

CITY OF MADISON POSITION DESCRIPTION

1. Name of Employee (or "vacant"):
New Position
Work Phone:
2. Class Title (i.e. payroll title): Asset Manager
3. Working Title (if any): Water Utility Asset Manager
4. Name & Class of First-Line Supervisor:
Peter Braselton, Computer Mapping/GIS Coordinator
Work Phone: 608.261.9834
5. Department, Division & Section: Water Utility, Engineering, Mapping
6. Work Address: 119 E. Olin Ave, Madison, WI, 53713
7. Hours/Week: 38.75
Start time: 7:30 End time: 4:00
8. Date of hire in this position: TBD
9. From approximately what date has employee performed the work currently assigned: New Position

10. Position Summary:

This is responsible professional technical work in Asset Management Program development, implementation, management, and coordination for Madison Water Utility. The Asset Management Program will develop processes and procedures to ensure the Utility's infrastructure system meets established service goals while minimizing total life-cycle cost. Working with the Mapping and Systems Supervisor, this position has responsibility for initial development and implementation of the Utility's Asset Management Program.

Working under the direction of the Principal Engineer and the Mapping and Systems Supervisor, this position will lead a cross functional asset management team drawing from all Sections of the Utility in the planning, development, implementation, and maintenance of an asset management program. The Asset Manager will work closely with the Asset Management Team to lead the implementation of the Utility's Computer Maintenance Management System (CMMS) software package, and to lead the development of standardized processes and procedures for asset condition assessment, preventative maintenance programs, system budgeting, and project planning. The Asset Management Team will be responsible for setting customer service levels, monitoring key performance indicators, developing and maintaining the asset inventory, performing condition assessments, mapping assets, managing asset attributes, optimizing operations and maintenance practices, managing acceptable levels of risk, developing long-term asset replacement or rehabilitation projections, making short-term decisions on asset repair or replacement, and planning for long-range financial needs for use in developing utility rate models.

11. Functions and Worker Activities: (Do NOT include duties done on an "Out-of-Class" basis.)

- 25% A **Administer and Maintain the Water Utility Asset Management Program**
- Organize and lead a cross functional team responsible for developing, building, and refining the Asset Management Program for Madison Water Utility. This is expected to be an intense 3 to 5 year effort.
 - Document the goals of the Utility asset management program, identify the steps for improvement, prioritize the improvement initiatives, and provide a framework for measuring progress and success.
 - Define system wide operational goals; identify and evaluate options and cost consequences of various operational goals; monitor whether the program achieves desired operational goals; recommend corrective actions when necessary.
 - Ensure that the results of Asset Management Program implementations meet the needs of strategic investment planning for Madison Water Utility
 - Evaluate and recommend modifications to asset management processes and procedures
 - Develop processes and procedures to plan for and finance repair and replacement of Utility infrastructure that seeks to minimize the life cycle cost of all assets while continuously delivering the service levels customers desire and regulators require at an acceptable risk to the organization
- 25% B **Asset Condition Assessment**
- Develop, document, and periodically update the program for utility system condition assessment data collection and organization. Oversee field-based condition assessment program activities to assure that field staff is complying with program data collection requirements.
 - Design and implement research-based condition assessment and data evaluation programs (data mining of historical records, GIS, etc.)
 - Develop a buried asset rating program that will simply communicate buried asset condition and reinvestment need to other City Departments, officials, boards, and neighborhood organizations
 - Define customer service level goals; identify and evaluate options and cost consequences of various service level goals; monitor whether the program achieves desired customer service levels; recommend corrective actions to senior managers, when necessary.
 - Develop annual program for infrastructure condition assessment activities, using asset management models and tools developed under the program, and coordinate with other city initiatives such as overlay or Transportation CIP projects.
- 10% C **Software and Data Management**
- Review, evaluate, recommend, and implement asset management program software
 - Once implemented review the use of data from the Utilities Computerized Maintenance Management System (CMMS) to inform maintenance and condition assessment activities.
 - Analyze asset management data storage and reporting requirements; evaluate options for improved efficiency of data management; recommend/implement improvements.
 - Review current trends and developments in asset management software and data management, recommend improvements or enhancements as feasible.
- 10% D **Preventative Maintenance Program**
- Assist with implementing risk-based preventive maintenance programs for operable assets such as pump stations, reservoirs, and valves.
 - Monitor repair costs and investment, evaluate asset life expectancy, and develop programs to optimize asset life cycle cost
 - Evaluate the consequence of failure and business risk exposure of each asset and develop a maintenance and replacement program based on individual facility conditions and the criticality of the asset
- 25% E **Engineering, Planning, Budgeting, and Reporting**
- Develop, review and revise program procedures and criteria for identifying and ranking capital renewal and replacement (R&R) projects. Use cost/benefit analyses, consequence of failure costs, failure probabilities, and total life cycle cost considerations. Identify and

prioritize R&R projects for implementation. Coordinate project prioritization and planning with engineering staff.

- Analyze program data to prepare statistical and other engineering reports, forecasts and correspondence to demonstrate program progress; measure against objectives; recommend changes.
- Develop, review and revise critical facility definitions; identify critical facilities based on those criteria.
- Provide periodic status reports of Asset Management Program activities and progress for utility leadership and Water Utility Board.
- Monitor the progress and expenditures of Capital Investment Program infrastructure renewal and replacement projects; evaluate against forecast fiscal resource requirements. Coordinate information with Utility finance staff for long-term financial forecasting, and budget and utility rate design and development.
- Assist with the update to the annual capital 5-year budget projections
- Assist in development of engineering standards which reduce life cycle cost of utility system ownership; provide technical support to other divisions and departments in support of same objective.
- Work with engineering staff to update the Utility water master plan

5% F **Staff Training and Development. Work Flow Refinement**

- Promote Asset Management Concepts and Practices to staff, Water Utility Board, Common Council, and other community organizations
- Maintain regular contacts with other utilities and industry groups to share information and keep informed on the latest developments relative to Utility Asset Management.
- Retain, select, hire and manage limited term employees (LTEs) and outside consultants to assist with asset management program as necessary.
- Other tasks as assigned

12. Primary knowledge, skills and abilities required:

- Bachelor of Science or equivalent from a 4 year accredited University or College in Engineering, Municipal Planning, Utility Management, GIS, Public Administration, or other closely related field.
- An understanding of the principles and objectives of asset management with respect to the operation of a public utility. Applicant should have an understanding of ISO 55000, the standard for Asset Management. It would be expected that asset management expertise would typically be gained with 3 to 5 years experience of progressively responsible technical tasks either working with or developing and implementing an asset management system or working as a utility planner or engineer.
- Possess a diverse project management experience background.
- Knowledge and understanding of established civil engineering principles, practices, methods, project management, and techniques, particularly for utility system renewal and replacement.
- Proven experience working cooperatively across organizational divisions to achieve program objectives. Success establishing and maintaining a working environment conducive to positive morale, individual style, quality, innovation, and teamwork.
- Proven ability to organize, analyze, interpret, and evaluate engineering problems to develop and recommend practical, cost-effective solutions.
- Demonstrated experience with tracking, recording, and evaluating performance metrics to advance asset management program objectives.
- Understanding of statistical analysis principles; experience with life-cycle costing and triple-bottom-line analysis.
- Effective public speaker. Ability to convey technical information succinctly, accurately, and comprehensively to non-engineering audiences. Ability to develop and present program objectives, progress and status to senior management, Water Utility Board, Common Council, or the general public.
- Knowledge of Water Environment Research Foundation's (WERF) Sustainable Infrastructure Management Program Learning Environment (SIMPLE).

- Knowledge of EPA's Sustainable Infrastructure initiative. Fundamental knowledge of utility finance, budgeting, and long term planning.
- Knowledge of EUM. Understanding of typical utility policies, practices, procedures, governing laws, ordinances and regulations.
- Working knowledge of computer terminology, engineering applications, CMMS, GIS, relational databases, and database reporting applications.
- Ability to organize and facilitate meetings with diverse stakeholders.
- Strong interpersonal and communication skills. Ability to work and thrive in a team environment.
- Strong problem identification and solution skills. Excellent quantitative, analytical, technical, and critical thinking skills.
- Ability to maintain good working relationships with staff, members of other agencies and the general public. Ability to maintain excellent attendance.
- Technical Skills needed or to be acquired for the position:
 - Knowledge and experience with CMMS (Accela, Hansen, Cityworks etc.)
 - RDBMS systems such as SQL Server or Oracle
 - ESRI GIS products (ArcGIS 9.x and/or 10.x, ArcInfo, ArcView, ArcSDE, ArcGIS Server)
 - Business reporting applications such as Crystal Reports or SSRS. SQL Syntax a plus.
 - Advanced skills in the Microsoft Office Suite of products including MS Access.
 - Experience with SCADA and/or AMI a plus.

13. Special tools and equipment required:

Electronic survey equipment, GPS and other mobile devices

14. Required licenses and/or registration:

Possession of a valid driver's license or the ability to meet the transportation requirements of the position. Demonstration of a good driving record.

15. Physical requirements:

Capability to effectively and cooperatively work in an office environment. Ability to work at a desk for extended periods of time including 8 hours per day for weeks at a time. Ability to work on a computer for extended periods of time including repetitive motion tasks such as using a computer mouse up to and including 8 hours per day for weeks at a time. Vision abilities required by this job include close vision, distance vision, peripheral vision, depth perception, and the ability to adjust focus.

Capability to work safely and efficiently on a public works construction site. The ability to stand for long periods of time, walk over rough terrain on a construction site, withstand adverse weather extremes (cold, hot, excessive humidity, rain, or sun), tolerate loud noises, dust, and pollen. Work may occasionally require the employee to climb, balance, bend, stoop, kneel, crouch, and/or crawl. Ability to occasionally lift 75 lbs to the waist. Ability to routinely lift 30 lbs and carry it over rough terrain for 100 yards as needed when working in the field.

16. Supervision received (level and type):

Supervision is provided by the Mapping and Systems Supervisor: Supervision is, most often, review upon completion. Parameters for the job are given and ideas are then put on paper or in the computer. The final product is then reviewed by the supervisor.

17. Leadership Responsibilities:

This position: is responsible for supervisory activities (Supervisory Analysis Form attached).
 has no leadership responsibility.
 provides general leadership (please provide detail under Function Statement).

18. Employee Acknowledgment:

- I prepared this form and believe that it accurately describes my position.
- I have been provided with this description of my assignment by my supervisor.
- Other comments (see attached).

EMPLOYEE

DATE

19. Supervisor Statement:

- I have prepared this form and believe that it accurately describes this position.
- I have reviewed this form, as prepared by the employee, and believe that it accurately describes this position.
- I have reviewed this form, as prepared by the employee, and find that it differs from my assessment of the position. I have discussed these concerns with the employee and provided them with my written comments (which are attached).
- I do not believe that the document should be used as the official description of this position (i.e., for purposes of official decisions).
- Other comments (see attached).

Water Utility Principal Engineer

DATE

Note: Instructions and additional forms are available from the Human Resources Dept., Room 501, City-County Bldg. or by calling 266-4615.