

Training Curriculum for Soil Scientist Group

Preface

The following list is a recommended progression of official trainings grouped within broad career advancement stages. Courses are listed within recommended career timeframes, to which there is no requirement implied, simply a guide to supervisory expectations of job duty skill acquisition with experience.

Elective courses are highly recommended, but not required within the curriculum. Nor are electives limited to those courses listed on this curriculum -- individuals are encouraged to tailor their trainings to fit their needs.

Offerings are not restricted to the level in which they occur and should not be used as a means of determining promotion eligibility.

These curricula do not in any way reflect the training necessary to fulfill the requirements for specific OPM job series, nor do they serve in any way to change the existing OPM-defined requirements for the specific job series.

MLRA SOIL SCIENTIST TRACK

Beginner

CORE COURSES

Year 1

- Basic Soil Survey – Field and Lab (NRCS-NEDC-000012)
- Conservation Planning Bootcamp (NRCS-NEDC-000164)
- Introduction to ArcGIS (ESRI Virtual Campus)
- NASIS Basic (Revitalized course)
- Statistics for Soil Survey Part 1 (NRCS-NEDC-000400)
- Understanding Map Projections and Coordinate Systems (ESRI Virtual Campus)

Years 2-3

- Digital Soil Survey Data Editing (NRCS-NEDC-000250)
- Introduction to Digital Remote Sensing (NRCS-NEDC-000028)
- Introduction to Image Interpretation (NRCS-NEDC-000275)
- NASIS – Understanding Soil Interpretations (NRCS-NEDC-000279)
- Plant ID (Local and Regional Field Botany Courses)

Years 4-5

- Developing Metadata (ESRI Virtual Campus)
- Introduction to Digital Soil Mapping (NRCS-NEDC-000333)
- Learning ARCGIS Spatial Analysis (ESRI Virtual Campus)
- Soil Geomorphology Institute (NRCS-NEDC-000110)
- Spatial Analysis Workshop (NRCS-NEDC-000271)

SELF-STUDY AND ON THE JOB TRAINING (OJT; All recommended to be completed within the first two years of employment with NRCS)

- National Soil Survey Handbook
 - Part 600 Introduction
 - Part 601 National Cooperative Soil Survey Organization
 - Part 607 Initial Soil Survey Preparation
 - Part 608.1 Responsibilities and Organization
 - Part 614 Applying Soil Taxonomy
 - Part 618 Soil Properties and Qualities
 - Part 622 Ecological and Interpretive Groups
 - Part 627 Legend Development and Data Collection
 - Part 630 Benchmark Soils
 - Part 631 Soil Survey Investigations
 - Part 638 Soil Data Systems
 - Part 639 NASIS
 - Part 647 Soil Map Development
 - Part 649 Land Resource Regions (LRR) and Major Land Resource Areas (MLRA)
 - Part 651 Advanced Soil Survey Information
- Soil Data Access Help
- OJT Modules
 - 001-0025 Map Unit Design and Mapping Soils
 - 101-135 Soil Description
 - 201-214 Soil Classification
 - 301-310 Documentation
 - 401-419 Sampling and Characterization
 - 501-507 Soil Survey Information
 - 601-606 Equipment and Operation

RECOMMENDED ELECTIVE COURSES

Agency Knowledge

- Basic Field Conservation Orientation (Detail in field service center for 2-3 weeks)
- Introduction to the Field Office Technical Guide (NRCS-NEDC-000149)
- NRCS Mentor and Protégé Training (NRCS-NEDC-LOCAL-000003)
- Orientation for New Employees (NRCS-NEDC-000013)

Basic Skills

- MS Excel Series (AgLearn Web-based learning)
- Technical Writing (TBD)

Technical Skills

- ArcGIS Pro: Essential Workflows (ESRI Virtual Campus)
- ArcGIS4 Sharing Content on the Web (ESRI Virtual Campus)

Work Life

- Emotional Intelligence 2.0 (Audio book USDA-BOOK-49926)
- What is Emotional Intelligence? (AgLearn Web-based learning)

Intermediate

CORE COURSES

Early Mid-career

- Digital Soil Mapping with ArcSIE (NRCS-NEDC-000273)
- Digital Soil Survey Data Management (NRCS-NEDC-000251)
- Ecological Site Fundamentals (New Course)
- Managing for Excellence (NRCS-NEDC-000010)
- Remote Sensing for Soil Survey Applications (NRCS-NEDC-000244)
- Soil Correlation (NRCS-NEDC-000036)

Mid-career

- Cultural Resources Training Series, Part 1 (NRCS-NEDC-000141)
- How to Use DigiTop (National Agricultural Library interface)
- Science of Interpretations (NRCS-NEDC-000288)
- Wetland Identification for Food Security Act purposes – Phase 1: Basic Concepts (NRCS-NEDC-000268)
- Wetland Identification for Food Security Act purposes – Phase 2: Applications (NRCS-NEDC-000254)

SELF-STUDY AND ON THE JOB TRAINING (OJT)

- National Soil Survey Handbook
 - Part 608 Program Management
 - Part 609 Quality Control, Quality Assurance, and Soil Correlation
 - Part 610 Updating Soil Surveys
 - Part 655 Technical Soil Services
- Soil Survey Manual: Chapters 1-7 and other appropriate chapters as needed
- OJT Modules
 - 701-734 Ecological Inventory
 - 801-823 Geophysical Tools

RECOMMENDED ELECTIVE COURSES

Agency Knowledge

- Soil Health and Sustainability for Field Staff (NRCS-NEDC-000050)
- Technical Soil Services (NRCS-NEDC-000249)

Basic Skills

- Becoming an Effective Presenter (TBD)
- Conquering the Challenges of Public Speaking (AgLearn Web-based learning)
- MS Access (Web-based learning)

Leadership

- USDA Aspiring Leader Program (AgLearn Self-assigned curriculum)

Technical Skills

- Advanced Hydric Soils for Soil Scientists (NRCS-NEDC-000024)
- Discipline Specific Ecology (Range, Pasture, Forestry – depending upon SSO needs)
- Hydrology Tools for Wetland Restoration and Determination (NRCS-NEDC-000025)

- Soil Technology – Application of Soil Data Viewer and ArcGIS in Technical Soil Services (NRCS-NSSC-000001)
- Soil Technology – Measurement and Data Evaluation (NRCS-NEDC-000038)
- USACE Wetland Delineation Manual (Reg 4) for Clean Water Act (external)

Work Life

- Emotional Intelligence: Building Self-Management Skills (AgLearn Web-based learning)
- Emotional Intelligence at Work (AgLearn Web-based learning)
- Time Management (AgLearn Web-Based books)

Advanced/Leadership

CORE COURSES

- Cultural Resources Training Series, Modules 7 & 8 (Offered by state)
- Effective Ecological Collaborations (New Course)
- Management of Soil Survey by MLRA (NRCS-NEDC-000248)
- Soil Science institute (NRCS-NEDC-000110)
- Supervising for Excellence (NRCS-NEDC-000011; for supervisors only)
- USDA Team Leader program (AgLearn Self-assigned curriculum)

RECOMMENDED SELF-STUDY

- National Ecological Site Handbook
 - Part 630 Policy and Procedures, Subparts A, B, E
 - Part 631 Ecological Site Concept and Description Development, Subpart A

RECOMMENDED ELECTIVE COURSES

Agency Knowledge

- Capitol Hill Workshop (NRCS-NEDC-000001)
- EEO and Reasonable Accommodation for Managers & Supervisors (NRCS-NEDC-LOCAL-000002)
- USDA Federal Appropriations Law Training (AgLearn Web-based learning)

Leadership

- Emotionally Intelligent Leadership (AgLearn Web-based learning)
- Everything You Need to Know About Leadership in 60 Seconds (AgLearn Web-based learning)
- 151 Quick Ideas for Delegating and Decision Making (AgLearn Web-based learning)
- 151 Quick Ideas to Improve Your People Skills (AgLearn Web-based learning)
- USDA Leadership Essentials Certificate Program (Self-assigned curriculum)

Technical Skills

- NASIS – Designing and Developing Soil Interpretations (NRCS-NEDC-000302)
- Statistics for Soil Survey Part 2 (NRCS-NEDC-000332)

Worklife

- Just Listen: Discover the Secret of Getting Through to Absolutely Anyone (AgLearn Web-based learning)
- 100 ways to Motivate Yourself (AgLearn Web-based learning)

RESOURCE/STATE SOIL SCIENTIST TRACK

Beginner

CORE COURSES

Year 1

- Basic Field Conservation Orientation (Detail in field service center for 2-3 weeks)
- Conservation Planning Part 1 (NRCS-NEDC-000019)
- Conservation Planning Part 2 (NRCS-STATE)
- Conservation Planning Part 3 (NRCS-STATE)
- Fundamentals of Highly Erodible Land and Wetland Provisions Training (OJT)
- Introduction to ArcGIS (ESRI Virtual Campus)
- Introduction to the Field Office Technical Guide (NRCS-NEDC-000149)
- NASIS Basic (Revitalized course)

Years 2-3

- Introduction to Digital Remote Sensing (NRCS-NEDC-000028)
- Introduction to Image Interpretation (NRCS-NEDC-000275)
- NASIS – Understanding Soil Interpretations (NRCS-NEDC-000279)
- Soil Health and Sustainability for Field Staff (NRCS-NEDC-000050)
- Soil Technology – Application of Soil Data Viewer and ArcGIS in Technical Soil Services (NRCS-NSSC-000001)
- Technical Soil Services (NRCS-NEDC-000249)
- USDA Cross Training Programs: NRCS Wetland and Highly Erodible Land Compliance (USDA-CTP-NRCS-006)
- Wetland Identification for Food Security Act purposes – Phase 1: Basic Concepts (NRCS-NEDC-000268)
- Wetland Identification for Food Security Act purposes – Phase 2: Applications (NRCS-NEDC-000254)

SELF-STUDY AND ON THE JOB TRAINING (OJT; All recommended to be completed within the first two years of employment with NRCS)

- Technical Soil Services Handbook
- National Soil Survey Handbook
 - Part 600 Introduction
 - Part 601 National Cooperative Soil Survey Organization
 - Part 608.1 Responsibilities and Organization
 - Part 621 Soil Potential Ratings
 - Part 624 Soil Quality
 - Part 655 Technical Soil Services

RECOMMENDED ELECTIVE COURSES

Agency Knowledge

- NRCS Mentor and Protégé Training (NRCS-NEDC-LOCAL-000003)

- Orientation for New Employees (NRCS-NEDC-000013)

Basic Skills

- MS Excel Series (AgLearn Web-based learning)
- Technical Writing (TBD)

Technical Skills

- ArcGIS Pro: Essential Workflows (ESRI Virtual Campus)
- ArcGIS4 Sharing Content on the Web (ESRI Virtual Campus)
- Conservation Planning Bootcamp (NRCS-NEDC-000164)
- Introduction to Digital Soil Mapping (NRCS-NEDC-000333)
- Plant ID (Local and Regional Field Botany Courses)

Work Life

- Emotional Intelligence 2.0 (Audio book USDA-BOOK-49926)
- What is Emotional Intelligence? (AgLearn Web-based learning)

Intermediate

CORE COURSES

Early Mid-career

- Cultural Resources Training Series, Part 1 (NRCS-NEDC-000141)
- Discipline Specific Ecology (Range, Pasture, Forestry – depending upon State needs)
- Ecological Site Fundamentals (New Course)
- Hydrology Tools for Wetland Restoration and Determination (NRCS-NEDC-000025)

Mid-career

- Advanced Hydric Soils for Soil Scientists (NRCS-NEDC-000024)
- Managing for Excellence (NRCS-NEDC-000010)
- NASIS – Designing and Developing Soil Interpretations (NRCS-NEDC-000302)
- Science of Interpretations (NRCS-NEDC-000288)

RECOMMENDED ELECTIVE COURSES

Basic Skills

- Becoming an Effective Presenter (TBD)
- Conquering the Challenges of Public Speaking (AgLearn Web-based learning)
- How to Use DigiTop (National Agricultural Library interface)
- MS Access (Web-based learning)

Leadership

- USDA Aspiring Leader Program (AgLearn self-assigned curriculum)

Technical Skills

- Remote Sensing for Soil Survey Applications (NRCS-NEDC-000244)
- Soil Technology – Measurement and Data Evaluation (NRCS-NEDC-000038)
- Spatial Analysis Workshop (NRCS-NEDC-000271)
- USACE Wetland Delineation Manual (Reg 4) for Clean Water Act (external)
- Wetland Identification for Food Security Act purposes – Phase 3: Labels, Exemptions & Admin Process (NRCS-NEDC-000404)

Work Life

- Emotional Intelligence: Building Self-Management Skills (AgLearn Web-based learning)
- Emotional Intelligence at Work (AgLearn Web-based learning)
- Time Management (AgLearn Web-Based books)

Advanced/Leadership

CORE COURSES

- USDA Team Leader program (AgLearn self-assigned curriculum)

RECOMMENDED ELECTIVE COURSES

Agency Knowledge

- Effective Ecological Collaborations (New Course)

Leadership

- Emotionally Intelligent Leadership (AgLearn Web-based learning)
- Everything You Need to Know About Leadership in 60 Seconds (AgLearn Web-based learning)
- 151 Quick Ideas for Delegating and Decision Making (AgLearn Web-based learning)
- 151 Quick Ideas to Improve Your People Skills (AgLearn Web-based learning)
- Supervising for Excellence (NRCS-NEDC-000011)
- USDA Leadership Essentials Certificate Program (Self-assigned curriculum)

Technical Skills

- Soil Geomorphology Institute (NRCS-NEDC-000110)
- Soil Science institute (NRCS-NEDC-000110)

Worklife

- Just Listen: Discover the Secret of Getting Through to Absolutely Anyone (AgLearn Web-based learning)
- 100 ways to Motivate Yourself (AgLearn Web-based learning)