



# **Madison Water Utility – Madison, Wisconsin**

## **REQUEST FOR PROPOSALS Engineering Services for Design, Construction and Startup of Unit Well 15 – VOC Air Stripper**

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### **I. INTRODUCTION**

Madison Water Utility is soliciting proposals for professional services to include but not be limited to: final design of a VOC Air Stripping Treatment System at the Utility's Unit Well 15 including preparation of drawings and specifications, public participation, bidding assistance, construction administration and facility startup and testing services. The work will also include preparing all necessary documents to obtain any necessary permits and approval of the project from Wisconsin Department of Natural Resources and the Wisconsin Public Service Commission.

Well 15 is located on the east side of Madison in the vicinity of East Washington Avenue and Thierer Road. The well was drilled in 1965 and has an approximate capacity of 3.0 million gallons per day. VOC levels, particularly PCE have been rising at the well for the last several years. To investigate the overall water supply needs on the east side of Madison, the Utility hired Black and Veatch Inc. of Kansas City, Missouri to develop a capital improvement plan for the Utility. A recommendation from this plan is the installation of an air stripper at Well 15 to remove the VOC from the finished water. A copy of the draft Black and Veatch Well 15 report can be found on the Utility's web page at:

[http://www.cityofmadison.com/water/plans/documents/Draft\\_Tech\\_Memo\\_Well\\_15\\_VOC.pdf](http://www.cityofmadison.com/water/plans/documents/Draft_Tech_Memo_Well_15_VOC.pdf)

The Utility has formed a Citizen's Advisory Panel (CAP) for the project and has been working with the group to move the project forward.

### **II. PROJECT BACKGROUND**

#### **A. Unit Well 15 Facilities:**

1. The deep well was drilled in 1965 and has provided Madison Water Utility a capacity of 2200 gpm for over 40 years. Since 2005, Well 15 production has averaged over 840 million gallons per year.
2. Both the deep well pump and the single booster pump are line shaft vertical turbine pumps.
3. The reservoir has a capacity of 150,000 gallons and the booster pump rated capacity is 2,100 gpm.
4. A diesel powered standby generator owned and operated by Madison Gas and Electric is located on the well site.
5. Design drawings are available for the facility.
6. An aerial photo and some ground shots of the facility are included below:



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#### **B. Water Quality:**

1. PCE has ranged from 3.1 to 3.9 ug/l and has indicated a rising trend in recent years.
2. TCE has ranged from 0.33 to 0.41 ug/l and is relatively stable.
3. Total Hardness is measured at 410 mg/l as CaCO<sub>3</sub>
4. Iron and Manganese concentrations are 0.04 and 0.006 mg/l respectively
5. Radium has been measured at 1.40 +/- 0.63 pCi/L



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6. A detailed description of Well 15 can be found in the referenced Black and Veatch Report or on the Utility web page.
- C. Site Conditions: Madison Water Utility owns a 110 x 60 foot lot for the Well 15 facility. The lot abuts Reindahl Park and a small shopping center. The possibility of expanding the site is limited. It is currently assumed that the VOC air stripper will have to be constructed on the existing Water Utility property.

In the event that the treatment system cannot be added to the existing facility, other site layout options including the possibility of a remote site may have to be considered and developed.

The existing well and booster station will need to remain in operation as much as possible throughout construction. This will be a critical consideration during the high demand months of the summer.

- D. Design Criteria: The proposed facility will match and complement the existing pump station and reservoir in design, architectural treatment and material use. The Engineer will meet with Water Utility engineering and operations staff to go over the design requirements following Notice to Proceed. The facility shall be designed to be low maintenance, durable, energy efficient and quiet so it is not a nuisance to area residents.
- E. Objective:
1. The overall objective of this work is to develop a set of clear design documents that will allow the project to be efficiently and economically bid and constructed.
  2. The treatment facility will have an anticipated life span of in excess of 75 years.
  3. The treatment facility shall blend into the site, match or complement the existing building, benefit the neighborhood, and be sensitive to local issues and concerns.
  4. To prevent unauthorized tampering with facility operations, site and facility security shall be designed into the facility. Security features shall not detract from the architecture of the building.
  5. The Utility has a video surveillance and card access system at the site. The design will incorporate existing equipment and any necessary additions.
  6. Any additional site lighting shall be adequate for security and operations yet it shall not create a nuisance condition to area residents.



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7. Operational noise production at the facility including but not limited to, blowers, pump operation, electrical gear, and HVAC systems shall be considered and mitigated. Noise shall be limited to no more than 45 db at the property line.
  8. The Utility is moving to variable speed drives on all pumps. It is the intent of this project to install VFD controls on both the deep well pump and the booster pump.
  9. The treatment system shall be PLC controlled and monitored. The treatment system controls shall be integrated into the Water Utility's SCADA system by the Utility's SCADA vendor, LW Allen.
  10. The treatment facility shall meet all of the operational and maintenance requirements of Madison Water Utility.
  11. The treatment facility shall meet or exceed all building codes and City of Madison requirements.
  12. Ultimately the treatment system will operate un-staffed with only occasional daily checks by Water Utility personnel.
  13. Additional appropriate low maintenance landscaping around the site will provide screening of the facility and an attractive and pleasant looking facility.
- F. Budget:
1. Madison Water Utility has budgeted \$2,430,000 for the construction of the VOC treatment system.
  2. The Utility has budgeted approximately \$292,000 for engineering services to include but certainly not be limited to design, bidding, construction, testing, and startup services.
  3. The detailed Scope of Work submitted by the prospective consultant shall take into account the budget for this project.
  4. Firms shall develop a budget for the work as a part of the proposal and any budget concerns on the project shall be identified and detailed in the proposal.
- G. Public Participation/Public Information Presentations
1. Public participation and public information will be an important part of the project. Public input into the Utility's design development process for this project is vital to success.
  2. The Public Participation process shall conform to the Utility's Standard Operating Procedures for Public Participation. A copy of the SOP can be found on the Utility's web page.
  3. Assist the Water Utility with three to six Citizen's Advisory Panel meetings.
  4. Assist the Water Utility with two to five public meetings.



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5. Assist the Water Utility in preparation of exhibits for press releases and for meetings. Exhibits shall convey the scope and intent of the proposed treatment alternatives.
6. Assist the Utility with managing and implementing web based information design and production. The Utility will use the City web site and has a project dedicated web page.

### **III. SCOPE OF SERVICES**

- A. General: The Engineer shall work closely with Water Utility engineers and other City officials to develop a design for the facility that meets the needs of the utility. The design shall be similar to and consistent with the existing reservoir and pump station. This objective will be accomplished through a series of meetings and design reviews and coordination with the Water Utility and other City Departments.

For this project, the selected design team will be considered an extension of the Utility engineering staff. The design team will report to the Utility project manager with the common goal of completing the project of highest quality and functionality while meeting the needs of the public. Close communication and coordination of the team with the Utility will be critical to project success.

- B. Design philosophy: The overall design philosophy for the facility will be toward functionality, durability, minimal maintenance requirements, energy efficiency, economy, employee comfort, and the facility shall be aesthetically pleasing while keeping within the context of its function as a municipal water supply facility.
- C. Conceptual Design:
  1. Background: As a part of the East Side Water Supply project, the Utility hired Black and Veatch Incorporated to evaluate water supply needs within Pressure Zone 6E. Developing a VOC mitigation recommendation for Well 15 was part of that study and is attached to this RFP.
  2. Black and Veatch developed some preliminary site layouts, and various treatment options for Water Utility review and evaluation. From these preliminary concepts, the alternative to construct a low profile air stripper was selected and recommended. The selected consultant shall work with the recommendation to develop the final project documents.



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3. If an acceptable design cannot be developed that fits within the existing property, the selected consultant will work with the Utility on options of either acquiring adjacent property or evaluating a remote site.
4. Site plan development will include but will not necessarily be limited to the following components:
  - a) Surveying: As built drawings are available of the existing facilities. The Engineer shall provide any additional surveying required to complete the work.
  - b) Geotechnical Investigation – provide geotechnical investigation as needed for the proposed facility.
  - c) Environmental issues - The site design shall be sensitive to and shall protect the surrounding environment and shall comply with all existing environmental laws and regulations.
  - d) Planning and Urban Development - The Engineer shall develop the site plan in accordance with the requirements of the Madison Planning Department and the approved neighborhood development plan.
  - e) Zoning - All work shall conform to the zoning requirements for the area.
  - f) Grading and Storm Water - The site shall be graded to properly drain and storm water shall be controlled to prevent flooding or excessive ponding of surface runoff and any damage to adjacent property. The storm drain design shall meet the requirements of the City of Madison Engineering Department.
  - g) Landscape Design: The Engineer shall provide the necessary landscape design that is attractive, low maintenance, and effective in screening the facility.
  - h) Drawings: The Engineer shall develop drawings that illustrate the design concepts being proposed to allow the Water Utility to review and approve the development plan. Drawings shall include but shall not necessarily be limited to: Site plans, floor layouts, and building elevations.
5. Building configuration development
  - a) Building layout: Develop a building plan and conceptual layouts. The conceptual design shall establish exterior treatments and materials. Water Utility staff will review the floor, equipment, and piping layouts and working with the Engineer, determine the best alternative for the facility.
  - b) Drawings:



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- (1) The Engineer shall develop sufficient types and numbers of drawings to convey the design concept being proposed.
  - (2) Drawings to be produced shall include but shall not be limited to: Floor, equipment, and piping plans, sections, elevations, and details.
6. ADA Compliance:
- a) The facility shall take special care to accommodate the accessibility needs for the disabled as required by the Water Utility, paying particular attention to the Americans with Disabilities Act.
  - b) Designing only to the minimum requirements of State Code or ADA standards shall not be sufficient.
7. Energy Conservation:
- a) The City is a partner in the Federal Government's Energy Star Program for buildings.
  - b) The Utility would like to add a variable speed drive to the deep well equipment and consider adding a variable speed drive to the booster pump. The consultant shall provide an analysis of this revision and an estimate of potential energy savings.
  - c) All facility component designs shall be focused on energy conservation and operational functionality.
8. Sound Control:
- a) Sound from the facility shall be controlled.
  - b) The design shall incorporate sound attenuation into the facility.
  - c) The maximum sound level emitted from the facility at any time shall be limited to 45 db measured at the property line.
9. Constructability issues:
- a) The Engineer shall be fully responsible for the constructability of the proposed site features and structures.
  - b) Notwithstanding any recommendations or approvals by the City, the Engineer shall not be relieved from responsibility for the workability and suitability of the design and all details.
10. Schedule:
- a) A preliminary project schedule is attached to this RFP for informational purposes. The overall goal is to be under construction in the fall of 2012 and fully operational by the summer of 2013.
  - b) The Engineer shall develop and regularly maintain a project schedule that includes all phases of the project through completion of the construction and startup and take over of the facility by the Water Utility.



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- c) The schedule shall be presented in a Gantt chart format and it shall contain sufficient detail to allow tracking of the progress of the work through each phase.
  - d) The schedule shall be in an electronic format that is compatible with MicroSoft Project and the schedule and all updates shall be submitted to the Water Utility in MS Project electronic format.
  - e) Keeping the project on schedule shall be a priority and goal for the Engineer throughout the completion of the project.
  - f) Delays in completion of the work shall be promptly communicated to the Water Utility.
11. Cost estimates
- a) Controlling the total project cost is critical to project success.
  - b) The Engineer is responsible to be keenly aware of project costs, the cost impact of decisions made, and of how to keep project costs within budget.
  - c) Project cost estimates shall be routinely updated as the design is developed.
  - d) During the discussion of design concepts, the Engineer shall present the cost impacts of the relative features of each option.
  - e) Any change in the project cost estimate shall be promptly communicated to the Water Utility for analysis.
12. Construction Cost Control:
- a) The Water Utility has budgeted \$2,430,000 for construction.
  - b) The Engineer shall work closely with the Water Utility to control costs throughout the project.
  - c) Project Budget Adjustment:
    - (1) If an adjustment in the project budget is required to meet the overall objectives of the Water Utility, the Engineer shall notify the Water Utility and provide the necessary supporting documentation to allow the Water Utility to make a decision.
    - (2) The Engineer shall not proceed with the modifications to the facility budget without the prior written authorization of the Utility.
  - d) The Engineer shall remain responsible to maintain the project within the budget. The Engineer shall modify the design of the facility as necessary at no additional cost to bring the work within budget.
13. Presentation materials: The Engineer shall provide the Water Utility with any and all necessary drawings, renderings, and exhibits to convey the intent of



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- the design to City Departments, committees, neighborhood groups, and other interested parties.
14. Other issues as required to complete the work:
    - a) The Engineer shall outline and provide a detailed description in the proposal of any other tasks required to complete the work.
    - b) Failure to account for items that would be considered usual and customary to this project shall not be justification for additional compensation or an extension of contract time.
  15. The Engineer shall not proceed with Final Design until receipt of written approval of the final conceptual design from the Water Utility.
- D. Phase 2: Final Design: Upon approval of the conceptual design, the Engineer shall proceed with Final Design and the development of contract documents suitable for bidding through the Madison Board of Public Works.
1. Objective: Incorporate the approved components of the conceptual design into Drawings and Specifications suitable for public bidding and construction while staying within the established project budget.
  2. Develop final design documents for the work to address but not necessarily be limited to:
    - a) Site plan design
    - b) Construction staging analysis
    - c) Landscape Design
    - d) Site Utilities
    - e) City Planning Department issues
    - f) Architectural requirements
    - g) Mechanical and piping requirements
    - h) VFD Conversion
    - i) Chemical feed requirements
    - j) Monitoring and security requirements
    - k) Interior space layout
    - l) Communication system
    - m) PLC System
    - n) SCADA system setup and communications
    - o) Building material schedules
    - p) Window and door schedules
    - q) Room Finish Schedules
    - r) Plumbing
    - s) Electrical
    - t) HVAC



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- u) ADA Compliance issues as they apply
  - v) Any other component and schedules necessary to complete the work to the satisfaction of Madison Water Utility.
3. Drawings: Prepare plans, sections, elevations, mechanical and piping plans, lighting plans, electrical, structural and architectural details, grading plans, standard details, and any other drawings to adequately define the work and allow competitive bidding on the project.
4. Specifications - Prepare project specifications in CSI format to cover all aspects of the project. Craft specifications and contract documents to encourage the competitive bidding for materials and components.
5. Constructability:
  - a) The Engineer shall be fully responsible for the constructability of the final design.
  - b) Minimizing well downtime during construction shall be a priority in concept development.
  - c) Notwithstanding any recommendations or approvals by the City, the Engineer shall not be relieved from responsibility for the workability and suitability of the design and all associated details.
6. Cost Estimating - During final design, routinely update the project cost estimate and keep the Water Utility apprised of any changes to the overall costs of the project.
7. Construction Cost Limitation:
  - a) The Engineer agrees to adhere to the Construction Cost Limitation established during the Conceptual Design.
  - b) If at any time, the project costs exceed the approved cost limitation; the Engineer shall redesign components of the facility to reduce the estimated cost of the project. This redesign shall not be the basis for additional compensation or an extension of contract time.
8. Schedule:
  - a) The project schedule shall be regularly updated throughout the design process.
  - b) Include design, bidding, and construction work in the schedule.
  - c) Any delays in the completion of the work shall be promptly reported to the Water Utility.
9. Review and approval:
  - a) The Final Design shall be reviewed and approved by Madison Water Utility and other Departments of the City of Madison.
  - b) In the event that the Final Design is not approved, revise the design at no additional cost to the Water Utility until which time it gains approval.



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10. The Engineer shall be responsible to meet all the requirements of the permitting and reviewing agencies.
  11. Other issues as required to complete the work:
    - a) Complete any other tasks as needed to meet the facility objectives of the Water Utility.
    - b) Anticipated tasks other than those noted herein, shall be itemized in the proposal submitted to the Water Utility.
    - c) Failure to account for items that would be considered usual and customary to this project shall not be justification for additional compensation or an extension of contract time.
  12. The project shall not proceed to the bidding phase without the prior written approval of the Water Utility.
- E. Quality Assurance/Quality Control Plan
1. Prior to starting work, prepare a project specific Quality Assurance/Quality Control Plan (QA/QC).
  2. The QA/QC Plan shall include but shall not necessarily be limited to:
    - a) Schedule monitoring and compliance
    - b) Milestones
    - c) Project reviews both internal and external
    - d) Project communications
    - e) Project meetings
    - f) Standards to be used
    - g) Cost review and control
    - h) Quality Control methods and criteria
  3. Quality Assurance/Quality Control Plans will be required from all major sub-consultants working on the project.
- F. Permit requirements
1. The Engineer shall be responsible to provide all information necessary to obtain the required approvals and permits for the work.
  2. The design shall meet the requirements of the Planning and Zoning Departments of the City of Madison.
  3. In the event that the design is not accepted and a building permit or other required approvals cannot be obtained, the Engineer shall redesign components of the project at no additional cost to the Water Utility to conform with the requirements such that the necessary permits can be obtained.



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4. Make presentations as required for permitting and other approvals to City of Madison review agencies and boards, the Citizen's Advisory Panel, the Common Council, and to neighborhood groups.
  5. Address and incorporate any comments received from review agencies into the final documents.
- G. Engineer Responsibilities for Phase 1 - Conceptual Design:
1. Work closely with the Utility engineering and operations staff to develop an acceptable design. Communication and team work are expected and required to complete a successful project.
  2. Provide all necessary personnel, resources, and subconsultants to complete the specified design work to the satisfaction of Madison Water Utility and other Departments of the City of Madison.
  3. Retain a licensed surveyor to survey the property and develop any required site topographic maps, utility maps, and any other base mapping information necessary to complete the work if necessary.
  4. Gather and compile all necessary data required from City and County records, from field reconnaissance, and from other sources as the Consultant deems necessary to complete the work.
  5. Prepare a Quality Assurance/Quality Control Plan that will be reviewed and approved by the Water Utility.
  6. Once the QA/QC Plan is approved, schedule and coordinate quality control reviews throughout the completion of the work. The approved QA/QC Plan will define quality control requirements for the project.
  7. Provide preliminary conceptual designs for review and comment to assist the Water Utility in determining the preferred site layout and building configuration.
  8. Work closely with the Water Utility to develop regular reports and communication concerning progress of the work.
  9. Regularly update the project schedule.
  10. Control project costs to keep the project within budget.
  11. Assist the Utility in meeting with the City Planning Department and the City Building Department to discuss building concepts and site layout.
  12. Any other work as required in this Request for Qualifications and the project Scope of Work.
  13. Provide minutes for project meetings.
- H. Water Utility Responsibilities for Phase 1 - Conceptual Design:
1. Lead the project team.



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2. The Water Utility will provide the selected consultant with any existing information that we have on the property and the existing facility.
  3. Guide facility design development.
  4. Clearly communicate Utility objectives and needs.
  5. Complete design review and provide comments and direction within 2 weeks of receipt of preliminary information.
  6. Coordinate meetings of Utility staff and other City departments.
  7. At the completion of the work, select a preferred alternative and provide direction to the Engineer to allow the work to proceed to Phase 2.
  8. Host review meetings.
- I. Engineer Responsibilities for Phase 2 - Final Design:
1. Work closely with Utility engineers and operation personnel to develop the final design contract documents.
  2. Provide all necessary personnel, resources, and subconsultants to complete the specified design work to the satisfaction of Madison Water Utility and other Departments of the City of Madison.
  3. Coordinate with City Planning Department, the Urban Design Commission, and the City Building Inspection Division to obtain the necessary approvals and permits.
  4. Regularly meet with Water Utility personnel to review project status and go over design details.
  5. Schedule and coordinate quality control reviews during the Final Design in accordance with the approved QA/QC Plan.
  6. Work with the Utility to develop regular written reports and communication about the progress of the work.
  7. Regularly update the project schedule.
  8. Regularly update the project estimated costs.
  9. At the completion of the work, provide a final opinion of probable costs for the project.
  10. Control project costs to keep the project within budget. Assist Water Utility staff in finalizing and adjusting the project budget as needed.
  11. Any other work as required in this Request for Qualifications and the project Scope of Work.
  12. Provide minutes for project meetings.
- J. Water Utility Responsibilities for Phase 2 - Final Design:
1. Lead the project team.
  2. Provide timely input into facility design development.



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3. Provide required direction on Utility objectives and needs.
  4. Complete design review and provide comments and direction within 2 weeks of receipt of preliminary information.
  5. Coordinate meetings of Utility staff and other City departments.
  6. Host review meetings.
- K. Required Quality Control Reviews by the Water Utility:
1. Phase 1 - Draft
  2. Phase 2
    - a) 70 percent completion
    - b) Final Draft
  3. All permit submittals shall be approved by the Utility PM
- L. Communications/Meetings:
1. Regular and routine communication between all team members is expected and required throughout the project.
  2. Monthly progress reports:
    - a) Progress reports shall be submitted by the first of every month.
    - b) No payments will be released to the Engineer without an acceptable monthly report.
    - c) Each report shall detail progress made during the previous month, planned work for the coming month and any issues that need to be resolved.
    - d) All monthly reports shall include an undated project schedule.
    - e) Monthly reports shall not exceed one type written page not including updated schedules, charts or tables.
  3. Meetings:
    - a) A project kickoff meeting will be held prior to starting work.
    - b) Regular project meetings of the project team will be held at the Water Utility. Schedule will be established at the kickoff meeting but shall be a minimum of monthly with more meetings being required during QC reviews, public participation tasks, and approaching permitting.
- M. Schedule
1. Phase 1 shall be completed and approved within 30 calendar days of receipt of written Notice to Proceed.
  2. The selected Firm shall maintain an updated project schedule throughout the work.



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3. Phase 2 design and approval and the project shall be ready for bidding by July 1, 2012.
4. Construction shall be complete by August 2013.

#### **N. Products:**

1. All products shall be submitted electronically in addition to the paper copies noted below.
2. Conceptual Design: 4 copies of project documents to the Water Utility for review.
3. 70 Percent: 4 copies of project documents to the Water Utility for review.
4. Submittal Draft: 4 Copies to the Water Utility for review.
5. Building Permit Submittal: Copies as required.
6. Final Approved Documents:
  - a) 6 complete copies of the contract documents to the Water Utility.
  - b) Specifications shall be submitted electronically on a compact disk (CD) in MS Word format.
  - c) Drawings shall be submitted electronically on a compact disk (CD) in MicroStation Format. Submittal format shall be coordinated with the Water Utility Engineering Section.
7. Monthly progress reports throughout the project

#### **O. Bidding Services:**

1. Objective: The project shall be competitively bid to secure a qualified contractor at an equitable price with minimal change orders. The project will be bid through the City of Madison Public Works process.
2. Engineer Responsibilities for Bidding:
  - a) Provide all necessary personnel, resources, and subconsultants to assist the Water Utility in competitively bidding the work through the Madison Public Works process.
  - b) Gather and compile all necessary data required from City and County records and from other sources as the Consultant deems necessary to competitively bid the project successfully.
  - c) Prepare bidding forms, conditions of the Contract, and the form of Agreement between the Contractor and the Water Utility as required by the Board of Public Works.
  - d) Assist the Water Utility in answering questions from prospective bidders.



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- e) The selected Firm will participate in a pre-bid meeting with prospective contractors explaining the project concepts and goals and answering questions that come up.
  - f) Prepare Contract Addendums as required to clarify or modify the design.
  - g) Assist the Water Utility in evaluating the bids and recommending an award.
  - h) Cost Limitation on Construction Costs:
    - (1) In the event that the bid price is higher than the project budget, the Engineer will work with the Water Utility to determine ways to cut costs.
    - (2) If elements can be removed from the work to bring the total cost in below budget, the Engineer will advise the Water Utility as to the impact of this change.
  - i) Any other work as required in this Request for Qualifications and the project Scope of Work required to successfully bid the project.
3. Water Utility Responsibilities for Bidding:
- a) Print and distribute bid documents
  - b) Host the pre-bid meeting
  - c) Host the bid opening.
  - d) Coordinate Utility staff and other City departments.
  - e) Work with the Engineer to recommend a bidder.
- P. Construction Administration Services:
- 1. Objective: Assist Madison Water Utility in monitoring, recording, and administering construction activities.
  - 2. Engineer Responsibilities for Construction Administration Services:
    - a) Engineer shall provide all necessary personnel, resources, and sub-consultants to assist the Water Utility in administering construction of the project.
    - b) Construction administration and documentation to include but not necessarily be limited to:
      - (1) Shop drawings
      - (2) Schedule compliance
      - (3) Contract compliance
      - (4) Regular construction meetings
      - (5) Request for information
      - (6) Request for change
      - (7) Change Orders



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- (8) Monthly pay requests
  - (9) Operation and maintenance manuals
  - (10) Test results
  - (11) Final inspection and punch list
  - (12) Training
  - (13) Startup and commissioning
  - (14) Other tasks normal to facility construction administration
  - c) Construction Inspection Services or Resident Engineer:
    - (1) The Utility does not anticipate the need for full time inspection services for this project.
    - (2) Engineer to provide a reasonable amount of on-site coordination and inspection to adequately protect the Utility's interests and to ensure that the facility is constructed in compliance with project contract documents.
    - (3) Resident inspector/engineer shall provide written site reports to the Utility each time the inspector/engineer is on site.
    - (4) Resident inspector/engineer shall witness startup and testing of the facility.
  - d) Any other work noted in this Request for Qualifications and the project Scope of Work required to successfully complete construction, startup and commissioning of the facility.
3. Water Utility Responsibilities for Construction Administration Services:
- a) Accept or reject contract documentation
  - b) Approve pay requests
  - c) Provide direction as necessary
  - d) Accept or reject change orders
  - e) Attend project meetings
  - f) Coordinate and schedule Utility staff and other City departments.
  - g) Work with the Engineer to ensure contract compliance
- Q. Consultant Evaluation
- 1. At the completion of the project, the Water Utility may, at its option, conduct a consultant evaluation.
  - 2. The following criteria may be evaluated:
    - a) Teamwork, cooperation, and communication with the Utility
    - b) Responsiveness to Water Utility concerns
    - c) Ability to meet project schedules and budgets
    - d) Accuracy and completion of contract documents
    - e) Number of Addendum required during bidding



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- f) Constructability of the project
- g) Construction cost control
- h) Number of construction change orders and construction disputes

### IV. WATER UTILITY PROJECT TEAM

A. Water Utility Project Manager and point of contact:

Alan L. Larson, P.E.  
Principal Engineer - Water  
608-266-4653  
608-225-9131 Cell  
[allarson@cityofmadison.com](mailto:allarson@cityofmadison.com)

### V. PROPOSAL

A. General:

1. The proposal will be limited to no more than **Twelve (12) pages**
2. Figures, drawings, schedules and charts plotted on 11x17 paper shall be counted as one page each. Do not provide extensive text and/or narrative on 11x17 paper. Do not print 11x17 paper two sided.
3. Font shall be no smaller than 11 point.
4. Margins should be a minimum 0.75-inches left and right and 0.5-inches top and bottom
5. Submitted resumes shall not exceed one page in length per team member. Resumes are not counted in the page total

B. Statement of project understanding

1. Provide a one page original statement of project understanding for the Well 15 project
2. Statement shall cover but not be limited to:
  - a) Understanding of need for the project
  - b) Project objectives
  - c) Project challenges
  - d) Permitting
  - e) Public participation



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C. Public Participation

1. Provide a one page public participation and communication plan summary for the Well 15 project
2. Document qualifications and experience of the proposed team in public participation

D. Statement of Qualifications and Work History, to include but not necessarily be limited to:

1. Detailed description of the proposed Project Team
2. Documentation of qualifications of the proposed project team on projects of similar size and complexity.
3. A demonstration of a thorough up to date working knowledge of the applicable City of Madison building and zoning regulations.
4. Demonstration of recent success getting a project through the City of Madison permitting process.
5. Demonstration of working knowledge of Wisconsin DNR permitting requirements
6. Project History:
  - a) List of completed similar projects within the last 5 years. Dates for each project shall be clearly indicated.
  - b) Include name of Project Manager for each project.
  - c) Client name and phone number.
  - d) Project Design Fee History:
    - (1) Initial design fee dollar value
    - (2) Value of any amendments to the design fee and justification for the change.
    - (3) Provide a breakdown of Conceptual Design fee, final design and permitting fee, and construction administration fee for each project listed.
  - e) Provide the actual design schedule for the project.
  - f) Provide any public participation activities with the project
  - g) Construction Cost History:
    - (1) List the Engineers opinion of construction cost for each project listed.
    - (2) List the low bid for each project.
    - (3) List the value of all change orders for each project and the reason for the change orders.





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- d) The sample drawings are not included in the sheet count for the proposal.
14. Projected Hours and Estimated Costs -
- a) Submit a detailed breakdown of the estimated hours for each phase of the work by discipline and firm.
  - b) Submit the estimated hours and associated costs in a separate sealed envelope clearly marked **“Projected Hours and Estimated Costs”**.
  - c) The hour and cost estimate is not included in the page count for the proposal.
  - d) The projected hours and estimated costs will not be used in the initial evaluation of the qualifications of your Firm for this project. The selection committee reserves the right to review the projected hours as a point of additional information if no clear selection can be made based on the proposals.
  - e) Following selection of the successful Firm, these submitted costs will be used as a starting point to negotiate a Contract for the work.
- E. Interview:
1. Madison Water Utility reserves the right to make a selection based solely on the information contained in the submitted proposal. If no clear choice can be made based on the proposals, Madison Water Utility reserves the right to either interview selected Firms or request additional information to help in determining the most qualified Firm.
  2. Interview format (if used):
    - a) 30 minute presentation
    - b) 30 minutes for questions and answers
    - c) The proposed Project Manager shall lead the presentation.
    - d) Presentation team shall have a maximum of three (3) people.
  3. Presentation: The objective of the interview will be to clearly demonstrate the Firms qualifications to complete the project to the satisfaction of Madison Water Utility. The presentation shall be brief and concise and shall include but shall not be limited to:
    - a) A presentation of details and special features of previous projects completed by members of the proposed Project Team.
    - b) Information should include how the design for the project cited was developed, how the team worked with the Owner, and how the finished product was received.



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- c) Cost information should be presented for any project experience used to include design fees and amendments and construction costs and project change orders.
- d) A description of how the PM and the team proposes to work and communicate with the Utility throughout the project.
- e) Outline of the public participation process.
- f) A description on how the team will manage the design and control the costs on this project.
- g) A presentation on how the team will handle quality control and quality assurance for the project.
- h) Following a review of the submittals, the Water Utility reserves the right to establish specific requirements and content for the interview to further aid in the determination of the Firms qualifications.
- i) Extensive and detailed preliminary layouts and designs of the proposed Water Utility project are not necessary for the interview and should not be included in the interview presentation.
- j) Questions: The selection team may prepare a list of standard questions for the interview. Additional questions may be developed based on the Firm's proposal to clarify information submitted.

F. Submittal: Submit four (4) copies of the proposal to the following address:

Al Larson – Principal Engineer  
Madison Water Utility  
119 East Olin Avenue  
Madison, Wisconsin 53713

The submittal shall be clearly marked:

**“Proposal for Engineering Services for Unit Well 15 – VOC Air Stripper**

Email or fax submittals are not permitted and will not be accepted.

G. Due Date and Time:

1. The submittal is due to the Water Utility no later than **4:00 p.m. Thursday December 8, 2011.**



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2. The Water Utility is not responsible for late deliveries.
3. Submittals received after the designated time shall be returned unopened.

#### **VI. SELECTION PROCESS**

- A. The selection will be based on demonstrated qualifications in the design and construction of projects of similar size and complexity. A capability of working as a team with Water Utility staff toward the successful completion of the project. A demonstrated ability to successfully work within the City of Madison permitting and contracting process and engage the public in the process.
- B. Selection Committee: The Selection Committee shall be made up of 3 or 4 members of the Water Utility staff and potentially an independent outside individual.
- C. Ranking
  1. Submittals will be ranked based on the following categories:
    - a) Project understanding
    - b) Understanding of Madison Permitting process
    - c) Understanding of getting DNR approval of projects of similar size and complexity
    - d) Experience/Qualifications
    - e) Proposed Project Team
    - f) Proposed Project Schedule and Scope of Services
    - g) Public Participation experience and expertise
    - h) Quality of Two Work Samples
    - i) Project Management History and Plan
    - j) Cost Estimating and Cost Control History
  2. Estimated hours and costs
    - a) If necessary, after short listing the submittals, the evaluation team will review submitted estimated hours and costs.
    - b) The detail provided in the estimated hours and costs breakdown will be used to further evaluate the consultant's project understanding and project approach.
  3. Interview (If necessary) - Firms will be judged in the interview based on the following:
    - a) Project Team Presentation and Organization
    - b) Demonstration of Project Understanding and Project approach
    - c) Project Management/Cost Control Plan



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- d) Completed Projects
  - e) Questions and Answers
4. Final Selection:
- a) The Firm judged to be the most qualified based on all of the information presented and evaluated will be selected by the committee.
  - b) The selected Firm shall be notified in writing. No other method shall be considered to be official notification of selection by the Water Utility.
  - c) The selection of the committee shall be final.
5. Projected Schedule (Subject to change)
- a) December 8, 2011 – submittal due date
  - b) December 13, 2011 – selected Firm recommended to the Water Utility Board
  - c) January 3, 2012 – Selection confirmed by Common Council and contract awarded
  - d) Week of January 9, 2012 – Detailed scope of services and contract finalized and signed
  - e) Week of January 16, 2012 – Estimated start work

## **VII. CONTRACT**

- A. City Contract:
- 1. The Firm that is recommended for award of this Contract will be required to negotiate an equitable contract with the Water Utility based on the approved Scope of Work.
  - 2. The selected Firm will then enter into a standard City of Madison Contract for Purchase of Services. A copy of this standard contract is attached for your review.
- B. Recommendation and Contract Execution
- 1. The selected Firm will be recommended to the Board of Water Commissioners who will recommend the Firm to the Common Council of the City of Madison.
  - 2. Following the approval of the Common Council, a contract will be executed and the successful Firm will receive a Notice to Proceed.



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#### **VIII. QUESTIONS**

- A. Questions concerning this Request for Proposals should be directed to:

Alan L. Larson, PE, BCEE  
Principal Engineer – Water  
Madison Water Utility  
119 East Olin Avenue  
Madison, WI 53713  
608-266-4653  
[allarson@cityofmadison.com](mailto:allarson@cityofmadison.com)

