
REQUEST FOR PROPOSALS
Consulting Engineering Services for:
Troutdale Water Master Plan

I. Project Background

The City of Troutdale is in need of the services of a qualified Professional Engineer, licensed in the State of Oregon, and supporting disciplines to perform civil engineering and economic analysis and produce an updated Water Master Plan (the “Plan”) for the City of Troutdale, Oregon.

The City of Troutdale owns and operates a State-regulated municipal water system consisting of 64 miles of underground conveyance piping ranging from 4” – 12” in diameter, seven groundwater source wells with approximately 6.3 MGD combined production capability, four reservoirs with a total capacity of 6 million gallons, two booster pumping stations and various other appurtenances. The City supplies all of its own water needs through its groundwater source wells, but also maintains interties with the cities of Gresham, Wood Village and Fairview for reciprocal emergency supply. Water from the City’s wells is chlorine-treated for taste and odor, but none of the wells require chlorination for disinfection. The system presently serves approximately 4,400 residential, 175 commercial, 45 industrial, 15 community service, 70 fire-standby , and 40 irrigation accounts with an average demand of 1.7 MGD and a peak demand of 3.5 MGD.

Funding for operation and maintenance of the City’s water system is provided by an enterprise fund (the “Water Fund”) of the Troutdale municipal budget with the primary source of revenue being water user fees. Funding for capacity-enhancing water system improvements is provided by another fund of the Troutdale municipal budget (the “Water Improvement Fund”) with the primary source of revenue being system development charges on new development. In some cases, improvements are also funded wholly or partially by the Water Fund. Extensions of the system associated with new development are often directly funded and executed by respective developers.

The study area for this plan is the current and planned potable water utility service area for the City of Troutdale, that includes the current corporate limits of the City as well as the City’s unincorporated urban planning area (see attached plan area map). Unincorporated urban planning areas are areas adjacent to but currently outside the City limits that are designated for probable future annexation to the City of Troutdale. Presently, the City provides no water service east of the Sandy River, though that area does contain properties within the City limits. The City’s water system is completely mapped schematically in ESRI-based GIS software.

The planning horizon for this study will be 20 years into the future. Development projections in the context of current growth boundaries and urban planning areas indicate that the City will reach “build-out” within that planning horizon.

In 1993, the City of Troutdale completed the *Water Master Plan for Troutdale, Oregon* with the assistance of Economic and Engineering Services, Inc., a Portland, OR consulting engineering firm. A copy of this Master Plan can be found on the City’s website at <http://www.ci.troutdale.or.us/water-streets/>. Some of the policies, practices, capital improvements and other measures recommended by that plan have been implemented, some have been deferred and in some cases the City has subsequently determined that the measure was not needed. Since 1993, regulatory and fire service requirements have changed for the City, as well as projected development patterns and characteristics; the City’s water infrastructure has aged and been modified; demand patterns and expectations of the City’s water customers have evolved; performance of the City’s existing groundwater source wells has declined; and additional lands have been annexed or added to the City’s urban planning area for future annexation.

The City of Troutdale is now seeking a Professional Engineer to perform an update of the Water Master Plan and to perform related tasks and analysis. The selected consultant will review the existing master plan and related reports,

maps and documentation; meet and coordinate with stakeholders; evaluate the current state of the water system with respect to current demands, system capacity, system condition and regulatory requirements; evaluate probable future demands and requirements based on projected development and anticipated regulatory changes; evaluate probable future condition and serviceability of the system due to system aging; perform hydraulic system modeling (compatible w/ Bentley WaterCAD) and analysis; identify needed improvements and system preservation/rehabilitation measures and estimate costs for same; analyze the City's user fee and system development charge bases and rate structures and make recommendations; and produce a new contemporary master plan, including recommended policies, practices, capital improvements and other measures for the orderly provision of municipal water service within the City of Troutdale. In addition, the consultant may be asked to perform any or all of the following supplementary services, contingent on project budget: perform a feasibility study for adding a booster station at Reservoir #3; update the City's state-mandated Water Conservation Plan; perform 3-dimensional 2-year time-of-travel analysis for City wells proximal to Underground Injection facilities; conduct a conceptual feasibility study for the potential to implement reclaimed water distribution systems in select areas of the City; perform a data-quality analysis of the City's current water system mapping; and/or analyze taste, odor and scaling issues and make recommendations for measures to mitigate these issues.

II. Scope of Work

- A. The firm that is selected by the City shall perform the following tasks for this project:
1. Communicate regularly with City staff regarding project issues via telephone, electronic mail, fax, and post mail.
 2. Attend meetings as described in Section IV below. All meetings shall be presented and/or facilitated by the Consultant.
 3. Prepare and submit bi-weekly progress reports to the City. Progress reports will consist of a brief narrative summary as well as the progress report form attached herewith.
 4. Comprehensively review the 1993 *Water Master Plan for Troutdale, OR*, the City of Troutdale's 2004 *Water Management and Conservation Plan*, the City's *Water Quality Report for 2009*, the *City of Troutdale Public Works Department Capital Improvement Plan, May 2009*, water system demand records, previous water balance calculations, the City's Geographic Information System, topographic maps, population and growth/development projections and other applicable records and documentation as a starting point, background and basis for the development of a new, contemporary master plan.
 5. Identify data gaps in the City's water system GIS database that will affect preparation of the Plan. Collaborate with City staff or perform necessary investigation and field work to obtain data needed for modeling and analysis associated with preparing the Plan.
 6. Identify stakeholders and regulatory agencies that are affected by or have a direct interest in this master plan. Communicate with stakeholders and regulators to receive and address input and concerns that may affect the Plan.
 7. Develop and calibrate a complete Bentley WaterCAD water system model of the existing Troutdale water system with sufficient detail to identify hydraulic constraints and to predict pipe flows, fire flows, static and dynamic system pressures, well demands, and reservoir levels.
 8. Project annual and seasonal, average and peak, water supply demands for the City in each service zone and in total through each year of the planning horizon.
 9. Project water supply capacity under normal operating conditions in each service zone and in total through each year of the planning horizon.
 10. Analyze the City's water rights and permits in conjunction with the operational characteristics and patterns of the respective sources, determine allowable operational scenarios based on available rights and identify any problematic constraints.
 11. Project emergency water storage requirements in each service zone and in total through each year of the planning horizon based on 72-hour power outage emergency scenario or as otherwise required by the State of Oregon. Dead storage shall be discounted based on an assumption of 20 psi minimum pressure at point-of-service under emergency water supply conditions.

12. Identify any current or projected future deficiencies in water supply capacity and/or emergency water storage needs for the City in each service zone and in total through each year of the planning horizon.
 13. Project the future roughness coefficients and other distribution system variables affecting model calculations that will change with age through the planning horizon and program future scenarios into the model taking into account these changes in system parameters.
 14. Run the model for average and peak operating demands for existing conditions and the future scenarios identified above and identify any areas of deficient flow or pressure in the system. The City's service pressure standard for normal operating conditions is not less than 45 psi at the point of service.
 15. Program and execute a series of fire flow model scenarios, for existing conditions and the future scenarios identified above, assuming fire flows at various locations throughout the system. Locations will be geographically distributed to sufficiently evaluate all areas of the system and selected in collaboration with City staff. Compare results with required fire flows at each location, respectively, and identify any deficiencies.
 16. Identify the discreet system improvements needed to correct the deficiencies identified above. Indicate the estimated cost of each proposed improvement.
 17. Prepare a map of the water system and summary tables indicating the locations, functional data (size, capacity, material, etc), estimated costs and implementation timeframes of the improvements proposed in 15 above. These shall constitute the proposed Capital Improvement Plan (CIP) for the City's water system.
 18. Perform an economic analysis through the planning horizon, taking into the consideration the estimated costs and timing of the proposed CIP, the City's existing available improvement funds, projected development assessable, interest earning/losses and time-value of money, and forecast required increases or decreases in Water System Development Charge rates to fully fund the CIP.
 19. Recommend system preservation measures to prevent system deficiencies that will occur due to system aging (identified above), if preventable; and/or operational or administrative practices or policies to offset those deficiencies.
 20. Identify system replacement or rehabilitation that will be required within the planning horizon to correct non-preventable deficiencies due to system aging within the planning horizon. This will constitute the Replacement and Rehab Program for the City's water system.
 21. Perform an economic analysis through the planning horizon, taking into the consideration the estimated costs and timing of the replacement and rehabilitation projects identified above, the City's existing available operation and maintenance funds, projected user-base assessable, interest earning/losses and time-value of money, and forecast required increases or decreases in Water system user fees to fully fund the replacement and rehabilitation program. This analysis will only consider the increment of user fees needed for rehab and replacement and will not require analysis of funds needed for routine operation and maintenance of the system.
 22. Assess current and probable future drinking water quality regulations that will affect the operation and maintenance of the water system through the planning horizon. Identify improvements, if any, that will be required to meet water quality requirements and estimate capital costs as well as annual operational and maintenance costs associated with these improvements.
 23. Prepare a draft "Troutdale Water Master Plan" (the "Plan") that compiles and presents the analyses and findings derived above. See section III for an outline of the minimum Plan document requirements.
 24. Meet with City staff to submit the draft Plan and present an oral summary of the study and its findings.
 25. Distribute copies of the draft Plan to stakeholders and regulatory agencies and receive comments.
 26. Following review of the draft by the City and other stakeholders, meet with City staff to discuss and make revisions as directed by the City.
 27. Provide twenty-five (25) hard-copies of the finalized Plan and six (6) digital copies in Adobe Acrobat format on CD's or DVD's to the City.
- B. The City may desire supplemental services related to water system planning as identified in Section I, contingent upon project budget and Consultant's proposed fees for the required Scope of Work in part A of this Section above. The Consultant need not include these supplemental services in this Proposal. If, following award of this

contract, the City determines it has sufficient funds to pursue these supplemental services, it shall provide detailed Scope(s) of work and request subsequent supplemental proposals from the selected Consultant.

III. Products

The Consultant shall provide the following products associated with the Troutdale Water Master Plan project:

1. Bi-weekly progress reported submitted to the City's project manager.
2. Bentley WaterCAD water model fully developed and calibrated for the Troutdale water system, with the completed model files provided on a read-only data CD or DVD.
3. Six (6) copies of the draft Plan for City review. The Plan shall, as a minimum, contain the following Sections:
 - Table of Contents
 - List of Figures
 - List of Tables
 - Executive Summary
 - Goals and Objectives
 - Water System Background and Overview
 - Water Demand and Supply Analysis
 - Modelling Parameters, Scenarios Analysis and Results
 - Regulatory Analysis
 - Recommended Policies and Practices
 - Proposed Capital Improvement Plan, Costs, Priorities, and Phasing
 - Proposed Replacement and Rehabilitation Program, Costs, Priorities, and Phasing
 - Proposed Water Quality Improvement and Operational Plans, Costs, Priorities, and Phasing
 - System Development Charge and User Fee Analysis
4. Up to twenty (20) copies of the draft Plan distributed to stakeholders and regulators.
5. Twenty-five (25) hard copies of the finalized Plan.
6. Six (6) digital copies of the finalized Plan in Adobe Acrobat format on read-only CDs or DVDs.

IV. Meetings

The Consultant shall be required to attend, as a minimum, a study kickoff meeting, monthly progress meetings, a draft Plan submission meeting, a draft Plan review meeting and a City Council meeting. Additional meetings may be required, as needed, for collaboration and information sharing between Consultant and City and/or to resolve unforeseen issues or to discuss problematic study obstacles that arise.

V. Communication

The Consultant selected will be required to communicate with the City, as needed, concerning project-related issues via telephone, electronic mail and post mail.

VI. Project Milestones

Dates indicated are dates the City desires to meet or exceed. However, the firm is strongly encouraged to realistically consider its ability to meet each of these milestones and to submit a schedule that it is confident it can meet.

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| A. Submittal of Proposal | Monday, May 9, 2011 |
| B. Notice of Intent to Award | May 16, 2011 |
| C. Execute contract/Notice to Proceed | May 30, 2011 |
| D. Submit draft Plan | August 30, 2011 |
| E. Deliver finalized Plan | September 30, 2011 |

VII. Contracting, Fees

The selected consultant will enter into an agreement (see attached) with the City for these services with the fee stipulated as a "Not-To-Exceed" fee.

VIII. Proposal Format

The proposal shall contain the following:

- A. A cover letter affirming your firm's interest in performing these services and confirming your primary contact person for this project (with his/her phone number and email address).
- B. A project scope and understanding section describing what your firm understands the requirements for the project to be, what the major issues specific to this project will be, and giving a complete listing of the major tasks that will be performed by your firm for the fees indicated in section F below. A brief summary/description of each task should be given with the listing. Additionally, the level of effort for each task should be indicated as measured in total person-hours.
- C. A section identifying the individuals, and their roles, that will be assigned to the project. If any personnel proposed in the SOQ have been removed from your proposed team, indicate the reason. The previous SOQ will be combined with and made a part of this Proposal. Information regarding qualifications already provided in the SOQ need not be repeated. If any persons have been added to the team that your firm proposed in the SOQ, list the experience and credentials of the added team members.
- D. A study schedule section consisting of a complete schedule, in Gantt chart format, incorporating all tasks under the design Scope of Work. The dates indicated in section VI reflect the schedule the City desires to meet. However, the consultant should submit a schedule he/she is confident he/she can meet.
- E. A level-of-effort summary table listing total hours proposed for each class of personnel that will be assigned to the project.
- F. A fee summary indicating, for each task, the hourly rate and amount of time projected for each type of personnel utilized on the project, and the total cost for each task or division of work.

This proposal shall not exceed fifteen (15) pages from cover to cover.

IX. Proposal Submittal

Please submit your proposal to: Travis Hultin, Chief Engineer, 342 SW 4th Street, Troutdale, OR 97060, no later than 4:00 p.m. on Thursday, May 9, 2011. Please submit three complete hard copies of the proposal. Emailed, faxed or otherwise digitally transmitted proposals will not be accepted.

X. Questions and Protests

Substantive questions regarding this RFP must be submitted in writing to Travis Hultin at the address above or at thultin@ci.troutdale.or.us not less than five days prior to the deadline for submitting proposals.

Protests of this solicitation, if any, must be submitted in writing not later than ten days prior to the deadline for submitting Proposals and shall be administered in accordance with Section 2.24.160 of the Troutdale Municipal Code. Protests of award of this contract must be submitted no later than seven days following award and shall be administered in accordance with Section 2.24.170 of the Troutdale Municipal Code.

XI. Proposal Review

The consultant selection team will consist of: Travis Hultin, Chief Engineer, and two other members of the City's Public Works Department engineering and operational staff, to be determined. Selection will be based on the following criteria:

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| A. <u>Expertise</u> | 40% |
| Experience and qualifications of the primary person(s) assigned to the project in performing similar work; demonstrated abilities in the individuals' assigned roles, education, training, and credentials. This information will be taken from the Statement of Qualifications except in the case of team members that have been added in the Proposal. | |
| B. <u>Level of Effort/Fees</u> | 25% |
| The ability and expressed commitment of the proposing firm to meet or exceed the Project Milestones indicated in Section VI. | |
| C. <u>Project Understanding</u> | 20% |
| Apparent understanding of the tasks required to complete the Scope of Work and the skills and expertise across various disciplines needed to perform those tasks. Also, the understanding and foresight of any critical issues and challenges involved in the project. | |
| D. <u>Responsiveness</u> | 10% |
| The ability and expressed commitment of the proposing firm to meet or exceed the Project Milestones indicated in Section VI. | |
| E. <u>Other Factors</u> | 5% |
| Reputation of firm, reviewer's past experience with firm, structure of firm or team, positive and/or negative reports from references, proximity/availability/responsiveness, quality/accuracy of SOQ and other factors that the reviewer considers relevant. | |

The City reserves the right to seek clarifications of the proposed project approach, projected costs, or the assignment of resources, the right to negotiate a final contract which is in the best interest of the City, and the right to reject any or all proposals if it would be in the public interest to do so.