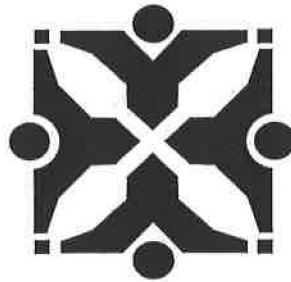


# City of Columbia



## WATER AND LIGHT DEPARTMENT

REQUEST FOR PROPOSAL #100/2015  
PROFESSIONAL SERVICES  
FOR

THE CITY OF COLUMBIA  
REQUEST FOR PROPOSALS FOR INTEGRATED WATER RESOURCE  
PLANNING

COLUMBIA WATER AND LIGHT  
MUNICIPAL WATER UTILITY SYSTEM

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**REQUEST FOR PROPOSALS #100/2015  
PROFESSIONAL SERVICES  
FOR  
THE CITY OF COLUMBIA  
REQUEST FOR PROPOSSALS FOR INTEGRATED WATER RESOURCE  
PLANNING**

**COLUMBIA WATER AND LIGHT  
MUNICIPAL ELECTRIC UTILITY SYSTEM  
APRIL 8, 2015**

**1) GENERAL**

- a) The City of Columbia, Missouri, Water and Light Department is requesting proposals for professional services for the development of an Integrated Water Resource Plan.
- b) The successful candidate shall serve as the City's professional Consultant in this assignment and shall give consultation and advice to the City during the performance of services.
- c) Proposals shall be received until 5:00 p.m. CDT on Friday, May 1, 2015 in the office of the Water and Light Department to the attention of Tad Johnsen, Director, Columbia Water and Light, (573) 874-7325.

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Columbia, MO 65205-6015

**2) INTRODUCTION**

- a) Integrated Water Resource Planning defines a holistic approach to the management of water systems combining water supply, water demand, water quality, environmental protection and enhancement, rate structures, financial planning, and public participation. Columbia Water & Light is requesting proposals from qualified consultants to develop an Integrated Water Resources Planning document.
- b) This Integrated Water Resource Plan (IWRP) will serve as a guide for program development, budget preparation, and capital improvement planning for Columbia's Water System. The selected consultant will work with the Water Department to prepare a comprehensive document consistent with the City's Strategic Plan. The Department anticipates the work will be ready for City Council consideration at a public hearing before the summer of 2016.
- c) In development of this proposal, the Department is looking to draw on the consultant's experiences in resource planning to make recommendations that

meet minimum requirements, make the resource plan document a very comprehensive document, discuss why the recommendations are being made, and how they will provide value to its customers.

### 3) DEPARTMENT DESCRIPTION

- a) The Columbia Water & Light Department was created in 1904 by voter approval. Currently, Columbia's Water System serves a territory of 89 square miles with 48,000 customers and peak demand of 23.3 million gallons per day (see Appendix A: Service Territory Map).
- b) The Columbia Water System produces 100% of its potable water supply from groundwater wells in an alluvial aquifer. The Water System consists of these wells and a production facility in the Missouri River flood plain, two water transmission mains into Columbia, four pump stations, three ground storage reservoirs, three elevated storage tanks, and 671 miles of water mains.

### 4) NEED FOR THE INTEGRATED WATER RESOURCE PLAN

- a) The purpose of the Integrated Water Resource Plan is to identify and provide planning information for future potable and recovered water Capital Improvement Projects and the development of Demand Side Management programs.
- b) This IWRP will develop a phased approach to outline the CIP projects necessary to meet projected customer demands through 2040.
- c) The Water Department has completed or is in progress of completing a number of individual planning documents. Below is a list of recent Water System studies:
  - 1. McBaine Water Treatment Plant Expansion Report
  - 2. McBaine Water Treatment Plant Condition Assessment
  - 3. Source Water Protection Plan
  - 4. Long Range Water Studies
  - 5. Water Cost of Service

### 5) SCOPE OF SERVICES

- a) **Coordinate Project**
  - 1. Consultant will meet with Department Staff to finalize goals, needs, and desires of the project, confirm project alternatives, discuss approach and criteria, establish project contacts, lines of communication, and data availability.
  - 2. Consultant will provide for coordination and communication between Department Staff, project stakeholders, citizen appointed committees, regulatory agencies, and advisory boards.
- b) **Summarize existing water supply systems in study area**
  - 1. Develop a thorough technical understanding of the study area. Review data relevant to the area. Data will include:

- i. Overall supply description and capacity, facility and infrastructure mapping, water demand data (including customer classes and historic maximum day and peak hour), treatment process and capacity, water quality data (raw, treated and distribution), distribution system configuration and pressure data, storage volume and hydraulic grade information and wellhead protection planning information.
  - ii. System infrastructure data including pumping capacity, storage capacity, pressure zone configurations, existing interconnections, operating pressures, pipe network attributes, land use, and water quality data will be collected.
  - iii. Verify existing water demand projections including average day and peak day.
- c) **Identify alternatives for water supply**
- 1. Document water sources and capacities in the study area including continued expansion and optimization of existing sources.
  - 2. Identify new surface water sources or alternative groundwater sources.
  - 3. A broad assessment of the water supply alternatives will be performed to identify scenarios that meet demand projections for the study area. Scenarios will evaluate source capacity required to meet demands and infrastructure required for distribution.
  - 4. Preliminary costs will be developed for scenarios.
- d) **Identify opportunities for use of surface water, groundwater, wastewater and storm water reuse for non-potable uses.**
- 1. **Surface Water and Ground Water**
    - i. Document current water sources and capacities in the study area including continued expansion and optimization of existing sources. Investigate new surface water sources or alternative groundwater sources.
  - 2. **Waste Water**
    - i. Collect and analyze wastewater effluent data, including source, volume, rate and quality. Identify potential non-potable uses for treated wastewater.
    - ii. Map potential uses relative to wastewater sources. Evaluate the potential to serve irrigation demands of future developments with treated wastewater using land use projections.
    - iii. Identify large-volume dischargers and the need for additional analysis to study these as potential sources.
    - iv. Evaluate water quality requirements for reuse of treated wastewater on typical applications.
    - v. Provide preliminary costs for implementing a sub-regional wastewater reuse system. Identify potential groundwater demand offsets associated with wastewater reuse.
    - vi. Review current standards and regulations for wastewater reuse, for non-potable uses and discuss regulatory or institutional barriers to implementation.
  - 3. **Storm Water**

- i. Using mapping data available in GIS or other electronic formats:
  - (a) Collect storm water infrastructure data for the study area including location of major conveyance system elements and outfalls and use this data to determine approximate capacity. Areas of high imperviousness and high runoff potential will be identified and mapped.
  - (b) Existing large-volume, non-potable water users will be identified and mapped relative to potential storm water sources.
  - (c) Agricultural drainage ditch systems will be identified and the potential for an addition to the scope to further study these as potential sources of irrigation water will be discussed.
  - (d) Opportunities for regional and distributed storm water use will be identified.
  - (e) Broad water quality requirements for alternatives will be summarized based on typical storm water quality assumptions.
  - (f) Preliminary costs for typical re-use applications will be developed.
  - (g) Potential groundwater demand offsets will be identified.
  - (h) Current standards and regulations for storm water reuse for non-potable uses will be reviewed, and regulatory or institutional barriers to implementation will be discussed.
  - (i) Identify recharge enhancement opportunities using wastewater.
- 4. Water Demand Response Programs**
  - i. Evaluate Demand Response Program for its potential to be a cost efficient water planning resource. Conservation resources should be evaluated using changes in water use and plumbing, landscape and building codes, pricing structures, or efficiency appliance rebates
- 5. Water Rate Structures**
  - i. Examine current and recommend possible changes to our water rate structure.
  - i. These recommended rate changes need to address the impact on customer usage, system demand, future demand, and revenue requirements
- 6. Regulatory Environment**
  - i. Assess the existing and pending regulatory environment, then prepare a summary description of projected impacts expected from these regulations affecting water, wastewater, and recycled water.
  - ii. Provide recommendations for operational strategies and infrastructure improvements to meet future and proposed regulatory changes.
- 7. Public Outreach and Coordination**
  - i. Over the course of the project, meet with stakeholders to discuss alternatives being evaluated for each water supply element.
  - ii. Meetings will be held with each study area;
    - (a) One meeting will be held to discuss conjunctive use alternatives
    - (b) One meeting will be held to discuss demand response alternatives
    - (c) One meeting will be held to discuss wastewater alternatives
    - (d) One meeting will be held to discuss storm water reuse alternatives.

- ii. Present the draft report at a stakeholder meeting (one for each study area) that will include representatives of the communities in the study area and other agency and organizations representatives.
- iii. Present the final report at a stakeholder meeting (one for each study area) after comments have been incorporated into the report.
- iv. The Consultant shall provide a report outline for review and comment early in the policies development period and one or more draft reports for review and comment by Water and Light Department followed by a final report.

## **6) SERVICES PROVIDED BY THE CITY**

- a) During the course of the work, the City shall assist the Consultant by compiling and/or furnishing the following described services when and as required for the orderly completion of the work:
  - 1. Assist Consultant by placing at Consultant's disposal available information pertinent to the assignment including aforementioned documentation.
  - 2. Schedule, notify and assist in conducting all public outreach and coordination meetings.
  - 3. Examine all studies, reports, sketches, estimates, drawings, proposals and other documents presented by Consultant and render in writing decisions pertaining thereto in a timely fashion.
  - 4. Give prompt written notice to Consultant whenever City observes or otherwise becomes aware of defect in the project.

## **7) CONTENT OF THE PROPOSAL**

- a) Proposals shall only be accepted from consulting firms that can clearly demonstrate having had a background and extensive previous experience in the field of work described. Such experience must include projects that were successfully carried through to completion.
- b) The City of Columbia requests that any firm desiring to be considered for this project submit five (5) copies of your proposal marked "PROFESSIONAL SERVICES FOR THE CITY OF COLUMBIA INTEGRATED WATER RESOURCES PLAN" containing the following:
  - 1. A brief description of the firm, including qualifications and background.
  - 2. A statement of your understanding of the work and work plan. With a description of the activities, and tasks that shall be undertaken to complete each of the objectives listed, but not necessarily limited to the specific objectives listed.
  - 3. An estimated timetable along with estimated starting and completion dates for each task with formal opportunities for City staff review.
  - 4. A statement outlining the scope of the staff resources and range of the specialties offered by your firm.

5. A statement describing the responsibilities and degree of participation of each professional staff member who will be assigned to the project along with resumes describing relevant previous experience.
6. A list of similar work performed for other municipalities or agencies, including a description of work and the name of the municipality or agency, and the action taken as a result of the work. A list of references shall be included.
7. Discussion explaining why the firm believes the City of Columbia would benefit from selecting the firm to do the work.
8. A description of the approach the firm shall take to complete the work, including an estimate of the total time needed for the firm to complete the work.
9. A summary of any arrangements you may be making with any other firm for assistance on this work.

## **8) SELECTION PROCESS**

- a) The City of Columbia follows the Qualification based selection process set by the State of Missouri under RSMo 8.285-8.291. Selection of the firm will be made by a committee potentially composed of the Water and Light Department Director, Water and Light Department Assistant Director, Engineering Manager, Water Services Manger and / or Water Production Superintendent. The final selection shall be based on the following criteria:
  1. Experience with similar projects.
  2. References provided.
  3. Availability to do the work required.
  4. Ability to complete the work in the time required.
  5. Specific background and experience of the key people who will be involved in providing these services.
  6. Interviews will be conducted before the selection committee.
- b) The selection committee reserves the right to reject any or all proposals and to accept the proposals the City considers the most advantageous.