Water Conservation Advisor Training Program

Project Status Report and Sustainability Plan

Phases 1-4

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WATER CONSERVATION ADVISOR TRAINING - PLANNING, DEVELOPMENT AND PILOT

Program Purpose:

The Metropolitan Council contracted with Freshwater to develop and implement the Water Conservation Advisor Training Program, funded through Clean Water Funds. The program is designed to train a corps of Master Water Stewards and other master-level volunteers as specialists in water conservation best practices. These Water Conservation Advisors are equipped to educate and engage individuals and local community groups in water conservation practices as well as complete projects that enhance groundwater protection.

Phase 1: Getting Started

A brainstorming "kick-off" workshop on January 29, 2018 at the Metropolitan Council initiated the planning process. The 34 potential program participants in attendance included representatives of 7 municipalities, local governing agencies, watershed districts, UMN, DNR, CUB, and engineering groups as well as community volunteers. Using a World Café format, the group established a set of water conservation goals for the next five years that center on no net drawdown of aquifers, less water use conflicts, and smart, efficient, sustainable water use based on education and awareness as well as technology-related advances. A Water Conservation Advisor training program was acknowledged as an efficient and potentially effective way to move towards these goals. To this end, the group generated an extensive list of potential audiences and water conservation advisor actions as well as a general scope of learning. A more detailed summary of the information gathered in this initial workshop can be found here.

A 15-member focus group made up of probable program participants, a team of subject matter experts, and municipal representatives convened at Freshwater on March 19, 2018. The group explored motivations around both becoming and "employing" water conservation volunteers. Participants were also asked to help set realistic expectations for time invested in learning, cost, and level of expertise as well as identify challenges and difficulties volunteers may face. Comments were recorded,

Figure 1: Training program goals

transcribed, and reviewed. This discussion of logistics helped refine the goals, scope, and structure of this training program (Figure 1). Based on the information gathered in both the initial "kick-off" workshop and the focus group, a program workplan was created and a technical team consisting of an instructional designer and academic technician was established.

Phase 2: Training and Program Development

Based on content and feedback generated from subject matter experts, the technical team developed a sequence of instruction delivered in four online modules and one in-person workshop, as identified in Figure 2. The online curriculum delivers basic water system science, information on water availability and use, a guide to exploring specific local water conservation issues, and an array of best conservation practices.

Basic Water Science provides program participants an understanding of earth's hydrologic cycle with an emphasis on surface and groundwater interaction. Water Availability and Use explores where and how water is used in Minnesota as well as the current and future water availability of our water resources. The Local Issues module guides participants through research into their specific local water conservation issues. The final module, Best Practices, helps water conservation advisors understand, communicate, and implement best practices for both indoor and outdoor water conservation. Here they are also connected with the Resource Hub, a library of resources and teaching tools to use when planning and carrying out water conservation activities in their communities. A set of prepared activities serve as templates to guide them in developing projects of their own. The Resource Hub is also where participants can go to dig deeper in to areas of interest or concern.

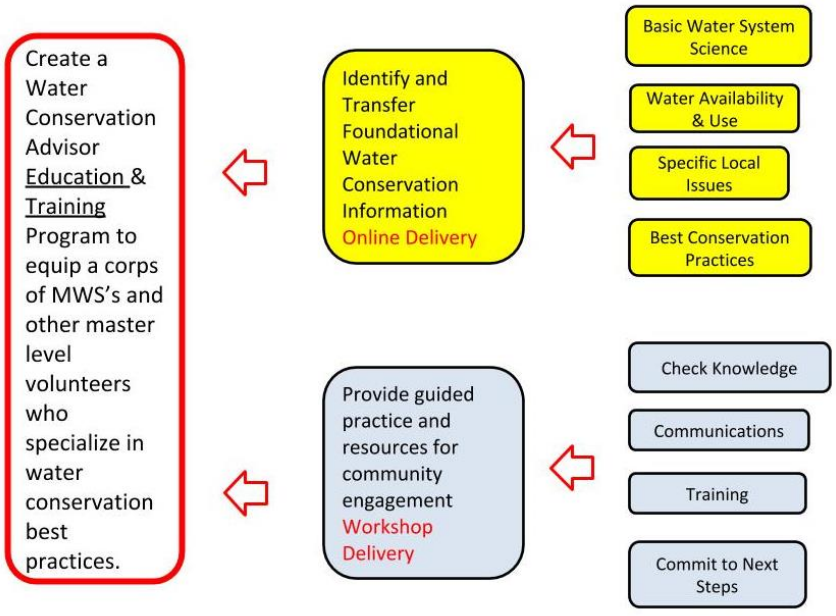


Figure 2: Online and in-person content and delivery

The in-person workshop concludes the course. It is designed to check understanding, provide guided practice, and create a space where water conservation advisor candidates plan and launch water conservation activities. Further details regarding the curriculum content, sequence of instruction, and delivery can be found in this flow chart.

The Moodle platform for online learning offers a wide range of interactive delivery modes. Where appropriate and effective, interactive learning was incorporated into this curriculum. Program participants are enrolled in Water Conservation Advisor Training through FreshwaterU, home to all of Freshwater's online education programs. Once enrolled, water conservation advisors continue to have access to the course and Resource Hub to guide future work.

Phase 3: Pilot Program

A volunteer pilot team consisting of eight Master Water Stewards, four Master Gardeners, and five Master Naturalists was recruited in September 2018. The pilot team was enrolled in the Water Conservation Advisor training course in early October and given five weeks to work through the online information. On November 9, nine pilot participants attended a six-hour workshop hosted by Freshwater to check their understanding of the course information, ask questions, share local issues, practice initiating conversations to encourage water conservation, and design and plan water conservation projects. (Note: Ice and snow contributed to lower attendance than expected.) Four experts in the topics covered by the course material presented important aspects of their respective areas of expertise and offered insight into how to engage people in water conservation. The experts remained throughout the remainder of the workshop to answer questions and help with project design and planning.

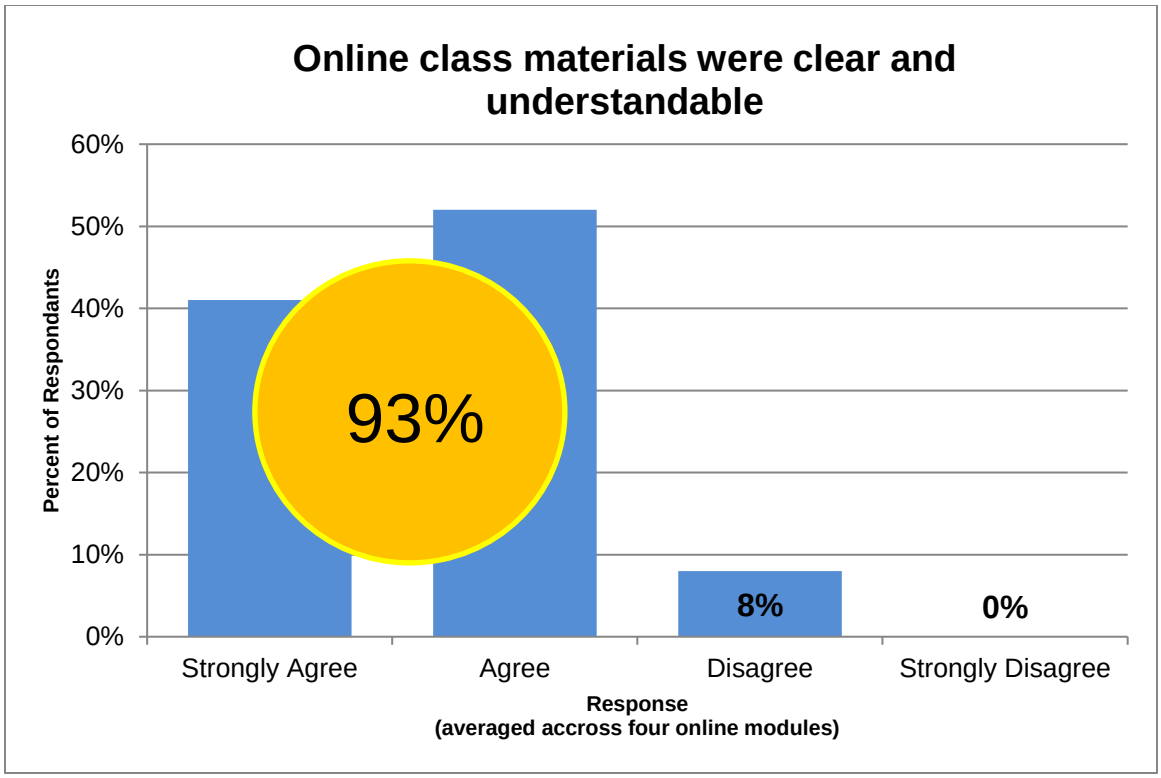
An integral step in the workshop project planning process involved identification of resources needed to implement each project. This information was instrumental to refining and growing the Resource Hub, particularly prepared activities and planning guides.

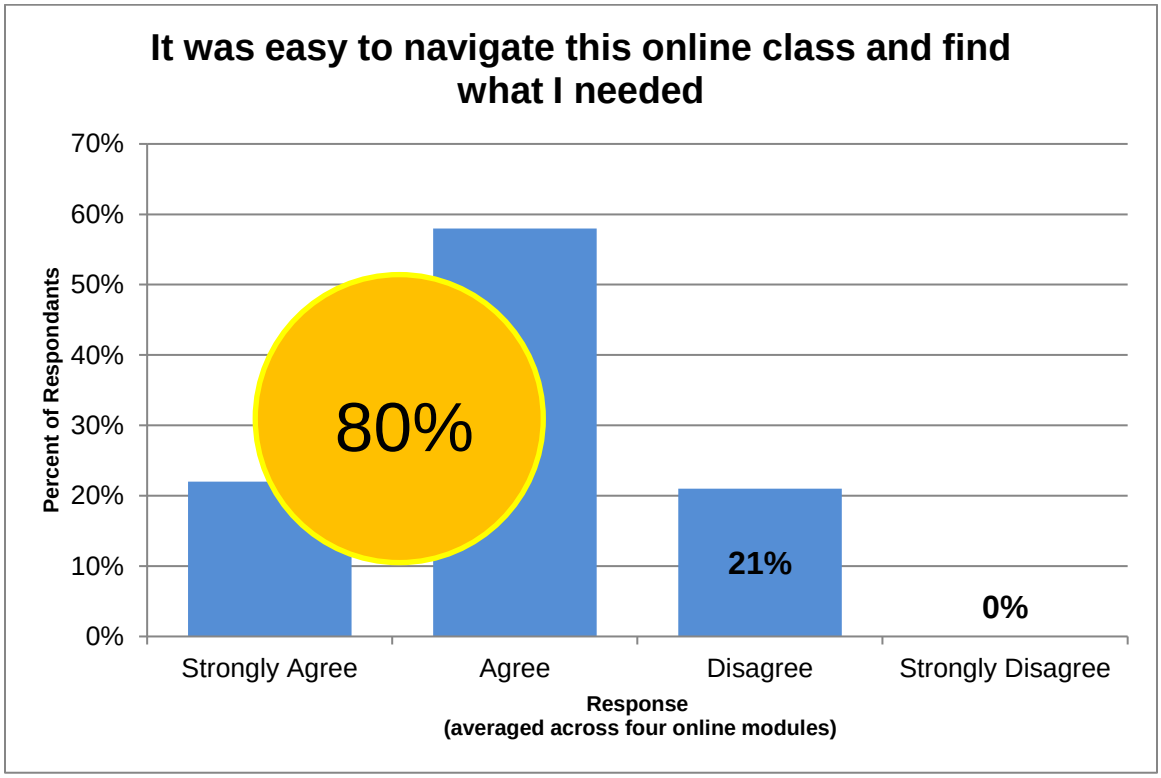
Evaluation Techniques

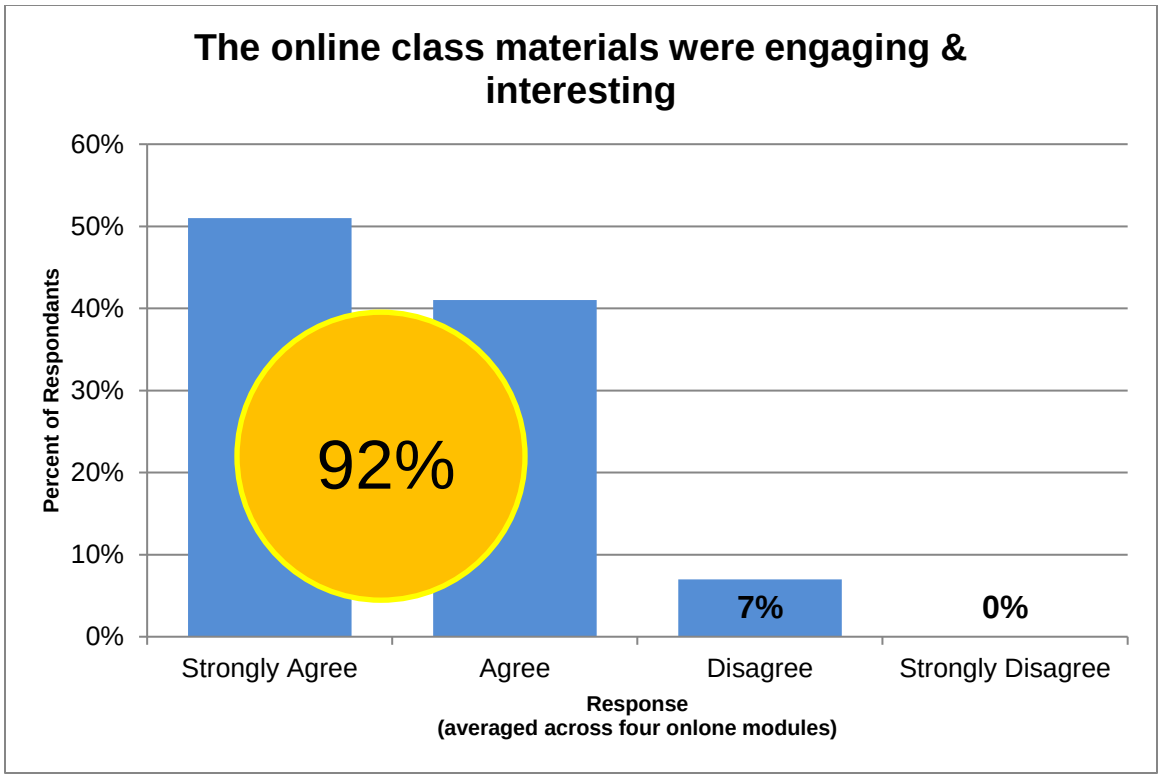
Each of the four online learning modules concludes with an evaluation activity. Five multiple choice questions ask if the material covered is clear and understandable as well as interesting, engaging, and presented at an appropriate level. There are also questions pertaining to ease of navigation and amount of time required to complete the module. Three open-ended questions give participants the opportunity to describe what worked well, suggest where we could make improvements, and offer any other comments or suggestions. Pilot participants were asked to work through the online material with evaluation in mind and allow enough time to carefully evaluate each module. During the in-person workshop they were again reminded to thoughtfully complete this online evaluation. Each workshop participant also completed an evaluation of the workshop that included opportunity to add any additional thoughts or suggestions for the course.

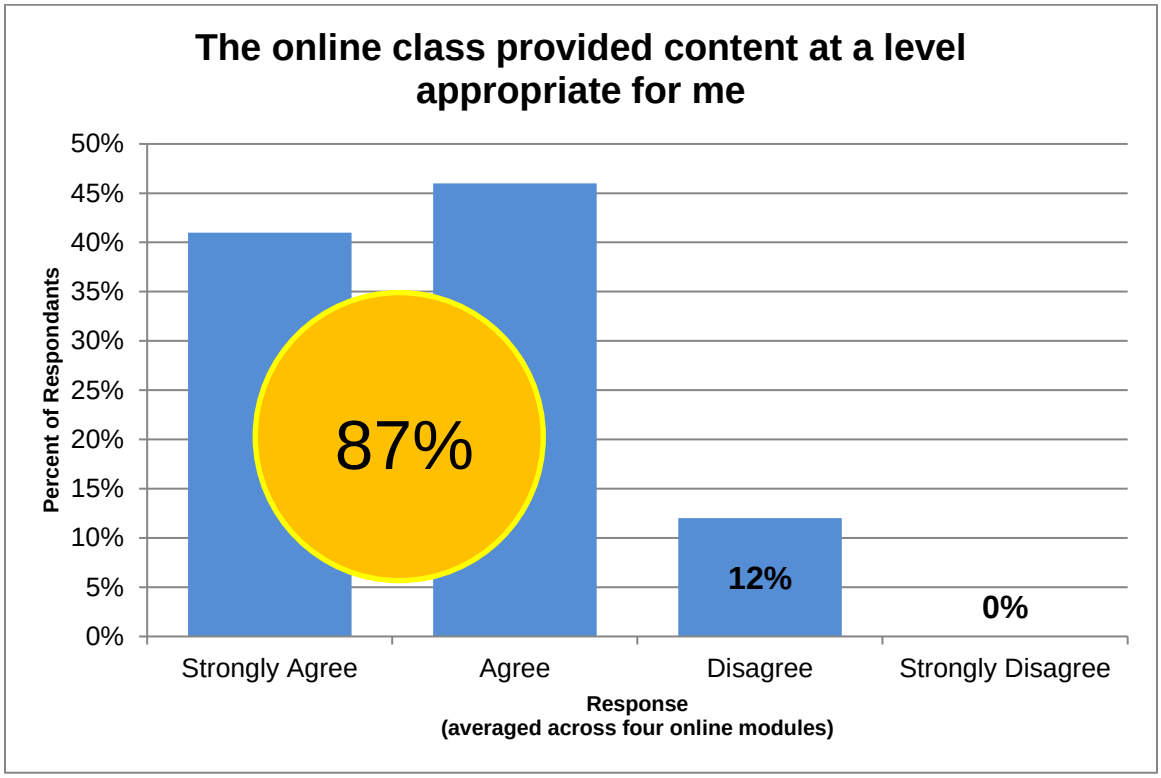
Evaluation Results

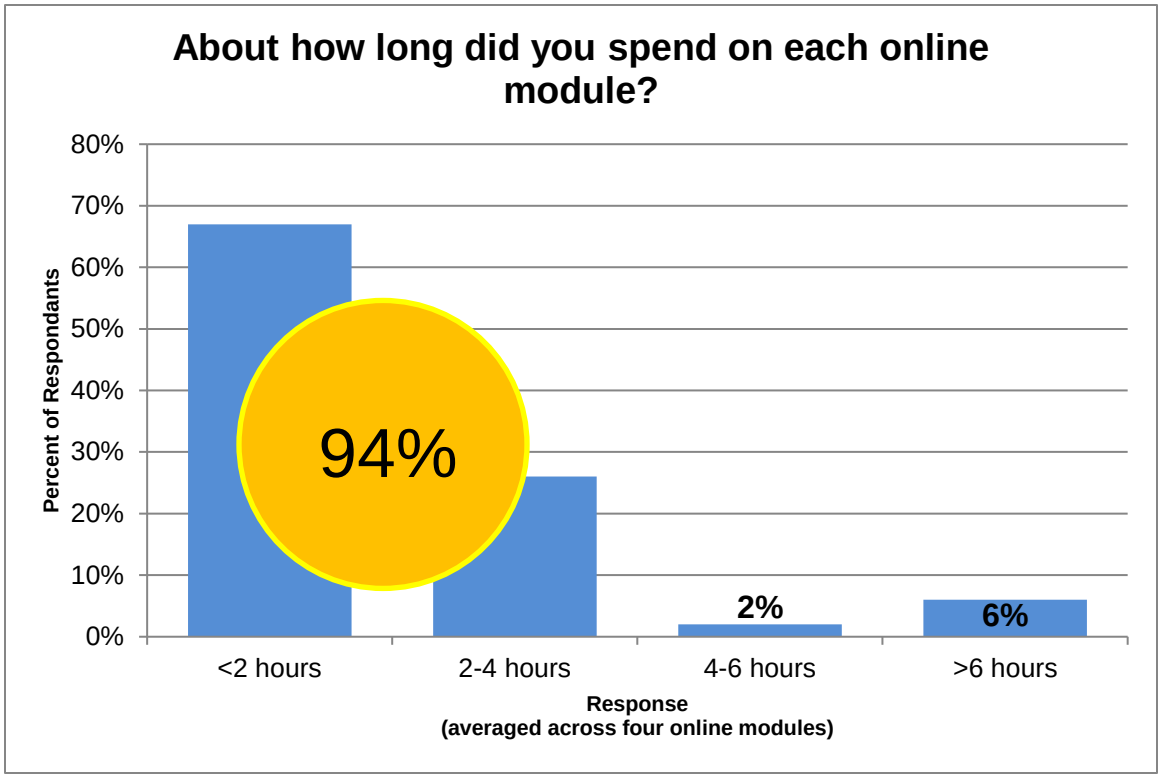
The pilot evaluations affirmed that the Water Conservation Advisor training course is engaging, accessible, and covers the material at an appropriate level. See the graphs below:


Online class materials were clear and understandable
60%
50%
40%
30%
20%
10%
0%
Percent of Respondants
93%
8%
0%
Strongly Agree
Agree
Disagree
Strongly Disagree
Response
(averaged accross four online modules)


It was easy to navigate this online class and find what I needed
70%
60%
50%
40%
30%
20%
10%
0%
Percent of Respondants
80%
21%
0%
Strongly Agree
Agree
Disagree
Strongly Disagree
Response
(averaged across four online modules)


The online class materials were engaging & interesting
60%
50%
40%
30%
20%
10%
0%
Percent of Respondants
92%
7%
0%
Strongly Agree
Agree
Disagree
Strongly Disagree
Response
(averaged across four onlone modules)


The online class provided content at a level appropriate for me
50%
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
Percent of Respondants
87%
12%
0%
Strongly Agree
Agree
Disagree
Strongly Disagree
Response
(averaged across four online modules)



Online Course Revision

The technical team reviewed all evaluation material provided by the pilot team and subject experts. Based on this information, the instructional designer revised the curriculum content, design, and flow. Much of this revision was minor. However, the guided local issues research module required more extensive reworking. This module is, by design, more loosely structure to provide participants the opportunity for individualized research. We found that participants require more explicit direction to effectively explore their local water conservation issues. Since this information forms the basis of their water conservation activities, it is important to find the right balance of structure and freedom. The combination of online evaluation and feedback in person in the workshop will allow us to continue to monitor and adjust this part of the course. An advantage of ongoing evaluation built into the course is that there is opportunity to review comments and revise as necessary following each run of the course. In addition, we anticipate adding to the Resource Hub as new conservation projects and activities are planned and implemented.

Workshop Revision

Based on attendance, observation, and post-workshop feedback, we redesigned the in-person training. It will be shorter and focused almost entirely on planning conservation activities. To achieve this, we recorded the expert presentations delivered at the first workshop and have incorporated edited versions into the online material. Course participants will watch these videos as well as explore the

Resource Hub materials and activity ideas in preparation for the workshop. This homework allows us to shorten the workshop from 6 to 3 hours. Using recorded, rather than live, presentations also allows us to offer the workshop on Saturday instead of a workday. We expect this shortened, weekend, project-focused workshop to result in higher attendance and better planned conservation activities. We expect that a project-centered workshop will result in a high rate of implementation of these projects this spring and summer.

Phase 4: Ongoing Implementation

Freshwater hosted a second Water Conservation Advisor training January to March this spring with the culminating workshop scheduled for March 9. Those completing the online material and the workshop will spend the spring and summer months working on conservation projects and activities within their communities. The 2019 spring training was offered to a waiting list of Master Water Stewards, Master Gardeners and Master Naturalist compiled during pilot recruitment in October 2018 as well as current certified Master Water Stewards. The eight October pilot participants unable to attend the fall workshop were also invited and encouraged to join the spring workshop.

Robust response resulted in a 2019 training class of 47 candidates. This group includes eight 2019 Steward candidates sponsored as Water Conservation Advisors by Met Council. As a part of the Master Water Steward certification process, these eight steward candidates are expected to complete conservation projects between March and September of this year. Everyone participating in this training will be equipped and encouraged to incorporate water conservation into their volunteer work and complete and report these activities. It is anticipated that implementation of the program this spring will result in 20 to 40 trained Water Conservation Advisors. Assuming most participants work in pairs or small groups, we can expect 3 to 4 water conservation capstone projects and 5 or more water reported activities from our continuing education participants.

The intent is that Freshwater will continue to offer the online modules and workshop each spring. Based on the response this year the anticipated outcome for the next two years is 20 or more trained Water Conservation Advisors per year engaged in 10 or more water conservation activities.

Long-Term Sustainability Plan: Cost Structure and Course Delivery

Water Conservation Advisor Training and the Master Water Steward Curriculum

The first two learning modules of the curriculum were embedded into the existing Master Water Steward core curriculum this year. The 2019 class and all Master Water Steward candidates going forward will now learn about water quantity and quality - groundwater as well as stormwater. Towards the end of their coursework, steward candidates who choose a water conservation track branch off into the final two Water Conservation Advisor training modules - Local Issues research and Best Practices. Once they complete these modules and explore the Resource Hub, these steward candidates attend the

Water Conservation Advisor workshop where they share local water conservation issues and contacts and work together to design their conservation capstone activities for certification. Candidates have the remainder of the spring and summer to implement their capstone and are certified as both Master Water Stewards and Water Conservation Advisors in the fall.

The cost of this extension of the Master Water Stewards curriculum is covered by watershed district, county, and municipal partners who sponsor and manage stewards. The Metropolitan Council is sponsoring eight Master Water Stewards on the Water Conservation Advisor track per year, 2019-2021. The intent is to encourage municipalities interested in community-based conservation efforts to sponsor Master Water Steward candidates interested in becoming Water Conservation Advisors going forward. Current tuition for Master Water Steward volunteers is $2,500 for certification.

Water Conservation Advisor Training as Continuing Education

Master Water Stewards

The entire four-module course will be available to previously certified Master Water Stewards as an annual spring continuing education option. While the time investment in this course is greater than the Master Water Steward requirement of 8 hours/year continuing education, the steward will have as incentive the opportunity to earn an additional certification through this course. Hosting Water Conservation Advisor training as continuing education January to March each year allows coordination with current Master Water Steward training.

The cost of the Water Conservation Advisor continuing education offering is provided in the Met Council Grant through July 2021. Starting August 2021 stewards will pay to take the course as continuing education at an anticipated rate of $70. This cost estimate is based on projected course enrollment, staff hours to manage participants and partners, as well as miscellaneous food, supply, and venue costs. It is assumed that by 2021 course revisions will be at a minimum, but new water conservation partnerships will continue to be established and recruiting continuing education participants will be necessary, requiring staff hours outside of the Master Water Steward candidate training program.

Master Gardeners and Master Naturalists

Starting in 2020, Water Conservation Advisor training as continuing education will be offered at an anticipated rate of $70 to Master Gardeners and Master Naturalists.