

# Minnesota Watershed Specialist Training Syllabus and Course Overview

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## Course Information

Name: Minnesota Watershed Specialist Training (WRS 5150 Sec 001)

Delivered by: The University of Minnesota Water Resources Center

Meeting time: Online for 14 weeks; estimated 6-8 hours each week

Meeting place: Online at [canvas.umn.edu](https://canvas.umn.edu)

Required materials: Regular access to a high-speed internet connection is required. Online links will be provided for all required readings. Learners are responsible for printing any readings, as desired.

## Introduction

Welcome to the Minnesota Watershed Specialist Training. The purpose of the training is to help you build your skills and knowledge for developing and implementing a water resource plan. In this course you will:

- Gain foundational knowledge that you can apply immediately to your work,
- Identify what further information and skills you need, and
- Develop strategies for getting information through professional networks and resources.

This course is meant to help you integrate the skills you have learned from a variety of other training and education opportunities.

## Course Objectives

By the end of the course, participants will:

- Have a deeper appreciation of water and land as an integrated system, and a better understanding of how to address water issues from a systems perspective;
- Understand the structure of policy and institutions related to water management in Minnesota;
- Expand their toolbox of resources to support their work;
- Expand their skills for leading a watershed community, including communication skills and approaches to engaging the community;
- Understand the fundamentals of water resource science, and appreciate the need to integrate science from multiple disciplines;
- Be able to use a systems approach to gather information that supports decision-making, including clarifying project goals, identifying what information is really needed, and integrating diverse physical and social information from varied sources;
- Be methodical and explicit with processes that lead to effective project outcomes, including writing work plans and selecting implementation activities.
- Expand their long-term network of colleagues to learn from and collaborate with.
- Have a personalized plan for future professional development.

## Instructors

Instructors will respond to phone and email messages during weekday daytime hours. Contact them individually (below) or email [wst@umn.edu](mailto:wst@umn.edu).

### Primary instructors

Anne Sawyer, [sawye177@umn.edu](mailto:sawye177@umn.edu), (507) 491-8393

Anne is an Extension Educator in Water Resources, focusing on rural/agricultural watershed-based education for audiences including concerned citizens, local and regional planners, and water resource professionals. Anne earned her PhD in Soil Science from the University of Minnesota in 2017, where she studied nutrient management and microbiology in perennial grasses grown for bioenergy. She also has a BA in Geology from Carleton College and an MS in Watershed Science from Colorado State University. Her previous work experience includes Extension (horticulture), the National Weather Service (snow hydrology) and the National Park Service (resource interpretation).

Ann Marcelle Lewandowski, [alewand@umn.edu](mailto:alewand@umn.edu), 612-624-6765.

Marcelle is a Senior Research and Extension Coordinator for the University of Minnesota Water Resources Center. Since 1997, she has helped manage a variety of research, outreach, and education projects related to maintaining and improving soil and water quality, especially in agricultural regions of the state. Marcelle has a M.S. degree in Geography from the University of Minnesota, and additional training in facilitation and distance learning.

### Additional instructors

Additional experts will participate during individual modules.

## Schedule

Wk.	Topic	<b>Required activities</b> <ul style="list-style-type: none"> <li>● In addition to the activities below, <b>readings, webinars, and module feedback surveys</b> are required.</li> <li>● There may be multiple deadlines each week.</li> <li>● <b>Seven of the course webinars</b> or relevant, alternative webinars are required (post an observation to receive credit).</li> </ul>
1	Introduction to the Course	<input type="checkbox"/> Build your online profile. <input type="checkbox"/> Post an introduction to your work in water resources.
2	Policy and Institutions	<input type="checkbox"/> Interview a leader in water resources. <input type="checkbox"/> Submit interview notes <input type="checkbox"/> Post insights from your interview and comment on others' experiences.
3	Watershed Science	<input type="checkbox"/> Review fundamentals of watershed science and Integrated Watershed Management. <input type="checkbox"/> Discuss readings.
4	Watershed Science	<input type="checkbox"/> Submit one-page analysis of a case from an Integrated Watershed Management perspective. Respond to others' work.
5	Civic Engagement	<input type="checkbox"/> Participate in two discussions about civic engagement and application of the principles.
6	Civic Engagement	<input type="checkbox"/> Discuss applications of community assessments. <input type="checkbox"/> Write a plan for a stakeholder analysis or community assessment. <input type="checkbox"/> Write a brief plan for developing civic engagement skills.
7	Communication	<input type="checkbox"/> Write a strategic communication plan. <input type="checkbox"/> Create an outline of a communication product that fits your plan.
8	Assessment, Monitoring, and Evaluation	<input type="checkbox"/> Schedule a meeting and submit a plan for conducting a gap exercise to identify information needs.
9	Assessment, Monitoring, and Evaluation	<input type="checkbox"/> Conduct the gap exercise. <input type="checkbox"/> Summarize gap exercise results and identify the data collection methods. <input type="checkbox"/> Discuss definitions of evaluation and assessment.
10	Implementation Activities	<input type="checkbox"/> Clarify project goals and identify implementation alternatives.
11	Implementation Activities	<input type="checkbox"/> Evaluate implementation alternatives and respond to other's work.
12	Implementation and Follow-through	<input type="checkbox"/> Write a project work plan.
13	Implementation and Follow-through	<input type="checkbox"/> Discuss others' work plans.
14	Course wrap-up	<input type="checkbox"/> Evaluate the course. <input type="checkbox"/> Plan future learning.

## Mentors

You are asked to identify a mentor to consult with while you take this course. A mentor can help you apply course concepts to your everyday work by describing their experiences. Choose a mentor who has more experience than you in the field of water resource management. Your supervisor or someone in a partner agency may be a good choice. Think about whether you want (a) someone in a similar position to yours who can help you think about your work, (b) someone in a position you aspire to who can clarify what skills you need to develop, or (c) someone in another discipline who can offer a contrasting perspective.

When asking someone if they would serve as your mentor, give them the following list of guidelines. These are a starting point; the two of you should establish clear and mutually agreeable expectations for the amount of time, types of support, and goals for the mentoring relationship.

### Guidelines for mentors

The role of a WST mentor is to draw from personal experience to help a WST participant apply course concepts to their current work and to their future professional development. Mentors will be given access to course materials during the course. Mentors are asked to commit a total of 5-to-10 hours over the 14-week period of the course. The following activities are recommended:

- **Meet.** Meet with your mentee by phone or in-person either for 20 minutes each week or for one hour during each of the seven modules (i.e. about every other week). Schedule these meetings before the course begins.
- **Provide feedback** on course assignments.
- **Share.** During the regular meetings:
  - Share your experience and observations about key resources and issues related to the week's topic.
  - Lead a discussion by asking the course participant the following questions:
    - Explain the course topic of the week.
    - What caught your attention? What was new?
    - How can you apply this to your work?
    - How do you rate your skills and knowledge about this topic?
    - List concrete next steps: What do you need to finish the assignment(s)? Which specific skill(s) do you want to learn more about? What is your plan for continued skill-building?

## Module Components

The course consists of 7 modules that are one or two weeks in length. Multiple activities will be assigned and due each week. It will be important to *read entirely through instructions each Sunday or Monday to be able to plan out your work for the week*. The following components or activities will be used throughout the course:

### Welcome, Readings and Resources

Start at this link each week for a list of requirements for the week.

At the beginning of each module the instructor will post a brief [welcome video](#) providing an introduction to the week's activities and any clarifications about the previous module.

The list of [readings](#) may include webpages, pdf documents, videos, online books, or other resources.

### Assignment

The assignment page for the module lists multiple tasks that need to be completed. Be sure to complete all steps.

[Assignments](#) are designed to be directly applicable to your work. In most cases, we provide a case study to work with. However, to make the course as useful to you as possible, you are encouraged to use your own example instead of the case study. If you choose to use a situation other than the case study, you are encouraged to discuss your scenario with the instructor early in the week (by Tuesday) to ensure that the situation fits the assignment.

Again, to maximize the usefulness of the course, you are encouraged to work with your watershed group, stakeholders, local officials, and others in your community as part of the assignments. You are also encouraged to work with other participants in the course, remembering that each learner is responsible for writing and submitting their individual assignments.

When uploading assignments, name files so they include your name., e.g.:  
lastname\_firstinitial\_week#assign#.docx

### Discussion Forums

Most weeks, you will be required to participate in an online discussion by responding to the posted question and reacting to other learners' comments.

### Web-based meetings

Weekly, hour-long web meetings will be held on a day/time that maximizes in-person participation from all learners; a scheduling poll will be sent to participants prior to the start of the course. For most webinars, topic experts will give a presentation and answer questions about the week's material or related cases. Course participants are required to attend seven of these course webinars or alternate webinars (or events) on topics related to course material. You will receive credit by posting an observation about the webinar in the designated forum.

## Required Course Evaluations

Your feedback about the course is critical for us to meet the evolving needs of conservation professionals. To receive your certificate of completion, you are required to complete a short survey at the end of each module and at the end of the course.

## Deadlines and Requirements for Completion

To receive credit or a Certificate of Completion, you must:

- complete the weekly assignments by the deadlines, to the standards described for each assignment,
- submit short anonymous surveys at the end of each module, and
- comment on seven webinars.

We understand that, as a working professional, you are juggling other commitments and may need extra time to complete one of the modules. You may submit **one** module's assignments after the deadline and remain in good standing in the course. Notify the instructors ahead of time if you will be submitting a late assignment. All late assignments must be submitted within two weeks of the end of the course.

Review the assignments before the start (Monday) of each week and plan out your time to meet the deadlines for that week. Meeting the assignment deadlines allows instructors time to provide input and gives your fellow learners time to comment on your work.

Use the time estimates to help determine the scope of each assignment. For example, in the communications module part of the assignment is to spend 1-2 hours developing a communication plan. Obviously, you won't be able to develop a highly detailed plan. But you will be able to develop the basis for a solid communication plan and demonstrate your understanding of the concepts.

## Evaluation of Other Learners

The concepts presented in this course are learned through exposure and experience rather than through memorization. Thus, your progress cannot be measured using objective exams. Readings and assignments are designed to give you experience thinking through and applying a process. Your progress will be evaluated based on whether you complete all the steps of each activity.

The instructors and guest experts will provide some feedback on your work. In addition, you will be asked to provide feedback to other course participants. You will not be asked to make judgments about "right" or "wrong" answers. Rather, you will be asked to suggest other approaches, resources, or viewpoints that could be considered to solve the problem. This is part of the learning process for you and provides opportunities to support other learners.

## Distance Learning

Learning applied material online requires a different attitude and approach than attending an on-site workshop or a college class. At a day-long workshop, the instructors control the order of content and decide when you take mental breaks to reflect on material. In an online course, you control which components you emphasize, in what order, how long at one sitting, and how to reflect on and absorb what you are learning. Take advantage of this control and create study habits that suit your preferred learning style.

Schedule about 8-10 hours a week to work on this course. Schedule some of that time early in the week. To accommodate interaction with other course participants, the activities cannot be completed in one sitting over a weekend. Please plan accordingly.