

# Technical Training and Certification Strategy For Conservation Delivery in Minnesota

September 2, 2015





This commitment document provides a strategy for achieving the goals for technical training and certification as identified in the agreement signed December 9, 2014 at the MASWCD Convention by the Partnership, which includes the Natural Resources Conservation Service (NRCS), Minnesota Board of Water and Soil Resources (BWSR), Minnesota Association of Soil and Water Conservation Districts (MASWCD), and Minnesota Association of Conservation District Employees (MACDE) (Appendix A).

The purpose of the technical training and certification strategy is to provide a framework for development of training and credentialing for local conservation professionals. This strategy document articulates the partnering agencies' and associations' dedication to provide resources and leadership toward achieving training and credentialing of local staff through a robust conservation delivery program in Minnesota. Seven strategies were advanced by the partnership to achieve this purpose.

- 1. Core competencies:** The partnership will require core technical competencies for all conservation employees. Core competencies form the foundation for all technical activities. Technical and administrative support must be provided to ensure needed conservation services are provided in Minnesota.
- 2. Identification of practices by priority resource concern:** The partnership will identify skills and associated practices for all employees performing technical services. Technical practices must be identified at the local level, and selected based on locally identified priority resource concerns. State and federal partners must provide the staff time and resources needed to lead technical training and certification needed for local conservation implementation.
- 3. Individual development plans:** Employees providing technical services will have completed individual development plans based on priority resource concerns and conservation practices. Federal and state partners will assist with standardizing the format of these individual development plans to provide consistency across the state. Information from these individual development plans will be a foundation for an annual training needs inventory.
- 4. Training needs inventory:** A robust technical training needs inventory will be developed to identify conservation planning and technical training needs. This process will ensure the highest priority trainings are provided to employees providing technical services, and training needs are matched with the trainings offered. Federal, state, and local partners will formalize a structure to work together to inventory and evaluate training needs. This process will be accessible to all partners and will allow for the prioritization of training needs statewide.
- 5. Training roles and responsibilities:** NRCS, BWSR, MASWCD, and MACDE will identify the roles of each agency/organization in providing long term support and/or delivery of technical training so a complete suite of training is predictably and consistently available and comprehensive planning and coordination is done. Responsibilities of each of the partners will be identified, including training delivery and evaluation, need identification, cataloging, coordination, administration and program evaluation.
- 6. Credentialing:** The system to ensure employees providing technical services in Minnesota are qualified to implement conservation practices and activities will include certification, obtaining job approval authority, and/or other means to achieve credentialing. The current NRCS job/technical approval authority structure may provide guidance and/or is part of the credentialing system for many of these requirements.

7. **Continuing education/training:** These resources must continue to be evaluated and prioritized so technical staff are able to maintain and increase technical competency.

**Commitment:**

The undersigned parties commit to providing resources for technical training and certification of local staff to maintain and enhance conservation delivery. This process will continue with the development of an implementation plan providing details for each of the strategy areas discussed above.

**Early Implementation Milestones:**

- Establish a State Technical Training Committee - December 2015
- Hire a new State Technical Training Coordinator - December 2015
- Begin core competency training/offerings - Begin in 1<sup>st</sup> quarter of 2016

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## Executive Summary

This is a high level overview of each of the strategic areas needed to support a renewed commitment to technical training and credentialing of the State's conservation workforce as agreed to by NRCS, BWSR, MASWCD and MACDE. It is intended to guide greater levels of dialogue in process development and implementation. For the purposes of this report, the strategic areas focus on technical training only. Other non-technical training should be part of any long term professional development, but is not included for the purposes of this report.

The following principles adopted by the partners in December of 2014 guided the work of the Technical Training and Certification Team (TTCT) in developing an enhanced program for technical training and certification for conservation technical assistance in Minnesota.

The program should:

- Integrate into a quality assurance framework for state funded conservation practices.
- Address conservation planning, engineering practices and ecological sciences practices for agricultural, forested and urban lands.
- Coordinate with, but not be duplicative of or dependent on, any one agency to meet technical training needs.
- Not preclude private technical assistance when available and cost effective.

The technical training and credentialing strategy areas recommended and outlined in this document to further develop and implement are:

- Require core technical competencies for all employees. These competencies form the foundation for all technical activities, and all employees will benefit from an understanding of the fundamental functions of conservation technical assistance.
- Local priorities and conservation practices should guide identification of needed skills for all employees providing technical services.
- Each partner will support the creation and/or enhancement of individual development plans for all employees. Federal and state partners will assist with standardizing the format of this to provide consistency across the state.
- Develop a technical training needs inventory to identify conservation planning and technical training needed for all employees at a statewide level. Federal, state, and local partners will work together to develop an appropriate structure to work jointly to ensure this information can be shared amongst all partners.
- Define roles necessary to provide long term support and delivery of training needs identified in the training inventory. NRCS, BWSR, MASWCD, and MACDE, working in partnership, will identify and develop material for a complete suite of annual, rotating courses. This group will also identify roles and responsibilities for these courses to ensure employees receive appropriate training in a timely manner.
- Recognize the importance of continuing education/training. Resources must be continually evaluated to ensure technical staff are provided the opportunity to stay current and receive continuous training on technical issues.
- Long term resources must be committed to achieve coordinated and consistent training. To support this work moving forward, the partners have agreed to the establishment of a State Technical Training Committee, and reestablishment of Area Training teams. State Technical Training Committee and Area Training Teams will consist of NRCS, BWSR, MASWCD, and MACDE staff at local and state levels.

Where possible, existing resources and processes/protocols will be used. With new resources/funding new systems and processes will be developed to fulfill determined needs and shortcomings. This strategy does not negate any existing policy and/or procedures that are required to meet each agency's internal requirements.

## Background

Establishing conservation practices on private lands in Minnesota is critical to achieving state and federal goals for clean and sustainable water resources, healthy and sustainable soil resources, and abundant fish and wildlife. Conservation Technical Assistance requires statewide, core technical assistance capabilities, as well as capabilities tailored to the local priority resource concerns and conservation practices found in the diverse landscapes of Minnesota. Training and certification are key quality assurance elements of an effective conservation delivery system.

In Minnesota, local field offices deliver the technical components of conservation planning and implementation services on private lands by working directly with landowners. Under the existing system, the NRCS, SWCDs, and BWSR use a Job Approval Authority (JAA) credentialing system for planning, design and installation of standard soil and water conservation practices found in the Field Office Technical Guide. In addition, when available and cost effective, cooperators also use private technical assistance.

BWSR and SWCDs have recently reviewed the status of conservation delivery in Minnesota. In 2012, BWSR conducted a TAA/JAA inventory and survey with SWCDs to determine their current TAA/JAA, as well as the interest and commitment of SWCD offices to increase TAA/JAA for priority conservation practices. In December 2013 the MASWCD Board of Directors and BWSR agreed the current system and levels of technical assistance and district capacity are not able to meet existing demands and future expectations. In Spring 2014, BWSR led a group discussion about technical training opportunities and needs of LGUs during a Minnesota Erosion Control Association workshop, and in Summer 2014, SWCD lead staff attended half-day leadership discussions with BWSR Executive Director John Jaschke and other BWSR staff to discuss, among other topics, technical training and credentialing. As a result, in June 2014 MASWCD and BWSR sponsored a Technical Assistance Summit, attended by NRCS and MACDE, to develop strategies for enhancing and sustaining Minnesota's conservation delivery system.

Key findings from these formal and informal reviews include:

- 73% of SWCDs have a desire to increase their levels of JAA.
- 82% of the participants at the MECA workshop indicated their technical skills/conservation practice training needs were not currently being met.
- 78% of the MECA workshop participants cited a lack of offerings and lack of available mentoring/on the job training as barriers.
- SWCD Technical Service Areas (TSAs) are very important for providing shared engineering and technical assistance support. Summit participants recommend using TSAs as vehicles for additional shared services beyond the current engineering assistance.
- In regard to TAA/JAA, state strategies should be developed for establishing an enhanced Local/State/Federal TAA/JAA process that provides training and increased technical capacity for conservation professionals.

These findings illustrate the need for change to build and maintain technical assistance capabilities. A well trained, high quality technical workforce is necessary to respond to the growing need in Minnesota for enhanced and sustainable conservation delivery involving Clean Water Funds, Outdoor Heritage Funds, buffer requirements, and other state programs, as well as full utilization of federal Farm Bill programs at the local level. To improve and maintain Minnesota's conservation delivery system, a revised, long-term strategy that addresses the documented need for technical training and certification for local government staff, as well as NRCS staff, is necessary.

In December of 2014, the partners agreed to move forward in developing a statewide technical training strategy based on the following timeline:

1. By January 1, 2015: Establishment of an interagency team to develop a comprehensive strategy for joint technical training and certification.
2. By July 1, 2015: Completion of the strategy for joint technical training and certification for conservation delivery in Minnesota. The strategy will include, but is not limited to the following items and actions:
  - Assessment of technical training needs in Minnesota
  - Assessment of applicable programs and approaches in other states
  - Competency based approach to training specifications
  - Leverage and alignment of state, federal and local funding
  - Priorities and associated cost projections for scaled training efforts

This technical training and certification team process was formed to develop details of the strategy and actions shown above. The resulting document provides a framework strategy to accomplish these agreed-to items. It is intended that a subsequent implementation plan will provide comprehensive details of how these will be accomplished.

Note: Minnesota NRCS, as well as SWCD and BWSR partners, adopted the terminology “Technical Approval Authority” in the 1990s to help distinguish “technical” approval from the “administrative” or “financial” aspects of job approval. However, “job approval authority” remains the commonly used NRCS terminology across the U.S. and for many people in Minnesota. **Therefore, this partnership strategy proposes to go back to using only the terminology “Job Approval Authority” (JAA).**

## Purpose

The purpose of the TTCT was to develop a training and certification framework, and articulate agency and association dedication to providing resources and leadership to achieve robust training of local staff for conservation delivery. Details are identified in the December 9, 2014 agreement signed by all partners (Appendix A).

## Process – Steering Committee and Workgroup

The technical training and certification strategy was developed through a process involving two committees. The steering committee, consisting of BWSR, MACDE, MASWCD and NRCS staff, was created by the partnership to guide the process and develop the strategy. The TTCT was created to provide feedback and input on any documents or guidance developed by the steering committee.

The TTCT is made up of a diverse cross-section of staff from partner agencies, including federal and SWCD field office staff, area staff (NRCS, BWSR, TSA) and federal, state, and association representatives. The steering team held six meetings to create drafts and compile results from the three TTCT meetings that were held. The TTCT also heard presentations from state conservation agency staff from Missouri, North Carolina, and Wisconsin to learn about their technical training initiatives and lessons learned.

The final steering committee was held on August 31, 2015 to finalize the document and forward it to partnership leaders for endorsement. A noteworthy early accomplishment was the announcement that BWSR and NRCS have agreement to jointly fund a state technical training coordinator. This represents both early agency commitment and leveraging of resources towards reaching the goal of developing a highly trained and technically skilled workforce to meet Minnesota’s conservation delivery needs. The steering committee also began discussions

about putting in place a transition team to plan for the implementation of “next steps” identified in the strategy document.

## Recommended Minnesota Model for Technical Training

This recommended model does not negate any existing policy and/or procedures that are required internally by partner agencies. This is intended to enhance existing policy and coordinate partnership efforts. This model is illustrated in a linear pattern; however, this is a dynamic process with exchanges and 'check backs' between steps in the process, and is therefore circular in nature. The partnership endorses this as the Minnesota Model for technical training and certification.

1. Endorsement of Core Competencies training for all staff
2. Identification of local priority resource concerns and applicable practices requiring specific technical expertise (using existing data and local plans)
3. Identification of specific practices and critical skills for staff based on local priority resource concerns
4. Creation of Individual Development Plans for each staff member
5. Prioritization of training needs
6. Identification, development and review of training offerings
7. Delivery of training and mentoring to achieve results
8. Delegation and periodic review of JAA and other technical certifications
9. Upkeep and development of existing skills; maintenance of Individual Development Plans and records

## Recommended Technical Training and Certification Strategies

### Step 1: Endorsement of Core Competencies Training for All Staff

All employees, regardless of position, should have a basic understanding of soil and water conservation activities. To achieve this, SWCDs, TSAs, NRCS and BWSR, individually and collectively, must have basic conservation skills and/or understanding required for all employees. For new employees these skills are best developed prior to, or concurrent with, proceeding to areas of specialty. The vision is that these foundational competencies will be achieved by all positions, though the level of competency may vary by position (Ex. a technician must know all aspects of conservation planning, where administrative staff may need just a basic level of understanding). This will be standard training, offered to all districts and field offices, regardless of staff numbers or levels. Many staff will already have these core competencies, and would not be required to retake this training.

MASWCD, MACDE, BWSR & NRCS endorse the following foundational competencies for all staff:

- Conservation planning - basic principles and concepts
- Soils – introduction to what is in your county soil survey
- Water quality basics

## Next Steps:

- Develop guidance on the amount of training needed for technical, administrative and educational staff for each foundational competency
- Develop new training, or identify existing training courses, that will be offered to staff to meet core competency training
- Make use of web-based training where possible
- Develop an action plan identifying roles, timeframe and cost associated with implementation
- Begin development and offering of core competency training in 2016 independent of remaining steps

## Step 2: Identification of Local Priority Resource Concerns and Applicable Practices Requiring Specific Technical Expertise (Using Existing Data and Local Plans)

SWCD, TSA and NRCS field office staff will identify local priority resource concerns and conservation practices for their office, based on geography and land use. The NRCS, BWSR, MASWCD & MACDE will work together to create a list of local priority concerns and potential conservation practices. These identified local priority resource concerns and conservation practices will be used by SWCDs and NRCS field offices to guide decisions regarding technical proficiency needs.

The following are resource concerns identified by NRCS in *USDA NRCS National Planning Procedures Handbook, Subpart H, Exhibit 6 - Resource Concerns and Planning Criteria*:

- Soil Erosion
- Soil Quality Degradation
- Excess/insufficient Water
- Water Quality Degradation
- Degraded Plant Conditions
- Inadequate Habitat for Fish and Wildlife
- Livestock Production Limitation
- Air Quality Impacts
- Inefficient Energy Use

## Next Steps:

- Develop guidelines/framework for determination of local priority resource concerns

See Appendix B for more information on these resource concerns.

## Step 3: Identification of Specific Practices and Critical Skills for Staff Based on Local Priority Resource Concerns

It is recommended that technical specialties be assigned to staff based on identified local land use priorities, resource concerns and applicable conservation practices. The District Manager, TSA staff and NRCS District Conservationist should work together to identify technical skills (e.g. grazing, forestry, livestock, etc.) for their office and determine which staff are responsible for a given area of specialty.

Different levels of competencies should be established within each area of specialty. Criteria for increased competency (advancement in skill level) will be developed through this partnership and will be consistent throughout the state. Advancement criteria will include such things as: attending training, completing modules,

testing, certification, hours of work experience, on-the-job application, etc. Specific technical practices (i.e. grassed waterway) and related planning, design, and construction will be identified for each employee.

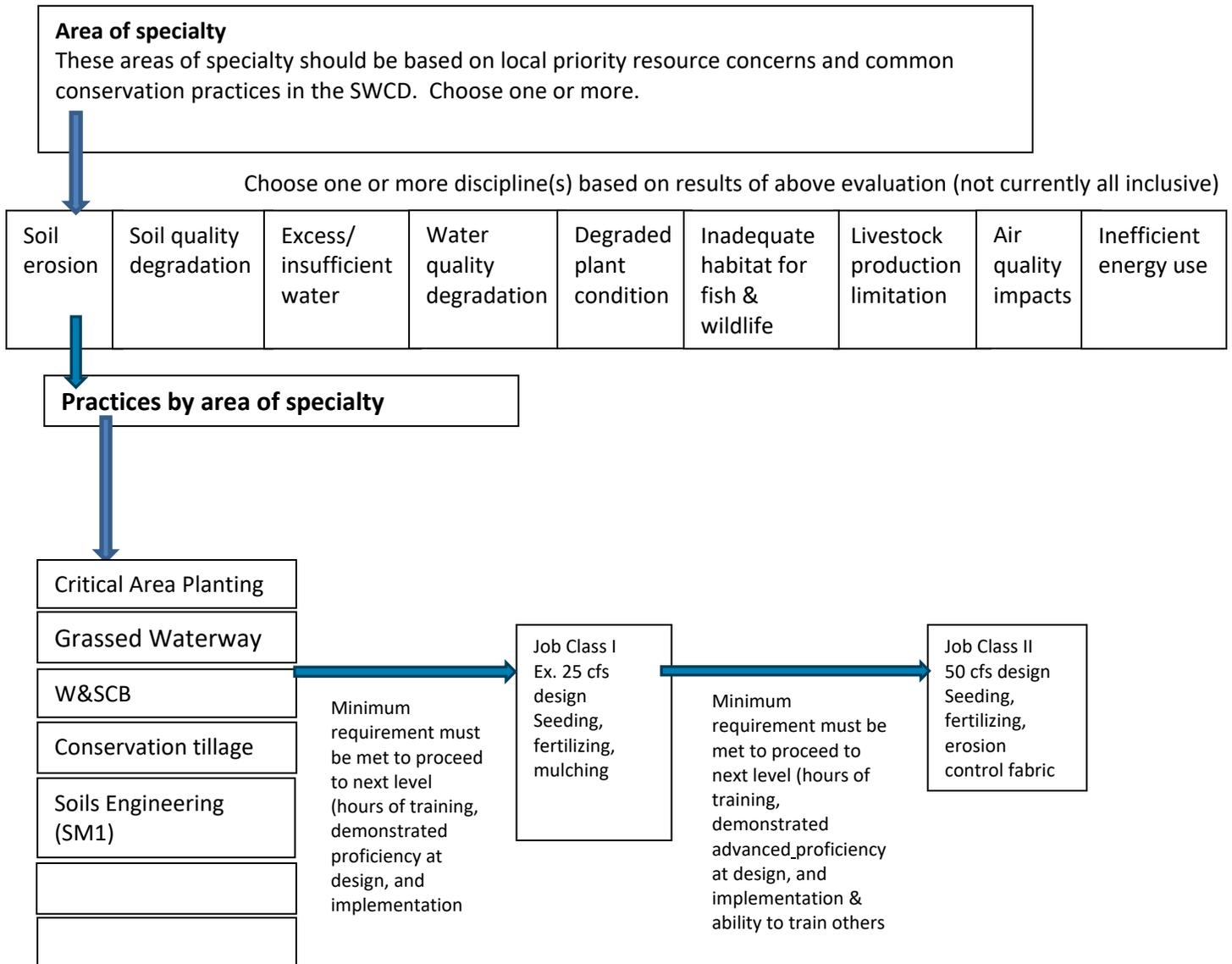
Local priority resource concerns and conservation practices will require additional skills.

Below are examples of knowledge and skills that are needed as foundational (basic) requirements based on an assigned area of specialty:

- Seeding Rates and Mixtures
- Construction inspection
- Surveying skills
- Certified Conservation Planner
- RUSLE2 (Revised Universal Soil Loss Equation)
- WEPS (Wind Erosion Prediction System)
- NRCS-CPA-052 (Environmental Evaluation Worksheet)
- WIN-PST (Windows Pesticide Screening Tool)

The example on page 8 illustrates how identification of training requirements can be determined for employees providing technical services.

## The Process of Identifying Training Requirements



### Overall Steps

1. Identify areas of specialty based on local priority resource concerns and common conservation practices used by the SWCD – one or more may be chosen.
2. Identify what practices the SWCD needs staff to hold JAA for, based on the area of specialty identified.
3. Obtain practice specific JAA by demonstrating knowledge and proficiency in I &E, design and/or implementation.

### Next Steps:

- Develop guidance for selecting and assigning area of specialties to ensure the needs of the conservation office are met.
- Develop a list of conservation practices by area of specialties.
- Identify training needs and consistent requirements to reach several levels of complexity by area of specialties.

## Step 4: Creation of Individual Development Plans for Each Staff Member

Individual development plans (IDP) should be required for all employees providing technical services. These IDPs will be based on core competencies and area of specialties as identified in Step 3. Each IDP should include:

1. Prioritization of training
2. Milestones for year one, two, three and long-term
3. Identification of desired outcomes, such as intended increase in JAA

### Next Steps:

- Develop a template for IDPs that incorporates identified employee areas(s) of technical expertise and common conservation practices.

## Step 5: Prioritization of Training Needs

A process to assess IDPs is necessary to identify, track, catalog, and prioritize the need for training of all NRCS, BWSR, SWCD, and TSA employees providing technical service, as well as other conservation partnership staff providing technical service to producers. An inventory will be used to identify and prioritize statewide and area training needs, and must be implemented in a way that is effective yet not burdensome. As part of the training needs inventory process, data will be submitted by NRCS, SWCD, and TSA technical staff based on IDPs. The information will be compiled, and coordination will take place at the Area level by Area Training Teams and the state level by a State Technical Training Committee. Membership on the State Technical Training Committee by Area Training Team Members will ensure cross communication between the groups. It is anticipated that this process will be electronic or web-based in order to be as efficient and user friendly as possible.

Upon completion of the training needs inventory process, topics will be prioritized for statewide trainings and local and regional training offerings. Training will be coordinated between Areas and the State to ensure that priorities are accommodated.

### Next Steps:

- Establish a State Technical Training Committee
- Establish Area Training Teams
- Identify membership, roles, responsibilities, schedules, timelines and support for the State Committee and Area Training Teams.
  - Develop and coordinate support for agencies training budgetary needs
  - Emphasize the importance of the IDP
  - Encourage employee self-development and on-the-job training
  - Set policy for pre-training and post-training conferences and discussion with trainees
  - Set priorities for trainings
  - Show plan to make use of local resources (colleges, etc.), training developed locally (workshops), and alternate methods (packages, etc.)
  - Tie to overall objectives of each agency as appropriate to each plan
  - Consider needs of new employees, new supervisors, minorities, etc.
- Develop the annual process for distributing the training needs inventory, reviewing and sharing the data, and prioritizing training offerings
- Review and update existing course catalogs as appropriate

- Develop an electronic inventory system that can be accessed and utilized by BWSR, NRCS, MASWCD, and MACDE as needed
- Develop a schedule for distribution and collection of Training Needs Inventory Data

## **Step 6: Identification, Development and Review of Training Offerings**

Once topics are prioritized, Area Training Teams and the Statewide Training Committee will identify training programs and trainers with expertise in each topic area. If needed, assistance will be provided to trainers in development of learning objectives, course materials and evaluation methods to ensure consistency and high quality of training offerings.

### **Next Steps:**

- Identify existing training resources available for use by trainers – including but not limited to guidance for training development, evaluation templates, existing training materials and handouts
- Identify new training resources needed by trainers
- Identify needed resources to implement Step 5
- Develop comprehensive formal agreement identifying agency commitments (funding, time, staff, etc.) for training implementation coordination, roles and responsibilities

## **Step 7: Delivery of Training and Mentoring to Achieve Results**

Technical training can be delivered in a number of ways, such as face-to-face classroom settings, field days, online modules, webinars, and on-the-job guidance and experience. The delivery of training should consider all venues including the partners themselves, colleges and universities, other agencies, and private contractors. Mentoring is another important aspect of on-the-job training that can be face-to-face, via email, or over the phone. Conservation partnership staff time and other resources will be dedicated to ensuring that training delivery is coordinated and high quality. This renewed emphasis on technical training will also explore and develop ways to more effectively provide on-the-job training and mentoring to better utilize existing technical knowledge and experience of staff to help others achieve greater JAA and other applicable certifications for effective conservation technical assistance.

## **Step 8: Delegation and Periodic Review of JAA and Other Technical Certifications**

JAA is based on three key components for engineering and ecological sciences conservation practices:

1. Training
2. Experience
3. Demonstrated competence

Training can be formal classroom, online (e.g. AgLearn, webinars and other resources), or on-the-job, including mentoring, as indicated in Step 7. The process for delegating JAA in Minnesota includes an ethics statement requiring that JAA will only be used within the scope of the person's associated training, experience and competence.

Other technical certifications for which this technical training and certification strategy apply include Certified Conservation Planner, Comprehensive Nutrient Management Planner certification, Wetland JAA (for the Food

Security Act), and Wetland Delineator Certification. These technical certifications can have separately defined requirements for training, experience and demonstrated competence.

### **Next Steps:**

- This technical training and certification initiative will update the documentation and dissemination of the JAA process, charts and forms.
- NRCS is responsible for the JAA system used for USDA programs. This system is also used by BWSR and SWCDs for state programs involving the conservation partnership. Designated NRCS staff (state conservation engineer, state resource conservationist, area engineers and area resource conservationists, as appropriate) must review and delegate JAA, with supervisor concurrence. Workload priorities often limit direct working relationships between these NRCS staff and SWCD staff. The conservation partners will investigate clarifying and streamlining a process for SWCD and BWSR staff, together with their on-the-job trainer/mentor, to provide necessary documentation to the designated NRCS staff person for delegation or periodic review of JAA.
- Additional coordination will be conducted to help ensure effective and efficient training and certification for conservation planning, nutrient management planning and wetland technical compliance work.
- Investigate and develop a JAA tracking, review, and re-authorization process that does not rely wholly on one of the partners.

## **Step 9: Upkeep and Development of Existing Skills; Maintenance of Individual Development Plans and Records**

It is important that the skill levels of field office staff be developed, increased, and/or maintained to implement practices that address priority resource concerns. This will take commitment and dedication from all parties, including NRCS and SWCD field office staff. Any technical training completed by an individual, whether it is in the form of classroom, field, or on-the-job, should be tracked in their IDPs.

Maintaining and improving skills varies depending on the practice. Examples of information that should be tracked include: number and title of trainings attended, plan/designs completed, and on-the-job training.

The NRCS engineering and ecological science practices will have continuing education requirements. Periodic reviews will be used for NRCS and SWCD staff.

To adequately track and maintain skills, the following steps are necessary:

- Training received and training needed for field office staff should be reviewed at intervals of not more than three years (depending on JAA or certification requirements).
- An annual submittal of skill maintenance activities (which can include training received, required hours, plans completed, implementation activities, etc.) should be cataloged and submitted to managers.
- Depending on the practice, continuing education may include:
  - Online webinars, modules attended
  - Training(s) completed (# and/or hours)
  - Plans/designs completed: number, type, level (concept, design, implementation, approval)
  - On-the-job training

### **Next Steps:**

- Develop guidelines, templates and schedules for tracking and review of training & development efforts, as well as individual training plan review. These guidelines will be developed using existing guidance and methods used to track certification, and JAA maintenance and review.
- Determine the potential of eLINK to track training, skill/practice review, and maintenance.

## Acknowledgements

The TTCT Steering team members, made up of NRCS and BWSR state agency staff, the MASWCD executive director, and a MACDE representative, developed meeting agendas and discussed details in development of this strategy document.

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## Appendix A: Technical Training and Certification Commitment

### TECHNICAL TRAINING & CERTIFICATION FOR CONSERVATION DELIVERY IN MINNESOTA



A renewed partnership ensuring high  
quality technical assistance to protect  
Minnesota's natural resources

**DATE:** November 25, 2014

**VISION:** MINNESOTA'S WATER RESOURCES ARE RESTORED AND PROTECTED THROUGH COOPERATIVE EFFORTS INVOLVING PRIVATE LANDS.

**GOAL:** TO DEVELOP AND MAINTAIN A HIGHLY TRAINED, TECHNICALLY SKILLED WORKFORCE OF NATURAL RESOURCE PROFESSIONALS TO MEET MINNESOTA'S CONSERVATION DELIVERY NEEDS.

### CONTEXT AND NEED

In Minnesota, local field offices deliver the technical components of conservation planning and implementation services on private lands by working directly with landowners. Under the existing system, the NRCS, SWCDs and BWSR use a Technical Approval Authority (JAA) credentialing system for planning, design and installation of standard conservation practices. In addition, private technical assistance is used for a number of practices when available and cost effective.

Establishing conservation practices on private lands in Minnesota is critical to achieving state and federal goals for clean and sustainable water resources, healthy and sustainable soil resources, and abundant fish and wildlife. Conservation Technical Assistance requires statewide, base technical assistance capabilities, as well as capabilities tailored to local resource concerns and conservation practices in the diverse landscapes of Minnesota. Training and certification are key quality assurance elements of an effective conservation delivery system.

BWSR and SWCDs have recently reviewed the status of conservation delivery in Minnesota. In 2012 BWSR conducted a JAA inventory and survey with SWCDs to determine their current JAA, as well as the interest and commitment of SWCD offices to increase JAA for priority conservation practices. In December 2013 the MASWCD Board of Directors and BWSR agreed the current system and levels of technical assistance and district capacity are not able to meet current demands and future expectations. As a result, in June, 2014, MASWCD and BWSR sponsored a Technical Assistance Summit to develop strategies for enhancing and sustaining Minnesota's conservation delivery system. In Spring 2014, BWSR led a group discussion about technical training opportunities and needs of LGU's during a Minnesota Erosion Control Association workshop, and in Summer 2014, SWCD lead

staff attended half-day leadership discussions with BWSR Executive Director John Jaschke and other BWSR staff to discuss several topic areas, including technical training and credentialing.

Key findings from these formal and informal reviews include:

- 73% of SWCDs have a desire to increase their levels of JAA.
- 82% of the participants at the MECA workshop indicated their technical skills/conservation practice training needs were not currently being met.
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- In regard to JAA, State strategies should be developed for establishing an enhanced Local/State/Federal JAA process that provides training and increased technical capacity for conservation professionals.

These findings illustrate the need for change. A well trained, high quality technical workforce is necessary to respond to a growing need in Minnesota for enhanced and sustainable conservation delivery involving Clean Water Funds, Outdoor Heritage Funds, and other state programs, as well as full utilization of federal Farm Bill programs at the local level. To maintain and improve Minnesota's conservation delivery system, a revised, long-term strategy that addresses the documented need for technical training and certification for LGU staff is necessary.

## **GUIDING PRINCIPLES**

The following principles will guide the development of a new program for technical training and certification for conservation technical assistance in Minnesota:

- Integrates into a quality assurance framework for state funded conservation practices.
- Addresses conservation planning, engineering practices and ecological sciences practices for agricultural, forested and urban lands.
- Coordinated with, but not duplicative of, nor dependent on, NRCS to meet requirements of both state and federal conservation programs.
- Does not preclude private technical assistance when available and cost effective.



## Appendix B: Detailed example of NRCS Resource Concerns

### SOIL EROSION

- Sheet, Rill, & Wind Erosion
  - Sheet and Rill
  - Wind
- Concentrated Flow Erosion
  - Classic Gully
  - Ephemeral Erosion
- Excessive bank erosion from streams, shorelines or water conveyance channels

### SOIL QUALITY DEGRADATION

- Subsidence
- Compaction
- Organic Matter Depletion
- Concentration of Salts and other Chemicals

### EXCESS / INSUFFICIENT WATER

- Ponding, Flooding, Seasonal High Water Table, Seeps and Drifted Snow
- Seep
- Runoff, Flooding or Ponding
- Seasonal high water table
- Drifted Snow
- Inefficient Moisture Management
- Inefficient Use of Irrigation Water

### WATER QUALITY DEGRADATION

- Excess nutrients in surface and ground waters
  - Ground water
  - Surface water
- Pesticides transported to surface and ground waters
  - Ground water
  - Surface water
- Excess pathogens and chemicals from manure, bio-solids or compost applications in surface waters and ground waters
  - Ground water
  - Surface water
- Excessive salts in surface waters and ground waters
  - Ground water
  - Surface water
- Petroleum, Heavy Metal and other pollutants transported to waters
  - Ground water

- Surface water
- Excessive Sediment in surface waters
- Elevated Water Temperature

## **DEGRADED PLANT CONDITION**

- Undesirable Plant Productivity and Health
- Inadequate Structure and Composition
- Excessive Plant Pest Pressure
- Wildfire Hazard, Excessive Biomass Accumulation

## **INADEQUATE HABITAT FOR FISH AND WILDLIFE**

- Habitat Degradation
- Food
- Water
- Cover/Shelter
- Habitat Continuity / Space

## **LIVESTOCK PRODUCTION LIMITATION**

- Inadequate Feed and Forage
- Inadequate Livestock Shelter
- Inadequate Livestock Water

## **AIR QUALITY IMPACTS**

- Emissions of Particulate Matter (PM) and PM Precursors
- Emission of Greenhouse Gases (GHGs)
- Emissions of Ozone Precursors
- Objectionable Odors

## **INEFFICIENT ENERGY USE**

- Equipment and Facilities
- Farming/Ranching Practices and Field Operation

