

POSITION DESCRIPTION

Agricultural Engineer – Senior (Advanced Downgraded)

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POSITION SUMMARY:

This position will serve as an agricultural engineer senior level under the supervision of the Conservation Engineering Section Manager and will provide engineering assistance to County Land Conservation Department (LCD) staff, other conservation professionals, and landowners in support of state and county programs including Soil and Water Resource Management (SWRM) grants, county land and water resource management plans and manure storage ordinances, and other Land and Water Resources Bureau (LWRB) programs and projects such as Livestock Facility Siting. Technical assistance will also be provided in support of Federal and State programs including the Natural Resource Conservation Service's (NRCS) Financial Assistance programs, and Dept. of Natural Resources (DNR) Nonpoint Source Water Pollution Abatement and NR 243 Animal Waste Management programs. This position will provide engineering services and technical support within an assigned multi-county area related to the design, installation, and approval of practices for soil and water conservation and animal waste management. Additional responsibilities include the certification of technical staff under the Conservation Engineering Practitioner Certification program (Wis. Admin. Code ATPC 50.46), the advancement of conservation engineering technologies, provision of training, and assistance with the administration of the LWRB programs.

GOALS AND WORKER ACTIVITIES:

50% GOAL A: Provision of engineering services and technical support in multi-county area related to the planning, design, installation, and review and approval of conservation practices.

- A.1 Prepare and review engineering designs, construction plans, specifications, operation and maintenance plans, inspection plans, and cost estimates for conservation practices and complex systems. Where possible, perform these tasks with LCD/NRCS personnel while providing guidance and training to them.
- A.2 Evaluate plans and specifications developed by conservation professionals, including private engineers, to ensure conformance to engineering principles, environmental goals, standards, codes, ordinances, and department policies.
- A.3 Provide construction inspection services to ensure high quality construction of engineering practices.
- A.4 Assist conservation planners in determining alternatives and cost estimates to solve complex soil and water resource protection problems.

30% GOAL B: Coordination with and support for federal, state and local conservation and related programs.

- B.1 Provide technical and administrative support for federal, state and local programs related to financial incentive and cost-sharing, and permitting of livestock facilities and manure storage.
- B.2 Provide engineering and related support for livestock facility siting and other programs under the LWRB.

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- B.3 Represent the Conservation Engineering Section in interactions with DNR, LCDs, NRCS, and affected landowners, to coordinate projects.
- B.4 Work effectively with other area DATCP engineering field staff and NRCS area staff assigned to multi-county region in the management of program activities including review of engineered construction plans, implementation of quality control measures, and provision of training support.
- B.5 Maintain project files, monitor and track activities using spreadsheets and other approved methods, and prepare reports and other program summaries to document progress.
- B.6 Assist with development and updating of technical standards for conservation engineering practices through participation in teams sponsored by the Standards Oversight Council (SOC).
- B.7 Develop tools and aids, such as standardized designs and drawings, and computer spreadsheets, for the support of engineering planning and design.
- B.8 Provide technical guidance to LWRB and cooperating agencies for the development of rules, policies and procedures.

20% GOAL C: Provision of technical training, guidance and oversight to LCD field office personnel and other conservation professionals in planning, surveying, designing, construction inspection, and the operation and maintenance of engineered practices.

- C.1 Administer the DATCP Conservation Engineering Practitioner Certification program by assigning appropriate certification ratings to conservation professionals within the assigned multi-county area.
- C.2 Design and deliver training programs in a classroom or workshop setting.
- C.3 Provide technical guidance and on-the-job training to individual field staff.
- C.4 Conduct project status reviews and spot checks to ensure that conservation practices are of high quality and are cost-effective and to monitor the performance and training needs of field staff.
- C.5 Assist LCD technicians and others to acquire resource materials and technologies.
- C.6 Participate in statewide training efforts through the Statewide Interagency Training Committee (SITCOM) and/or the associated Area Interagency Training Committee (AITCOM).

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SPECIAL REQUIREMENTS:

1. Assigned field work is required more than 50% of work time and may include extensive travel to field offices and construction or project locations, and is typically during business hours.
2. Possession of or the ability to obtain a valid driver's license, and the ability to obtain authorization to drive a State of Wisconsin vehicle.
3. Possession of at least one of the following:
 - Registration as a Professional Engineer as determined by the Department of Safety and Professional Services per s. 443.04, Wis. Stats.
 - A specific record, issued by the professional engineering section of the Department of Safety and Professional Services, showing 4 years or more of experience in engineering work of a character satisfactory to the professional engineering section and satisfactory completion of the fundamentals of engineering exam
 - Graduation from a recognized college or university with a degree in a related engineering field such as electrical, mechanical, civil or environmental engineering
 - Equivalent professional training and practical experience so as to be deemed a professional engineer as defined by the Department of Safety and Professional Services per s. 443.01, Wis. Stats., and also deemed to be qualified to engage in professional engineering practice as determined by the Department of Safety and Professional Services per s. 443.04 or 443.05, Wis. Stats.
4. Establish and maintain Conservation Engineering Practitioner Certification (ATCP 50.46) for conservation practices as appropriate to provide technical assistance to the multi-county area served, and must include a certification rating of 3 or higher for the design and construction oversight covering a minimum of five practices.

PHYSICAL DEMANDS:

Ability to walk over uneven and/or muddy terrain, stand for long periods of time, bend, stoop, and climb ladders at construction/project sites is required.

WORKING ENVIRONMENT:

In addition to work performed in an office setting, this position also performs work outdoors at construction/project sites. Project sites may include: farmsteads, farm fields, lakes, streams, woods, wetlands, etc.

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KNOWLEDGE, SKILLS AND ABILITIES:

- A. Extensive knowledge of the laws, codes and regulations pertaining to soil and water conservation programs and the agencies that administer them.
- B. Extensive knowledge of the state's resource management practices, including agricultural practices, and the ability to talk with farmers and other landowners about these issues.
- C. Extensive knowledge of hydrology, hydraulics, and sediment transport associated with lakes, streams and storm water runoff.
- D. Extensive knowledge of the principles and practices of soil and water conservation engineering pertaining to water quality and animal waste management.
- E. Extensive knowledge of the technical guides and standards used by engineers and governmental agencies for practices, structures and facilities implemented by landowners to improve water quality and manage animal wastes.
- F. Considerable knowledge of computer applications such as Microsoft Office programs (i.e. Word, Excel, Outlook) and AutoCAD.
- G. Extensive ability to make difficult engineering computations to analyze data and design conservation practices, structures and facilities.
- H. Ability to work with a wide range of people representing many agencies, special interest groups, and units of government, and acting with tact in controversial or politically sensitive situations.
- I. Considerable skill in oral and written communications.
- J. Considerable knowledge of administrative procedures.