

**POSITION DESCRIPTION  
COVER SHEET**

REASON FOR THIS POSITION		
1. NEW <input checked="" type="checkbox"/>	2. IDENTICAL ADDITION TO THE ESTABLISHED PD NUMBER <input type="checkbox"/> NHQSCGIS11	3. REPLACES PD NUMBER

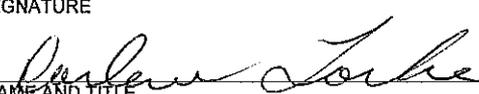
RECOMMENDED				
4. TITLE <b>Soil Scientist</b>		5. PAY PLAN <b>GS</b>	6. SERIES <b>0470</b>	7. GRADE <b>11</b>
8. WORKING TITLE (Optional) <b>Soil Scientist (GIS)</b>			9. INCUMBENT (Optional)	

OFFICIAL						
10. TITLE <b>Soil Scientist</b>						
11. PP <b>GS</b>	12. SERIES <b>0470</b>	13. FUNC	14. GRADE <b>11</b>	15. DATE Month Day Year		16. I/A <input type="checkbox"/> Yes <input type="checkbox"/> No
						17. CLASSIFIER

8. ORGANIZATIONAL STRUCTURE (Agency/Bureau)			
1st	<b>Natural Resources Conservation Service</b>		5th
2nd			6th
3rd			7th
4th			8th

SUPERVISOR'S CERTIFICATION			
I certify that this is an accurate statement of the major duties and responsibilities of the position and its organizational relationships and that the position is necessary to carry out Government functions for which I am responsible. This certification is made with the knowledge that this information is to be used for statutory purposes relating to appointment and payment of public funds and that false or misleading statements may constitute violations of such statute or their implementing regulations.			
19. SUPERVISOR'S SIGNATURE		20. DATE	22. SECOND LEVEL SUPERVISOR'S SIGNATURE
21. SUPERVISOR'S NAME AND TITLE		24. SECOND LEVEL SUPERVISOR'S NAME AND TITLE	

FACTOR EVALUATION SYSTEM					
FACTOR	25. FLD/BMK	26. POINTS	FACTOR	25. FLD/BMK	26. POINTS
1. Knowledge Required	<b>FL 1-7</b>	<b>1250</b>	6. Personal Contacts	<b>FL 6-3</b>	
2. Supervisory Controls	<b>FL 2-4</b>	<b>450</b>	7. Purpose of Contacts	<b>FL 7-C</b>	<b>180</b>
3. Guidelines	<b>FL 3-4</b>	<b>450</b>	8. Physical Demands	<b>FL 8-2</b>	<b>20</b>
4. Complexity	<b>FL 4-4</b>	<b>225</b>	9. Work Environment	<b>FL 9-2</b>	<b>20</b>
5. Scope and Effect	<b>FL 5-3</b>	<b>150</b>	<b>TOTAL POINTS</b>		<b>2745</b>
<b>GRADE</b>					<b>GS 11</b>

CLASSIFICATION CERTIFICATION	
I certify that this position has been classified as required by Title 5, US Code, in conformance with standards published by the OPM or, if no published standard applies directly, consistently with the most applicable published standards.	
29. SIGNATURE 	30. DATE <b>05/30/2008</b>

31. NAME AND TITLE  
**Darlene Locke, Human Resources Specialist, Employment and Classification Team, Washington, D.C.**

32. REMARKS:	33. OPM CERTIFICATION NUMBER
--------------	------------------------------

**References: OPM JFS PROFESSIONAL WORK, NATURAL RESOURCES MGT & BIOLOGICAL SCIENCES, SEPT 05  
Position is FLSA - Exempt.**

**MASTER RECORD/INDIVIDUAL POSITION DATA**  
THIS SIDE TO BE COMPLETED BY THE CLASSIFIER

<b>A. KEY DATA</b>					
1. FUNCTION (1)	2. DEPT CD./AGCY-BUR-CD. (4)	3. SON (4)	4. MR. NO. (6)	5. GRADE (2)	6. IP NO. (8)
	<b>AG 16</b>				

<b>B. MASTER RECORD</b>					
1. PAY PLAN (2)	2. OCC. SERIES (4)	3. OCC. FUNC. CD. (2)	4. OFF. TITLE CD. (5)	5. OFFICIAL TITLE (38)	
<b>GS</b>					
6. HQ. FLD. CD. (1)	7. SUP. CD. (1)	8. CLASS STD. CD. (1)		9. INTERDIS. CD. (1)	10. DT CLASS (6)
1 = HQ 2 = FLD	1 = Sup. SGEG 3 = Mgr. SGEG 4 = Sup. CSRA	5 = Mgmt. CSRA 6 = Leader LGEG 8 = All Others	X = New Standard Applied Blank = NA	N = No Y = Interdis	MO DAY YEAR
11. EARLY RET. CD. (1)	12. INACT/ACT (1)	13. DT. ABOL. (6)	14. DT. INACT/REACT (6)	15. AGENCY USE (10)	
1 = Primary 2 = Secondary	3 = Foreign Svc. Blank = NA	I = Inactive A = Active	MO DAY YEAR	MO DAY YEAR	
16. INTERDISCIPLINARY SERIES (40) (4) Per Block					
17. INTERDISCIPLINARY TITLE CODE (50) (5) Per Block					

<b>C. INDIVIDUAL POSITION</b>					
1. FLSA CD. (1)	2. FIN. DIS. REQ. (1)	3. POS. SCHED. (1)	4. POS. SENS. (1)	5. COMP. LEV. (4)	
E = Exempt N = Nonexempt	0 = None 1 = CD 219 2 = CD 220	3 = SF 278 4 = AD 392 5 = SF 849	A = Sched A B = Sched B C = Sched C	0 = Excepted but not A,B,C	0 = Nonsensitive 1 = Noncritical 2 = Critical Sense
6. WK. TITLE CODE (4)		7. WK. TITLE (38)			
8. ORG. STR. CODE (18)		9. VAC REV CODE (1)		10. TARGET GD.	
1st	2nd	3rd	4th	5th	6th
		0 = Position Action No Vacancy A = No Change		B = Lower Grade C = Higher Grade	D = Different title and/or series E = New Position/New FTE
11. LANG. REQ. (2)	12. PROJ. DTY. IND. (1)	13. DUTY STATION (9)		14. BUS. CD. (4)	15. DT. LST. AUDIT (6)
	Blank = NA Y = Yes	State (2)	City (4)	County (3)	MO DAY YEAR
16. PAS. IND. (1)		17. DATE EST.		18. GD. BASIS. IND (1)	
	Blank=NA 1 = PAS	MO DAY YEAR	MO DAY YEAR	1 = Rev. when vacant 2 = Impact of Person 3 = Sup./SGEG	4 = Sup./Program 5 = RGE G 6 = Policy Analysis G E G
7 = Equipment Devel. Guide 8 = Agency Use 9 = Agency Use ALPHAS = Agency Use		19. DT.REQ. REC. (6)	20. NTE. DT. (6)	21. POS.ST. BUD (1)	
		MO DAY YEAR	MO DAY YEAR	Y = Perm N = Other	
22. MAIN. REV./CLASS.ACT. CD. (2) (1st Digit = Activity and 2nd Digit = Results)					
Normal Act		Maintenance Review Act		Results	
3	1 = Desk Audit 2 = Sup. Audit 3 = Paper Rev. 4 = PME/Activity Rev.	5 = Desk Audit 6 = Sup. Audit 7 = Paper Rev. 8 = Panel Rev.	1 = No Action Req. 2 = Minor PD Change 3 = New PD Req. 4 = Title Change	5 = Series Change 6 = Pos. Upgrade 7 = Pos. Downgrade 8 = New Pos.	9 = Other
23. DATE EMP. ASGN. (6)	24. DATE ABOL. (6)	25. INACT/ACT(1)	26. DATE INACT/REACT (6)	27. ACCTG. STAT. (4)	28. INT. ASGN. SER. (4)
MO DAY YEAR	MO DAY YEAR	I = Inact. A = Act.	MO DAY YEAR		
30. CLASSIFIER'S SIGNATURE					31. DATE
					<b>5/30/2008</b>
32. REMARKS					

## STANDARD POSITION DESCRIPTION

**Official Title:** Soil Scientist  
**Working Title:** Soil Scientist (GIS)  
**Classification:** GS-470-11  
**Number:** NHQSCGIS11

**Date:** May 30, 2008  
**Classified By:** NHQ-HRMD-ECT  
**Location:** MLRA Office

**Note:** This is a standard position description and can not be modified without the approval from the Human Resources Management Division, Employment & Classification Team, NRCS, in Washington D.C.

### Introduction

This position is Major Land Resource Area (MLRA) Soil Specialist for a designated county Soil Survey Update and Maintenance, and/or Satellite Office in the MLRA. The incumbent serves as a GIS specialist for assigned portions of the MLRA within assigned area. The incumbent serves as part of a team of soil scientists responsible for the update and maintenance of soil surveys within the assigned geographical area. The work is coordinated with other soil survey update activities within the state and adjoining states.

### Major Duties

#### **1. GIS Leadership (50%)**

- a. Provides staff leadership and technical guidance and operates computer systems in developing digital soil surveys, GIS, remote sensing and cartographic technology in the assigned soil survey area. This includes evaluation of existing older soil surveys to assess their quality and the development of strategies and plans to bring them up to modern digital standards.
- b. Provides leadership in designing and carrying out sampling activities including gathering laboratory, transect, and other field data to characterize and recorrelate existing soil survey maps in order to achieve a coordinated soil survey product throughout the assigned region.
- c. Coordinates and communicates technical functions of soil survey activities with the MLRA Regional Office. In addition, the incumbent is responsible for communication and coordination with NCSS Cooperators, other MLRA project offices, and with other regional technology teams to assure all products of the soil surveys meet customer needs. These offices may be within the state as well as across state boundaries.

#### **2. Project Coordination (50%)**

- a. Coordinates all assigned county "subset" project correlation activities to ensure that the objectives and goals of the entire MLRA Soil Survey Project are achieved. This includes development of work plans throughout the assigned area to ensure priority projects are completed in a timely manner, as well as design and coordination of all mapping legends to ensure that all county subset maps and data join across county boundaries.

b. Emphasis is placed on field data collection and subsequent use of the data in correlation activities and in interpretation for customers. In addition, the incumbent performs map compilation manually and digitally as appropriate, updates and maintains soil data bases, and develops soil survey manuscripts for publication. Participates in periodic technical field visits and progress reviews within assigned subset projects to ensure that the objectives of the MLRA project are being met as agreed to in the Memorandum of Understanding and for conformance to policy for conducting soil surveys. The incumbent assists project members in technical and administrative concerns, and ensures that National Cooperative Soil Survey standards are met.

c. Promotes maximizing efficiencies in MLRA soil survey projects by utilizing available technology and encouraging the development of new technology and techniques. Uses and promotes use of computers and automation technology to share, analyze, summarize, and manage data, develop manuscripts and publications, and to develop and maintain databases. Encourages use of Geographic Information Systems, Global Positioning Systems technology and Remote Sensing techniques to maximize efficiencies in conducting and maintaining soil surveys.

d. Serves on regional committees, interdisciplinary teams and boards related to making and using soil surveys.

e. Practices safety and health in all areas of work assignments and stays abreast of safety rules and regulations.

### **3. Equal Employment and Civil Rights**

a. Understands and applies personnel rules and regulations as they apply to the Equal Opportunity and Affirmative Employment Programs to ensure their integration into recruitment, hiring, promotion, training, career development (including varied work assignments, details, and special developmental assignments), separations, grievances, and other personnel actions. Emphasizes meeting the objectives of equal opportunity and affirmative employment plans and requirements. Ensures that these functions are carried out without regard to race, color, national origin, religion, sex, age, or handicap.

b. Provides leadership and guidance in the design, development, and maintenance of administrative procedures to ensure that delivery of NRCS programs and services are carried out without regard to race, color, national origin, religion, sex, age, or handicap. Reviews the implementation of civil rights policies to determine that they are translated into appropriate actions consistent with annual plans of operation.

**Performs other duties as assigned.**

**Competitive Level – (Designated by state)**

**CONDITION OF EMPLOYMENT –** Must possess and maintain a valid state motor vehicle operator's license for the type of vehicle(s) operated to perform the duties of this position. This will require the operation of a motor vehicle on both public and private roads during daylight hours and occasionally after dark.

## **EVALUATION FACTORS**

### **1. KNOWLEDGE REQUIRED BY THE POSITION – LEVEL 1-7 (1250 POINTS)**

- a. Professional knowledge of geographic information systems (GIS), cartographic practices and techniques, and remote sensing techniques and products. This knowledge and acquired skills are used to digitize, edit, attribute, analyze, and develop GIS data for MLRA “subset” project.
- b. Professional knowledge of all technical aspects of the soil survey program, including mapping, manuscripts, correlations, classification, investigations, interpretations, and database in order to make and implement sound decisions regarding map unit design, map compilation, application of soil taxonomy in classification of soils, and in interpreting the soils for many uses.
- c. Working knowledge of agronomy, geology, biology, forestry, and engineering to sufficiently integrate soil information into these disciplines’ activities so that soil and water conservation needs are adequately addressed from a coordinated multi-disciplinary approach. Also possesses knowledge of topographic maps in order to recommend and provide guidance on developing or acquiring data layers.
- d. Knowledge and skill in oral and written communication sufficient to communicate procedures through directives, scientific journals, technical notes, papers; and to develop training materials and train soil scientists and other NRCS technical personnel.

### **2. SUPERVISORY CONTROLS – LEVEL 2-4 (450 POINTS)**

- a. The incumbent receives technical and administrative supervision from the Supervisory MLRA Project Leader (or representative) and operates independently working within established goals or objectives.
- b. The incumbent interprets agency policy and procedures in carrying out responsibilities and coordinates activities with other soil scientists or specialists, technical support staff specialists such as the state GIS Specialist, biologist, forester, agronomists, and engineers.
- c. Completed work is reviewed annually to ensure compliance with policy and objectives, for soundness of approach, and overall effectiveness.

### **3. GUIDELINES – LEVEL 3-4 (450 POINTS)**

- a. Guidelines consist of National Soil Survey Handbook, Soil Survey Manual, Soil Taxonomy, General Manual, and Memorandums of Understanding with other agencies, National Bulletins and Memorandums, and other related scientific data sources in agronomy, biology, engineering, and forestry.
- b. The NRCS is just beginning the process of updating and modernizing existing (but outdated) soil surveys. As a result, many of the tasks required lack specific guidelines or are under revision, requiring the incumbent to be creative and develop, test, and implement new and unique methods, criteria, procedures, and techniques for updating soil surveys. Consultation is available

with the incumbent's supervisor, State/Region GIS Specialist, Data Quality Specialist, at the MLRA regional office, or other more experienced soil scientists.

#### **4. COMPLEXITY – LEVEL 4-4 (225 POINTS)**

a. The incumbent is responsible for tasks that provide GIS, and cartographic services to MLRA project offices. Has responsibility for utilizing GIS products and services to update soil surveys in progress using the latest GIS technology. Tasks include assistance in preparation of GIS handbooks, providing technical training to NRCS personnel and others on how to use soils information, etc.

b. This position deals with a high degree of complexity. This assigned area represents a wide range of soils and landforms. In addition to the physical complexity of the soils and landforms of the assigned area, the nature of the assignment itself is complex. The incumbent must evaluate all existing soil surveys in the region to determine each one's specific needs for update and maintenance. The goal is to achieve a modern, coordinated, uniform product for the assigned area. These older projects were completed during the past four decades and represent soil survey technology of the time. The incumbent must develop and implement techniques that capitalize on the preservation of all the good aspects of the current soil surveys and concentrate efforts on activities to build upon and improve the existing product. Accomplishing this requires a high degree of expertise in assembling large amounts of information (both new and some of which is decades old), organizing and interpreting the information, and making decisions which bring all of the information together in a coordinated fashion.

c. The incumbent's assignments will include identification of multiple needs for soil information within the agricultural and urban sectors. The incumbent develops and guides the use of soil information to serve these two diverse use areas with a minimum of conflict. The incumbent, with support and assistance when needed from the MLRA Regional Office, interprets and evaluates new mapping techniques, proposed interpretations criteria, new manuscript formats, and implements those that are adopted.

#### **5. SCOPE AND EFFECT – LEVEL 5-3 (150 POINTS)**

a. The purpose of the work is to inventory the soil resource and develop the soil survey data into publications, manuscripts, guides, and tables that will effectively accelerate the utilization of soil information by users and potential users in the NRCS field offices, state conservation and resource agencies, and local planning groups. The interpretations made of the data have a major impact on land use decisions. The incumbent must determine the diverse needs of these groups and promote coordinated use of the information. New GIS techniques and software available should be used to improve the quantity and quality of these soil surveys.

b. The presentation of soils information affects the work of other soil scientists, soil conservationists, biologists, foresters, engineers, and planners in NRCS as well as other Federal, State, and local agencies. Soils information must be sound and accurately interpreted. Errors or inadequacies would seriously impair the effectiveness of NRCS programs in the state and other agency programs dependent on soil survey.

## **6. & 7. PERSONAL CONTACTS & PURPOSE - LEVEL 3-C (180 POINTS)**

a. Personal Contacts - Personal contacts are with NRCS and other state groups, landowners, and individuals outside of NRCS. Contacts are with soil scientists, engineers, district conservationists, resource conservationists, agronomists, biologists, foresters, and technicians. Contacts are also made with representatives of consulting firms, civic groups, experiment stations and universities, students, and the news media.

b. Purpose of Contacts - The purpose of the contacts is to coordinate soils information and to advise and train users in the proper integration of soils information into the planning process by addressing a wide range of soil and water conservation needs. Representatives of federal, state, and local governments contacted at this level are generally pursuing mutual goals and are cooperative. Contacts are generally routine and within a structured setting. The purpose of contacts may include developing cooperative relationships with universities and others in order to facilitate technology transfer by investigating research and development projects utilizing GIS techniques, persuading individuals of the value of GIS products, interaction with peers to exchange information on GIS, and providing training.

## **8. PHYSICAL DEMANDS – LEVEL 8-2 (20 POINTS)**

The work is performed in the field and in the office setting. While in the field either mapping or during field visits, and reviews it may involve substantial walking, climbing, bending, carrying heavy samples, excavating samples sites, carrying sampling and testing equipment over rough terrain, fences, streams, or up steep slopes. While in the office, it may require hours of repetitive work at the light table or in front of the computer screen.

## **9. WORK ENVIRONMENT – LEVEL 9-2 (20 POINTS)**

The work involves the risks and discomforts normally associated with such places. Frequently, work is performed outdoors during mapping activities, field visits, and reviews and is subject to variable weather conditions. Work at the computer or light table is performed in an office setting.

Total Points = 2745

Point Range 2355-2750 = GS-11

**This position is determined to be exempt from the provisions in the FLSA as defined in 5CFR 551.**