

**IOWA DEPARTMENT OF ADMINISTRATIVE SERVICES ▼**  
**HUMAN RESOURCES ENTERPRISE**

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**SOIL CONSERVATION TECHNICIAN 3**

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**DEFINITION**

Develops resource management plans and performs paraprofessional engineering design work related to the conservation of natural resources including inspecting construction of structural conservation practices and being responsible for the construction survey; performs related work as required.

**The Work Examples and Competencies listed are for illustrative purposes only and not intended to be the primary basis for position classification decisions.**

**WORK EXAMPLES**

Develops whole farm plans, addressing multiple resource concerns; explains state and federal cost share programs to landowners.

Promotes conservation programs and practices through written and/or oral presentations, and tours; conducts windbreak schools and Outdoor Classrooms.

Analyzes current conditions and make recommendations to landowners for solving site specific resource management problems; estimates the costs of various options; computes soil losses.

Develops design and layout of terraces, waterways, contour stripcrop systems, grade stabilization structures, farm ponds, farmstead and field windbreaks, etc., based on site specific conditions; uses the computer for design, conservation planning, communication, and progress reporting on a daily basis.

Operates a variety of survey instruments to obtain survey data needed for design; utilizes various computer aided design software, and prepares design drawings subject to approval by engineer.

Oversees several contractor construction projects simultaneously and conducts inspections of the completed work to assure adherence to specifications; reviews field notes for contractors; answers questions and provides explanation to property owners about progress of construction.

Conducts training for contractors.

Serves as the lead technician for the field office providing training of other staff, both within the agency, and with partner agencies; checks the work and oversight of others for accuracy and completeness.

Analyzes and prepares various records and reports, as assigned.

**COMPETENCIES REQUIRED**

Knowledge of State and Federal laws concerning environmental programs and federal farm legislation, IDNR regulations (governing flood plains, water storage, permit requirements for agriculture waste handling and storage), Endangered Species Act, etc., as well as Federal and State of Iowa regulations concerning disturbance of cultural resources and "ancient human remains."

Knowledge of policies, procedures and eligibility standards associated with Federal, State and local soil and water conservation programs.

Knowledge of a wide variety of technical specifications for soil and water conservation practices, management practices, and components of agriculture waste management systems in order to apply them to a wide variety of resource conditions.

Knowledge of conservation practices and their effects upon the land, environmentally and economically.

Knowledge of mathematics (including algebra, plane geometry and trigonometry) as applied to the survey, design and layout of conservation practices.

Knowledge of local soils and their properties as related to erodibility and suitability for construction materials.

Knowledge of construction materials and methods used by contractors.

Knowledge of animal waste handling systems.

Knowledge of proper grazing techniques and woodland management.

Ability to assist the landowner with site selection (comply with IDNR separation distances), appropriate type of structure (earthen, concrete, total containment vs. solids settling, etc.) determine volume requirements, develop waste utilization plan, obtain sufficient survey information for design and supervise construction.

Ability to work independently and prioritize work schedule.

Ability to communicate effectively verbally and in writing with a widely variable customer base (farm operators, absentee landowners, farm managers, real estate developers, small acreage owners, urban dwellers, agribusiness, educators, and other government agencies).

Ability to operate a variety of survey equipment, ranging from dumpy levels, to lasers, theodolites, and total station instruments.

Ability to lift and carry survey equipment.

Ability to work outside in all weather conditions, over varying terrain.

Ability to develop Whole Farm plans utilizing methods and techniques required.

Ability to collect and analyze field data used for the purpose of planning, designing and implementing conservation practices.

Ability to read and interpret blueprints and construction drawings.

Ability to visualize and illustrate a concept or design in two or three dimensions.

Ability to read and interpret technical manuals, and explain them to contractors and landowners.

Ability to read and understand the terminology and symbols used in survey notes, plans, aerial photographs, soil surveys, and topographic maps to interpret data and information for use in designing conservation practices.

Ability to adapt to new technologies as they become available in the field office [Global Positioning Systems (GPS), Geographic Information Systems (GIS), etc.].

Ability to use spread sheets, word processing, engineering design software; do data entry, and utilize the Internet for information gathering and communication.

Ability to identify cool and warm season grasses, legumes, and beneficial forbs in the field.

Ability to identify wetland indicator species.

Ability to interpret soil test results and make accurate recommendations for seeding establishment.

Ability to establish and maintain effective working relationships with partner agencies staff, contractors and customers.

Ability to identify cultural resources in the area where work is to be done, and recommend alternative practices to avoid adverse affects, including the significance of the cultural resource and mitigating measures.

Ability to work effectively with clients, regardless of ethnic background or gender.

Displays high standards of ethical conduct. Exhibits honesty and integrity. Refrains from theft-related, dishonest or unethical behavior.

Works and communicates with internal and external clients and customers to meet their needs in a polite, courteous, and cooperative manner. Committed to quality service.

Displays a high level of initiative, effort and commitment towards completing assignments efficiently. Works with minimal supervision. Demonstrates responsible behavior and attention to detail.

Responds appropriately to supervision. Makes an effort to follow policy and cooperate with supervisors.

Aligns behavior with the needs, priorities and goals of the organization.

Encourages and facilitates cooperation, pride, trust, and group identity. Fosters commitment and team spirit.

Expresses information to individuals or groups effectively, taking into account the audience and nature of the information. Listens to others and responds appropriately.

**EDUCATION, EXPERIENCE, AND SPECIAL REQUIREMENTS**

Graduation from high school or GED and experience equal to forty-two months of full-time work in engineering or engineering field survey;

OR

an equivalent combination of education from a college, university or technical school, and experience substituting thirty semester hours of course work in civil engineering or engineering survey for twelve months of the required experience with a maximum substitution of thirty-six months;

OR

employees with current continuous experience in the State executive branch that includes the experience equal to eighteen months of full-time work as a Soil Conservation Technician 2.

Effective Date: \_\_\_\_\_ 2/01 \_\_\_\_\_ GR