



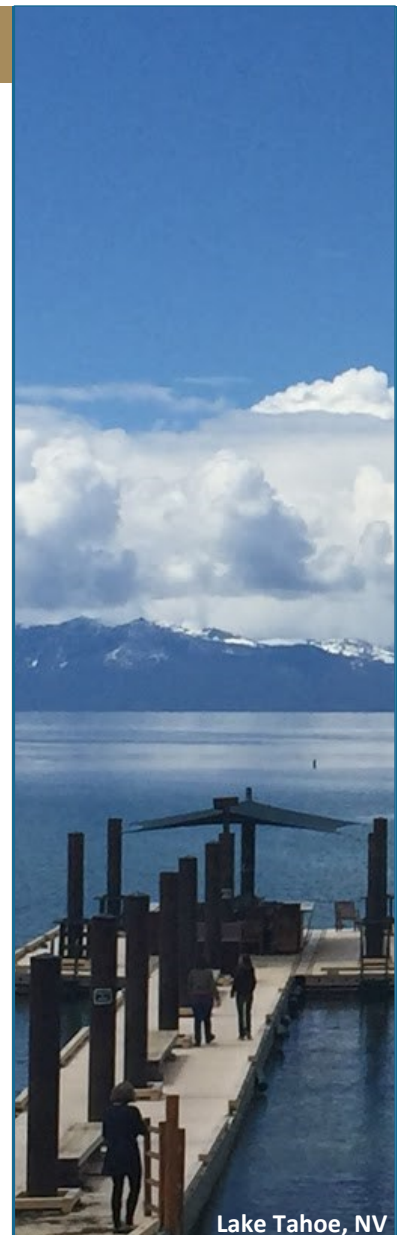
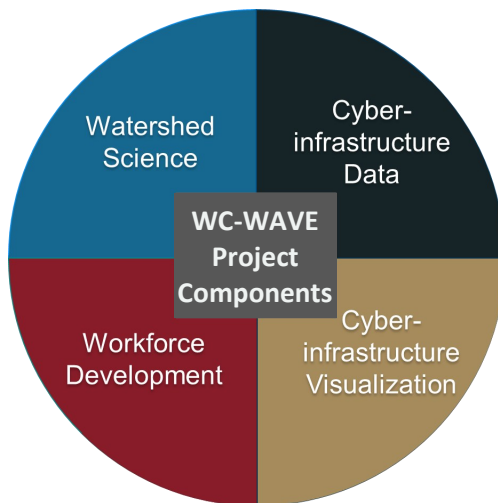
## PROJECT OVERVIEW

On June 1, 2013, the Nevada System of Higher Education received a National Science Foundation award to establish a Track 1 EPSCoR (Experimental Program to Stimulate Competitive Research) project.

This newsletter presents information for Nexus activities conducted in Trimester 2 (December 1 - June 30, 2016) of Year 3 of the grant. Two activities were conducted during this time:

- ◆ WC-WAVE Virtual Meeting
- ◆ WC-WAVE Meeting and Capstone Course

Below are the four WC-WAVE project components.



Lake Tahoe, NV

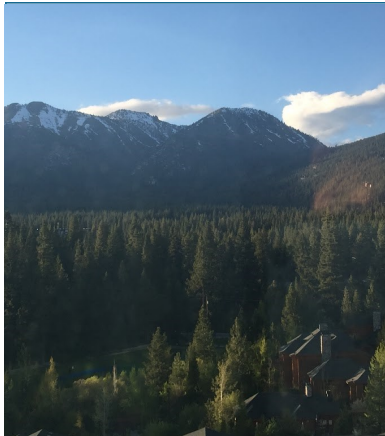
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### What programs were a success according to our evaluation results?

Which of these successful programs do we want to replicate again next year? Were any programs unsuccessful? Do we want to consider discontinuing them moving forward?





Incline Village, NV

## 2016 WC-WAVE VIRTUAL MEETING

The 2016 WC-WAVE Virtual Meeting was organized by project leaders and occurred on March 29, 2016. Thirty of the 101 members of the project attended the meeting.

### Quick facts about meeting attendees

<b>27%</b> Watershed Science	<b>43%</b> Female
<b>47%</b> Faculty	<b>13%</b> URM

### Findings

- ◆ American Indian attendees are well represented when compared to 2015 attendees.
- ◆ Hispanic/Latino attendees are underrepresented when compared to 2015 project participants.
- ◆ Female attendees are representative of project participants.
- ◆ Participants reported pre to post knowledge gains in all objectives.

### Highlights of the meeting according to participants

*“Seeing that the work is coming to a conclusion and the NCE will be a time to finalize work and wrap things up.”*

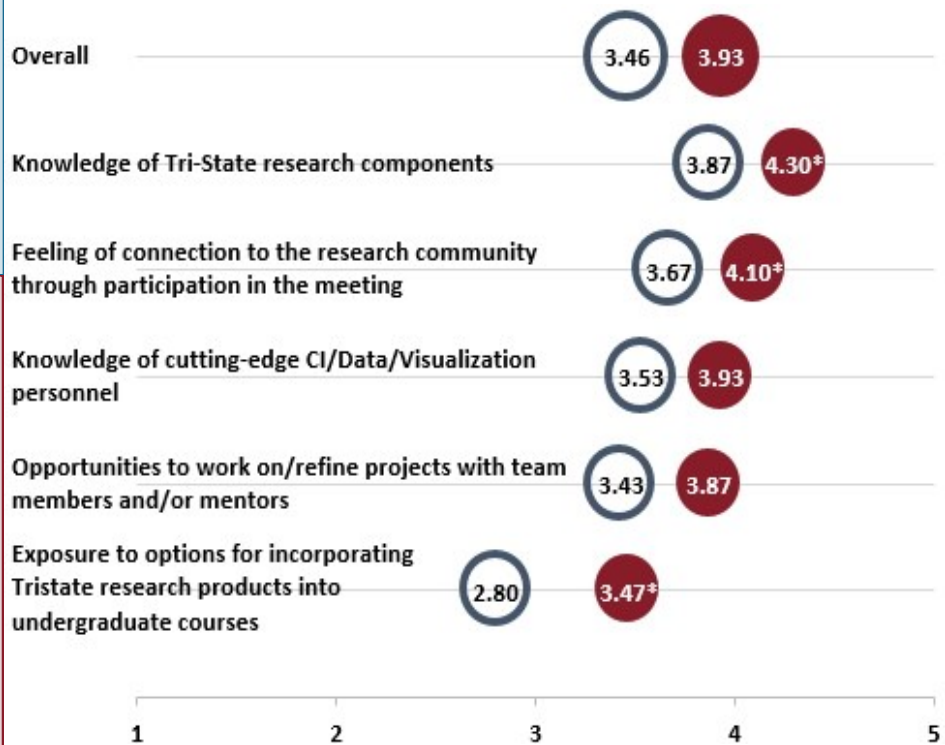
*“Capstone planning and how various aspects are coming together to a meaningful conclusion as we approach the end of the project.”*

*“It was nice to see visual representations of the Components’ progress, particularly the visualization capabilities.”*

*“Seeing all the progress that has been made by students (publications, presentations, and theses).”*

### Achievement of Meeting Objectives

Meeting attendees rated their level of knowledge of the Virtual Meeting objectives before and after the meeting using a 5-point Likert scale, with 1= minimal and 5= extensive. Pre and post ratings of objectives are shown in the figure below. Pre-meeting ratings (gray) and post-meeting ratings (red) are shown below.



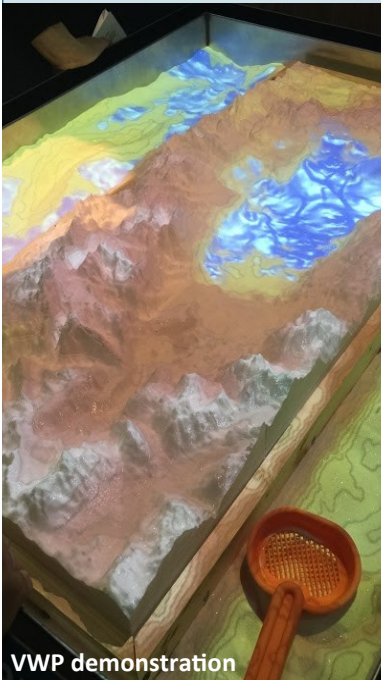
### How can the no-cost-extension be used to solidify the work and knowledge generated by the project?

Begin to consider ways to cement the project’s legacy, such as identifying work plans and sustainability plans that extend beyond the no-cost-extension year.



## Meeting and Capstone course findings

- ◆ Female and American Indian participants were well-represented when compared to 2015 project participants.
- ◆ Hispanic/Latino participants were underrepresented when compared to 2015 project participants.
- ◆ Participants came from the following research areas: watershed science (21%), cyberinfrastructure (40%), and workforce development (21%).
- ◆ After the Capstone Course, participants' knowledge increased in the intended areas of impact from a *little knowledge* (2.56) to *large knowledge* (3.49).
- ◆ After the Annual Meeting, participants' knowledge increased in the intended area of impact from *some knowledge* (3.06) to *large knowledge* (3.92).
- ◆ All knowledge gains in the Capstone Course and Annual Meeting objectives were statistically significant.



## 2016 WC-WAVE MEETING AND CAPSTONE COURSE

The 2016 WC-WAVE Meeting and Capstone Course was organized by project leaders and occurred on May 23-25, 2016 at Incline Village, NV. The event was split into two sessions: the WC-WAVE Tri-State Meeting and the Graduate Student Capstone Course.

### Quick facts about Meeting and Capstone Course attendees

**43**  
Survey respondents

**49%**  
Female

**13%**  
URM

### Meeting and Course Sessions

Participants rated meeting and course sessions on their **usefulness**. Capstone sessions are coded **blue**, Meeting sessions are coded **red**, and overall average **beige**.

Session	Rating
Capstone and meeting average	3.99
WC-WAVE Meeting session average	3.95
Reception/Poster session	4.38
UVMN demonstrations	4.14
Breakout sessions by teams	4.13
Capstone report	4.06
Proposal and publication informal groups	4.04
WC-WAVE highlights	4.00
Sustainability report	3.71
Evaluation presentation	3.70
Welcome and overview	3.70
Progress reports/NCE plans	3.69
Capstone Course session average	4.03
UVMN teaching exercise	4.40
UVMN field experience	4.35
Hydrology 101	4.33
UVMN lesson planning	4.08
Practice team presentations	3.96
Introduction and capstone overview	3.92
PRMS/Model run	3.79
Model calibration	3.71
Intro to PRMS	3.68

"Not sure of the need to repeat project goals at this point, for example. Without funds or a student involved in the NCE year, I'm unsure how the plans will be relevant to me."

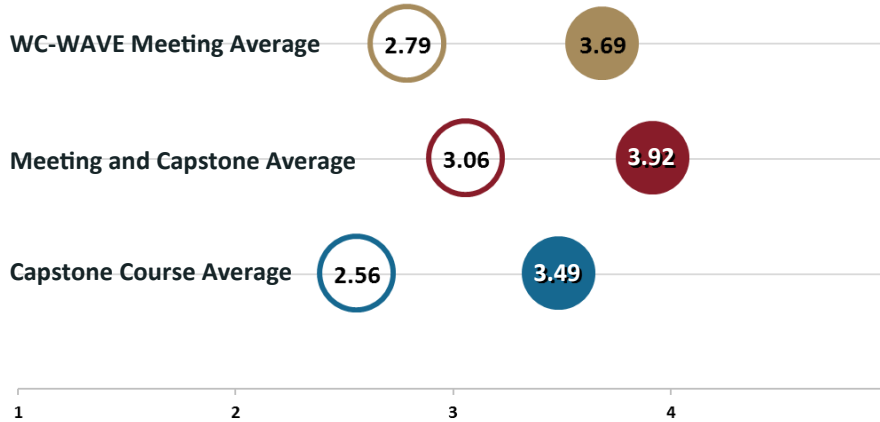
"There was not enough time provided to plan a lesson that was structured. I feel like this would have been more beneficial to students if we had more time to plan a more in depth lesson and be more organized."

"We gave each other very informal feedback on the process while we were still working with the models. I don't know that this needed to be done, but to be useful, maybe more of a roundtable discussion about what we did and what did or didn't work."

# 2016 WC-WAVE MEETING AND CAPSTONE COURSE

## Meeting and Course Objectives

The overall average is coded **beige**, WC-WAVE Meeting objectives are coded **red**, and Capstone objectives are coded **blue**.



Objectives with largest gains	
<b>WC-WAVE meeting</b>	Exposure to Tri-State research products developed for undergraduate courses.
<b>Capstone Course</b>	Understanding of the physical principles governing the flux of water through watersheds from snow accumulation to streamflow.

### How will attendees use what they have learned?

*"...learning how to collect watershed data, evaluate and analyze that data using proper software to predict changes due to climate change is knowledge that can be applicable in any natural resource field."*

*"My understanding of modeling has been enhanced and also my understanding of hydrologic processes. I will definitely use that in my program development and teaching."*

*"Learning about the needs of the scientists who will be using VWP will allow me to design a more accessible interface..."*

*"Continue to work on ways to teach STEM to undergraduate non-science majors that are effective for diverse groups of students."*

## OVERALL FINDINGS & RECOMMENDATIONS

Findings	
<b>Demographics</b> <ul style="list-style-type: none"> <li>American Indian participants were well-represented.</li> <li>Hispanic/Latino participants were underrepresented.</li> <li>Females were well-represented.</li> <li>African American participants were not present at the Virtual Meeting and on par in representation in the Capstone Course/Annual Meeting, compared to project participants.</li> </ul> <p><b>Note:</b> all comparisons described were compared against 2015 project participants.</p>	
<b>Program usefulness</b> <ul style="list-style-type: none"> <li>Overall, participants rated meetings logics high (average rating of 4.48).</li> <li>On average, participants described program activities from this quarter as useful, with the majority of participants rating activities as <i>very</i> or <i>extremely useful</i>.</li> </ul>	
<b>Program objectives and impact</b> <ul style="list-style-type: none"> <li>86% of all activity objectives achieved statistically significant gains from pre- to post-activity.</li> <li>All activities this quarter were successful in achieving gains towards their intended impact, with means averaging 3.03 (pre-activity) to 3.78 (post-activity).</li> </ul>	
Recommendations	What's Next:
As the project comes to a close, project leaders should begin to critically assess what will be the <i>legacy</i> of the project (i.e. what existing programs should be continued in their current form, modified, or scaled-up) and how this legacy will be sustained. This type of thinking and planning should be incorporated into the no-cost-extension year and sustainability plans.	The External Evaluator's final report will include an analysis of the Baseline and Post survey responses, which will help to illuminate project participant growth (i.e. awareness and knowledge of project research areas and project activities) over the course of the project. Additionally, a detailed analysis of the Program Sustainability Assessment Tool (PSAT) will be included, which will provide concrete recommendations for the WC-WAVE project moving into its no-cost-extension year.



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