods, including cured-in-place pipe, slip lining with HDPE, segmental slip-lining and open-cut replacement. This strategy allowed the City to receive the most competitive bids for the project.

Pioneer Pump Station and 19th Avenue Force Main Projects

City of Puyallup, Washington

Project Manager/Project Engineer. Mr. Parker was project engineer for the pre-design and design phases of an expansion/upgrade to a major sanitary sewer pump station for the City. He also served as the project manager during the construction, where he performed hydraulic modeling, pump selection, and station layout. The station and surrounding area were experiencing CSO and SSO due to capacity issues in both the sanitary sewer pump station as well as the storm sewer system. This project was the

key element in reducing those overflows for the City. The project included a new 31.5-MGD pump station, reuse of the existing 12-MGD station structure for new electrical and odor control facilities, and the conversion of a section of 36-inch gravity sewer to a force main by slip lining with HDPE. Mr. Parker had a key role in developing a plan to reuse the existing station and convert an existing gravity sewer to a higher-capacity force main. This plan allowed the City to meet flows projected in the Comprehensive Plan for a much lower than anticipated cost.

York Pump Station Upgrade

King County, Washington

Quality Manager/Project Manager. The York Pump Station was scheduled to be expanded from a capacity of 35-MGD to 68-MGD. Mr. Parker served first as quality manager during the predesign phase and later as project manager during the design and construction phases for this pump upgrade project. He helped to develop a cost-saving alternative that provided three new constant speed pumps in lieu of the planned variable speed pumps. He had a major role during construction helping King County staff review pump shop drawings. He also helped the County do on-site witnessing of the factory pump tests.

ULID S-10 Force Main Extension

Sammamish Plateau Water and Sewer District/Washington

Project Engineer. This unique project extended an existing force main as an alternative to a proposed pump station and force main project. Mr. Parker helped conceive and develop an alternative that saved the District more than $750,000 in capital and lower operational expenses while maintaining desired operational flexibility. In addition, the design created by R. W. Beck lowered wastewater life-cycle costs by utilizing an existing pump station and an existing inverted siphon to handle ultimate design flows in lieu of the pump station recommended in the Comprehensive Plan Updates.

Wastewater Comprehensive Plan Update

Karcher Creek Sewer District/Port Orchard, Washington

Project Engineer/Senior Reviewer. Mr. Parker has provided both project engineering services as well as senior review for two major updates of the District's Wastewater Comprehensive Plan. The District has been plagued for years with CSOs from their old and under-maintained system. The Comprehensive Plan updates, including sewer modeling, field flow measuring smoke and dye testing, and video tape inspections of sewer lines, have allowed the District to develop Capital Improvement Plans, secure grant loans and funds, and set realistic sewer rates and general facility charges. A number of successful construction projects have reduced infiltration and inflow (I/I); the reduced number and volume of CSO's has been achieved as the District implements the recommendations of the comprehensive plan.

Affiliations

- American Water Works Association
- Water Environmental Federation

Awards, Publications, Presentations

- CECW, 2000 Engineering Excellence Honor Award for the Potlatch Beach Desalinization Plant
- ASCE, Tacoma/Olympia Section, Outstanding Local Engineering Achievement Award for the Martin Way Lift Station/North Lacey Sewer Interceptor Facilities
- RO Desalination Plant, Skagit PUD No. 1's Guemes Island Facility, PNWS-AWWA 2000 Annual Conference, with MaryBeth Gilbrough
- Skagit River Pump Station and Pipeline, PNWS-AWWA, 2002 Annual Conference

Experience Summary

Steve Plancic is a principal designer with Brown and Caldwell. For more than 27 years Mr. Plancic has developed technical knowledge of how to transmit ideas through drawings. He is accomplished in organizing large jobs and scheduling staff to complete them on time. Steve is an experienced AutoCAD operator, having started with Release 2.6 and currently using AutoCAD 2008 and AutoCAD Architecture 2008. Steve's work experience includes numerous wastewater treatment plant designs, pumping stations, management plans, and facilities layouts.

Assignment

BIM

Education

BA Industrial Technology Department, Western Washington State University, 1972

Experience

30 years

Joined Firm

1978

Relevant Expertise

- *Mechanical designer; numerous wastewater treatment projects*
- *Project organization; experienced in organizing staff to design and draft all manor of environmental engineering projects*
- *Graphic presentation; illustrated numerous manuals*
- *Software proficiencies:*
  - *AutoCAD*
  - *AutoCAD Architecture*
  - *AutoCAD MEP*
  - *AutoCAD Raster Design*
  - *COADE*

Envronmental Engineering Design:

Picnic Point WWTP, Alderwood Water & Wastewater District, Lynnwood, WA (2008)

Designer. In charge of creating and maintaining process drawings for this 6 MGD membrane wastewater treatment plant. Also prouduced mechancial design drawings using AutoCAD and Architectural Desktop in 3D.

Columbia Data Center Cooling System, Microsoft, Quincy, WA (2008)

Mechanical Designer and CAD Lead. Multiple disciplinary drawings for a large and complex evaporative cooling tower system.

West Point WWTP Heating and Cooling Loop Modifications, King County, WA (2007)

Mechanical Designer – CAD Lead. Organized effort of all other discipline designers as well as participating in mechanical design effort. Modifications to existing facilities had to be completed to avoid construction conflicts with live systems.

Eastern Urban Growth Area Pump Station Design, City of Port Angeles, WA (2007)

Mechanical Designer. Performed mechanical design of two submersible wastewater pumping stations using AutoCAD. Also assisted structural design and drafting.

Chambers Creek Regional WWTP Headworks, Pierce County, WA (2006)

Mechanical Designer. Performed designer level effort on almost every discipline: demolition, process, structural, mechanical, electrical, and instrumentation. Assisted in the other disciplines using AutoCAD.

West Point WWTP Odor Control, King County, WA (2006)

Mechanical Designer – CAD Lead. Multi-dicipline upgrade of existing facility including foul air piping and chemical systems using AutoCAD. Coordinated the efforts of supporting disciplines and organized drawing production.

Brightwater WWTP, King County, WA (2006)

Designer. Assisted in the production of process diagrams and instrumentation drawings for this 35 MGD MBR facility using AutoCAD.

West Point WWTP Power Generation Facility, King County, WA (2006)
CAD Lead and Mechanical Designer. Coordinated design efforts of a multi-facited design effort to install two 2.3 MW generators running on digester gas or natural gas. Also coordinated efforts of other disciplnes in multiple offices, organized drawing production and maintained CAD standards. The design process was intricate due to the existing structure that the client wanted to perserve.

WWTP Aeration Upgrades, City of Richland, WA (2006)
Mechanical Designer – Drafting Support. In charge of the most of the design and drafting of this blower – aeration upgrade to wastewater treatment plant.

Pumping Stations 4102 and 4103, City of Tacoma, WA (2005)
Mechanical Designer. Performed mechanical design of two wastewater wetwell – drywell pumping stations using AutoCAD.

Everett WWTP Expansion, City of Everett, WA (2005)
Mechanical Designer. Performed mechanical, HVAC, plumbing and chemical handling designs as part of a major upgrade to this 21 MGD treatment plant. Assisted in structural design working with staff in another office.

Satellite Reclamation Plant, LOTT (Lacy, Olympia, Tumwater, and Thurston County) Alliance, WA (2004)
Designer – Drafting Support. Assisted in the design and drafting of this 1 MGD wastewater treatment plant (later upgraded to 2 MGD). One of the first MBRtreatment plants designed by the Seattle office for a munical client. Design effort was split between mechanical and structural disciplines.

Martin Way Pumping Station, LOTT Alliance, WA (2004)
Designer – Drafting Support. Assisted in the design and drafting of this pumping station. Design effort was split between mechanical and structural disciplines.

Hosmer Pumping Station, City of Tacoma, WA (2003)
CAD Lead - Designer. Pump station, with two with large submerisable pumps and above ground support structures. Involvement was all disciplines.

South Plant Biosolids Dewatering, King County, WA (2003)
CAD Lead and Mechanical Designer. CAD Lead and for a large multi-consultant effort to replace belt filter press dewatering units with high capacity centrifuges. Coordinated all CAD and engineering efforts.

Memberships

Member of the Autodesk Users Group International (AUGI), an international CAD user group.

Member of Puget Sound Autodesk Users Group (PSAUG), a local software users group the meets monthly to discuss topics related to AutoCAD.

ASSOCIATE

PROCESS CONTROLS MANAGING ENGINEER

KEVIN H. STIVELY, P.E.

Experience Summary

Over the past 20 years, Kevin has provided engineering services to numerous municipalities and private sector clients. Kevin's experience includes Instrumentation & Controls project leadership for multi-firm consulting teams, SCADA and Control System master planning, process optimization and automation engineering, SCADA and Control System design, network architecture design, network device configuration, PLC programming, applications interface development, data management, network security, QA/QC design reviews, and on-site construction support and inspection services. In addition, he offers extensive experience with equipment and fieldbus communications design, and startup of VFDs, motor control centers, switchgear, and standby backup power systems. Drawing on his talents and experience, he has developed many technical training manuals and provided training for plant operators and technicians.

Assignment

Automation/BIM

Education

B.S., Pulp and Paper Science and Engineering, University of Washington, 1988

Registration

Professional Chemical Engineer, 38416, Washington, 2002

Professional Engineer, 7070709-2202, Utah, 2008

Experience

20 years

Joined Firm

2004

Previous Employment

Parker, Messana & Associates, Inc.; Senior Process and Controls Engineer; Federal Way, Washington, 1998/2004

NLK/Industra, Inc.; Instrumentation and Controls Manager; Seattle, Washington; 1988/1998

North Pacific Paper Corporation; Process Controls Intern; Longview, Washington; Summers 1987/1988

Tree Top, Inc.; Lab Chemist Intern; Selah, Washington; Summer 1986

Relevant Expertise

- *Designed, programmed many PLC based control systems*
- *Developed distributed PLC controls for complete wastewater treatment plant for Western Pulp in Port Alice, BC Canada*
- *Hands-on field start-up, training and troubleshooting for DCS and PLC based control systems*

Wastewater Treatment Plant and Conveyance Control System Standards Development and East Section Control System Replacement, King County Department of Natural Resources, Washington

Project Manager. Led a team of engineers to develop new control systems standards for all of King County's Wastewater Treatment Division and to apply these new standards to the design of a replacement control system for the East Section wastewater facilities. Provided services in four phases including: 1) review existing treatment facility control systems and current and upcoming technologies for application of new standards; 2) establish the optimum level of hardware and software and commonality required for data to be efficiently and reliably transferred between control and computer systems throughout WTD's wastewater facilities; 3) develop design specifications to upgrade or replace the existing process control system hardware and software used to monitor and control one process unit (Primary Treatment) located in the South Treatment Plant to prove the concepts prior to completing the design of the remaining control system replacement for the South Treatment Plant and conveyance facilities; and 4) provide final design specifications for the remaining South Treatment Plant and system installation oversight services during installation of the specified control system. The project is currently finishing Phase 3 and we anticipate starting Phase 4 services the fourth quarter of 2008.

Assessment and Master Automation Plan for the City of Tacoma, Public Works Environmental Services, Tacoma, Washington

Technical Lead. Provided technical expertise and workshop facilitation to review existing electrical, instrument and control standards, and EI&C design documentation standards in order to document the existing conditions of the Central Treatment Plant (60 MGD average flow). Developed and presented to the City state-of-the-art conceptual designs of idealized automation and communications architectures to facilitate the automation team's understanding of applicable current automation solutions.

Developed the foundation for applying a rigorous process to review automation projects under consideration. The City is currently reviewing a backlog of automation projects using the structured approach developed which evaluates each project based on its merits relative to the City's identified user requirements. The remaining tasks include developing an implementation plan with budgetary costs and schedule for selected projects and incorporating all project results into a master automation plan.

Brightwater Wastewater Treatment Plant Design, King County Department of Natural Resources, Washington

I&C Discipline Technical Lead. Brown and Caldwell teamed with CH2M Hill, Mithum and others were chosen to predesign and design the new Brightwater Treatment Plant to be located in Woodinville, WA. Kevin's role on the project has been to provide I&C discipline design leadership and coordination between all design firms for the overall control system which includes the main plant, influent pumping station and conveyance systems.

The project includes development of one of the nation's largest greenfield wastewater treatment plants, designed for an ultimate average wet weather flow of 54 mgd and peak flow of 170 mgd. Key technical challenges that were incorporated into the design included designing for emerging and proven technologies to effectively use the constrained site; one of the highest levels of odor treatment in the nation; incorporating stringent sustainability criteria including on-site cogeneration using digester gas; and integration of innovative landscape and architectural designs. The project will include anaerobic digestion with provisions for future conversion to the advanced temperature phased anaerobic digestion process with Class A batch tanks, co-thickening with gravity belt thickeners, dewatering with high solids centrifuges, and dewatered cake storage and load out.

Wastewater Treatment Facility Programmable Logic Controller (PLC) Upgrade, City of Richland, Washington

Project Manager. Brown and Caldwell was selected by the City of Richland to develop a control system design for the Wastewater Treatment Facility PLC upgrade in which all the plant's older PLCs are upgraded using new modern controllers. The design involves documenting existing wiring, installing a new fiber optic ring for a gigabit control network backbone, new controllers and I/O terminations, and upgraded control system graphical interfaces. One major project challenge is to replace the equipment while maintaining 24 hour per day operations. Through innovative design and well documented implementation planning, the control system will be replaced while minimizing total system down time.

Publications/Presentations

- "How Does Automation Factor into Process Optimization? Determining the 'right' level of automation for your system" Pacific Northwest Clean Water Association Annual Conference, Vancouver, WA, September 2007 and Water Environment Association of Utah Mid-year Conference, Salt Lake City, UT, November 2006
- *"Which Control Option Do I Go With? DCS, Mini-DCS or PLC?,", TAPPI, 1999 Next Millennium PCE&I Joint Conference, Atlanta, Georgia, March 1999.*
- *"Low-Budget, High-Performance Distributed Control System", IEEE, 1996, and TAPPI, 1997.*

MANAGING ENGINEER

PHILIP L. WOLSTENHOLME, P.E.

Experience Summary

Philip Wolstenholme, a managing engineer and associate with Brown and Caldwell, has a wide range of mechanical engineering experience gained over the past 29 years. He is Brown and Caldwell's national practice leader in odor control and also specializes in sludge handling processes for wastewater treatment facilities. He has additional background in energy/cogeneration, environmental, solid waste, and industrial material handling projects. He is a member of the Water Environment Federation air quality and odor control committee. He has been instrumental in the design of over 100 odor control and biosolids systems.

Assignment

Odor Control

Education

B.Sc. Mechanical Engineering, Imperial College, London University, 1970

Registration

Mechanical Engineer No. 33019, Washington, 1996

Experience

29 years

Joined Firm

1981

Relevant Expertise

- *Design of dry media scrubbers at many pump stations*
- *20 years of designing ventilation and odor control systems*
- *Many high profile sensitive location projects*

Tacoma Biosolids Building Modifications, Tacoma, Washington
Project Manager. Study and design of ventilation and odor control improvements for dewatering room at Central Plant Biosolids.

Odor Control Design Services, Renton Wastewater Treatment South Plant Enlargement III, KCDNRP, Seattle, Washington
Project Engineer. Responsibilities included carbon foul air treatment, air permitting, HVAC, and sprinkler systems for expansion to 108-mgd. Biofilter pilot facilities media testing.

Odor Control Design Services, Renton Wastewater Treatment South Plant Enlargement II, KCDNRP, Seattle, Washington
Project Engineer. Responsibilities included carbon foul air treatment and HVAC for expansion to 72 mgd.

Odor Control Design Services, Greater Vancouver Regional District, Burnaby, British Columbia
Project Manager. Analysis and design of odor control system for Annacis Island and Lulu Island wastewater plants. Design included five chemical scrubbers and six biofilters.

Odor Improvements, West Point Treatment Plant, KCDNRP, Seattle, Washington
Project Manager. Study and design of ventilation and odor control improvements for various buildings including centrifuge room at West Point Treatment Plant.

Composting Facility Odor System and Site Modification Project, Newberg Composting Facility, Newberg, Oregon, Paul Chiu, (503) 554-1751
Technical Design Reviewer. Reviewed design work for the plant's new odor control system to treat odor emissions from the plant's composting facilities. The odor control process of 14,000 scfm includes ammonia scrubbers followed by a packaged biofilter.

Biosolids Drying, Lakehaven Utility District, Federal Way, Washington
Project Manager. Pre-design of a batch operation biosolids drying facility fueled by digester gas and natural gas.

Analysis for Permitting, King County Department of Metropolitan Services (Metro), Renton Wastewater Treatment Plant, Washington, Joe Fernandes, (206) 263-4670
Project Engineer. Work included fate modeling of VOCs, air dispersion modeling for VOCs stripped to the air, BACT analysis, and health risk analysis. Work was to obtain the air permit for construction of the expansion of the 72-mgd facility.

Biosolids Building Retrofit, Central Plant, City of Tacoma, Washington
Project Manager. Responsible for modification to ancillary systems including ventilation and electrical controls for belt process dewatering building.

Biosolids Planning Project, Cowlitz Sewer Operating Board, Kelso, Washington
Project Engineer. Investigation of alternative biosolids disposal options including heat drying and lime pasteurization, economic analysis of options.

Biosolids Odor Control Facilities, City of Toronto, Ontario, Canada
Project Engineer. Conceptual design and development of bid documents for design - build biosolids processing facilities.

Biosolids Drying, Lakehaven Utility District, Washington
Project Manager. Led the pre-design of a batch operation biosolids drying facility fueled by digester gas and natural gas.

Biosolids Long-Range Strategy and Facilities Planning Project, KCDNRP, Seattle, Washington
Project Engineer. Responsibilities included investigation of alternative biosolids disposal options, cost analysis of incineration and drying options.

Value Engineering, West Side CSO Tunnel, City of Portland, Oregon
Project Engineer. Value engineering review of ventilation system for new downtown tunnel.

Ventilation and Odor Control Design, Central Kitsap Wastewater Treatment Plant, Kitsap County, Washington
Project Engineer. Design development of odor control systems for plant expansion facilities.

Biosolids Composting Facility, Pierce County Public Works and Utilities, Pierce County, Washington
Project Engineer. Design of compost aeration air system and compost foul air biofilter.

Design Services, Sludge Incineration Project, President Street Wastewater Treatment Plant, Savannah, Georgia
Project Engineer. Refurbishment for two multiple hearth incinerators and sludge conveyance. Design of odor control facility for sludge dewatering/ incineration.

CHARLES ZICKEFOOSE

Experience Summary

Chuck Zickefoose has over 50 years of extensive wastewater treatment operation and engineering office management experience in environmental and wastewater engineering. He has managed design projects, conducted seminars on plant operations, and written operation and maintenance manuals for many wastewater plants. He was the first manager of the Portland Brown and Caldwell office and later managed the Honolulu, Hawaii office.

Assignment
Operations and Maintenance
Education
M.S.S.E, Sanitary Biology, 1965
B.A., Biological Science, 1953
Experience
50+ years
Joined Firm
1983

Capital Improvement Program Assessment, City of Portland, Oregon
Task Leader. Chuck participated in interviews and report preparation for the Bureau of Environmental Services.

Kailua-Kaneohe-Kahaluu Facilities Plan, City and County of Honolulu, Hawaii
Principal-In-Charge. Chuck managed the wastewater system evaluation phase of this plan, serving as subconsultant to Wilson Okamoto. Wet weather issues on the windward side of the island, and impact of high flows on the regional treatment plant and two upstream preliminary treatment facilities were the focus of the project.

Master Plan, County of Maui, Hawaii
Principal-In-Charge. A report was developed presenting wastewater collection and treatment needs for West Maui District, including Lahaina. A review was performed and recommendations were made in response to a development affecting two treatment plants and various pumping stations.

Capacity Assessment, County of Maui
Principal-in-Charge. Chuck determined cost-effective modifications and additions that provided the most capacity at the least cost for the Kahului Wastewater Reclamation Facility.

Design of Facility Expansion, County of Maui
Principal-in-Charge. Capacity assessment testing was performed for the Lahaina Wastewater Reclamation Facility expansion from 6.7 million gallons per day (mgd) to 9.0 mgd.

Facility Evaluation, County of Maui
Task Leader. As a team member, Chuck conducted multi-discipline review for both Lahaina and Kahului Wastewater Treatment Facilities.

Noise and Odor Abatement Systems Phase I/II, City and County of Honolulu
Task Leader. As task leader for Phase I, Chuck coordinated a consultant team's Plan of Study for the development of a comprehensive noise and odor control program and to establish work elements and activities Phase II. For Phase II recommendations are being developed for immediate and long-term implementation plans for the wastewater system noise and odor control program.

Honouliuli Wastewater Treatment Plant, City and County of Honolulu

Construction Manager. This project included two separate construction contracts: a secondary treatment facility ($24 million) and a new maintenance building ($4 million).

WWTP Facility Assessment, City of Newberg, Oregon

Task Leader. Chuck provided a wastewater treatment facilities condition assessment for the wastewater treatment system as a task in the facility plan.

Staff Liaisón, Portland Columbia Boulevard WWTP Facilities Plan

Task Leader. Chuck facilitated staff brainstorming sessions to provide staff input into the facilities plan update.

Water Resources Master Plan, Guam Waterworks Authority, Guam

Team Member. Chuck particpated in a field visit and performed extensive work in preparing and editing master planning documents for Guam's water and wastewater systems to comply with USEPA requirements. The project required three years to complete and resulted in establishing a GIS system for the island as well as several models addressing water, sewer and finances for ongoing use by the Authority.

O&M Manual Preparation

Team Member. Chuck particpated in preparation of a number of O&M manuals over the past 30 years. Recent documents include:

- City of Edmonton. Alberta Gold Bar Wastewater Treatment Facility
- City of Tacoma, Washington Wastewater Treatment Facility
- Redmond, Oregon Wastewater Treatment Facility
- King County, Washington Juanita Bay Pump Station

EXHIBIT D

CITY'S RESPONSIBILITIES
CITY OF WILSONVILLE
OWNERS REPRESENTATIVE FOR THE
WASTEWATER TREATMENT PLANT EXPANSION PROJECT

EXHIBIT D

CITY'S RESPONSIBILITIES
CITY OF WILSONVILLE
OWNERS REPRESENTATIVE FOR THE
WASTEWATER TREATMENT PLANT EXPANSION PROJECT

City Responsibilities

- Review and comment on draft reports
- Attend and participate in workshops and meetings
- Coordinate with consultant on access for sampling and testing
- Provide as-built drawings and equipment performance data for the biological process. Including but not limited to clarifiers, aeration system configuration, blower performance data, diffuser data, tank configuration, and operating objectives (mixed liquor suspended solids [MLSS] and dissolved oxygen [DO] concentration, solids retention time (SRT) and hydraulic retention time (HRT).

EXHIBIT E

COMPENSATION
CITY OF WILSONVILLE
OWNERS REPRESENTATIVE FOR THE
WASTEWATER TREATMENT PLANT EXPANSION PROJECT

CITY OF WILSONVILLE
WWTP EXPANSION DBO - OWNER'S REPRESENTATIVE SERVICES
PROJECT BUDGET - PHASE A SERVICES

TASK / SUBTASK - PHASE A SCOPE OF SERVICES	*Kyle Rhorer*	*Robert Bingham*	*Neil Callahan*	*Jessica Guerrette*	*Alan Bushley*	*John Christopher*	*Keith Parker*	*Samantha Prociv*	*Rosita McGinley*	R.W. Beck Labor Hours	R.W. Beck Labor Cost	R.W. Beck Travel Expenses[AA]	R.W. Beck Other Expenses[AA]	Subcontractor Labor Costs[a]	Subcontractor Expenses[aa]	TOTAL COST
TASK 1.1 - PROJECT MANAGEMENT	514	0	119	468	94	0	0	48	48	1,290	$ 278,403	$ 25,200	$ 720	$ 60,082	$ 5,250	$ 369,655
TASK 1.2 - FACILITIES PLAN UPDATE	14	0	0	28	8	4	4	0	0	58	$ 11,391		$ -	$ 314,624	$ 10,920	$ 336,935
TASK 1.3 - RISK MANAGEMENT	6	0	0	10	2	0	0	0	0	18	$ 3,528		$ -	$ 133,815	$ 42,315	$ 179,658
TASK 1.4 - INFLUENT CHARACTERIZATION	8	4	0	16	8	2	2	0	0	40	$ 8,118		$ -	$ 63,993	$ 55,388	$ 127,499
TASK 1.5 - WWTP SITE SURVEY AND EXISTING CONDITIONS	8	4	0	16	0	0	0	0	0	28	$ 5,497	$ 2,100	$ -	$ 67,434	$ 69,353	$ 144,384
TASK 1.6 - CREATE AND MAINTAIN PROJECT SCHEDULES	80	0	0	70	0	0	0	0	0	150	$ 32,662		$ -	$ 9,270	$ -	$ 41,932
TASK 1.7 - INDUSTRY FORUM AND STAKEHOLDER INPUT	72	144	0	128	0	0	0	96	96	536	$ 92,346	$ 12,600	$ 750	$ 33,414	$ 1,050	$ 140,160
TASK 1.8 - ASSIST IN NPDES PERMIT RENEWAL PROCESS	8	0	0	8	4	0	0	0	0	20	$ 4,261		$ -	$ 18,226	$ 1,050	$ 23,537
TASK 1.9 - PROCUREMENT STRATEGY DEVELOPMENT	32	40	0	80	0	0	0	28	28	208	$ 35,438	$ 2,100	$ 100	$ 14,920	$ -	$ 52,558
TASK 1.10 - REQUEST FOR QUALIFICATIONS	112	8	0	184	0	0	0	44	44	392	$ 67,733	$ 4,200	$ 350	$ 14,200	$ -	$ 86,483
TASK 1.11 - STATEMENT OF QUALIFICATIONS EVALUATION	74	32	0	210	0	0	0	16	16	348	$ 61,070	$ 5,250	$ 200	$ 16,400	$ -	$ 82,920
GRAND TOTAL	928	232	119	1,218	116	6	6	232	232	3,088	$ 600,447	$ 51,450	$ 2,120	$ 746,378	$ 185,326	$ 1,585,721