

**Proficiency Model - Student Trainee (Soil Conservationist) and  
Employee Development Plan for: (name)**

**4/2009 version**

Subject	Present KSA level	Michigan Required KSA level		Selected Training Methods	References	Comments - KSA level achieved, date, initials
		1st yr	2nd yr			
Conservation Planning						
General Agricultural Characteristics						
A. Field Crops	Identify common field crops in local work area, locate references for planting and harvest dates and methods.	1	2	OJT Attend local field days	- E-489 Seeding Practices for Michigan Crops - Agronomy Technical Note 4 , Identification of Cereal Grains and Grasses Without Seed Heads - Agronomy Tech Note 4a, ID. of Common Legumes	
B. Specialty Crops	Recognize common specialty crops in local work area (potatoes, cucumbers, snap beans, asparagus); locate references for planting and harvest dates and methods.	1	2	OJT Attend local field days	- Childers: Fruit Book used in MSU Introductory courses. - Current MSUE bulletins.	
C. Farm Equipment	Recognize equipment commonly used for crop production in local work area including tilling/cultivating, planting, and harvesting.	1	2	Ag Expo OJT	- Technical Note Agronomy #27 "Calibration of Seeding Equipment" - Core 4 manual on Conservation Tillage Equipment - National Agronomy Manual	
D. Livestock	Understand basic management of livestock operations in local work area. Aware of differences in livestock life phases and associated terms.	1	2	OJT Attend local 4-H fair AgLearn- Fundamentals of Agriculture; Beef Production for NRCS	- MSUE Catalog Publications	
E. Weeds	List common weed species in local work area.	1	2	OJT	- E-1363 "Guide to the I.D. of Common Weed Seedlings of Michigan" - E-791 "Problem Perennial Weeds of Michigan" - NCR Ext. Pub. No. 281 "Weeds of	

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					the North Central States" - NCR Ext. Pub. No. 607 "Common Weed Seedlings of the North Central States" - Technical Note Agronomy #4 "Identification of Cereal Grains and Grasses without Seed Heads" Technical Note Agronomy #4b "Identification of Common Grasses"	
<b>F. Trees</b>	Aware of common tree species in local work area including their uses, markets and general silviculture. Aware of taxonomic keys and other tools for tree identification.	1	2	OJT	- Michigan Trees, Barnes & Wagner	
<b>G. Shrubs</b>	Aware of common shrub species in local work area including their uses and growth habits. Aware of taxonomic keys and other tools for shrub identification.	1	2	OJT	- Michigan Trees, Barnes & Wagner - Midwest Wetland Flora Field Guide - Shrubs of Michigan, Cecil Billington	
<b>H. Conservation plants</b>	Identify important conservation plants (including native plants) of local work area.	1	2	OJT	- Agronomy Technical Note 4 "Identification of Cereal Grains and Grasses Without Seed Heads" - Key to Native Perennial Grasses - Vegetating with Native Grasses in Northeast North America - Conservation Plants Pocket ID Guide	

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Working with Individuals/Groups						
A. Social Protocols	Aware of social science aspects of conservation. Demonstrate effective communications with customers, extend considerations/courtesies to customers. Understand the concept of stakeholders.	4	4	OJT Orientation for Student Trainees	- 420 GM - National Social Sciences Manual	
Policies/Laws/Regulations						
A. Field Office Technical Guide (FOTG)	Understand use of the FOTG in providing technical assistance, including accepted technology and levels of assistance. Navigate within the content of each FOTG Section and subsections.	1	2	OJT, Basic Conservation Orientation	- FOTG - 450-GM Part 401	
B. Freedom of Information Act	Aware of proper response to requests for case file information from customers, employees, and others. Understand NRCS role in protecting client information.	1	2	Orientation for Student Trainees OJT	- 120-GM Part 408	
C. National Environmental Policy Act	Aware of parts of the Planning Process during which NEPA is considered. Aware of documentation associated with NEPA for individual conservation plans.	1	3	OJT Basic Conservation Orientation	- 190-GM Part 410, Subparts A & B - 450-GM Part 405, Subpart A	
D. FSA 1985, FACTA 1990, and FAIRA 1996, 2002, 2008	Understand and provide assistance in applying NRCS HELC/WC policy.	1	2	OJT	- National Food Security Act Manual, Third Edition - 340-GM Part 404, Part MI 404, Subpart B	
E. Permits - state, federal	Aware of federal, state, tribal, and local laws and regulations	1	2	OJT	- 180-GM, Part 409.2 - FOTG Section I, Laws	

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<b>and local</b>	regarding when permits may need to be obtained before proceeding with conservation system implementation.					
<b>F. Permits-state, federal and local</b>	Recognize situations that may require federal, state, local and tribal permits.	1	2	OJT	-180 GM, Part 409.2; FOTG Section I, Laws	
<b>Agronomy</b>						
<b>A. Erosion Prediction</b>	Understand how erosion occurs including sheet & rill, ephemeral gully, classic gully, and wind erosion. Understand how conservation practices can effect soil erosion potential. Calculate soil erosion loss.	1	2	OJT Erosion Prediction Calculations	- FOTG Section I, Erosion Prediction - RUSLE 2; WEQ	
<b>B.Risk Assessment</b>	Recognize field conditions under which loss of agrichemicals, manure and nutrients from a farm field occurs. Use tools in making risk assessments. Aware of alternative mediation strategies for prevention of loss.	1	2	OJT	- MARI, Agronomy Manual part 503 - FOTG Section II, Water Quantity and Quality, N Leaching; Section IV N Leaching Index; WinPST; Section IV Phosphorus Index, Pasture Condition Score Sheet - Core 4 manual	
<b>C. Core Agronomic Conservation Practices</b>	Aware of the following conservation practices including location, design and layout.					
<b>C1. Conservation Cover</b>		1	2	OJT	- FOTG Section IV - 327 Practice Standard - CREP job sheets - Conservation Sheets - Engineering Specifications	
<b>C1. Conservation Crop Rotation</b>		1	2	OJT	- FOTG Section IV - 328 Practice Standard - RUSLE C factor calculation	

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<b>C1. Cover Crop</b>		1	2	OJT	<ul style="list-style-type: none"> <li>- FOTG Section IV - 340 Practice Standard</li> <li>- E-2646, Michigan Field Crop Ecology: Managing Biological Processes for Productivity and Environmental Quality</li> <li>- E-2126, Annual Summer Forage Production in Michigan</li> <li>- Michigan Conservation Sheet "Cover Crop"</li> </ul>	
<b>C1. Critical Area Planting</b>		1	2	OJT	<ul style="list-style-type: none"> <li>- FOTG Section IV, 342 Practice Standard</li> </ul>	
<b>C1. Filter Strip</b>		1	2	OJT	<ul style="list-style-type: none"> <li>- FOTG Section IV, 393 Practice Standard</li> <li>- Filter Strip Conservation Sheet</li> <li>- Core 4 Manual, Part 4 - Buffer Practices, Chapters 1, 2, 3e, 4, 5 and 6</li> </ul>	
<b>C1. Nutrient Management</b>		1	2	OJT	<ul style="list-style-type: none"> <li>- FOTG Section IV - 590 Practice Standard</li> <li>- 180-GM, Part 409</li> <li>- Nutrient and Waste Utilization GAAMPS</li> <li>- E-2904 Nutrient Recommendations for Field Crops in Michigan; -E2934 Nutrient Recommendations for Vegetable Crops in Michigan</li> <li>- MI Tech Notes, Agronomy Technical Note 28 "Preparing the Crop Nutrient Budget"</li> </ul>	
<b>C1. Pest Management</b>		1	2	OJT	<ul style="list-style-type: none"> <li>- Core 4 Manual</li> <li>- FOTG Section IV - 595 Practice Standard</li> <li>- E-484 Weed Control Guide for Field Crops</li> </ul>	

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<b>C1. Residue Management (Mulch till, no-till, seasonal)</b>		1	2	OJT	- Core 4 Manual - FOTG water erosion section I, Erosion Prediction - FOTG Section IV - 329 Practice Standards - Fact sheets	
<b>Biology/Recreation</b>						
<b>A. Wildlife ecology</b>	Recognize NRCS responsibility to provide technical assistance on wildlife management options for wildlife species in local work area.	1	2	OJT	- FOTG - "Managing Michigan's Wildlife- A Landowner's Guide"; - Biology Technical Note 12.	
<b>B. Threatened and Endangered Species</b>	Aware of Federally and State Listed Species in local work area. Use species list or consult State Biologist as needed.	2	3	OJT	- Michigan Natural Features Internet Site - Michigan Biology Technical Note 11 Federal Threatened and Endangered Species; Biology Technical Note 12 index.	
<b>C. Wetland Delineation</b>	Aware of procedure to identify and delineate wetlands for federal purposes including major wetland plants.	1	1	OJT	- National Food Security Act Manual - Midwest Wetland Flora Guide - 1987 Corps Manual	
<b>D. Biology Conservation Practices</b>	Aware of the following conservation practices of Upland and Wetland habitats and complementary conservation practices for use.					
<b>D1. Upland Wildlife Habitat Management</b>		1	2	OJT	- FOTG Section IV- 645 Practice Standard - "Managing Michigan's Wildlife- A Landowner's Guide" - Conservation Sheet "Wildlife Corridor Development"	

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Engineering						
A.Engineering Surveys	Understand mechanics and basic functions of survey equipment, know how to reduce notes. Aware of basic engineering planning, design, an implementation of conservation engineering practices.	1	2	OJT Basic Engineering and Surveying for Conservation Practices	- Engineering Field Handbook (NEH Part 650), Chapter 1 - Engineering Surveys - Technical Release No. 62, Engineering Layout, Notes, Staking and Calculations	
B. Conservation Engineering Practices	Aware of how to plan conservation practices including location, design and layout. Aware of the beneficial use of each conservation engineering practice.				- Engineering Field Handbook (NEH Part 650) - Michigan CO-01 Construction Specifications - Michigan Engineering Standard Drawings	
B1. Diversion		1	2	OJT	- FOTG Section IV, 362 Practice Standard - Engineering Software	
B1. Grade Stabilization Structure		1	2	OJT	- FOTG Section IV, 410 Practice Standard - Engineering Software.	
B1. Grassed Waterway		1	2	OJT	- FOTG Section IV, 412 Practice Standard - Engineering Software	
B1. Heavy Use Area Protection		1	2	OJT	- FOTG Section IV, 561 Practice Standard	
B1. Roof Runoff Management		1	2	OJT	- FOTG Section IV, 558 Practice Standard - Agricultural Waste Management Field Handbook (NEH Part 651) - Engineering Software	
B1. Stream Crossing		1	2	OJT	- FOTG Section IV, 728 Practice Standard Agricultural Waste Management	

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					Field Handbook (NEH Part 651) - Engineering Software - Stream Corridor Restoration: Principles, Processes, and Practices (NEH Part 653)	
<b>B1. Waste Storage Facility</b>		1	1	OJT	- FOTG Section IV, 313 Practice Standard - Agricultural Waste Management Field Handbook (NEH Part 651) - Engineering Software	
<b>C. Construction Inspection</b>	Able to follow NRCS policy regarding safety during construction activities.	3	3			
<b>Forestry</b>						
<b>A Policy</b>	Aware of Forestry as a component of conservation planning.	1	1	OJT	- National Forestry Manual - Parts 535 and 536	
<b>B Core Forestland Conservation Practices</b>	Aware of the following conservation practices including location, design and layout.	1	1	OJT	- National Forestry Handbook Parts 636 and 637 - Improving Hardwood Timber Stands(MSU-E Bulletin E-1578) - Agroforestry Notes- National Agroforestry Center - Northern Hardwoods in the North Central States, USFS Gen. Tech. Report NC-39 - Red Pine in the North Central States, USFS Gen. Tech. Report NC-33	
<b>B1. Tree/Shrub Establishment</b>	Use reference material to make species selections. Use references to make tree/shrub spacing design.	1	2	OJT	- FOTG Section II part K Site Suitability Index, also -Sec. IV - 612 Practice Standard - Michigan Conservation Design Sheet 612a "Tree and Shrub Planting for Reforestation, Windbreaks and Wildlife" - Michigan Conservation Sheet	



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						"Weed Control for Tree and Shrub Establishment" - Tree Planting in Michigan- MSUE Bulletin # E-771;
<b>Geographic Information</b>						
<b>Locating Geographic Features</b>	Able to use maps and photos to locate a specific geographic feature or parcel of property based on physical location, legal description, etc.	1	2	OJT Basic Conservation Orientation		
<b>Grazing</b>						
<b>A. Policy</b>	Aware of grazing practices as a component of conservation planning	1	2	OJT	- National Range and Pasture Handbook Chapter 1, Chapter 5, Chapter 11	
<b>B. Core Grazing Conservation Practices</b>						
<b>B.1 Prescribed Grazing</b>	Aware of inventories needed. Calculate forage demand by livestock. Estimate forage supply from hay yields, producer records, or in field dry matter tools.	1	2	OJT	FOTG Section IV Prescribed Grazing Conservation Practice Standard 528, Prescribed Grazing conservation sheet; Section 1 Grazing Technical Note 3 Designing a Prescribed Grazing System.	
<b>Soils and Soil Surveys</b>						
<b>A Soil surveys</b>	Aware of how soil surveys are made and how to use them.	1	2	OJT Making and Using a Soil Survey		
<b>B Soil Interpretations</b>	Aware of soil Interpretations for cropland, woodland, wildlife, engineering, recreation and urban areas	1	2	OJT Making and Using a Soil Survey	- Local soil survey - FOTG section II, Soil Interpretations - NSSH, Section 620 - MSU Fertilizer Recommendations for vegetables and field crops, Bul. E550A, E550B.	

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<b>C Interpretive groupings of soils</b>	Aware of interpretative groupings of soils for land capability classes, prime farmland, hydrologic soil units, and Michigan Soil Management groups.	1	2	OJT Making and Using a Soil Survey	- Local soil survey manual - MSU Research Report #254 - USDA Ag. Handbook 210	
<b>D Basic soil properties</b>	Aware of basic soil properties including soil drainage, soil permeability, USDA soil texture, Unified texture, AASHTO, and soil structure	1	2	OJT Making and Using a Soil Survey	- Local soil survey - SSM, Chapter 3, applicable parts	
<b>E Soil Quality</b>	Aware of indicators of soil quality	1	2		- Soil Quality Thunderbook; Website soils.usda.gov/sqi	
<b>Water Quality</b>						
<b>Policy</b>	Aware of NRCS role in Water Quality	1	2	OJT	- 460-GM	
<b>Conservation Planning Process</b>						
<b>Conservation Planning Process</b>	Aware of the NRCS planning process, and the use of supporting technology, in order to assist clients in making decisions resulting in implemented conservation systems that conserve, maintain, and improve our natural resources and meet the client's needs.	1	2	OJT Basic Conservation Orientation	- 180-GM Part 409 - NPPH, 600.0-600.2	
<b>Conservation Plans</b>	Aware of proper documentation for a conservation plan, including creating a new case file, conservation notes, and practice certification.	1	2		120 GM Part 403 Subpart A National Planning Procedures Handbook Part 600.3 450 GM Part 407 Documentation, Certification and Spot-checking	

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Programs						
Conservation Programs						
Contracting	Aware of the different types of cost-share contracts used for landowners as tools to promote applicable programs (WRP, PL-566, CRP, EQIP, WHIP, etc) as incentives to landowners to provide total farm planning.	1	2	OJT	2008 Farm Bill legislation; Program Manuals; 120 GM Part 404	
Policy	Locate NRCS policy regarding Conservation Programs Find program manuals. Find program fact sheets..	1	1	OJT	- Program Manuals (2-CRP; 1-MI-CRP; Title 440 Conservation Programs Manual Part 517 [WHIP]; Part 514[WRP]; [EQIP]; Part 520 [FIP]; Part 523 [FPP] - Fact Sheets (WHIP, WRP, EQIP, CRP)	
Plant Materials						
Policy	Aware of the mission, purpose, and authority of the NRCS – Plant Materials Program. Aware of PMC function in evaluation and release of conservation plants	1	2	OJT Visit PMC	- National Plant Materials Manual Part 539.2, Exhibit 539-5 - National Plant Materials Manual Part539.0, General - National Plant Materials Manual Part 539.1, Authority	
State Programs						
NRCS role	Aware of NRCS's role in providing technical assistance for state programs.	1	1	OJT	- GM	
Resource Conservation & Development						
Resource Conservation and Development	Aware of the RC&D program, purpose and structure; RC&D Associations, relationship to other programs.	1	1	OJT Atetnd RC&D meeting	- National RC&D Manual, sections 523, 524 & 525 - RC&D Council Member Handbook and promotional flyers and factsheets available on-line.	

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Management Operations/Administration						
Accountability						
Accountability	Accurately report time in TCAS. Report progress. Aware of NRCS responsibility in quality assurance	3	3	OJT Orientation for Student Trainees	- GM Title 250, Part 404, Subpart D - GM Title 340 - Field Operations Training Manual - Enhanced Integrated Accountability System/ TCAS Manual - PRS, TCAS, and IAS web sites	
Civil Rights						
Civil Rights	Aware of USDA Civil Rights/EEO policy in relation to equal treatment of employees and customers in relation to race, color, religion, sex, national origin, age or handicap. Aware of USDA policy regarding sexual harassment and to identify sexual harassment.	3	3	OJT AgLearn Civil Rights courses Orientation for Student Trainees	- GM Title 230 - NRCS and USDA Offices of Civil Rights web sites - Michigan Outreach Resource Materials	
Outreach						
Outreach	Aware of NRCS policy and actions take to reach underserved, non-traditional and minority clients and communities in the local work area.	1	2	OJT	- GM Title 230, Part 405 - State Outreach Committee Business Plan -Field Office Outreach Plan	

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Working with Other Agencies						
NRCS Partners	Aware that NRCS cooperates with local, state and federal agencies.	1	1	OJT Orientation for Student Trainees		
	Aware of the functions and responsibilities for partner agencies and how they relate to NRCS. Aware of NRCS relationship with Conservation Districts					
Contracting						
Contracting	Aware of contracting compliance procedures	1	2	Workshop OJT	- 2008 Farm Bill Legislation - Program Manuals - 120 GM, Part 404 -Watershed Plan	
Information and Education						
A. Policy	Aware that NRCS carries out planned public information work. Underatnd NRCS responsibility for clearanc and review of public information for release. Aware that the NRCS has a state level public information and education officer that can assist in media developed for use in the local work area.	1	2	OJT	260 GM	
A. Policy	Aware of NRCS information policy and general guidelines for public information responsibilities of NRCS employees. This includes Basic Purposes of Information Work, Kinds of Media, Kinds of Information Activities, and proper Clearance and Review.	1	2	OJT	- 260-GM	

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<b>B. Directives and Records</b>	Use Technical References including FOTG, General Manual, etc. Aware of proper case file administration.		1	2	OJT	450 GM Part 401 Technical Guides, Subpart A 450 GM Part 407 Documentation, Certification and Spot-checking	
<b>B. Directives and records</b>	Aware of Technical References including FOTG, General Manual, etc.  Aware of proper documentation for a conservation plan, including creating a new case file, conservation notes, and practice certification.		1	2	OJT	- 120-GM, Part 403, Subpart A - National Planning Procedures Handbook, Part 600.3 - 450-GM, Part 401 Technical Guides, Subpart A - 450-GM, Part 407 Documentation, Certification and Spot-Checking	
<b>Human Resources/Supervision</b>							
<b>Personnel Policies</b>							
<b>Hours of duty</b>	Knowledge of policy/procedure for setting work schedule.		3	3	OJT Orientation for Student Trainees	- 360-GM, Part 427 and 430	
<b>Organization</b>	Aware of USDA organization, NRCS national and state organization, relationship to Conservation Districts, and relationship to MDA, MDNR, MDEQ.		1	1	OJT Orientation for Student Trainees	- 360-GM, Part 404	
<b>Performance appraisal</b>	Knowledge of policy and procedures used by supervisor for assessing quality/quantity of work produced versus that expected. Understand opportunities for promotion and upward mobility.		1	1	OJT Orientation for Student Trainees	- 360-GM, Part 409	
<b>Training</b>	Aware of process to create an Employee Development Plan; request technical and administrative training needed.		1	1	OJT Orientation for Student Trainees	- 360-GM, Part 410	

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<b>Training-Supplementing OJT</b>	Attendance and Participation in available formal trainings within driving distance. At the discretion of the supervising DC.			Consult current year Training Plan and Calendar; email Training Officer and Course Instructor/Coordinator to enroll Student Trainee	Michigan Course Catalog	
		1	1			
<b>EEO</b>						
<b>EEO</b>	Aware of alternative dispute resolution activities and contacts.			OJT		
		3	3			
<b>Leave</b>						
<b>Leave</b>	Knowledge of earning rates, appropriate use, and approval requirements of annual leave, sick leave, family friendly leave, maternity leave, or other paid periods of absence from work.			OJT Orientation for Student Trainees	- 360-GM, Part 415	
		3	3			
<b>Benefits</b>						
<b>Benefits</b>	Aware of FERS retirement system, health and life insurance, Thrift Savings Program (TSP), Employee Assistance Program (EAP), and other employee benefits.			OJT Orientation for Student Trainees	- 360-GM, Parts 416, 417 and 420 - www.opm.gov	
		2	3			

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Safety						
A. Safety - Vehicle	Knowledge of appropriate and safe use of Government Owned Vehicle (GOV), reporting accidents, injuries, recognizing unsafe conditions, and use of safety equipment in order to utilize vehicles in a safe and efficient manner.	3	3	OJT Orientation for Student Trainees	- 120-GM, Part 405	
B. Safety - Biosecurity	Follow appropriate biosecurity measures for day-to-day work situations.	3	3	OJT Basic Conservation Orientation	GM 430 Part 405 Subpart H Homeland Security and Emergency Preparedness MI Supplement GM 430 Part 405 Subpart H	
Ethics						
Ethics, Responsibilities and Conduct	Knowledge of appropriate use of NRCS resources and equipment (including computers), prohibited conduct, relationship to farm organizations, receipt of gifts, political activity, bribery, and conflicts of interest. Aware if prohibited employee activities.	3	3	OJT Orientation for Student Trainees	- www.nhq.nrcs.usda.gov/ethics - www.usda.gov/ethics	