REQUEST FOR QUALIFICATIONS
Consulting Engineering Services
for: Warrenton Water Master Plan

I. Project Background

The City of Warrenton, Oregon is soliciting the services of a licensed Professional Engineer or Firm, and supporting disciplines to perform civil engineering and economic analysis to produce an updated Water Master Plan for the Warrenton water system. The 20 year update must be approved by the State by December 29, 2017.

The City of Warrenton operates a 6 million gallon per day Continuous Microfiltration Water Treatment Plant located south of the City. The City uses surface water collected from four dams on the Lewis & Clark River and its tributaries. The City has a 16.4 million gallon reservoir for raw water. Additionally, the City has two 3.5 and one 0.275 million gallon reservoir tanks for treated water. The City of Warrenton owns and operates a State-regulated municipal water system consisting of 95 miles of underground conveyance piping ranging from 2" – 24" in diameter, 2 booster pumping stations and various other appurtenances. The City supplies all of its own water needs through its treatment plant, but also maintains interties with the city of Gearhart. Water from the City's treatment plant is treated for disinfection purposes through on-site generation of sodium hypochlorite. The system presently serves approximately 3025 residential and 261 commercial customers. The City also serves the City of Gearhart during high demand summer periods.

Funding for operation and maintenance of the City's water system is provided by an enterprise fund (the Water Fund) of the Warrenton municipal budget with the primary source of revenue being water rates. Funding for capacity-enhancing water system improvements is provided by capital project funds or capital reserve funds. 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 water utility service area for the City of Warrenton that includes the current corporate limits of the City as well as the City's unincorporated service areas of Clatsop County. 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 moderate growth within that planning horizon.

In 2011, the City of Warrenton completed the *Water system hydraulic model summary report,* with the assistance of WH Pacific, a Portland, OR consulting engineering firm. The City completed a *Water System Master Plan* in 1998 with help from CH2M Hill. The City is also working with GSI Water Solutions, Inc. Corvallis, OR, for a *water right extension*. The City completed a *rate study* in April of 2016, with help from FCS Group. The rate study addressed rates, but SDC and cost of service was not included. Copies of these documents can be found on the City's website at http://ci.warrenton.or.us/. Some of the policies, practices, capital improvements and other measures recommended by these documents have been implemented, some have been deferred and in some cases the City has subsequently determined that the measure was not needed. Since 1998, 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 has experienced significant water loss current estimates are 30%; the City constructed a new treatment facility in 2002; demand patterns and expectations of the City's water customers have evolved; two major customers, the City of Gearhart and Pacific Seafood Group have significantly decreased water use.

The City of Warrenton is now seeking Professional Engineering Services 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, source and treatment facilities, system capacity, staffing requirements, 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/ existing model) and analysis; identify needed improvements and system preservation/rehabilitation measures maintenance programs and estimate costs for same; analyze the City's system development charge basis and rate structures and make recommendations; and produce a new contemporary master plan, including coordination and compliance with OHA-DWS to ensure compliance with current regulations http://public.health.oregon.gov/HealthyEnvironments/DrinkingWater/PlanReview/Documents/PR-MasterPlan.pdf; recommended policies, practices, staffing needs, capital improvements and other measures for the orderly provision of municipal water service within the City of Warrenton's water service area.

II. Scope of Work

The firm that is selected by the City shall perform the following tasks for this project:

Communicate regularly with City staff regarding project issues via telephone, electronic mail, and post mail. Attend meetings as described in Section IV below. All meetings shall be presented and/or facilitated by the consultant.

Submit monthly progress reports and invoicing to the City. Progress reports will consist of a brief narrative summary accompanying invoice.

Comprehensively review:

- The 1998 *Water Master Plan for Warrenton, OR,*
- The City of Warrenton's 2011 *Water System Hydraulic Model Summary Report and model,*
- The City's *Water Quality Report for 2016,*
- The *City of Warrenton's Capital Improvement Plan,*
- The 2016 *rate study,*
- Water system demand records,
- The city's *water right extension application*,
- The City's *Vulnerability Assessment,*
- *The capacity assessment for the Hammond Waterline,*
- Previous water balance calculations,
- The City's Geographic Information System,
- Topographic maps,
- Population and growth/development projections,
- OHA-DWS, AWWA and EPA staffing requirements to ensure water quality/maintenance programs meet standards
- Budget allocations, and other applicable records and documentation as a starting point, background and basis for the development of a new, contemporary master plan.

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.

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.

Project annual and seasonal, average and peak, water supply demands for the City and in total through each year of the planning horizon.

Under normal operating conditions, project water supply capacity in each service zone and in total through each year of the planning horizon.

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 i.e. necessity of a new source.

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.

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1. Identify any current or projected future deficiencies including water loss and 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.
2. Evaluate the treatment facility (Continuous Microfiltration Water Treatment Plant) and system including dams, reservoirs and raw water distribution piping and appurtenances. Identify current and projected deficiencies through the planning horizon.
3. 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.
4. 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 20 psi at the point of service.
5. 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.
6. Perform an analysis of existing staffing levels and maintenance and operating programs i.e. valve exercising, directional flushing, water quality, and or other programs as compared to industry best management practices, and AWWA, EPA, and Department of Health Standards; and recommend staffing adjustments that preserve facilities and provide acceptable levels of service.
7. Identify the system improvements needed to correct deficiencies. Indicate the estimated cost of each proposed improvement.
8. 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 improvement projects. These shall constitute the proposed Capital Improvement Plan (CIP) for the City's water system

and must be compatible with the City's current GIS data format and projections.

9. Perform an economic analysis through the planning horizon, taking into 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. (Note: FCS completed a rate study for the City in 2016; however SDC's were not part of that study.)
10. Recommend system preservation measures to prevent system deficiencies that will occur due to system aging (identified above), if preventable; and/or operational/maintenance or administrative practices or policies to offset those deficiencies.
11. 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 Rehabilitation Program for the City's water system.
12. 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. (Note: FCS completed a rate study for the City in 2016; however changes to the City's existing CIP may necessitate future year's rate adjustments.)
13. 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.
14. Prepare a draft "Warrenton 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.
15. Meet with City staff to submit the draft Plan and present an oral summary of the study and its findings.
16. Distribute copies of the draft Plan to stakeholders and regulatory agencies and receive comments.
17. Following review of the draft by the City and other stakeholders, meet with City Commission and Staff, to discuss and make revisions as directed by the City.
18. Provide twenty (20) hard-copies of the finalized Plan and six (6) digital copies in Adobe Acrobat format to the City.

III. Deliverables

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

1. Monthly progress reports submitted to the City's project manager.
2. Compatible water model fully developed and calibrated for the Warrenton water system, with the completed model read-only data files provided on a CD or DVD. Data must be compatible with the City's current GIS data format and projections and water model.
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
    - Schedule
    - Water System Background and Overview
    - Water Demand, Supply and Storage Analysis
    - Source and Treatment Analysis
    - Modelling Parameters, Scenarios Analysis and Results
    - Regulatory Analysis

- Recommended Policies and Practices
- Staffing Recommendations
- 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 Rate Analysis

4. Up to fifteen (15) copies of the draft Plan distributed to stakeholders and regulators.
5. Twenty (20) 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 kickoff meeting, a minimum of 3 progress meetings, a draft plan submission meeting, a draft Plan review meeting and up to 2 City Commission meetings. 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 unforeseen issues.

V. Communication

The Consultant selected will be required to communicate with the City and the Oregon Health Authority, 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.

A. Submittal of Proposal	November 30, 2016
B. Notice of Award	December 13, 2016
C. Execute contract	Dec 20, 2016
D. Submit draft plan	August 7, 2017
E. Deliver finalized plan	October 30, 2017
F. Final Deadline	December 29, 2017

VII. Proposal Format

This proposal shall not exceed fifteen (15) pages from cover to cover.
The proposal shall contain at a minimum 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, giving a complete listing of the major tasks to be performed and critical issues and challenges involved in the project.

C. A section identifying the individuals, and their roles, that will be assigned to the project; a statement regarding each individual's qualifications (SOQ). Please 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 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.

VIII. Proposal Submittal

Please submit your proposal to: Jim Dunn, Public Works Director, 225 S Main Ave / P.O. Box 250, Warrenton OR 97146, or drop off at the front desk at Warrenton City Hall, no later than 3:00 p.m. on Wednesday, November 30, 2016. Please submit three complete hard copies of the proposal. Emailed, faxed or otherwise digitally transmitted proposals will not be accepted.

IX. Questions

Substantive questions regarding this RFQ must be submitted in writing to Jim Dunn at the address above or at jdunn@ci.warrenton.or.us not less than five days prior to the deadline for submitting proposals.

X. Proposal Review

The consultant selection team will consist of: Jim Dunn, Public Works Director, at least two other City staff members to be determined. Selection will be based on the following criteria:

A. Expertise — 35%
   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.

B. Effort/Responsiveness — 25%
   The ability and expressed commitment of the proposing firm to meet or exceed the Project Milestones indicated in Section VI. A study schedule section consisting of a complete schedule, in Gantt chart format, incorporating all tasks under the Scope of Work.

C. Project Understanding — 25%
   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. Describe what your firm understands the requirements for the project to be and give a complete listing of the major tasks to be performed.

D. Other Factors — 15%
   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, 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.