USU Extension Grant – Final Report
Project Leader: Larry A. Rupp
Project Title: Promoting Water Conservation through Online Qualified Water
                     Efficient Landscaper Certification Implementation
Beginning Date: June 15th, 2016   End Date: April 2017
Total Requested: $9,919.70

Project Objectives:

The goal of this project is to promote water conservation throughout Utah and the
Intermountain West by expanding Qualified Water Efficient Landscaping (QWEL)
training and certification online through collaboration with support agencies at
Utah State University (USU) and community partners. Objectives include the
adaptation of seven lectures of QWEL foundational training as a pilot test for online
expansion.

Specific tasks include:
- Adapting and expanding existing training material, including all content
  material, graphics, videos, and any applicable assessments.
- Upload all videos to a YouTube channel.
- Obtain transcripts and captioning for all videos.
- Create the course in Canvas (the software used to launch online courses).
- Insert the instructional content into Canvas.
- Create an overall look and feel to the course in Canvas.

Project Results:

This project was directed by Ivy Thomson as the capstone project portion of the
Masters in Professional Studies in Horticulture – Water Efficient Landscape
Management degree.

Meetings were held with project collaborators to determine the best ways to
transition the seven lectures of QWEL training online. The target audience was
determined to be working professionals in the landscaping industry, many of whom
are male and have not completed higher education. Instructional methods which
facilitated learners' work schedules while providing various means to study the
material were sought. A simple, consistent format would be needed to facilitate
learning for those who are not entirely comfortable interacting with computers.

Collaborators determined that the most efficient and effective method of
transitioning the training online was to utilize professional screen recording and
video editing software, Camtasia, to record the PowerPoint lectures. This would
enable the learners to have access to videos of the lectures, audio downloads which
could be listened to while working on the job, and pdfs of the PowerPoint slides
with the instructor's notes. The videos would be submitted to USU's Center for

Innovative Design and Instruction (CIDI) for transcription and video captioning services. For this initial transition, collaborators determined to focus on designing the user interface for desktop interaction instead of allowing for learning via mobile devices.

For five of the on-site QWEL lectures, the teacher uses practice quizzes to further aid learner comprehension and understanding. Collaborators determined to make these quizzes available online.

Shortly after this grant was received, the Utah Division of Water Resources (DWR) hired a statewide water conservation coordinator. Since the online QWEL program is meant for a broader audience than the on-site programs taught in northern and southern Utah, the DWR's water conservation coordinator was invited, and accepted the invitation, to collaborate in recording the training for the first lecture.

The status of the following tasks are:
- Existing PowerPoint presentations were adapted and expanded for recording. One teacher elected to utilize the PowerPoints used for on-site training. Teachers recorded a total of five and a half hours of lecture material (after editing), which were broken into 32 video clips, one for each QWEL objective. One supplemental video was produced and others are in the process of being prepared for production.
- The videos have been uploaded (currently unlisted while being transcribed) to the Center for Water-efficient Landscaping's YouTube channel.
- The 32 lecture videos have been submitted to CIDI for captioning and transcribing services, and should be completed by February 15th.
- The QWEL course has been created in Canvas with collaborators working to finish its structure.
- USU Extension's instructional designers created an overall look and feel to the course in Canvas (see Figure 1 below).
- Collaborators are in the process of inserting the instructional content into Canvas (see Figure 2 below).

Collaborators are on track to finish the project before the on-site QWEL training held this coming March. The project lead is in the process of discussing with Canvas administrators how to allow the public to access the online training while collecting program fees from those who wish to obtain QWEL certification. Collaborators look forward to piloting the online training to determine if further online expansion would be practicable.

Ivy Thomson
MPSH Student

Larry A. Rupp
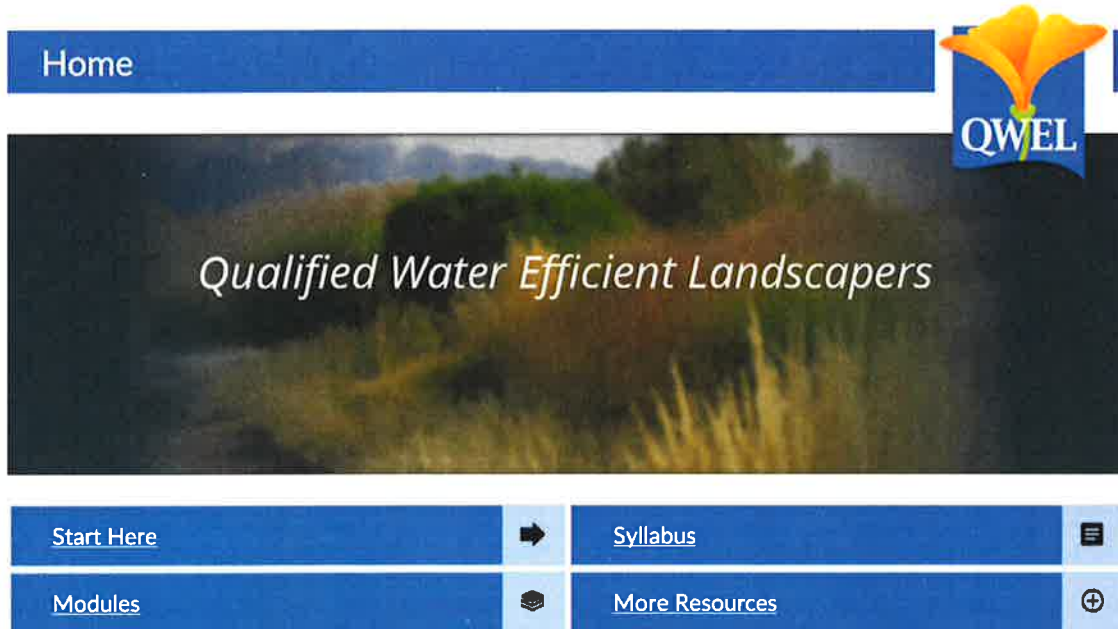Project Leader

Paul Johnson
Department Head

Figure 1 Homepage of online QWEL website.

1.1 | Sources of Water Supplies and Collection for Use

Precipitation in Utah occurs largely in the high mountains during the winter months in the form of snow. Most of our culinary or drinking water comes from the melting snowpack which produces roughly 40" of snow/water equivalent. The snow melts and recharges the aquifers or ground water and collects as surface water in our streams, springs and lakes. Building reservoirs allowed us to capture more snow melt to utilize during the summer growing season, when less than 6 inches of rain normally falls over most of Utah. For much of Utah's population, municipal water is obtained by water conservancy districts which deliver it on a wholesale basis to utilities and other water agencies.

🖳 Instruction

-embed video-

-download audio-

-download powerpoint-

-download transcript-

☰ Summary

- Most of Utah's culinary or drinking water comes from melting snowpack.
- Since watersheds do not follow political boundaries, water must be continually shared, managed, and negotiated among communities, counties, and states where feasible.
- For much of Utah's population, municipal water is obtained by water conservancy districts which deliver it on a wholesale basis to utilities and other water agencies.

🗎 Additional Resources

1. Reading_list
2. Additional_videos

✔ Assessment

After watching the video, click here or click Next to complete the quiz for this section.

Figure 2 Example page of QWEL Objective 1.1.