

**REQUEST FOR PROPOSALS**  
**for**  
**Water Conservation & Reuse Study (WCRS)**  
**and**  
**Comprehensive Water Master Plan (CWMP)**

PROJECT NO: **2008-54**  
PROJECT TYPE: **Engineering Services**  
PRE-PROPOSAL CONFERENCE **1:30 PM, August 25, 2009**  
PROPOSAL OPENING DATE: **1:30 PM, September 15, 2009**  
CITY PROJECT MANAGER **Pieter Smeenk, PE**  
PROJECT DURATION **24 month maximum**

**CITY OF**  
**ASHLAND**  
**PUBLIC WORKS ENGINEERING**  
**20 E. MAIN STREET**  
**ASHLAND OR 97520**  
**541/488-5347**

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ADVERTISEMENT  
CITY OF ASHLAND PUBLIC WORKS  
REQUEST FOR PROPOSALS FOR  
PROFESSIONAL ENGINEERING SERVICES

The City of Ashland is requesting proposals for professional engineering services to conduct a **Water Conservation & Reuse Study (WCRS) and Comprehensive Water System Master Plan (CWMP)**. The City of Ashland was recently awarded an Oregon Water Resource Department Water Conservation, Reuse Grant aimed at conservation of limited potable water supplies and potential utilization of other available water resources including effluent from the City's advanced wastewater treatment plant. The findings of the Study will be incorporated into developing the CWMP.

The Conservation and Reuse Study will include but is not limited to the following tasks:

- Review, analyze, validate and identify gaps in Ashland's existing water master plans resources.
- Validate the City's future water needs through the year 2058.
- Identify and fully describe all other alternative sources of water.
- Identify options that explore the right water for the different water sources and uses available.
- Identify benefits and challenges to using irrigation water.
- Analyze environmental impacts of long term use of irrigation water sources for City use.
- Evaluate hydrological benefits and challenges and anticipate the effects of climate change with regard to water needs and water use.
- Identify benefits and challenges to using recycled water.
- Identify options and cost estimates.
- Administer and implement all grant agreement requirements and reporting.

The Comprehensive Water Master Plan will include but is not limited to the following tasks:

- Summarizing and Describing the Water System.
- Describing the Water Quality and Service Level Goals for the system.
- Projecting Water Demand for the 6 year and 20 year planning horizon.
- Evaluating the Water Supply System and identifying deficiencies.
- Analyzing available engineering and financial alternatives.
- Recommending updates to the capital improvement program and operational structure of the water supply system.

Proposals must be received by **1:30 PM, September 15, 2009**, in the City of Ashland Engineering Office located at 51 Winburn Way, Ashland OR 97520; Mailing Address: 20 E. Main Street Ashland OR 97520. A **non-mandatory** pre-proposal conference will be held at 51 Winburn Way at **1:30 PM , August 25, 2009**. For further information, contact City's Project Manager **Pieter Smeenk, PE** at 541/488-5347. Consultant selection is anticipated to result in City Council approval for the issuance of a contract for engineering services in the form provided in this RFP, for a maximum **24 month** duration.

Proposal documents are available at the above address, as well as the City of Ashland website at [www.ashland.or.us](http://www.ashland.or.us). If you received the RFP by downloading it from the City's website and intend to submit a proposal under this RFP, you must register as a prospective proposer. To register, email your contact information including phone numbers, mail and Email addresses to Betsy Harshman at [harshmab@ashland.or.us](mailto:harshmab@ashland.or.us). Registration will ensure that your firm will be included on the RFP holders list, and you will therefore receive any addendums that might be issued. The City will not be responsible for providing addendums to prospective proposers that download the RFP from the City website and fail to register as a prospective proposer. Proposals are limited to **10** pages. The proposer must be registered as a Professional Engineer with the State of Oregon. Consultant selection will be based upon weighted criteria as cited in the Request for Proposal document. Standard selection criteria include, but are not limited to: experience, availability, schedule, response time and cost. The City of Ashland reserves the right to reject any and all proposals, to waive formalities or to accept any proposal which appears to serve the best interest of the City of Ashland.

**CITY OF ASHLAND**  
**DEPARTMENT OF PUBLIC WORKS**  
**REQUEST FOR PROPOSAL**

**SECTION 1: SOLICITATION INFORMATION AND REQUIREMENTS**

**1.1.1 SUMMARY OVERVIEW**

The City of Ashland is requesting proposals for professional engineering services for a Comprehensive Water System Plan (CWMP) update. This Request for Proposal (RFP) is unique in that the City of Ashland received an Oregon Water Resource Department Water Conservation, Reuse, and Storage Grant that looks at the “Right Water for Right Use”. The “Right Water for Right Use” concept evaluates conservation of limited potable water supplies and the potential utilization of other available water resources including the reuse of water from the City’s advance wastewater treatment plant. One element of this plan will recommend the best use of each water resource (i.e. Talent Irrigation District Water and waste water treatment effluent for irrigation etc.). Another element of the grant will require the consultant to provide a comprehensive report on the impacts climate change will have on the raw water source. The Grant terms specifically require the CWMP update to include the following items:

- Review, analyze, validate and identify gaps in Ashland’s existing water master plans and water sources.
- Validate the City’s future water needs to the year 2058.
- Identify and fully describe all alternative water sources.
- Identify options that explore the right water for the different water uses; potable, and irrigation (sources and uses).
- Identify benefits and challenges to using irrigation water.
- Analyze environmental harm or impacts with the long term use of various irrigation water sources for City irrigation use.
- Evaluate hydrological benefits and challenges and anticipate the effects of climate change with regard to water needs and water use.
- Identify benefits and challenges to using recycled water.
- Identify options and cost estimates.

While this RFP’s specific deliverables are designed to meet the grant requirements, it is important for each applicant proposal to clearly demonstrate full compliance with all of the specific OWRD Water Conservation, Reuse and Storage grant requirements and timelines. To that end, a copy of the grant requirements will be included in all application packets.

In addition, the scope of work for CWMP update will include requirements for planning, programming, and financing improvements to the community’s water systems. The final plan will accurately reflect current water system needs and demands, identify future improvements, include comprehensive and prioritized 20 year Capital Improvement Plan, an evaluation of water system staffing needs, and a specific financial plan to pay for recommended system and staffing

needs that includes a water rate model. The water master plan shall be prepared in accordance with the Oregon Administrative Rules for Public Water Systems OAR 333-061-0090 (5).

### Background

The City of Ashland provides the City's Drinking water source supply, water treatment and water distribution to approximately 8,300 service connections. The City's primary raw water supply source is the Mount Ashland watershed which collects into Ashland Creek. The City owns and operates Hosler Dam where Ashland's source water is held in Reeder Reservoir.

The water treatment plant is located below Hosler Dam next to Ashland Creek and has a peak flow of 7.5 million gallons per day in the summer and averages 2 million gallons per day (MGD) in the winter months. The water transmission and distribution system consists of 130 miles of water distribution lines, 6 pump stations, 53 pressure reducing devices, and 1115 fire hydrants. There are four distribution reservoirs with 6.65 million gallons of water storage. In addition, the City owns and maintains 334 separate irrigations meters using potable water and 187 irrigation accounts using Talent Irrigation District (TID).

This master plan shall begin by completing this source water study looking at all potential sources as well as storage alternatives to see whether the current approach can be improved. A primary question to answer is whether the community should use water treated to potable drinking water standards to irrigate or whether alternate sources might be more viable. Ashland's winter use of water is 2 million gallons a day. The summer use increases to 7 million gallons a day, primarily because of irrigation use.

Finding the best water supply for different uses has previously been known in Ashland as the "Right Water for the Right Use". Alternate sources including the Talent Irrigation District Water, the City's wastewater treatment plant effluent, and other sources and storage alternatives not previously studied, will be investigated in an alternates analysis

A 1998 study that looked at water sources was completed before the sewage plant upgrade had been completed. Since completion of the Wastewater treatment plant upgrade, level four effluents now empties into Ashland Creek, which then flows into Bear Creek. The City also upgraded the sewage plant to add membranes that remove phosphorus because the Oregon Department of Environmental Quality required Ashland to stop emptying phosphorus-laden wastewater into the creek. The agency also maintains that the City's wastewater effluent is too warm. It must either be cooled, used somewhere else, or exchanged for a colder water source. One possible conclusion of the source water study may be that the best use of the wastewater effluent is to use it for irrigation. If the City does use the wastewater for irrigation, it may also need to replace that water that flows into the creek with another source, perhaps by purchasing water rights from Emigrant Lake.

Many Ashlanders already use Talent Irrigation District, or TID, water for their lawns and gardens. The Ashland Parks and Recreation Department is already pioneering expanded use of TID water. The department plans to use TID water to provide fresh water for the upper duck pond in Lithia Park. It will drain water from the pond to irrigate the park.

The City has a broad range of water conservation programs in place. However, through this RFP the City is hoping to increase its efficient use of its current water sources. The consultant will verify that increased City use of TID water won't create a strain on the irrigation system and

short other users like farmers if the City exchanges another water source for more TID water. For example, the City could use its treated wastewater to irrigate 846 acres of City owned property and replace the in-stream water right with the TID water right tied to the Ashland owned property.

The City has spent approximately \$2.50 million on its share of the Talent-Ashland-Phoenix Water Intertie Pipeline Project (TAP) to bring water from Medford to Ashland. The pipeline now ends in Talent. Finishing the project and connecting Ashland to the Medford water supply would cost approximately \$13 million. Of that, about \$10 million would be paid for from charges on new development in Ashland, with nearly \$3 million paid by water customers. Back in 1998, Carollo Engineering recommended the TAP project as the best supplemental water source based on cost and reliability. But the firm, working with input from a citizen's Water Advisory Group, acknowledged even then that the TAP project was not the most environmentally beneficial option, according to a 1999 memo from the firm to the City. The Water Advisory Group found that maximizing the use of existing water sources, including Talent Irrigation District water, provided environmental benefits. Some members of the group voiced the opinion that finishing the pipeline to connect to Medford's water may not be the best choice.

TAP may still have an important role to play in providing a back-up source of water in case of emergency and a means of meeting the needs of a growing population. But this new water study must provide a thorough look at all the water sources, including TAP, irrigation water and sewage wastewater. There is also new data about how climate change may affect the Rogue Valley that will need to be incorporated into the study.

Scientists generally believe that summers will be drier with more intense wildfires and winters will be milder, with less snowpack to supply summer needs. This study will need to provide recommendations to prepare for that possibility.

#### Reference Documents

The City has posted a series of studies that need to be incorporated into the CWMP update. Many of those studies can be reviewed on-line at [www.ashland.or.us](http://www.ashland.or.us):

2008 Reeder Reservoir Study

2002 Water Distribution Analysis and Capital Improvement Plan

2001 USFS West Fork Stream Study

2000 USFS Ashland Creek Stream Survey

1998 Ashland Creek-Where Living Waters Flow

1991 Comprehensive Water Plan

2006 Water Supply System Master Plan Update Technical Memos 1-4

2009 Independent Part 12 Inspection Report

2008 Preparing for Climate Change in the Rogue River Basin of SW Oregon

2009 City of Ashland Council Goals

### **1.1.2 DEFINITIONS**

For the purposes of this RFP:

- a) “calendar days” means any day appearing on the calendar, whether a weekday, weekend day, national holiday, State holiday or other day;
- b) “days” means calendar days; and
- c) “Business days” means calendar days, excluding Saturdays, Sundays and all City recognized holidays.

“Agency” or “City” means City of Ashland.

“Council” means City of Ashland City Council

“Proposers” – All firms submitting Proposals are referred to as Proposers in this document; after negotiations, an awarded Proposer will be designated as “Consultant”.

“PWD” means Public Works Director

“Qualification Based Selection” or “QBS” (for the purposes of this RFP) means evaluations and scoring of proposals based on qualifications, experience and project approach, without considering cost.

“RFP” means Request for Proposal.

“Scope of Work” means the general character and range of services and supplies needed the work’s purpose and objectives, and an overview of the performance outcomes expected by Agency.

“Services” means the services to be performed under the Contract.

“Statement of Work” means the specific provision in the final Contract which sets forth and defines in detail (within the identified Scope of Work) the agreed-upon objectives, expectations, performance standards, services, deliverables, schedule for delivery and other obligations...

### **1.1.3 CONTRACT FORM**

The consultant selected by City will be expected to enter into a written contract in the form attached to this RFP in the Appendix. The proposal should indicate acceptance of City’s contract provision. Suggested reasonable alternatives that do not substantially impair City’s rights under the contract may be submitted as outlined under Section 1.4.2. Unconditional refusal to accept the contract provisions will result in proposal rejection.

#### **Contract Duration**

The maximum duration of the contract is **24** months.

#### **Contract Payment**

Contingent upon City’s need, consultant’s performance and the availability of approved funding, City reserves the right to amend the contract (within the scope of the project described in this RFP) for additional tasks, project phases and compensation as necessary to complete a particular project. Proposers are advised that the award and potential dollar amount of the contract under this RFP may be contingent upon approval by the Ashland City Council acting as the Contract Review Board.

Payment will be made for completion of, or acceptable monthly progress on, tasks and deliverables in conformance with contract requirements and all applicable standards. The method of compensation will be determined by the City and may be based upon any one or combination of the following methods:

- Cost plus fixed-fee, up to a maximum NTE amount
- Fixed price for all services, Fixed price per deliverable, Fixed price per milestone
- Time and materials, up to a maximum NTE amount
- Price per unit

#### Disadvantaged Business Enterprise (DBE) Participation

The utilization of federal funds is not anticipated in this contract and no DBE participation goals will be assigned.

#### Ashland Living Wage Requirements

Consultant's employees must be paid at least the living wage as established by the City of Ashland on June 30, 2008 (\$12.96 per hour):

- For all hours worked under a service contract between their employer and the City if the contract exceeds \$18,088 or more.
- For all hours worked in a month if the employee spends 50% or more of the employee's time in that month working on a project or portion of business of their employer, if the employer has ten or more employees and has received financial assistance for the project or business from the City in excess of \$18,088.

In calculating the living wage for full time employees, employers may add the value of health care, retirement, 401K and IRS eligible cafeteria plans, and other benefits to the employee's wages. The City of Ashland Living Wage Statement is appended to the sample contract included in the appendix.

#### **1.1.4. BUSINESS LICENSE REQUIRED**

The selected consultant must have or acquire a current City of Ashland business license prior to conducting any work under this contract.

#### **1.1.5 INSURANCE REQUIREMENTS**

Contractor shall at its own expense provide the following insurance:

- a. Worker's Compensation insurance in compliance with ORS 656.017, which requires subject employers to provide Oregon workers' compensation coverage for all their subject workers.
- b. Professional Liability insurance with a combined single limit, or the equivalent, of not less than **\$1,000,000** for each claim, incident or occurrence. This is to cover damages caused by error, omission or negligent acts related to the professional services to be provided under this contract.
- c. General Liability insurance with a combined single limit, or the equivalent, of not less than **\$1,000,000** for each occurrence for Bodily Injury and Property Damage. It shall include contractual liability coverage for the indemnity provided under this contract.

- d. Automobile Liability insurance with a combined single limit, or the equivalent, of not less than **\$1,000,000** for each accident for Bodily Injury and Property Damage, including coverage for owned, hired or non-owned vehicles, as applicable.
- e. Notice of Cancellation or Change. There shall be no cancellation, material change, reduction of limits or intent not to renew the insurance coverage(s) without 30 days' written notice from the Contractor or its insurer(s) to the City.

Additional Insured/Certificates of Insurance. Contractor shall name The City of Ashland, Oregon, and its elected officials, officers and employees as Additional Insurers on any insurance policies required herein but only with respect to Contractor's services to be provided under this Contract. As evidence of the insurance coverage required by this Contract, the Contractor shall furnish acceptable insurance certificates prior to commencing work under this contract. The certificate will specify all of the parties who are Additional Insurers. The consultant's insurance is primary and non-contributory. Insuring companies or entities are subject to the City's acceptance. If requested, complete copies of insurance policies; trust agreements, etc. shall be provided to the City. The Contractor shall be financially responsible for all pertinent deductibles, self-insured retentions and/or self-insurance.

## **1.2 QUESTIONS AND CLARIFICATIONS**

### **1.2.1. Proposer Questions**

All inquires, whether relating to the RFP process, administration, deadline or award, or to the intent or technical aspects of the services must be submitted in writing to the City's Project Manager listed in the advertisement for this proposal, , at 20 East Main Street, Ashland Oregon 97520. All questions must be received not later than ten (10) calendar days prior to the proposal submission deadline.

Answers to questions received by City, which are deemed by City to be substantive, will be issued as official addenda to this RFP to ensure that all proposers base their proposals on the same information. When appropriate, as determined by City in its sole discretions, revisions, substitutions or clarification of the RFP or attached terms and conditions, an official addendum to this RFP will be issued. Proposer shall indicate receipt of all issued addenda by attaching a copy of the addendum to the proposal. The addendum will not be included in the total maximum page limit.

## **1.3 PROTESTS**

### **1.3.1 Award Protest Requirements**

Every proposer who submits a proposal shall be notified of its selection status. Any proposer who claims to have been adversely affected or aggrieved by the selection or any proposer who contends that the provisions of the RFP or any aspect of the procurement process has promoted favoritism in the award of the contract or has substantially diminished competition, must file a written protest to the RFP within seven (7) calendar days after the date of the selection notice. Failure to file a protest will be deemed a waiver of any claim by an offeror that the procurement process violates any provision of ORS Chapter 279, the City of Ashland Local Contract Review Board Rules or the City's procedures for screening and selection of persons to perform personal services.

### **1.3.2 Costs and Damages**

All costs of a protest shall be the responsibility of the protestor and undertaken at the protestor's expense. City shall not be liable for the proposer's damages or costs for filing the protest or to any participant in the protest, on any basis, express or implied.

#### **1.4 "PASS / FAIL" PROPOSAL SUBMISSION REQUIREMENTS**

Each proposal must comply with the following Pass / Fail criteria. Proposals not meeting ALL Pass / Fail criteria shall be rejected.

##### **1.4.1 Proposal Submission Deadline (Pass / Fail)**

Proposals must be received by the submission deadline as indicated in this RFP and at the address specified. City will not accept proposals submitted by facsimile or electronic mail, nor will it accept proposals submitted after the proposal submission deadline. City is not responsible for and will not accept late or mis-delivered proposals.

##### **1.4.2 Terms and Conditions (Pass / Fail)**

Unless an official addendum has modified or reserved the right to negotiate any terms contained in the contract or exhibits thereto, City will not negotiate any term or condition after the protest deadline, except the statement of work, pricing and calendar with the selected proposer. By proposal submission, the selected proposer agrees to be bound by the terms and conditions as set forth in this RFP and as they may have been modified or reserved by City for negotiation. Any proposal that is received conditioned upon City's acceptance of any other terms and conditions or rights to negotiate will be rejected.

#### **1.5 "REQUIRED" PROPOSAL SUBMISSION ITEMS AND SCORING DEDUCTIONS**

Any items in this Section 1.5 marked as REQUIRED that are incomplete or are not submitted with the proposal will receive a three (3) point scoring deduction for each item and must be submitted within two (2) business days of request by City. Failure to deliver properly completed "REQUIRED" items within two (2) business days of request by City shall result in proposal rejection.

##### **1.5.1 Cover Sheet (Required)**

The proposal must include a completed cover sheet signed by a duly authorized representative empowered to bind the proposer (at least one original signature). The cover sheet shall state the project title, the legal name of the proposer, legal status, federal tax ID number, mailing address, primary contact person for this proposal with email address, telephone number, fax number and the name of the person authorized to sign a contract. Include an original signature, printed name and title and date.

##### **1.5.2 Page Length Limitation (Required)**

The proposal must not exceed **10** pages, excluding cover sheet, any tabs or indexes and references, and any issued addendum. Failure to include addendum within the RFP shall result in a three point scoring reduction. If a proposer submits a proposal exceeding this limit, City will consider the pages up to that allowable number and discard all subsequent pages.

One page is defined as: one side of a single 8 ½" x 11" page. Any page over this size will be counted as two (2) pages. Any page or partial page with substantive text, tables, graphics, charts, etc. will be counted as one page.

There is no scoring deduction for exceeding the proposal page limitation; however, extra pages will be discarded and will not be considered in the evaluation.

### 1.5.3 Quantity of Proposals (Required)

Proposers must submit six (6) complete copies of the proposal along with six (6) sealed cost proposals.

### 1.5.4 Minimum Proposal Contents

A. Project Narrative: The narrative should provide a description of the consultant's understanding of the project objectives.

B. Project Schedule and Budget

1. The Consultant shall prepare a proposed project schedule and budget that anticipates all services required to complete the Master Plan before May, 2011. The Proposal shall include a graphic Gant-chart style schedule of major work tasks with project milestones and estimate of costs for those tasks.

C. The Statement of Work (SW)

1. The Statement of Work should outline phases of work and the relationship of the proposed tasks to the objectives of the project. It should include proposed methods of investigation, analysis, and design as appropriate. Key elements shall include:

a. An expanded outline of all work tasks

b. Detailed work schedule for each major task, including time frames, costs, and estimated staff hours committed to each task.

c. List all proposed sub-consultants, including their planned scope of work, estimated cost of services, key project staff and references (contact names, phone numbers, and email addresses).

d. Description organized by task of City's anticipated role to assist in the development of the plan. Include specific deliverables needed from the City.

e. Detailed description of Consultant's deliverables, including support documents and the technical reports that the Consultant will submit at the set milestones. The consultant should include a description of all computer software (including version) proposed for the project, including word processing, spreadsheet, mapping, graphics and technical models, display graphics used for public meetings, and electronic files.

f. One copy of similar representative project deliverables recently completed for another similar organization by the consultant.

g. Description of the how the consultant will coordinate work with City staff as the plan is developed. Include a discussion of the process used to share information with the City's project team, anticipated process for periodic review as the plan is developed, including the type, format, and frequency of meetings.

h. The format of the completed master plan shall be recommended by the consultant for the City's consideration, but the City has the option to require changes to the formatting and submittal as it sees fit.

D. The proposed work breakdown and associated budget and schedule for services that are submitted together with the Statement of Work shall be attached to the City's standard contract for Engineering Services. Invoices requesting payment shall be prepared assuming payment on a "time and materials not to exceed" (NTE) basis per major task. Payment will be made as a percentage of completion of each task. The City's fiscal year ends on June 30<sup>th</sup>, and all work completed up to that date must be billed no later than July 5<sup>th</sup>. It is of particular importance that work or services rendered are paid out of the budget for the same fiscal year in which the services are budgeted and the service is rendered by the City. Therefore, costs associated with contractors' or

subcontractors' work or services rendered under the direction or direct or indirect control of the proposer are also subject to the invoicing requirement listed above by June 30th of each year. By April 15<sup>th</sup>, the proposer shall submit an estimate of anticipated billings up to June 30<sup>th</sup> of that year.

The proposer shall assume that there will be no opportunities to increase the total cost of the sum of all work tasks, but that costs may be shifted from one task to another after tasks are completed. The City's budgeting process does not provide a means to readily change the total project budget, and proposers must be clear that increases in the project budget will not be available after the Statement of Work has been accepted. Proposers are responsible to ensure that every effort is made to anticipate potential additional costs brought about by the project, including but not limited to work or services related to ORS 227.186 (City Planning and Zoning Notice to property owners of hearing on certain zone change; form of notice; exceptions; reimbursement of cost), DHS requirements, and other regulations that increase the City's costs to carry out the master-planning process.

## **SECTION 2.0 EVALUATION PROCESS AND CONSULTANT SELECTION**

### **2.1 EVALUATION PROCESS**

#### **2.1.1 Proposal Evaluation**

City will review proposals for conformance with the "Pass / Fail" and "REQUIRED" criteria identified in Sections 1.4 and 1.5. Proposals meeting all Pass / Fail criteria will be forwarded to an evaluation committee that will independently review, score and rank proposals according to the scoring criteria set forth in Section 2.2.

The outcome of the evaluation process may, at the City's sole discretion result in:

- a. Notice to proposers of selection or rejection for contract negotiations and possible award;
- b. Further steps to gather additional information for evaluation (e.g. checking references, notice of placement on an interview list, requesting clarification); or
- c. Cancellation of the RFP and either reissuance of the RFP in the same or a revised form or no further action by the City with respect to the RFP.

City may reject any or all proposals and may cancel this RFP at anytime if doing either would be in the public interest as determined by the City. City is not liable for any costs a proposer incurs while preparing or presenting the proposal or during further evaluation stages. All proposals will become part of the public record file without obligation to the City of Ashland.

#### **2.1.2. Interviews / Follow-up Questions**

Interviews / follow-up questions may be conducted and scored at the discretion of City. If interviews / follow-up questions are conducted the following will apply:

- A minimum of three (3) evaluators shall score the interviews / follow-up questions;
- The interviews / follow-up questions will have a maximum score of ten (10) points;
- The number of Proposers selected for interviews / follow-up questions is at the sole discretion of the City;

- Follow-up questions will typically be sent via email to proposer(s) as an alternative to face-to-face interviews. However, City may conduct face-to-face interviews if determined necessary after conducting written follow-up questions;
- Interviews normally require physical attendance at City's offices; however, the City may elect to conduct interviews via teleconference or video conference. Further details will be included with notification of time and date of interviews, if conducted.

### 2.1.3 References

City does not intend to score references, but may contact references (by phone, email or fax) to verify information provided in proposals.

### 2.1.4 Clarifications

City may require any clarification it needs to understand the proposer's proposal. Any necessary clarifications or modifications which are in the best interest of City may be made before the proposer is awarded a contract and some or all of the clarifications or modifications may become part of the final contract. Clarifications may not be used to rehabilitate a non-responsive proposal.

## **2.2 SCORING CRITERIA**

Scoring will be based upon the following described categories. The proposer must describe how each of the requirements specified in this RFP are met. Responses should be clear and concise.

### 2.2.1 Understanding of Requested Service

Maximum Score 10 points

Demonstrate a clear and concise understanding of the scope of services being requested in this RFP.

### 2.2.2 Proposer's Capabilities

Maximum Score 20 points

Demonstrate capability to complete the requested services. Response must include:

- (10 points) An explanation describing how the proposer can accommodate the varying workload contemplated under an on-call contract, including a description of anticipated response times.
- (10 points) An explanation describing proposer's proximity to the project and how the proposer can cost effectively accommodate working on this project. Describe proposer's branch or satellite offices that will provide the requested services, indicate their location(s) and which services they are able to perform.

### 2.2.3 Project Team and Qualification

Maximum Score 25 points

- (5 points) Describe the extent of principal involvement
- (10 points) Include descriptions of similar projects, project outcomes and customer feedback received (if any).
- (10 points) Describe the experience and qualifications of proposed project manager(s), (whether they are from the prime or a sub-consultant) with similar interdisciplinary teams. Include descriptions of similar projects, project outcomes and customer feedback received (if any). Also provide information regarding key staff members (including sub-consultant staff) who are anticipated to perform services.

### 2.2.4 Resources

Maximum Score 15 points

Demonstrate proposer’s resources available to be allocated for the proposed scope of services. Describe any specialties or unique strengths that relate to the services requested in this RFP. Include a brief description of new or innovative equipment or techniques to be used.

**2.2.5 Response Time**

**Maximum Score 20 points**

This criterion relates to how quickly the consultant can respond to City’s requests/inquiries. The consultant must demonstrate how time will be managed.

**2.2.6 Cost of Services**

**Maximum Score 10 points**

In an attached sealed envelope, provide a summary of costs including:

- Professional, technical, draftsperson, other professional / sub-professional rate(s);
- Direct non-labor costs that might be applicable;

<b>Criteria</b>	<b>Maximum Score</b>
2.2.1. Understanding of Requested Services	<b>10</b>
2.2.2 CONSULTANT Capabilities	<b>20</b>
2.2.3 CONSULTANT and / or Project Team	<b>25</b>
2.2.4 Resources	<b>15</b>
2.2.5 Response Time	<b>20</b>
2.2.6 Cost of Services	<b>10</b>
<b>TOTAL</b>	<b>100 Points</b>

**SECTION 3.0 SCOPE OF SERVICES**

**3.1 GENERAL REQUIREMENTS**

**3.1.1 Personnel, Materials & Equipment:** The Consultant shall provide qualified and competent personnel and shall furnish all supplies, equipment, tools and incidentals required to accomplish the work. All materials and supplies shall be of good quality and suitable for the assigned work.

**3.1.2 Safety Equipment:** The Consultant shall provide and use all safety equipment including, but not limited to hard hats, safety vests and clothing required by State and Federal regulations and Department policies and procedures.

**3.1.3 Professional Responsibilities:** The Consultant shall perform the work using the standards of care, skill and diligence normally provided by a professional in the performance of such services in respect to similar work and shall comply with all applicable codes and standards.

**3.1.4 Project Management:**

The Consultant and the City staff will meet to initiate the Project. The objectives of the meeting will include reviewing the scope, budget, and schedule.

The Consultant will be responsible to:

1. Organize and manage Consultant project team and coordinate with City project manager.

2. Meet with all Regulatory Agencies impacted (e.g. Oregon Department of Health Services Drinking Water Program to determine expectations and share approach). Develop an acceptable approach for developing the Comprehensive Water System Plan (CWMP), and determine if there are any special concerns or issues DHS believes need to be addressed.
3. Prepare a Statement of Work (SW), that includes scope, schedule and budget; project contacts and responsibilities; and update as needed. The SW shall be a coordinated document that includes a work breakdown structure (WBS) with an estimate and schedule by work task.
4. Prepare monthly invoices and progress reports including the following:
  - Work Completed during the Month by work task as a percentage of completion.
  - Needs for Additional Information, Reviews, or Changes to the SW.
  - Scope, Schedule, and Budget Issues and Changes.
  - Project completion status spreadsheet (e.g. standard AIA, EJCDC or approved form).
5. Prepare and submit quarterly and final reporting as required to meet any applicable grant reporting requirements.
6. Prepare, assemble, and deliver draft and final documentation as outlined below.

### 3.1.5 Document Assembly (Draft and Final):

1. For each deliverable, assemble a draft version for City review and a final draft version- for submittal to appropriate agencies and public participation process
  - Assemble the draft chapters and supporting memoranda into a separate main document and an appendices document. Assemble the two parts into loose-leaf, three-ring binders with dividers, one binder for each study.
  - Provide data on computer analysis of the distribution system.
  - Provide the following deliverables to the City:
    - Three (3) draft bound sets of the document with each set bound in two three-ring binders – one with the draft Water Plan and one with Plan appendices.
    - Five (5) final draft sets of the document for agency review if needed or WRIA 34 Planning Unit if appropriate including plan and appendices.
2. Respond to City and public comments and assemble final plan for City approval.
  - Prepare an Executive Summary of the plan to be included at the front of the plan document (5 – 10 pages). See required contents in item 1 of the format requirements below.
  - Assemble the final chapters and supporting memoranda into the final WCRS & CWMP and appendices document. The document will be assembled into two loose-leaf, three-ring binders with dividers.
  - Detailed system description information or maps judged to be important to system vulnerability will be summarized in a separate confidential memorandum to be provided only to personnel authorized by the Public Works Director.
  - Consultant Presentation to City Council for adoption if applicable
  - Provide the following deliverables to the City:
    - Copy ready original paper copy of document

- Ten (10) bound sets of the document with each set bound in two three-ring binders – one with the Water Plan and one with Plan appendices.
- Ten (10) compact disk PDF file copies of the water plan and appendices.
- Three (3) compact disk Word/Excel files copies of the water plan and appendices.

### **3.2 TASK SPECIFIC REQUIREMENTS:**

The following pages describe the major tasks and requirements specific to those tasks.

# 1.0 WATER CONSERVATION AND REUSE STUDY (WCRS)

## Objective

To conduct detailed water conservation and re-use study and prepare a report as spelled out in the attached DHS grant application that conforms fully to the attached DHS grant agreement, reporting requirements, and attached prior submittals

## Consultant Services

**A. Grant Reporting:** Based on the RFP and award of an engineering consultant services contract for the planning study that includes the tasks listed below, administer all applicable grant requirements, including quarterly progress reporting, financial status reporting, requests for release of funds to the City, and final reporting.

**B. Existing Master Planning Gap Analysis:** Review, analyze, validate and identify gaps in Ashland's existing water master plans and water sources. (Incorporate results into CWMP). The updated Comprehensive Water Master Plan (CWMP) document to follow the CWRS shall include specific items per OAR Ch. 333, Div. 061 Oregon Department of Human Services, Public Health Systems. The CWMP shall evaluate the needs of the water system for a six and twenty year periods. It shall include but is not limited to the following chapters:

1. **Executive Summary** that includes:

- a. Water quality and service goals
- b. Present and future water system deficiencies identified
- c. Recommended alternative for achieving goals and correcting deficiencies
- d. Recommended schedule and financing program for constructing improvements

2. **Existing System Description** including:

- a. Service Area
- b. Sources of Supply
- c. Status of Water Rights
- d. Current Drinking Water Quality and Compliance with Regulatory Standards
- e. Maps of System Showing Size and Location of Facilities
- f. Estimates of Water Use
- g. Operation and Maintenance Requirements

3. **Water Quality & Level of Service Goals Description**, considering:

- a. Existing and Future Regulatory Requirements, including:
  - (1) Preparation of an EPA Stage 2 Rule ISDE Evaluation Technical Memo (TM) before December 1<sup>st</sup> 2010 to meet all regulatory requirements for selecting sample sites.
  - (2) Preparation of a Disinfection By-product (DBP) Preliminary Evaluation TM that investigates the cause of and prepares recommendations for possible solutions to address high DBP levels in the distribution system. This evaluation may not be

necessary; pending the completed IDSE monitoring results, but should be included in the scope so as to reserve funding in the event that it is necessary.  
(3) Preparation of a Security Plan, Structural Safety Analysis, and Dam Safety Monitoring Plan for Hosler Dam as required meeting FERC requirements. The most recent Independent Part 12 Inspection Report has spelled out the required reporting in its recommendations.

- b. Non-Regulatory Water Quality Needs of Water Users.
  - (1) Preparation of a Monitoring and Source Water Protection Management Plan TM for Reeder Reservoir, in particular as it relates to:
    - Water Quality to meet current TMDL requirements and treatment objectives
    - Water Quantity to meet storage and operational objectives
- c. Flow and Pressure Requirements.
  - (1) Preparation of a TM addressing flow and pressure needs in the Loop Road Zone and preparing an updated budget and scope of services required for the Crowson II Reservoir.
- d. Capacity Needs Related To Water Use And Fire Flow Needs.
  - (1) Preparation of a TM to address implications of a potential reduction of Reeder Reservoir storage capacity due to structural concerns raised by the most recent Part 12 Consultant.

**4. Water Demand:** Project growth of water system necessary to meet demand during the 6 year, 20 year, (and 50 year per section B below) periods and impacts on:

- a. Service area boundaries
- b. Water supply source(s) and availability
- c. Customer water use

**5. Water Supply:** An engineering evaluation of existing system's ability to meet the water quality and level of service goals, identification of any existing water system deficiencies, and deficiencies likely to develop within the master plan periods. The evaluations shall include:

- a. Water Supply Sources and Water Rights Descriptions
- b. Water Treatment Facilities
- c. Storage
- d. Distribution Facilities including Pumping and Pressure Zone Separation Analysis
- e. Operation and Maintenance Requirements
- f. Impacts of Present and Probable Future Water Quality Regulations
- g. Determination of Additional Water Availability

**6. Alternatives Analysis** including identification of

- a. The three top alternative engineering solutions that address anticipated deficiencies.
- b. Environmental impacts of the preferred alternative.
- c. Associated capital costs, as well as operation and maintenance life cycle costs to correct water system deficiencies and achieve system expansion to meet anticipated growth, including identification of available options for cooperative or coordinated water system improvements with other local water suppliers.

**7. Financial Alternatives Analysis, including**

- a. Local financing
  - (1) User Fee and Rate Study
  - (2) System Development Charges Update
- b. Financial assistance programs (“One stop”)

**8. Capital Improvement Program (CIP) Recommendation, including:**

- a. Engineering alternative and associated costs
- b. Maps showing size and location of proposed facilities
- c. Financing alternative recommended
- d. Schedule for design and construction

**C. Add 50 Year Planning Horizon:** Validate the City’s future water needs through the year 2058. (Incorporate results in to part of CWMP Chapter 4).

**D. Alternative Sources Analysis:** Identify and fully describe all other alternative sources of water that will fully meet the City’s needs through the year 2058. (Incorporate results in to CWMP Chapter 5, section g)

**E. Right Water, Right Use Analysis:** It is anticipated that each water source will have defined uses and as such, identify options that explore different methods to utilize the right water for the different water uses; potable, irrigation sources and uses. (Incorporate results in to CWMP Chapter 3, section d (1)).

**F. TID Irrigation Analysis:** Identify benefits and challenges to using Talent Irrigation District and Bureau of Reclamation water, such as concerns from the Klamath Water basin; Oregon Fish and Wildlife issues, Oregon Water Resources, and others (incorporate results in to CWMP Chapter 5, section g).

**G. TID Environmental Analysis:** Specifically analyze environmental harm or impacts with the long term use of various irrigation water sources for City irrigation use (incorporate results in to CWMP Chapter 5, section g).

**H. Climate Change Analysis:** Explicitly address the hydrological benefits and challenges and anticipate the effects of climate change with regard to water needs and water use (incorporate results in to CWMP Chapter 5, section g)

**J. Recycled Water Analysis:** Identify benefits and challenges to using recycled water, such as the community’s perception and realities, restrictions, support from DEQ and State health, fruit growers, and others. (Incorporate results in to CWMP Chapter 5, section g).

**K. Secondary Piping System Analysis:** Identify options and cost estimates for piping the irrigation canals, piping for reuse/recycled water uses, ponds, treatment, pumping, and any other relevant costs (incorporate results in to CWMP Chapter 5, section g).

**City Responsibilities**

1. Schedule project initiation meeting in Ashland
2. Review monthly reports, drafts, and requests for information

**Deliverables**

1. Initiation meetings - agendas, notes, and action items
2. Monthly project reports and invoices (project duration)
3. Draft and Final Copies of the Report as required in the DHS grant agreements.

## 2.0 WATER SYSTEM DESCRIPTION

### Consultant Services

1. Prepare a summary of data and CWMP reference materials needed from the City.
2. Meet with City staff to tour water system facilities and review system condition and operational issues and concerns.
3. Work with appropriate City staff to create a Water System Description. The following water system components will be described:
  - a. Service Area
  - b. Sources & Quality of Supply (including coli form, contaminants, chemicals, & turbidity)
  - c. Status of Water Rights
  - d. Current Drinking Water Quality and Compliance with Regulatory Standards
  - e. Maps of System Showing Size and Location of Facilities
    - Water Treatment Facilities (process, hydraulic capacity, constituents, & disposal)
    - Transmission System
    - Pump Stations (including hydraulic capacity)
    - Storage Facilities
    - Distribution System
    - System Inerties
  - f. Estimates of Water Use, including historic consumption, production, & capacity
  - g. Operation and Maintenance Requirements
  - h. Ownership and Management
  - i. Overview – Pressure Zones

### City Responsibilities

1. Provide copies of requested water system data and reference materials in a timely manner.
2. Host a water system facilities tour for the project team.
3. Provide Data for the Consultant team to create a Water System Description.
4. Review and comment on draft documents provided by Consultant.

### Assumptions

1. The data collection meeting and facilities tour site visit will be coordinated with project initiation meetings described in Task 1.
2. The City will provide the available requested water system data and reference materials.
3. The City will review the draft CWMP System Description chapter and work with the Consultant team to provide necessary information for revising the draft chapter.

4. Detailed system description information and maps judged to be important to system vulnerability will be summarized in a separate confidential memorandum to be provided only to personnel authorized by the Public Works Director.

**Deliverables**

1. Data and reference materials request summary.
2. Word document electronic file of draft Plan Chapter 2 containing a description of the existing water system which includes the service area, source(s) of supply, status of water rights, current status of drinking water quality and compliance with regulatory standards, maps or schematics of the water system showing size and location of facilities, estimates of water use, and operation and maintenance requirements
3. Word document electronic file of the final draft Chapter 2 incorporating comments
4. Limited release Technical memorandum of vulnerable system details

## 3.0 WATER QUALITY & LEVEL OF SERVICE GOALS-

### Objective

Work with City staff to develop a plan for existing and continued compliance with State and Federal Safe Drinking Water Act requirements.

### Consultant Services

#### **3A. Regulatory Requirements and Compliance Program**

1. Describe Safe Drinking Water Act and Oregon DHS drinking water regulations applicable to the City for:
  - Existing Regulations
  - Proposed Regulations
  - Anticipated Regulations
2. Review the City's water quality compliance data from 1999-2007
3. Create a regulatory compliance monitoring plan for the City
4. Document compliance status.
5. Prepare recommendations regarding existing monitoring plans and/or treatment practices based on existing or proposed Safe Drinking Water Act regulations
6. Prepare Comprehensive Regulatory Compliance Plan
7. Review and document the City's procedures for handling customer inquiries
8. Document use of certified laboratories
9. Preparation of an EPA Stage 2 Rule ISDE Evaluation Technical Memo (TM) to before December 1<sup>st</sup> 2010 to meet all regulatory requirements for selecting sample sites.
10. Preparation of a Disinfection By-product (DBP) Preliminary Evaluation TM that investigates the cause of and prepares recommendations for possible solutions to address high DBP levels in the distribution system. This evaluation may not be necessary; pending the completed IDSE monitoring results, but should be included in the scope so as to reserve funding in the event that it is necessary.

#### **3B. Non-Regulatory Needs of Users: Public Involvement Process**

1. **Technical Review Committee**
  - a. The City will establish a Technical Review Committee (TRC) consisting of City management staff and members of the public to provide review and consensus concerning study recommendations and improvement options.
  - b. The Consultant shall schedule milestones throughout the project and submit technical reports to the TRC at these milestones.
  - c. The Consultant shall set the TRC meeting schedule and notify all members.
2. **Public Involvement**
  - a. Conduct two (2) open house format hearings during the master planning process to provide an opportunity for the public to comment on the master planning.

- Consultants may be asked to conduct additional open house meetings to share the designs and cost estimates with the public and answer questions.
  - b. Inform the City Council of master planning status.
    - Submit a monthly status report to the Public Works Director for Council review.
    - Present a summary and the status of the master planning effort to Council three (3) times during the duration of the project.
  - c. Prepare three separate mailings, to be mailed by the City, which will inform citizens of master planning efforts.
  - d. Assist the City in drafting three (3) news releases informing citizens of the progress of the master planning efforts.
- 3. Preparation of a Monitoring and Source Water Protection Management Plan Technical Memo for Reeder Reservoir in particular it relates Algae and water quality to meet current TMDL requirements and identify future requirements.

### **3C Flow & Pressure Requirements: Program**

1. Preparation of a Technical Memo addressing storage, pumping, flow and pressure needs in the Crowson and Loop Road Pressure Zones that includes a detailed budget and scope of services required to address the current deficiencies.

### **3D. Capacity Needs Related to Water Use: Conservation Program**

1. **Recent Program:** Document the City's recent water conservation efforts, including estimated savings if feasible. This will be achieved using information from the City and discussions with City staff.
2. **Goal:** Assist the City in developing an appropriate quantitative conservation goal. The goal will be developed related to the primary driver of the City's conservation program. Typical conservation drivers include: 1) meeting voluntary water production targets, 2) obtaining additional water supply, 3) deferring capital improvements, 4) decreasing operating costs, or 5) demonstrating responsible use of water resources.
3. **Program Next 6 Yrs:** Recommend direction of the City's conservation program for the next six years, ensuring that the number of conservation measures involved is reasonable and practical and consistent with past activities as well as the Conservation Plan that is currently being developed. The Consultant should be aware that the City is currently implementing six or more measures (source meters, service meters, conservation pricing, bills showing consumption history, education, and landscape management practices on City properties). The City staff will identify the measures for the Consultant to include in the program. Evaluation of the impacts of conservation to the water demand forecast will be addressed.
4. Preparation of a TM to address implications of a potential reduction of Reeder Reservoir storage capacity due to structural concerns raised by the most recent Part 12 Consultant.

#### **City Responsibilities**

1. Provide existing water quality regulatory compliance data from 1999-2007 for review and summary.
2. Assist with development of comprehensive regulatory compliance plan elements

3. Review drafts and provide comments

### **Assumptions**

1. No monitoring plans are currently in place.
2. One meeting and one conference call will be held with City staff to develop the draft and final goal setting approach and actual goal(s);
3. The draft and final goals shall be consistent with the City's Water Comprehensive Plan and DHS requirements.
4. The Public Participation Process is very difficult and subject to uncertainty regarding the number of Public Meetings, conference calls and follow-up required. It is therefore proposed to hold five public meetings and 12 technical group meetings.

### **Deliverables**

1. Word document electronic files of the draft Chapter 3 containing a description of water quality and level of service goals for the water system, considering, as appropriate, existing and future regulatory requirements, non-regulatory water quality needs of water users, flow and pressure requirements, and capacity needs related to water use and fire flow needs.
2. Final draft word electronic file of Chapter 3 with review comments incorporated.
3. Word document electronic files preliminary and final as technical report
4. A Conservation Curtailment Program as required for conservation plans in OAR Ch. 333, Div. 061

## 4.0 WATER DEMAND EVALUATION

### Consultant Services

1. Create up to four maps for this task showing the following:
  - Current City Limits
  - Current Area of urban growth boundary;
  - The City's service area for the current, 6 year, 20 year and 50 year time frames;
  - Projected City growth areas for the 6, 20, and 50 year periods per the Comprehensive Land Use Plan;
  - Current and projected zoning or land use within the City service area.
2. **Demographic Projections:** Develop demographic projections for the City's service area for three time periods: 6-year, 20-year, and 50-year. These projections will evaluate and include the impacts of climate change and will be based on demographic data from the City Community Development Department, the County Planning Department, the City Public Works Department, and/or the U.S. Census, depending on data availability. Coordination with City's Community Development Department will be important. The ideal demographic data are projections of single family households, multifamily households, and employment through the 50-year time period. If such data is not available, alternative methods of developing demographic projections include: 1) using population data rather than households, 2) using utility connections data rather than households, 3) analyzing historical data to determine historical growth rates and extrapolate growth rates forward as appropriate given input from City staff, and 4) analyzing buildable lands inventory, zoning, and timing of development. A range of demographic projections (such as low, medium and high) can be provided, if desired by City.
3. **Analysis:** The demographic projections will be matched to the City's existing and projected service area using appropriate analysis with input from the City's Comprehensive Land Use Plan. Please note that GIS data may not be available. The demographic projections should be divided into sub-areas such as pressures zones, and current versus new service areas, as data allows and as desired by the City.
4. **Supply Characteristics:** Summarize ten years (or a lesser amount if ten years is not available) of historical supply characteristics such as the number of connections by customer category, production, sales, water balance showing non-revenue water and leaks, peaking factor, and water use factors. (Note: the current Utility Billing System can produce information on water use by customer class. This information can be determined via an extraction of the data from the Utility Billing System and manual development of the customer related details via spread sheet.) This information will be presented on an annual or monthly basis as appropriate. Water use factors, including EDUs, will then be calculated based on this data. Information will be analyzed and presented separately for potable and reclaimed water.
5. **Technical Memo:** Prepare a Technical Memorandum for City review with summary tables and graphs of the demographic projections and historical supply characteristics. Edits and adjustments of this information shall occur before the data is used to develop the demand forecasts.

6. **Demand Forecasts:** Generate demand forecasts using the demographic projections and water use factors for the 6-year, 20-year, and 50-year time periods. The forecasts will be presented by billing category (e.g., single family, multifamily, commercial) and additionally will be divided into the same sub-areas as the demographic projections. Information will be presented separately for potable and reclaimed water. For reclaimed water, the Consultant will work with City staff to identify large potable users and determine the feasibility of converting them to reclaimed water based on their location and purpose of water use. The demand forecasts will include adjustments to reflect the conservation program from Task 6.
7. **Chapter 4:** Prepare the associated chapter for inclusion in the CWMP.
8. **Reuse:** Describe Ashland's potential for Wastewater Reuse and water rights for Wastewater Treatment Plant effluent and their potential impacts on potable water supply with respect to use of treated effluent in lieu of source water.
9. **TID:** Describe Ashland's potential for use of Talent Irrigation District Water and the availability of associated TID water rights for the potential impacts on potable water supply with respect to use of TID water in lieu of source water.
10. **TAP:** Describe Ashland's potential for use of Talent, Ashland, and Phoenix (TAP) and associated water rights as a drinking water supply.

Summarize consistency with the City's land use plan, and note any differences (e.g. the 50 year scenario will likely go beyond the existing information in the comprehensive land use plan and portions of the service area will be outside the projected City Limits and current Area of City Impact).

### **City Responsibilities**

1. Provide the following source data, per the data and reference materials request associated with Task 2: map data layers, City intertie agreements, Related plans, City base map/parcel map in ACAD electronic file format, aerial map, utility map, land use maps (current and future), and water rights.
2. Review the draft CWMP chapter, including summarized demographic projections, historical supply characteristics, maps, and provide written comments.

### **Assumptions**

1. Limited source data will be available beyond the 20 year planning horizon. Consultant shall collaborate with the Community Development Department and the Engineering Division to determine the 50 year planning horizon data utilizing the Comprehensive Land Use Plan as the baseline for growth projections;
2. These task activities will be completed in conjunction with Task 5.

### **Deliverables**

1. Word document electronic file of draft Plan Chapter 4: containing an estimate of the projected growth of the water system during the master plan period and the impacts on the service area boundaries, water supply source(s) and availability, and customer water use.
2. Word document electronic file of the final draft Chapter 3.

## 5.0 WATER SUPPLY SYSTEM EVALUATION

### Objective

Perform a water rights and alternate supply options analysis including inventory, comparison with future needs, assessment of interties, and assessment of alternate water supply options to meet IDWR, DEQ and City planning requirements.

### 5a. Water Sources & Water Rights

#### Consultant Services

1. Perform a water right inventory and analysis to identify and summarize the status of the City's existing water rights with input from a review of City records and Oregon Department of Water Resources files pertaining to the basic documents of each water right file (permit, certificate, etc.). The depth of this analysis will be sufficient to make a recommendation to the City regarding the sufficiency of existing water rights for current and future demands for each planning horizon.
2. Prepare future supply water rights analysis to determine the adequacy of the City's existing ground water rights to meet the 6, 20 and 50 year demand forecast developed under Task 5. Service area considerations related to purpose and place of use and service limitations (if any) will be evaluated. The depth of this analysis will be sufficient to define the City's ability to serve the existing and future service area. Identify any additional water rights needed.
3. Document the status of the existing UI interties and agreements and their potential impact on the ability of the City to provide service to current and future service areas with existing and proposed water rights.
4. Describe surface source and aquifer storage and recovery potential for future source of supply options to meet projected demand and improve system reliability. This summary will include description of the potential facility elements and design criteria, permitting considerations, estimated cost, and other relevant information. Consultant will also describe common implementation issues associated with surface water and ASR projects for City consideration.
5. Describe reuse potential for future source of supply options to meet projected demand and improve system reliability. This summary will include description of the potential water reclamation demands (currently planned and future planned irrigation sites), facility elements and design criteria, permitting considerations, estimated cost, and other relevant information. Consultant will also describe common implementation issues associated with reuse projects for City consideration.
6. Develop preliminary common cost/yield comparison among the following potential future water supply options: Surface Water Supply and associated water treatment; Aquifer Storage and Recovery; reuse; conservation savings; and new groundwater supply wells. This effort will rely on the work completed and conservation information available in the City Water Conservation Plan, and information developed as part of the CWMP.

#### City Responsibilities

1. Provide available information regarding existing water rights.

2. Review and comment on CWMP Draft Chapter 6 and Technical Memorandum on potential cost/yield supply options.

### **Assumptions**

1. The City will provide available water rights information.
2. The preliminary cost/yield comparison will rely on existing available capital and O&M cost information for the three different supply options, updating existing cost information to 2009 costs. If O&M costs are not available, a qualitative assessment with ranges associated with high, medium or low costs will be applied to provide for comparison among the alternatives.

### **Deliverables**

1. Word document electronic file of draft and final Technical Memorandum titled- Water Rights and Supply Options; and final cost/yield supply options. This memorandum will be formatted to be directly compiled into the CWMP as an appendix.

## **5b. Water Treatment**

### **Consultant Services**

- Evaluate the existing Water Treatment Facilities to determine ability to treat water produced to meet the supply requirements for projected demands in all planning horizons.
- Identify potential solutions to any deficiencies in the Water Treatment Facilities including lack of capacity, location limitations, and distance from proposed supply sources.
- Develop listing of recommended Treatment Facilities improvements for the Capital Improvements Plan update.
- Capital Improvements Plan update shall identify locations and types of Treatment Facility additions and upgrades needed for improved use of existing sources and those necessary to serve new sources.
- Prepare a Technical Memorandum that evaluates the effectiveness and reliability of WTP improvements and operations, including the following process improvements issues:
  - (a) Magnetic Meter flow pacing SCADA incompatibilities
  - (b) Hypo-chlorite pump SCADA control inadequacies
  - (c). Soda Ash feed system control issues and remaining work
  - (d) Flocculation Design: how much flocculation is optimal and how much baffling is appropriate
  - (e) Chlorine Diffusion in the clear well to reduce nuisance alarms and reduce secondary DBP
  - (f) Backwash sump pump electrical power supply isolation from the SCADA system, as well as other appropriate transient protection necessary to reduce adverse impacts of lightning and power surges

**Deliverables**

1. Word document electronic file of draft and final Technical Memorandum titled- Water Treatment Plant Operational and Capital Improvement Options. This memorandum will be directly compiled into the CWMP as an appendix.

**5C. Water Distribution**

**Consultant Services:**

**5C.1 Hydraulic Computer Model Development**

Assist the City in the development of a PC based computer model that can be used for planning, fire flow analysis, sizing of facilities, and extended period simulations. The model will consist of a single input file that includes all the City’s pressure zones. This task includes the following:

- Review the status of the existing hydraulic model
- Provide recommendation on purchase of new hydraulic modeling software
- Purchase new hydraulic modeling software
- Create and calibrate a new hydraulic model utilizing City purchased software, existing hydraulic model data, base maps, and field data. Hydrant tests will be used to collect pressure data to assist in the calibration process.
- Include distributed system demand and all important facilities (tanks, pumps, sources, interties, and pipelines) to reflect actual system operation including pressure zones.
- Provide assistance, as needed, for the selection of sites for calibration fire flow tests.
- Refine the operation of the model so that it will work in steady-state and extended period modes.
- Provide training, as needed, in the operation of the modeling software.
- Utilize model to determine necessary system modifications/additions to meet projected growth and system demand. Findings shall be the basis of recommended Capital Improvement Program update.

**5C.2 Model Calibration**

**Data Collection**

- Select sites for fire flow tests and recording meters
- Utilizing City provided field data calibrate in accordance with *Calibration Guidelines for Water Distribution System Modeling* prepared by the Engineering Computer Applications Committee of the AWWA.
- Perform Steady state calibration to Planning Level accuracy.

**Modeling Scenarios**

- The following base simulations will be run in the same order as listed:

Description	Facilities	Mode	Demand	Purpose
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<b>Description</b>	<b>Facilities</b>	<b>Mode</b>	<b>Demand</b>	<b>Purpose</b>
Existing Peak Hour	Existing	Extended Period	2008 Peak Day with Diurnal Curve	Evaluate existing peak hour conditions and identify deficiencies
Existing Fire Flow	Existing	Steady State	2008 Peak Day plus fire flow	Evaluate existing fire flow conditions and identify deficiencies
2010 CIP Peak Hour	2009 CIP	Extended Period	2010 Peak Day with Diurnal Curve	Develop CIP for existing peak hour conditions
2010 CIP Fire Flow	2009 CIP	Steady State	2010 Peak Day plus fire flow	Develop CIP for existing fire flow conditions
2030 Peak Hour	2009 CIP	Extended Period	2030 Peak Day with Diurnal Curve	Evaluate 2030 peak hour conditions w/2009 CIP improvements and identify deficiencies
2030 Fire Flow	2009 CIP	Steady State	2030 Peak Day plus fire flow	Evaluate 2030 fire flow conditions w/2009 CIP improvements and identify deficiencies
2030 CIP Peak Hour	2030 CIP	Extended Period	2030 Peak Day with Diurnal Curve	Determine CIP for 2030 peak hour conditions
2030 CIP Fire Flow	2030 CIP	Steady State	2030 Peak Day plus fire flow	Determine CIP for 2030 fire flow conditions
2015 CIP Peak Hour	2015 CIP	Extended Period	2015 Peak Day with Diurnal Curve	Identify portions of 2030 CIP needed to meet 2015 peak hour conditions
2015 CIP Fire Flow	2015 CIP	Steady State	2015 Peak Day plus fire flow	Identify portions of 2030 CIP needed to meet 2015 fire flow conditions

- Develop Table of Capital Improvements for inclusion in final CIP listing. Scheduling of CIP items will take into account the City's street overlay and improvement program as well as other scheduled capital projects.
- Develop drawing that shows the locations of the CIP items included in the final list.

### **5C.3 System Physical Capacity Analysis**

#### **Consultant Services**

##### **Source Capacity Analysis**

- Evaluate the existing source (wells, booster pumps, etc.) capacity and compare it to the projected demands for all planning horizons.

- Provide analysis for each pressure zone in the distribution system
- Identify potential solutions to any deficiencies in source
- Develop listing of recommended source improvements for the Capital Improvements Plan update
- Capital Improvements Plan update shall identify locations and types of piping additions and upgrades needed for improved use of existing sources and those necessary to serve new sources.

#### **5C.4 Energy Consumption Assessment**

##### **Consultant Services**

- Gather and summarize data on existing water system equipment and facilities energy consumption and efficiency.
- Assess existing facilities energy consumption and identify equipment or facilities with potential for energy savings through operational modifications, upgrades, or replacement.

#### **5D. Storage Capacity Analysis**

##### **Consultant Services**

- Evaluate the existing storage capacity and compare it to the required storage based on projected demands using the following criteria or those criteria that may be required by DEQ:
  - Operational Storage
  - Equalizing Storage
  - Fire Flow Storage
  - Standby Storage (use greater of Fire Flow or Standby, if approved by local fire authority)
  - Dead Storage
- Assess by City quadrant the storage capacity and ability to provide fire flow volumes and rates within each quadrant. Identify where additional storage is required to meet current and projected demands.
- Assess operational parameters of Southeast reservoir under high flow demand periods and emergency operations.
- Provide analysis for each pressure zone in the distribution system
- Identify potential solutions to any deficiencies in storage
- Develop listing of recommended storage improvement for the Capital Improvements Plan update
- Utilize hydraulic model to assess current storage operations, determine location and size of additional piping needed to improve operations, and determine piping necessary to service new storage facilities.

##### **Conveyance System Capacity Analysis**

- Examine existing conveyance system to determine capacity to deliver water under normal and fire flow scenarios. Identify system deficiencies and improvements necessary to resolve them. Specifically assess ability of system to deliver flow from production and treatment facilities to storage facilities and high flow demand areas. Evaluate methods to fully utilize existing storage capacity. Identify pressure ranges for peak and normal flow conditions.
- Review ability of storage and conveyance systems to meet demands during high flow periods with largest reservoir off line.

### **City Responsibilities**

- Work with local fire authority to explore possibility and advisability of nesting of fire flow and standby storage

### **Assumptions**

- Software acquisition shall be made by City during Comprehensive Water System Plan development with recommendations from consultant on available options. Model shall utilize purchased software.
- Model contains all necessary pipes, pumps, reservoirs, interties, and sources.
- Water quality calibration is included in this scope of work
- Detailed system description information or maps judged to be important to system vulnerability will be summarized in a separate confidential memorandum to be provided only to personnel authorized by the Public Works Director.

### **Deliverables**

The following products will be created during this task. Some will be produced by Consultant and others will be produced by the City.

#### **Consultant Deliverables**

- Word document electronic file of draft and final Technical Memorandum titled- Water Distribution Hydraulic Modeling to provide Operational and Capital Improvement Options. This memorandum will be directly compiled into the CWMP as an appendix.
- Source adequacy analysis by pressure zone with recommendations for Capital Improvements, as needed.
- Conveyance system adequacy analysis by pressure zone with recommendations for Capital Improvements Plan, as needed
- Storage adequacy analysis by pressure zone with recommendations for Capital Improvements, as needed.
- Capital improvement table that contains all improvements recommended for the 20-year planning horizon.
- Model outputs for use in developing capital improvement program (tables and maps).
- Summary of Power Consumption Assessment process, findings, and recommendations.
- Limited release Technical memorandum of vulnerable system details.

## **City Deliverables**

- Existing hydraulic computer modeling software capable of simulating the Water distribution systems in both steady state and extended period modes.
- Data regarding equipment and facilities energy consumption and operations.

## **5D. Operations and Maintenance**

### **Consultant Services**

1. Meet with City staff to review information and create the following sections.
  - Organization Structure and Responsibility
  - Operator Certification
  - System Operation, Maintenance and Control
  - Emergency Response Operations
  - Safety
  - Cross Connection Control
  - Supplies and Equipment
  - Record Keeping and Reporting
  - O&M Improvements
2. Identify any recommended changes to current operations and maintenance program that will require funding through the CIP and evaluate and determine adequate staffing needs.
3. Identify and recommended changes to current Operations and Maintenance program and subsequent staffing needs that shall be necessary to provide adequate resources to address the expanded infrastructure outlined in the recommended Capital Plan

### **City Responsibilities**

1. Review available records and provide to the Consultant as requested.
2. Teleconference with Consultant to review available records.
3. Review and comment on draft Chapter 9.

### **Assumptions**

1. Detailed system description information and maintenance information judged to be important to system vulnerability will be summarized in a separate confidential memorandum to be provided only to personnel authorized by the Public Works Director.

### **Deliverables**

1. Word document electronic file of draft and final Technical Memorandum titled- Water Supply System Operational and Maintenance Improvement Options. This memorandum will be directly compiled into the CWMP as an appendix.
2. Word document electronic files of the draft Chapter 5 containing an engineering evaluation of the ability of the existing water system facilities to meet the water quality and level of service goals, identification of any existing water system deficiencies, and deficiencies

likely to develop within the master planning period. The evaluation shall include the water supply source, water treatment, storage, distribution facilities, and operation and maintenance requirements. The evaluation shall also include a description of the water rights with a determination of additional water availability, and the impacts of present and probable future drinking water quality regulations.

3. Final Draft Word electronic file of the Chapter 5 with review comments incorporated.

## 6.0 ENGINEERING ALTERNATIVES ANALYSIS

### Consultant Services

1. Develop water supply alternatives which address the planning goals of the City.
  - i. Include additional water rights that may need to be purchased. Consider water rights for both surface and well supply. Describe the types and amount of these additional water rights.
  - ii. Develop a contingency plan identifying potential emergency water supply options for severe water shortages.
  - iii. Assess potential for developing groundwater resources.
2. Evaluate each alternative based on the following:
  - i. Feasibility of each source considering preliminary cost estimates and integration with existing transmission and storage facilities.
  - ii. Reliability of source for both winter and summer uses. Consider the impact of the university, the school district, the City, and other large water users and factor the impacts of increase and decrease in use.
  - iii. Availability of water rights.
  - iv. Raw water quality and treatability of the potential sources. Sample collection and testing will be required for each potential source. Jar testing shall be done where necessary or required by the City.
  - v. Compliance of each source with drinking water standards.
  - vi. Supply vulnerability and security
3. Identify three options with the greatest promise to which additional evaluations will be done.
4. Evaluate these three water supply alternatives in greater detail, including present worth of operation and maintenance expenses, updated capital costs, and impact to the annual City budget and user rates. Evaluations shall include identification of specific sites, raw water transmission requirements, and scaled conceptual layouts in displaying the location of major unit processes and structures.
5. Review any environmental impacts of water supply alternatives and identify potential concerns.
6. Receive input on the various water supply improvement alternatives from the staff and the Technical Review Committee.

### City Responsibilities

1. Work with Consultant team to evaluate alternatives and select project prioritization criteria.
2. Provide recent City water project bid tabulations to be used in developing the cost estimating tool.

3. Review and comment on draft.

### **Assumptions**

1. City will provide available similar project cost information to help set up cost models.

### **Deliverables**

1. Draft and final Microsoft Excel spreadsheets, project cost estimating tool, and GIS maps.
2. List of O&M improvements to be included in the CIP and addressed in Operational budgets.
3. Draft and final Chapter 6 titled “Engineering Alternatives Analysis” that contains an identification of alternative engineering solutions, environmental impacts, and associated capital and operation and maintenance costs, to correct water system deficiencies and achieve system expansion to meet anticipated growth, including identification of available options for cooperative or coordinated water system improvements with other local water suppliers.
4. Draft and final maps of the City distribution system showing locations of projects identified in the CIP table with attached project number for ease in cross-referencing.

## 7.0 FINANCIAL ALTERNATIVES ANALYSIS

### Consultant Services

The financial program will be included in the Comprehensive Plan document as follows:

1. Past and Present Financial Condition – summarize water utility financial performance for the past six years and document outstanding long-term debt and bonding capacity.
2. Available Revenue Sources - Document available sources of revenue and funding for capital and operational costs and describe historical approaches and/or policies that establish the City's funding methods.
3. Capital Financing Alternatives and Approaches – Identify capital financing. Identify and document Capital Funding Assistance Programs – Available State and Federal grant and loan programs.
4. Life Cycle Costing - Develop perpetual life replacement program for the distribution system, recommended service life for water lines, pumps, and other components.
  - i. The program shall include an average, annual revenue requirement needed to fully fund a replacement program.
  - ii. The replacement program shall consider an assessment of backlogged needs, recommend a specific program to address the backlog, and shall recommend criteria for use in ranking projects.
  - iii. Develop a recommended on going maintenance program, detailing types of maintenance needed to protect investment and frequency of maintenance activities.
  - iv. Develop a detailed phasing plan for recommended improvements. Include new water systems in the undeveloped areas within the UGB. Show facilities as closely as possible to final design locations to permit them to be constructed with development projects.
  - ii. Prepare system wide maps showing locations and phasing of these improvements. Improvement locations shall be provided to assist staff in ensuring the improvements will be provided with land development.
5. SDC Implementation -
  - A. Provide detailed cost estimates for all recommended water system improvements.
    - i. Calculate future operation and maintenance costs.
    - ii. Define, in detail, the portion of individual project Costs attributable to existing customers and the portion attributable to growth. Provide documentation for the basis and methodology used to allocate costs.
    - iii. Review the City's existing system development charges (SDC) and recommend any improvements to the methodology used to allocate costs. Include a list of the recommended improvements that are eligible for SDC funds and the amount each is eligible for.
  - B. Thoroughly review all possible funding sources for the preferred water system improvements and develop a funding mechanism for the proposed improvements.
    - i. Review all funds available and the status of capital improvements, operation, and maintenance funds for the water system.

- ii. Identify different funding sources including State, Federal, and private sources.
6. Rate Structure and Conservation – Complete a rate analysis in order to estimate future water rates. Utilize projected annual operation and maintenance costs and any needed capitol improvement bonding to project. Potential rate impacts for the needed improvements. Identify water conservation opportunities that might be addressed through rate structure revisions. Summarize City’s approach to utility rate studies, status of rates recommended in 2005 rate study, and anticipated scope of 2010 rate study.
7. Recommended Financial Strategy – Recommend a financial strategy addressing funding sources, basic financial policies, rates and charges.

### **City Responsibilities**

1. Provide financial, budgeting, rate and customer reports.
2. Review and comment on draft Chapter 7.

### **Assumptions**

1. The tasks above assume that Consultant will participate in two meetings as part of this effort.
2. The Consultant will create a financial plan for the City.

### **Deliverables**

1. Word document and Excel spreadsheet electronic files of the draft chapter 7 containing a description of alternatives to finance water system improvements that includes local financing (such as user rates and system development charges), long term financial alternatives, and financing assistance programs. It also contains a detailed analysis of the financial operational performance of the water fund including detailed financial recommendations to enable the City to implement the preferred engineering solution recommendations chosen in the previous chapter.
2. Final Draft Word electronic file of the chapter 7 with review comments incorporated.
3. Word document electronic file of draft and final Technical Memorandum titled-Fees and Rates Study for the Water Supply System. This memorandum will be directly compiled into the CWMP as an appendix.
4. Word document electronic file of draft and final Technical Memorandum titled- SDC Update for the Water Supply System. This memorandum will be directly compiled into the CWMP as an appendix.

## **8.0 CAPITAL IMPROVEMENT PROGRAM (CIP)**

### **Consultant Services**

1. Work with the City during a workshop to discuss and develop project evaluation, screening and prioritization criteria to be used in the selection of and prioritization of projects. The contents of the CIP table and project sheets will also be reviewed and refined at this workshop.
2. Describe the CIP prioritization process, project justification and description.
3. Work with City staff to organize and summarize system pipe age and line break information to help evaluate remaining pipe life throughout the system. Data may be in the form of GASB 34 inventory database.
4. As other project information is made available by the City, water CIP projects will be scheduled to coordinate with other City sewer and street improvement projects in the same areas to minimize overall infrastructure improvement costs.
5. Provide justification for proposed capital and non-capital improvement projects.
6. Prepare a standard cost estimating methodology that will be used to compare and evaluate project alternatives. Costs will be updated to account for changes in schedule.
7. Apply a standardized cost apportionment methodology to each recommended CIP project which describes the estimated cost of the project in a cost per water service connection. These values will be used for comparison of alternatives and prioritization of projects within the confines of the Plan.
8. Prepare a CIP spreadsheet or database system that can be used to describe and sort projects by date, schedule, priority, or type. Each project in the spreadsheet will be linked to a project sheet that describes the project and project justification.
9. Outline and summarize the schedule of capital improvement projects in a summary table by year for the first 5 years, in 5 year increments for the next 15 years, and projects beyond the 20 year time frame. Develop a system exhibit that identifies projects and timeframe for implementation.
10. Describe long-term strategies for the 50-year system vision. It is expected that details of these strategies will be refined in subsequent CWMP updates.

### **City Responsibilities**

1. Work with Consultant team to evaluate alternatives and select CIP projects.
2. Help to select project prioritization criteria.
3. Provide recent City water project bid tabulations to be used in developing the cost estimating tool.
4. Review and comment on draft CIP.

### **Assumptions**

1. City will provide available similar project cost information to help set up cost models.

## **Deliverables**

1. Draft and final Microsoft Excel spreadsheets, project cost estimating tool, and GIS maps.
2. List of O&M improvements to be included in the CIP and addressed in Operational budgets.
3. Draft and final Chapter 8 titled “Capital Improvement Program” that contains a recommended water system improvement program including the recommended engineering alternative and associated costs, maps or schematics showing size and location of proposed facilities, the recommended financing alternative, and a recommended schedule for water system design and construction.
4. Draft and Final Maps of City distribution system showing locations of projects identified in the CIP table with attached project number for ease in cross-referencing.

## **9.0 ENVIRONMENTAL ASSESSMENT**

**(Note: This task is optional and inclusion in study scope will be determined during development of the Comprehensive Water Master Plan)**

### **9.1 Consultant Services**

1. Performance of an Environmental Assessment or Environmental Impact Statement as needed to meet State of Oregon and Oregon DEQ regulations for the identification, evaluation, and assessment of potential environment impacts associated with the Comprehensive Water System Master Plan.
2. EA/EIS shall meet the requirements set forth in the State Revolving Fund guidelines to allow anticipated Capital Improvement Projects to be eligible for SRF programs.
3. Public participation and review process in accordance with public outreach guidelines.
4. Inclusion of the EA/EIS findings in the Comprehensive Water System Plan document

### **City Responsibilities**

1. Provide floodplain and sensitive areas data as available.
2. Review and comment on draft Chapter 9.

### **Assumptions**

1. Consultant will participate in public outreach meetings.

### **Deliverables**

1. Word document electronic files of the draft Chapter 9.
2. Word document electronic files of final EA/EIS Documents and Chapter 9.

End of Task Specific Requirements