



Evaluation of the Idaho, Nevada, and New Mexico NSF EPSCoR Track 2 Project

Q2 Formative Report
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Prepared for:

Gayle Dana, Ph.D.
Project Director
Nevada NSF EPSCoR
Desert Research Institute
2215 Raggio Parkway
Reno, Nevada 89512

Peter Goodwin, Ph.D.
Project Director
Idaho NSF EPSCoR
University of Idaho
322 E. Front Street, Suite 340
Boise, ID 83702

Bill Michener, Ph.D.
Project Director
New Mexico NSF EPSCoR
University of New Mexico
Albuquerque, NM 87131

Prepared by

Lisa Kohne, Ed.D.
SmartStart Educational Consulting Services
4000 Barranca Pkwy
Irvine, CA 92604
Phone: 714.296.3440

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Section 1. Executive Summary

1.1 Overview

From March 2011 to May 2011, SmartStart Educational Consulting Services conducted a formative evaluation of the NSF Tri-state EPSCoR project. The focus of this quarter's evaluation is to identify activities that are being conducted and to assess the quality of those activities and the evaluation forms that are being used to evaluate them. The evaluation will also progress towards assessment of impact on project participants based on project goals. The primary goal and three objectives of the Track 2 EPSCoR project are:

Project Goal - Knowledge transfer

- Objective 1 - Connectivity
- Objective 2 - Interoperability
- Objective 3 - Cyberlearning

The following EPSCoR activities were conducted between September 1, 2010 and May 20, 2011. Evaluation results and/or evaluation forms of these project components are included in this Quarter 2 report:

- Tri-State Consortium Annual Meeting and Workshops
- CI Training Opportunities
- New Mexico Education Materials Development
- New Mexico Supercomputing Challenge
- New Mexico GUTS
- Incorporate recommendations from EAC report into evaluation plan
- Develop Data Portal survey
- Develop Technical Assistance Workshop and Proposals survey

1.2 Findings

The EPSCoR Track 2 project has made tremendous progress during the past two years. Tri-state consortium meeting attendance has almost doubled from the first to the third meeting. Almost all meeting activities received good or excellent ratings. Eighty-three percent of participants said the meeting was better than average or among the best. Eighty-eight percent are likely to highly likely to use the information presented. Fifty-two percent have initiated new collaborations. Ten faculty/graduate students attended CI training opportunities. They said the CI training opportunities have been very useful to increase their scientific literacy, enhance ability to conduct research and increase climate change awareness and skills. The New Mexico education materials development is progressing strongly. The SCC and GUTS programs are expansive in their outreach to middle and high school teachers and students. The EAC commended the Track 2 project in its establishment of Innovation Working Groups and a process for soliciting and evaluating proposals.

The evaluator made specific recommendations pertaining to the tri-state meeting, CI Training opportunities, New Mexico education materials development, New Mexico Supercomputing Challenge, and New Mexico GUTS programs. Share recommendations with individuals in

charge of the activities and consider implementing them to improve future meetings and programs.

The majority of tri-state meeting attendees are male (65%). Only 12% of the people who completed the tri-state meeting evaluation form are underrepresented minorities. In addition, no females have attended CI training opportunities and only two out of 10 are underrepresented minorities. Project and program directors and coordinators at all levels need to actively recruit and encourage females and underrepresented minorities to get involved in the various aspects of this EPSCoR project.

The EPSCoR Track 2 project and state-level programs need to establish metrics to assess standardized demographic information, impact of participation, and value-added benefits. To address this deficiency, the evaluator will develop and conduct an annual post-survey to measure impacts related to achievement of project goals, value-added impacts and outcomes that can be attributed to new CI capabilities of connectivity and interoperability, and will conduct focus groups and interviews. The evaluator will also conduct a qualitative analysis of post-survey, focus group, and interview data to identify themes, create an annual videotape of interviews and testimonials and revise or develop evaluation forms for project activities.



Western Consortium of Idaho, Nevada, and New Mexico

Section 2. Introduction

2.1 Background

Idaho, Nevada, and New Mexico NSF EPSCoR joined programs forming a consortium of EPSCoR states with similar research agendas related to climate change and water resources. The consortium model significantly increases opportunities for scientific collaboration and enhances each state's ability to secure competitive funding and tackle complex climate change research agendas. Program Directors, scientists and educators from the three states met in New Mexico, November, 2008 and Idaho, December, 2009, to create a coordinated Cyberinfrastructure (CI) research and development plan to serve both as a platform for future climate change research collaborations and the foundation for the EPSCoR NSF Track 2 RII.

The primary goal and three objectives of the Track 2 EPSCoR project are:

Project Goal - Knowledge transfer

The Track 2 project will promote knowledge transfer to scientists, educators, students, and citizens within and beyond the Consortium by enhancing state CI, and to enable the community science that is required to address regional to global scientific and societal challenges.

Objective 1 - Connectivity

Significant effort will focus on promoting communication and collaboration by improving connectivity infrastructure within the Consortium. Proposed and future Consortium efforts related to improving research competitiveness, STEM education, and economic development rely on this basic infrastructure.

Objective 2 - Interoperability

The Consortium will promote discovery by supporting community-based climate change science through enhanced interoperability between models and other software components, improved access to and usability of Consortium data products through the adoption of standards-based data management and access models, and new data assimilation, analysis, and visualization capabilities.

Objective 3 - Cyberlearning

The Consortium will enhance learning by focusing particularly on graduate student and postdoctoral researcher development; extending cyberenabled science education into middle and high schools and extracurricular programs; and improving outreach to business and industry

2.2 Quarter 2 Evaluation Components

The following Track 2 EPSCoR activities were conducted during Quarter 2. Evaluation results and/or evaluation forms of these project components are included in this Quarter 2 report:

Tri-State Consortium Annual Meeting and Workshops

- CI Training Opportunities
- New Mexico Education Materials Development
- New Mexico Supercomputing Challenge
- New Mexico GUTS
- Incorporate recommendations from EAC report into evaluation plan
- Develop Data Portal survey
- Develop Technical Assistance Workshop and Proposals survey

Section 3. Evaluation Findings

3.1 Tri-State Consortium annual meeting and workshops Background

The three member states of the EPSCoR Tri-State Western Consortium held their first joint meeting, *Building Regional Collaborations*, in Boise, Idaho, on March 30 – April 1, 2009. The overarching goal for the meeting was to make concrete progress toward future collaborations.

The second annual meeting, *Collaborative and Interdisciplinary Climate Change Science*, was held in Incline Village, Nevada on April 6-8, 2010. The primary goals of the meeting were to:

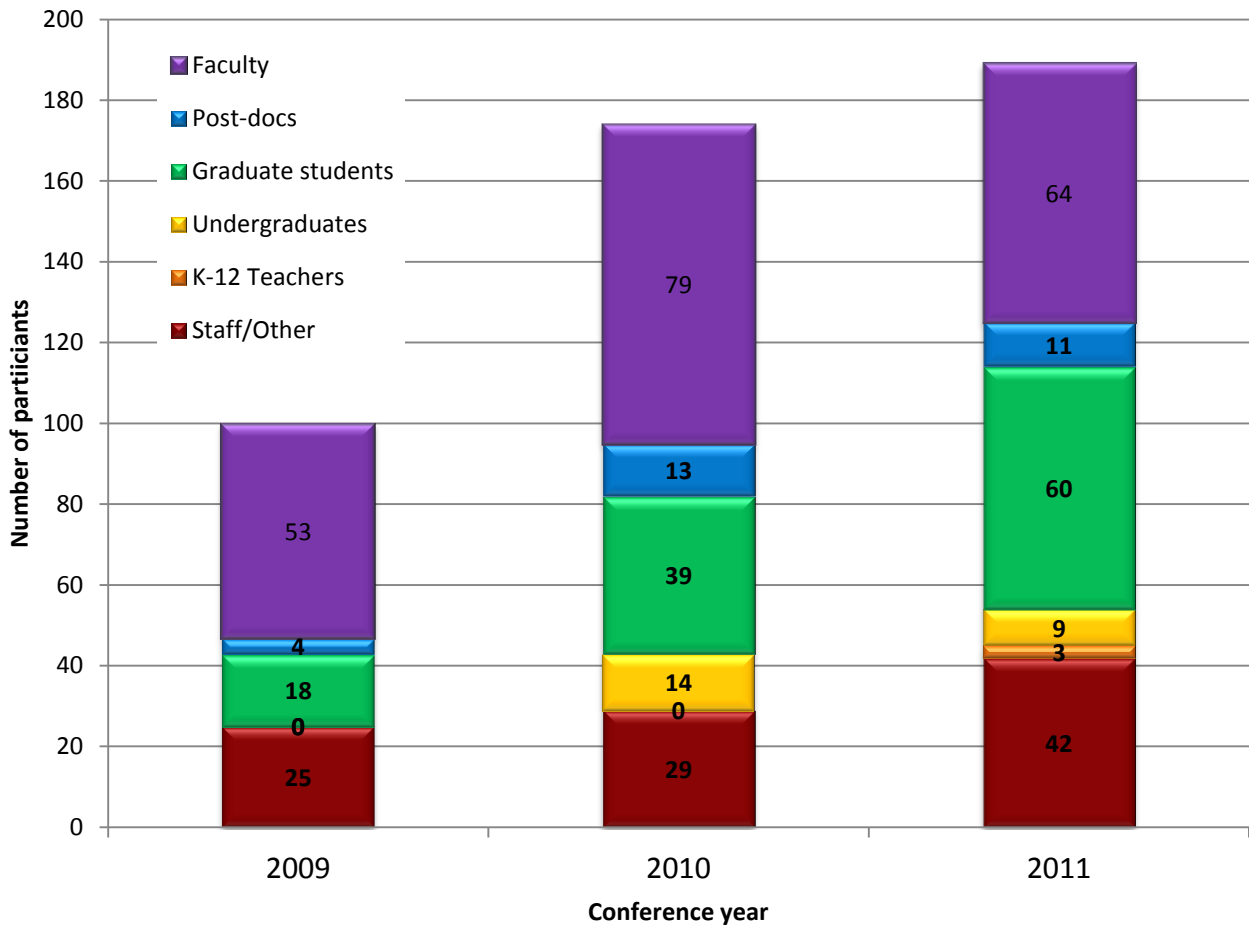
- Advance understanding of climate change and its impact on the western U.S. by leveraging resources, data sharing, and data management in ID, NV, and NM.
- Develop joint research, education, and outreach capacity in the broader region that will lead to development of a virtual center for regional climate change research, education, and outreach.

The third annual meeting, *Connecting CI & Diversity Working Groups to Research & Education*, was held in Santa Ana Pueblo, New Mexico April 6-8, 2011. The primary goals of the meeting were to build upon the previous goals of the second annual meeting outlined above, as well as to:

- Build upon and extend the collaborations that have been established between researchers across institutions and disciplines throughout the Western Consortium.
- Broaden the collaborative partnerships to be more inclusive of those who will ultimately use the results of the climate research to manage resources in the region. In addition, the meeting aims to provide a venue for further integration of cyberinfrastructure (CI), research, and education as well as continuing to work towards achieving the Consortium's goals for increasing diversity.
- Identify "next steps" in research, CI, education, and diversity efforts across the Western Consortium.
- Form partnerships to develop joint research, education, and policy efforts across the Western Consortium.

Figure 1 shows a comparison of meeting participation at the three Tri-state Consortiums. Meeting attendance has almost doubled from the first to the third meeting. One hundred people attended in 2009, 174 in 2010 and 188 in 2011. The evaluator was unable to compare growth in diversity of gender and ethnicity of meeting attendees because these items were not tracked for meeting attendees.

Figure 1. Tri-state Consortium attendance



Participants of the third annual meeting

One hundred and eighty-eight people attended the third annual meeting. Ninety-seven (51.6%) people completed the online survey. It is interesting that two-thirds of attendees are male yet only one-third of the survey respondents are male. Ethnicity of attendees is unknown because ethnicity was not requested on the registration form. Attendees are almost equally divided between the three states and come from a variety of location within the states. One-third of attendees are faculty, one-third are graduate students and one-third are other. The demographic description of meeting attendees and survey respondents is listed in Figure 2.

Figure 2. Demographic characteristics of conference attendees

		Tri-state meeting attendees (n=188)		Survey respondents (n =97)	
Attendance each day	Wednesday			66	66%
	Thursday			79	79%
	Friday			59	60%
States	Idaho	52	28%	24	25%
	Nevada	59	31%	31	32%
	New Mexico	70	37%	27	28%
	Others	7	4%	-	-
	Did not respond	-	-	15	16%
Gender	Male	122	65%	32	33%
	Female	66	35%	51	53%
	Did not respond	-	-	14	14%
Ethnicity	American Indian			1	1%
	Asian			8	8%
	Hispanic			11	11%
	Caucasian			54	56%
	No response			23	24%
Position	Faculty	64	34%	24	25%
	Graduate student	60	32%	24	25%
	Post-doc	11	6%	7	7%
	Administrator	-	-	9	9%
	Administrative staff	18	10%	5	5%
	K-12 Teacher	3	2%	1	1%
	Programmer	-	-	2	2%
	Undergraduate	9	5%	4	4%
	Other	21	12%	3	3%
	Did not respond	2	1%	-	-
Institution	Boise State University	10	5%	5	5%
	Desert Research Institute	17	9%	11	11%
	EPSCorR State Office ID	4	2%	4	4%
	EPSCorR State Office NM	3	2%	2	2%
	EPSCorR State Office NV	2	1%	2	2%
	Idaho State University	11	6%	2	2%
	New Mexico Highlands	4	4%	1	1%
	New Mexico Museum	1	<1%	1	1%
	NM State University University	10	5%	4	4%
	New Mexico Tech	8	4%	12	12%
	University of Idaho	23	12%	12	12%
	University of New Mexico	22	12%	4	4%
	University of Nevada, Las Vegas	25	13%	6	6%
	University of Nevada, Reno	14	7%	13	13%
	Other	34	18%	7	7%

Findings

Usefulness of Tri-state Consortium Components

On the tri-state conference evaluation, respondents rated the quality and usefulness of Tri-state consortium components on a Likert scale from “1=poor” to “5=excellent”. Means can be considered to trend towards positive or negative based on the following scale:

Excellent	4.21 – 5.00
Good	3.41 – 4.20
Average	2.61 – 3.40
Below average	1.81 – 2.60
Poor	1.00 – 1.80

Day 1

Survey respondents rated the usefulness of Day 1 Tri-State Consortium components. The mean ratings and comments regarding each component are presented in Figure 3. All Day 1 components received overall ratings of *good* or *excellent*. The *Climate Change and Climate Modeling* Workshop was rated separately with additional categories. Those ratings and comments are included in the comments column. General comments for Day 1 activities follow the figure.

Figure 3. Ratings of quality and usefulness of Day 1 Tri-State Consortium components

Consortium Component	Rating	Comments
Concurrent Sessions: 8:30am – 11:30am		
Cyberinfrastructure (CI) Working Group (Benedict, Ames, Dascalu)	4.12	<ul style="list-style-type: none"> • <i>What did I like the most? In the first CI working group session there was a good sharing of what each of the different states were doing and how they were going about it so that we had an opportunity to learn from each other. That was valuable.</i> • <i>I liked the most the CI Working Group session. Did not attend the other two sessions.</i>
Diversity Working Group (Casella, Daniel, Penney)	4.07	<ul style="list-style-type: none"> • <i>Most: Diversity Working Group</i> • <i>Also the Diversity Working Group was very productive and had some new faces to the group. It would be great to see a presentation on how diversity is incorporated into an EPSCoR grant for all the attendees of the conference to participate in. If this is done then it should be at a main session and not at the end when some participants have already left.</i> • <i>I liked the Diversity working group because it provided the opportunity for tri-state leadership to reconnect and re-evaluate the strategies and activities within the Tri-State Strategic Plan and to discuss our plan for integration amongst existing and future EPSCoR project.</i>
Climate Change and Climate Modeling Workshop (Koracin)	3.78	<p>Workshop content—2.27 Workshop pace—2.64 Overall Quality—3.45 Likelihood of Recommendation—3.32</p> <ul style="list-style-type: none"> • <i>The climate workshop was good, but geared more towards a relatively nascent audience. I highly recommend it to anyone with little knowledge of climate science, but would not recommend it for people looking for a higher level of discussion.</i> • <i>Liked most: Background information on climate modeling.</i> • <i>I thought we would get a tutorial in how to use EdGCM to develop new scenarios. It seems like EdGCM is a great program with lots of applications but almost no time was spent on this. We could have split into groups and each group come up with a lesson plan, or a new scenario to run. Next time: less talking, more doing.</i>

Consortium Component	Rating	Comments
Luncheon Talk		
Standards and Sharing in Mature Organizations (Ted Habermann, NOAA's National Geophysical Data Center)	3.92	<ul style="list-style-type: none"> The lunch speaker wasn't really appropriate for the audience. The Diversity Working Group meeting was unfocused and the summary given on Friday didn't really reflect the discussion that took place in the session. Holding this session on Wednesday and along with other concurrent sessions meant that the scientists could avoid diversity. The session I liked least was the lunch key note. I didn't feel that there should be key note speakers during lunch. Lunch is good for networking. Least: luncheon presentation
Concurrent Sessions: 1:00pm – 2:30pm		
Cyberinfrastructure (CI) and Research (Benedict, Ames, Dascalu)	3.80	<ul style="list-style-type: none"> No.1 : Cyberinfrastructure (CI) and Research The Cyberinfrastructure (CI) and Research workshop scope was too broad/ general
Enacting Cyberlearning with Analysis and Visualization of Data (Crippen)	4.30	<ul style="list-style-type: none"> The cyberlearning/viz session had a lot of great discussion and it was helpful to hear about people's experiences in this area No.2 : Enacting Cyberlearning with Analysis and Visualization of Data
Concurrent Sessions: 3:00pm – 4:30pm		
Data Portal for Research and Education Users/CI Policy (Benedict, Ames, Dascalu)	3.95	<ul style="list-style-type: none"> I liked the demos in the 3rd CI session the best. We should encourage those guys to do a lot more live demos of the tools and web sites they are developing. I liked the Data Portal for Research and Education Users/CI Policy workshop most, especially the Inside Idaho portal demonstration.
Connecting Education & Outreach with Research (Penney, Casella)	4.04	

Day 1 general positive comments and most-liked aspects:

- All sessions were very informative and engaging.
- I really learned a lot in the first day's cyberinfrastructure sessions
- I liked having the time to interact with colleagues in an informal setting.
- Field excursions
- Establishing personal connections with other participants
- I work for Nevada CI, and all the CI sessions I attended were very useful and insightful. It was great opportunities to learn what and how other researchers are doing, and discuss how we can improve our work. I don't really have anything that I didn't like about the sessions I've attended.
- Excellent collaboration across all states and outside participants in the education & outreach session!
- I was on the hike from 8:00am to noon (tent rock). I found everything at this conference valuable to me and my work.
- Field trip to Jemez terrific.
- Carol Moore's presentation about the water cycle was my fav because it showed the feedback cycle so beautifully. There was probably something in every session that I will take home, including from my least favorite. And it turns out I couldn't find a least favorite. It was terrific to see diversity emphasis and the "starting early" focus.
- The CI discussions throughout the day were very informative and served to bring many of the project leadership up-to-speed on both their local and the tri-state developments, differences, and collaborative efforts.
- Great organization. Excellent coffee.

Day 1 general comments about least-liked aspects and suggestions for improvement:

- The "least" favorable part of this conference was my limitation to only be present at one location at a time.
- Not enough time to interact with colleagues; should not have lunch time speakers
- Pre-workshop data preparation but little actual model use time. This could be 2 days, one for understanding the modeling effort and another for actually trying to use the model.
- The cyber group is talking to themselves!! In the afternoon session there should have been a concerted effort to involve discipline scientists - but there were almost none present.
- It would have been great if "excursions" were not scheduled during this time. Some participants did want to attend Wednesday sessions but were made to feel that those groups were private sessions and so did not attend. Also - I think the excursions could have either been offered when there was NOT a session in progress or offered at other times as well so that Wednesday presenters could've taken part.
- I had real issues with the sessions I was in because they were very poorly facilitated. In one case, the organizer spoke for the first hour, then took a few scattered questions and proceeded to answer them at such great length as to waste the entire time. These meetings are very expensive to put together, and to have so many people together and not have well organized facilitated discussion on relevant topics is a real waste. In the future I recommend that we have a clear distinction between sessions that are focused on sharing through formal presentations, and others that are small working groups around focused topics that are either facilitated, or kept open for actually solving a particular shared problem. The sessions I was in for discussion were too large and diffuse with a few people controlling the conversation and very little valuable exchange.
- Snacks at end of the day not sufficient for dinner, so I had a meal in the restaurant.

Day 2

Survey respondents rated the quality and usefulness of Day 2 Tri-State Consortium components. The mean ratings and comments regarding each component are presented in Figure 4. Most Day 2 components received overall ratings of *good* or *excellent*. One session, *Connecting Agencies and Researchers* was rated as below average. The *HIS Workshop* was rated separately with additional categories. Those ratings and comments are included in the comments column. General comments for Day 2 activities follow Figure 3.

Figure 4. Ratings of quality and usefulness of Day 2 Tri-State Consortium components

Consortium Component	Rating	Comments
Concurrent Sessions: 8:45am – 11:45am		
Climate Drivers & Landscape Response (Pierce, Crosby, Galewsky, Biondi)	4.14	<ul style="list-style-type: none"> • I liked the Climate Drivers & Landscape Response session the most. As a land manager it was very useful to hear about the landscape response to climate issue. • Climate drivers was the best. • I liked the climate drivers session the best, it was in the first section of sessions and all participants were fresh and eager to be involved in the discussion. • This discussion ended up focusing on education, communications and outreach, which was really good. I do have a concern that the tri-states, while they are learning what's happening in the other states about education, communications and outreach (ECO), but may not be aware of potentially complementary and synergistic ECO programs elsewhere. The tri-states should have representation at the tri-agency (NOAA, NASA, NSF) climate education conference at GMU: • I disliked climate drivers and landscape response because i didn't understand • Best session was the Climate Drivers & Landscape Response - this was closest to my scientific background. Presentations and discussion were excellent

Consortium Component	Rating	Comments
Catchment Science (Wilson)	4.24	<ul style="list-style-type: none"> If I must rank them, Catchment Science the least, although I have no complaints about that session.
Economics of Water and Land Use (Cobourn)	3.90	<ul style="list-style-type: none"> The session on Economics and Water Use was excellent. It did a good job of linking both topics very well. Also, the luncheon session on forest mortality rates was very informative.
HIS Workshop (Ames)	4.36	<p>Workshop content—3.00 Workshop pace—2.88 Overall Quality—4.38 Likelihood of Recommendation—4.38</p> <ul style="list-style-type: none"> I especially liked Dan Ames' session on HIS. Dan Ames and his group did a very good job with his HIS session. HIS seems to be standalone efforts that are not integrated into Epscor efforts. I like HIS most (3) really a good effort to make hydrologic dataset easier. HIS HydroDesktop workshop was truly useful, getting hands-on.
Luncheon Talk		
USGS Forest mortality responses to climate change stresses at regional to global scales (Allen)	4.13	<ul style="list-style-type: none"> The luncheon keynote speaker was great. Craig Allen's keynote was the best because it addressed real issues of landscape change by providing a narrative of mechanisms that could influence future landscape structure and function. These narratives were missing from many of the paleoecology talks. Dr. Allen's keynote was clear and interesting. Glad he was able to join. I did not like the last day keynote - not because the information was not interesting - but because it did not seem to be that relevant.
Concurrent Sessions: 1:45pm – 3:15pm		
Water Quality in Snowmelt dominated Systems: Coupled Hydrology /Biogeochemistry (Gabrielsen, Pullin)	3.95	<ul style="list-style-type: none"> The Water Quality in Snowmelt Dominated Systems: Coupled Hydrology and Biogeochemistry was the least useful. Some presentations were too technical. Least: Water Quality in Snowmelt Dominated Systems: Coupled Hydrology and Biogeochemistry. Moderators did a good job & some of the presentations were fine, others didn't make much sense/were too exacting.
Integrated and Interdisciplinary Modeling (Link)	3.50	<ul style="list-style-type: none"> Least: Integrated and Interdisciplinary Modeling
Strategies for Effective Education & Outreach Activities in Research Projects (Taylor)	3.96	<ul style="list-style-type: none"> Liked the most is Strategies for Effective Education & Outreach Activities in Research Projects Very practical to help thinking about proposal preparation. First presenter was useful and Jacque's offer of PD resources interesting/helpful. Hard to say which I liked the least - maybe the one that was about helping folks think about writing proposals.
Carbon and nitrogen dynamics in semi-arid ecosystems (de Graaff, Feris)	3.80	
Concurrent Sessions: 3:45pm – 5:15pm		
Enabling Climate Change Research: Monitoring Environmental Parameters (Pullin, Gabrielsen)	4.13	<ul style="list-style-type: none"> Most: Enabling Climate Change Research: Monitoring Environmental Parameters Despite knowing practically nothing about construction & application of models going in, I feel like I left knowing at least SOMETHING. I liked the Enabling Climate Change Research session the most I loved enabling climate change research.

Consortium Component	Rating	Comments
Use of Climate Records (Mejia)	4.00	
Climate Change Education (Rudd)	4.17	<ul style="list-style-type: none"> • I enjoyed the variety of programs in the Climate Change Education session. The discussion about determining value of a program based on number of teachers the program reaches was important. Does the metric of number of kids the teacher reaches relevant? Measuring success issues, etc. • Least enjoyed session attended: climate change workshop (sorry to say), although that's not to say it was bad, just that the others were better.
Connecting Agencies and Researchers (Parmenter)	2.00	<ul style="list-style-type: none"> • Connecting agencies with researchers was a total waste. The session organizer brought in people who had little understanding of our project and had a hard time thinking beyond the boundaries of their park or forest. It was informative to learn that agency people have a very limited view of research and that everything you do with them is political. It would have been more beneficial to have participants from each state sharing their strategies for getting their work done with agency people. For example - just set up a room with a discussion topic (working with land managers) and whoever shows up shares. The model followed here was that if you brought in a few 'professionals' then they could share their wisdom. But it didn't happen because if we brought up a problem all they say was- well what we do... and after a bit that is not really very useful. And it was not really discussion and sharing, but some expert telling you what they do, whether it was relevant or not. • The last presentation was too much like an educator-conference session, though the opportunity for people to talk was ok because it was an opportunity to hear what our colleagues think are important pieces of PD. • The Connecting Agencies and Researchers session was poor - because at least when I was there, there was a panel and very few other people. Agency people were mostly very restricted in their focus to their piece of land. This is not untypical of such sessions that I have attended in the past.

Day 2 general positive comments and most-liked aspects:

- I liked the outreach sessions the most.
- I really enjoyed the keynotes - especially Monday's.
- Other than poster session needing more space for noise control it was excellent and all poster participants should be congratulated.
- I was particularly pleased with the discussions associated with communicating science to teachers and the public. This is an area where academics can do much better and actually help themselves, as they compete for extramural funding that typically requires education and outreach programs as part of their proposal
- I have a tie for session I like the most... Cyber infrastructure - visualization and analysis of data presented tools for teaching students through model building, graphical representations, as well as resources for data student can engage with. the climate change for non-scientist - I really enjoyed the overview of the 6 Americas perspective of climate change attitudes. The perspective is imperative!
- The popup session was great - primarily because the speakers were limited to 3 minutes. It was probably the most articulate session I visited. In nearly all other cases people droned on for much longer than they should have.
- Best session attended: poster session
- But it was a fine conference. What I liked the very best was that the scientists were cordial and sometime very friendly to the K12 folks. I didn't feel that last year. I liked the pace. And of course great food!
- Wish there were more social science presentations, other than education. Are there social scientists here?
- <http://cires.colorado.edu/blogs/mccaffrey/2011/02/28/getting-to-yes/>

Day 2 general comments about least-liked aspects and suggestions for improvement:

- *I thought that only 1 of 3 presenters I heard gave a strong statement about the significance of their research. In times of budget cuts and calls for needs-informed research, significance must not be assumed. The significance, implications, and broader impact should be briefly but clearly stated and repeated in all talks.*
- *Again, I wanted to be present in more than one at the same time. Not sure how to make that happen.*
- *the poster session was a little bit long*
- *I was a bit surprised over the choice of presentations since some appeared to have nothing to do with ongoing EPSCoR work. So, I learned less about the climate change research going on in NV, ID and NM by investigators funded now under the grants.*
- *Better bandwidth is required for the HIS workshop. Downloading the software for the workshop over the wireless connection provided was very slow (i.e. 1 hour download), making it hard to utilize time well.*

Participants' mean ratings of the quality of the students' poster session are presented in Figure 5. Poster session components were rated *good to excellent*. Comments regarding the poster session are presented below the figure. Respondents made numerous positive comments along with a few suggestions for improvement, which primarily focused on logistics.

Figure 5. Respondents' ratings of quality of students' poster session

Poster Session Component	Rating
Research Quality	4.37
Oral Presentation Quality	4.10
Visual Presentation Quality	4.27
Promoting Critical Dialog	4.16

Comments regarding poster sessions

Presenters' comments:

- *As a presenter, this was one of the best poster sessions I have ever had. The posters presented were interesting, relevant and very diverse. The crowd was very interested, engaged and was not afraid to ask a lot of questions. I appreciated the interaction for the whole of the session and was kept very busy. Thank you*
- *The poster session was fantastic. I enjoyed participating as much as I did presenting.*
- *Great opportunity to advertise my work in my poster and to get feedback from other students and researchers.*
- *It was a wonderful event to participate in.*
- *a good opportunity for discussion with attendees...*
- *Though I didn't get the 3x4 feet board for my poster, staffs were very helpful setting my poster up on the wall. I really appreciate their effort. Also, I really appreciate that they allocate time for us to stand in front of the crowd to have recognitions.*
- *I competed at the poster session, and I talked for two hours. It was great having all this interest in our work, but we needed some rest, at least some water. I think next time, there should be some attention paid to the participants convenience.*
- *So much valuable conversation happens at these sessions; although I wish I would have gotten around to see others' posters. Maybe posters can be assigned a specific judging time, outside of which students are free to peruse other posters, eat, etc.*

Judges' comments:

- *Enjoyed being a judge. Amazing interdisciplinary span of posters.*
- *I had the opportunity to judge 7 posters, talk with many other poster presenters and peruse all posters during a very fruitful two-hour poster session. I was very impressed by the quality of posters and moreso by the way all students I interacted with had firm grasps of their topic areas and were able to convey that to me in a very*

engaging manner. I'm sure that it will not be easy picking a winner in the poster competition with so many excellent presentations.

- *As a judge, I think splitting the posters into groups was a great idea, but I ended up with a number of posters outside my area of expertise while there were a number of posters I would have been more competent to judge. It would be nice if there was a way to match judges to content to have a better judging experience.*
- *Very good participation, very good research presented by students from all three states. I was a judge in the poster competition and I recommend that next time YOU DO NOT overlap the poster session with the social event (refreshments and drinks). I had two judge 7 posters and that took me more than 1h 40 minutes in which I couldn't drink or eat anything (needed to focus on talking with the presenters and reviewing the posters + plus it would have been inappropriate to talk as a judge with the students while eating or drinking). Throughout this, the students' presenters weren't able to comfortably eat or drink anything. When the poster session ended, the food and drinks practically ended as well. There will be no incentive for me to judge posters next time if you'll overlap again the above two events.*

Attendees' comments:

- *Outstanding presentations by the graduate students. This event should be held again.*
- *This was the best part of the conference*
- *The poster session was great. Lots of excited students presenting interesting work.*
- *Really was one of the best poster sessions I've ever been to. It was the perfect size, everyone was very excited, and the research quality was excellent.*
- *Excellent poster session, with many great conversations about research! Would suggest having the food there earlier or longer because so many good discussions left less time to eat before it was gone.*
- *Excellent setup! Best poster session I have seen or attended so far!*
- *Excellent Research*
- *It is difficult to put values on the poster session since it was >40 different individuals. But I was impressed with the level of participation both in terms of the number of students who brought posters as well as the level of involvement with all during the session. I liked having the students give a brief plug for their posters, but we need to work with them to be more effective communicators to a group. Many spoke too quickly, or had not thought through important elements to highlight.*
- *There was great attendance and active participation by both faculty and students*
- *Loved enthusiasm of students and their generous sharing. I loved how crowded the space was. The energy was great. Multiple thanks to the professors who included undergrads.*
- *well organized and coupling with the reception worked quite well*
- *There was a great variety of work from all over, with people who did a FANTASTIC job of presenting it. Some people in particular were really passionate about their work, and that was great to see.*
- *The poster session was fantastic. Well-presented and organized. I was a judge, and I really enjoyed interacting with the students and probing their thinking, experimental design, and understanding of the material.*
- *This was an excellent opportunity for the students to showcase their research as well as to participate in this professional development opportunity.*
- *Exceptional poster session; very dynamic session with posters that were significantly improved over last year's.*
- *While the poster session is a great learning experience for the students, I think it would be more beneficial if the students were able to receive feedback from the judges about their posters and presentations. A couple anonymous constructive statements from each judge about one thing we did well and one thing we need to improve would be great feedback.*
- *A larger room would have made it easier to see all of the posters. While I was not able to view all posters in detail I was truly impressed by the quality of the posters and the enthusiasm of the students.*
- *"room" space busy - but okay. Perhaps allow posters to be viewable over longer period of time - make available electronically?*
- *Just a thought, how about opening the poster session up to teacher research on the implementation and impact of climate change education?*
- *Poster session location and atmosphere was good - but rather crowded. It was difficult to circulate and also to look at the posters*
- *I think students should've received more time during lunch sessions to promote their research. One minute is not enough time.*
- *Very crowded venue that did not allow for time to stop and engage without traffic jam. Was very loud when trying to listen and engage with students.*

- *Oral presentations were too short and not inspiring. Suggest having a short workshop for graduate students on how to do an effective and enthusiastic "elevator talk" to inspire people to come to their poster and talk more to the audience.*
- *It was very difficult to hear the presenters due to all the visiting and networking. It would have been better to have the posters inside the conference room and allow people to network out in the lobby with the food/drinks.*
- *Probably better to use only several evaluators to maintain consistency.*

Day 3

Respondents rated the quality and usefulness of Day 3 Tri-State Consortium components. The mean ratings and comments relevant to each component are presented in Figure 6. Day 3 components were primarily rated as *good to excellent*. One session, the Day 3 Plenary, “*From the digital pueblo to a consortium for Full dome Development Regional Partnerships for Research, Education and Economic Development*” was rated *average*. General comments follow the figure.

Figure 6. Ratings of quality and usefulness of Day 3 Tri-State Consortium components

Consortium Component	Rating	Comments
Morning presentations		
Tri--State Diversity Plan	3.66	
Presentation by NSF EPSCoR: The Perspective on Collaborative and Interdisciplinary Science - Moving Forward	3.46	<ul style="list-style-type: none"> • <i>Least: Because I only attended two sessions, I suppose the Perspective on Collaborative and Interdisciplinary Science was my least favorite by default, though I thought Bill Michener did a great job at summarizing the meeting and providing insight into NSF's agenda (which is much needed as a proposal writer).</i> • <i>Least: Presentation by NSF EPSCoR: The Perspective on Collaborative and Interdisciplinary Science - Moving Forward Boring & not well thought out, but I totally understand that things happen and can mess up even the best laid plans, and I give them great credit for trying to something essentially on the fly.</i>
Concurrent sessions: 10:00am – 11:45am		
Water Resources: State and Change (Heinse, Saito, White)	4.00	<ul style="list-style-type: none"> • <i>I only attended the Water Resources: State and Change session. Most of the presentations were very valuable for a person in my position. The presenters were very knowledgeable on their topics and presented the information well.</i> • <i>Water resources was confusing, and seemed to be lacking focus</i> • <i>It was well organized, highlighted interdisciplinary work going on within the three EPSCoR states, and got people excited about collaborating with climate scientists</i>
Communicating Climate Change Science to Non--Scientists (Everett, Sapunar Jursich)	4.37	<ul style="list-style-type: none"> • <i>climate change was well done, helpful, and I liked it</i> • <i>I really liked the presentation about the climate model downscaling. There's lot of potential of applying a similar approach in my research area.</i> • <i>Eileen and Jessica led a very thought-provoking session on communicating science with great speakers and lots of good Q&A.</i> • <i>Specifically the overview of the 6 Americas. Outstanding presentation that was strongly tied to decision-making in the informal setting.</i> • <i>Great diversity of speakers & topics, relevant, relatable & understandable. John Fleck was especially great to have with us.</i> • <i>I really enjoyed this session as it is a skill that we all must work on to help advance the general public's understanding of climate change, it's impacts, and possible solutions to minimize our impact as a people.</i> • <i>One of the best for variety and entertainment (though I was unimpressed by the simulation - good idea but seemed like old format and clearly both the folks who asked for the sim and the folks implementing were new to that kind of collaboration).</i> • <i>I liked the session communicating climate change to non-scientists,</i>

Consortium Component	Rating	Comments
Afternoon sessions and synthesis: 1:00pm – 4:00pm		
Plenary: From the Digital Pueblo to a Consortium for Fulldome Development Regional Partnerships for Research, Education and Economic Development (Angel)	3.29	<ul style="list-style-type: none"> • <i>Best-liked - plenary talk (2)</i> • <i>Neat discussion on Ed Angel's visualization research</i> • <i>Dr. Angel's talk was quite interesting, on the interdisciplinary effort to bind art and computer science together, and also the development of Fulldome. It is great to see the collaboration is moving forward, and see the tremendous efforts to improve each other. I didn't really have anything that I didn't like about the sessions I've attended.</i> • <i>There were many compelling aspects of the plenary talk, and the work appeared to be particularly challenging computationally and in other ways; however, the talk could have been made more applicable to the interests of the broad tri-state audience. For example, modifying Wii components for visualization in a dome is cool, but the point of showing this was less apparent.</i> • <i>Least-liked: the Plenary</i> • <i>The topic the speaker had after lunchtime (viewing dome) was not too relevant to the theme of the conference.</i> • <i>I am filling this in while Ed Angel is talking. I am sorry, but this talk seems entirely irrelevant, and the speaker is boring - appears to be talking about his achievements with no real purpose. This was a total waste of time. I think this meeting was one day too long. I would rather have had the opportunity to see some things that NM has built. In Idaho, if we can see some of their work that could be very valuable - although I don;t know how we achieve that if we are at Sun Valley!</i> • <i>I least enjoyed the full dome presentation. It seemed like it was primarily filler.</i> • <i>I disliked the plenary session due to the fact that it was not relevant.</i>
Meeting Synthesis Moderator: Michener	3.83	
Next Steps for Development of Collaboration (Michener, Dana, Goodwin)	3.59	<ul style="list-style-type: none"> • <i>I like Next Steps for Further Development of Consortium Collaboration</i> • <i>I also enjoyed the Next Step's Session.</i>

Day 3 general positive comments most-liked components

- *I'm "new" to this venue - all was relevant and excellently done. Very much a community of science!!! Thanks you.*
- *I liked the time set aside to award the graduate students for the winning poster sessions.*
- *I enjoyed the morning session and early re-cap. Insight into NSF was particularly interesting.*
- *I only attended number 18 [concurrent sessions 10am] above, and liked it.*
- *The timing of the end of conference was good, allowing people to travel back to their home states or view some of the sites in the area.*
- *The AM Diversity Plan presentation was helpful in bringing awareness to the goal of broadening participation in STEM for URM's and women.*

Day 3 general comments about least-liked aspects and suggestions for improvement:

- *The meeting sort of petered out on Friday, leaving many regretting that they stayed for the 3rd day.*
- *As noted earlier I think the Diversity presentation should be moved up earlier.*
- *It was a bit disappointing that Friday's schedule was shortened. It would have been great to walk away with some real action items for initiating more consortium collaboration.*
- *Something I ate did not agree with me, and that was my least favorite event of the day.*

General Tri-State consortium meeting ratings and comments

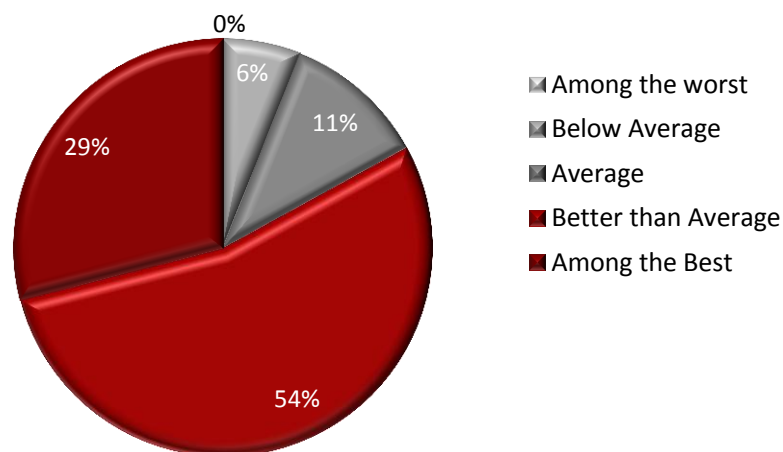
Respondents' ratings of individual aspects of this meeting are presented in Figures 7. and were also asked to rate this meeting as compared with other meeting attended in the past. Respondents rated the nine components primarily as *very good* or *excellent*.

Figure 7. Respondents' ratings of components of this meeting



Respondents' ratings of this meeting as compared with other meetings attended in the past are presented in Figure 8. Eighty-three percent of respondents rated the meeting as *better than average* or *among the best*.

Figure 8. Respondents' ratings of this meeting as compared with other meetings attended



Participants commented on what they found most and least useful, and provided suggestions for improvement. Overall, collaborating and networking was viewed as the most valuable part of this conference.

Respondents' comments regarding least useful components of the meeting

Collaborations and networking:

- *Collaborations. Being part of a group that is doing work that matters was a "good feeling" boost. Lots of good new references, ideas, things to follow up on (like Carole's water cycle video). I thought the emphasis on diversity was nicely tuned - I was really irritated last year by the negative attitude towards rural students as URM. I thought Bill's remarks in the morning about what being a scientist were wonderful and I will be sharing them with our community. "A scientist is inquisitive, likes the work, pushes boundaries, and works in an interdisciplinary team". Think globally, act scientifically, connect locally to adapt and mitigate.*
- *Interdisciplinary collaboration, face-to-face meetings, strengthening research and development ties among the 3 states.*
- *The interaction of all of the different institutions, topics and people was very well done. For the most part, sessions were diverse, talks were applicable to research being done and people were friendly and willing to discuss research-related issues.*
- *Collaboration among the three states was exciting to see. The momentum of three years of meetings and participation throughout the year was evident. I had many people come up to me and tell me what a great meeting it was. One faculty researcher told me it was excellent to have these collaborations because now when he attends other events they all have a great connection.*
- *Seeing what researchers in other states were doing.*
- *The spirit of collaboration and cohesiveness between the participants.*
- *Meeting with scientists from other states*
- *Workshops and inter-state collaboration and networking*
- *Learning about research at other institutions and within our research group.*
- *Opportunities to network and wide array of expertise...*
- *Meeting other people & seeing what they do, learning what kinds of research is 'out there' and what kinds of opportunities are available to me to pursue as a new grad student*
- *Many opportunities to meet a diverse group of folks - students, PI's, administrators.*
- *Collaborating with colleagues and sharing new ideas for instrumentation / site networking infrastructure.*
- *Getting to talk with people from my own state - coordinating efforts and sharing resources.*
- *The opportunity to collaborate personally with other tri-state and intra-state project members. It was especially helpful to compare our advances and the echnologies we've used.*
- *Meeting with researchers from other institutions. This is a good way to start collaboration.*
- *Opportunities to talk with colleagues and collaborators. Opportunity to learn about the research of faculty and students within the Tri-State*
- *Meeting other graduate students and professors.*
- *A chance to meet people who are involved with integrating climate and water related research with education, communications and outreach in the intermountain West.*
- *Networking and learning about the research going on in other states.*
- *Opportunity to discuss projects and issues with colleagues from the tri-state region*
- *Opportunity to engage in tracks outside of cybertechnology*
- *Initiating collaborations*
- *Being with the people from the other states - talking over meals and during breaks.*
- *Finding out what people in ID and NM are doing Making connections with people from all three states. Evening snacks in the casual setting really seemed to encourage interactions among attendees. Well-coordinated.*
- *Networking*
- *Connections*
- *Networking tied to diversity*
- *New connections and the HIS workshop.*
- *Interaction with people I hadn't met before*

- Overall, a well-organized and interesting meeting. The poster session was excellent and the breaks fostered collaboration. Nice job!
- Face-to-face meeting with colleagues and students
- I found that everyone with whom I engaged was mutually interested in engaging.
- Learning about the different research projects happening at other universities in the area.

Learning from experts

- It is THE place to go to hear from the experts in hydrology and water management, economics, politics and sustainability.
- The rich resources and willingness of individuals to share.
- Learning about outreach and education
- I got useful feedback from users about my software. I got the poster prize.

Workshops and poster session

- Session on climate drivers and landscape response.
- I was most interested in the cyberinfrastructure oriented parts of the meetings. I felt that those were well done and very well organized.
- Discussion on CI collaboration. It was very useful to see what others have done, in which we can improve our effort, and contribute to their work as well.
- The information and the topics presented about EOD.
- Seeing how climate data was being used and developed in other places
- Plenary talks, networking, and half of the workshops.
- Climate modeling workshop
- HIS workshop.
- Workshops(2)
- The opportunity to go to sessions I wouldn't normally visit at National meetings (e.g. K-12 education & outreach). AND the pop-ups. Great idea. Gives students a little experience of talking on their research, but also prevents them from being "unknowns at the meeting" until the poster session.
- learning more about what is going on in the other states
- I thought that the poster session was one of the best I ever attended.
- It gave me practice presenting. I enjoyed meeting new people.

Respondents' comments regarding least useful components of the meeting:

- It was difficult to determine the content of sessions by their title and descriptions, I had to go to the session to find out what it was really about and if I wanted to stay or not. I am not sure if there is a good way around this or not. The abstracts for some of the sessions were helpful in this regard.
- Main sessions that were only focused on research. It would have helped to have both research and education/outreach/diversity focus.
- The networking breaks were a little short but they needed to be in order to have all of the sessions. I felt that having speakers during lunch was a little distracting with people clanging dishes, getting up to get food, etc. I ended up paying a lot more attention to the amazing food than the speakers.
- Key notes at lunch
- Some luncheon presentations
- The diversity programming must be unavoidable by scientists. If you are going to hold a third day, make it more useful.
- The education portion, but only because education is not currently part of my job (not that education is not important by any means!). Everything was very useful.
- Crowded seating in the breakout session rooms; I really dislike it when presenters simply read their PowerPoint slides; we can all read! Tell us something that is not on the screen. Some speakers present slides that are incomprehensible (e.g., due to too much information, small font, unreadable graphs, etc). Some of them address the screen rather than the audience. The speakers are supposed to be professionals -- they should know how to give a talk. Nevertheless, maybe a tip sheet would be helpful.
- Not enough time was allowed for interaction with colleagues.
- Overlapping judging posters with evening social event (eating & drinking). They really should be separated. Perhaps the audience not involved in judging posters or present posters liked the combination, but it was really uncomfortable for judges and student presenters.

- *The lack of a paper schedule (even a single page printed duplex) was often an obstacle in planning and figuring out where I wanted to be.*
- *Meeting so many people face to face that were working on similar or related projects.*
- *The location.*
- *The synthesis and next steps.*
- *I wish there were a way to avoid so many desirable concurrent sessions.*
- *Friday's agenda sort of floundered but most of the causes of this were out of the control of the organizers. Perhaps in the future a "Plan B" could be formulated if there is any potential for last minute significant agenda cancellations.*
- *Would prefer availability of printed agenda each day*
- *Management presentation on Wednesday*
- *Sometimes I couldn't find a session that I found remotely interesting, other times I wanted to go to all of them. Lack of info for grad students beyond poster session*
- *I'm sure I missed a bunch of good stuff - just cannot be in more than one place at a time.*
- *The presentation on the dome.*
- *Someone mentioned that despite the goal of this meeting, and of EPSCoR in general, being fostering communication between different areas (research and education) people stick to their own things.*
- *The organized sessions and the keynote speakers.*
- *I liked all the keynotes but I thought that by Friday afternoon we were beyond giving any speaker our full attention. Listening is work and we were, I think, ready to go home and not ready to listen to something new and cutting edge. But I didn't think it was a not useful thing.*
- *Very few people at the meeting do similar science, or think they have a need for the type of science that I do.*
- *The plenary session, as it was not relevant to anything in the conference.*
- *I wished I could have gotten to more sessions, but there were so many concurrently that I wasn't able to get to them all. And to be honest, I only went to the communicating climate change session on Friday -- I didn't find any of the other sessions (nor any on Wednesday) useful to me.*
- *Relatively limited Internet bandwidth.*

Respondents' suggestions for improvement:

Research/content

- *Create more cross over with research, education, outreach and diversity. Show other funding resources (grants) available for EPSCoR grantees.*
- *Provide a better synthesis at the end and discuss pathways for future work/collaborations/meetings.*
- *Overall this meeting was quite successful. It allowed for a group of people to get together to foster new ideas and promote collaboration between the states. The only place improvement could be suggested is to screen some of the presentations beforehand (once again I am referring to the dome presentation). While it was interesting, it was not valid to the field of study.*
- *Perhaps maybe next meeting the focus can be truly interdisciplinary sessions. In the water economics session there were only economists and social scientists while in the catchment session there was mostly hydrologists. It's difficult because the majority of the people here belong to one specific area, it seems, modeling. And because each state has a different focus. I understand the division, but maybe there's a way to force integration on them outside of plenary lectures.*
- *Please include a teacher strand in the future. So much talk was centered around education yet I only saw one presentation that displayed innovative approaches to teaching climate change (LV+30) in the traditional school setting.*
- *I think that it would be good to have a session that compares and contrasts the challenges that each state program faces - e.g. infrastructure building, diversity, funding, sustainability*
- *While it is clearly important for the three states to work together, it's not too early to start exploring working with other partners, both regional and national, outside the three state region, and not just EPSCoR states like Wyoming and Wyoming, but Colorado and at a minimum the Colorado Plateau region of AZ.*

Scheduling and organization

- *More pre-meeting communication.*
- *Reduce or eliminate mealtime speakers, and shift keynotes to an early evening plenary session.*

- *The process of proposing sessions and organizing speakers could be improved by doing it more AGU-style with advertising the session and having people submit abstracts they think are relevant. The way it is now, we had to search high and low for presenters.*
- *Three days is kind of long, and the third day was reduced to 1/2 because of people leaving, etc. I liked the breaks but they were long. Maybe 2 days would be enough. The workshops could occur during the day before the full conference begins.*
- *There were many participants that were interested in both the research sessions and the education sessions. It was difficult to attend both because they were scheduled at the same time.*
- *Provide the abstracts of presentations and student posters on the meeting website.*
- *Don't have lunch time speakers so we can discuss with colleagues. Treat breaks as though they are sessions - longer times for discussion and collaboration*
- *One of my favorite things about how this meeting was organized was how it was just about (if not totally) paperless. Brilliant! Well done! Please let's try and keep this up for the sake of the environment. the memory stick idea for meeting materials was good - I would have liked it if there was a file on there with a list of participants and their contact details.*
- *Print a paper schedule with details on which speakers and talk titles. Don't need much else printed, but not having this was a false economy, in my opinion.*
- *You need to provide a list of participants with institutions and emails so that we can follow up with each other. Do more informal discussion opportunities and solicit ideas from the participants on what they want to discuss. I think that having the locals try to set up sessions that they thought others would like was not only a lot of work for them, but in fact not very effective for me as a participant. Get more input from participants ahead of time on topics that they want to discuss, and just give them time and space to talk. The informal time was more productive, so if you can work on providing some 'structured' but informal time that is organized around specific problems people are grappling with, I think that would be more effective. I know that was the intent of the sessions, but as structured with a few 'expert speakers' they tended to get captured by these 'speakers' and real discussion rarely got going.*
- *Provide some room for individual state collaboration relating to conference session results.*
- *Great meeting and a couple comments to continue improve I suggest having people step out of their comfort zones at this meeting. It is a Tri-State meeting and I am not sure if people are interacting as closely with the other states. I see a lot of people from my own state sitting together during meals and networking breaks. Some strategies to make this interaction happen include: - have a student only breakout icebreaker type session (early in the meeting..maybe first night) where they meet each other and work together on an icebreaker activity. - at the same time as the student breakout, have a faculty (and others) breakout where the same type of icebreaker gets people meeting each other. - encourage people to not just sit together as a state group*
- *It's such a tricky balancing act, to have sessions specific to certain research interests while still allowing for cross-disciplinary interaction. Perhaps structuring sessions to be more interdisciplinary? (i.e. up scaling climate modeling is too specific. Maybe more like modeling the critical zone? Maybe that's too broad.) Also I would suggest calling for abstract submissions to sessions, rather than having all talks be invited. This may encourage more diversity and may help get the right talks into the right sessions. I thought my presentation should have gone in another session, but I didn't even know that session existed.*

Facilities:

- *I have to comment about the food, drink. How could the NM EPSCoR office afford to spend so much money on this? I feel that this was a big waste of money. Much research, outreach, and other important things could have been done with money.*
- *This is an expensive meeting for each state. It is great to have it in a retreat type of facility; however, that does drive up costs and we are all looking closely at budgets. Not sure if such fancy facilities are needed for this meeting.*
- *The whole time I was there I kept wondering how much money was spent on this conference and how those funds could of been used on more research and educational outreach. I felt that this was a waste of money and we could of meet at the University and saved a bundle.*
- *In this time of cutbacks let's meet at a Best-Western in Mountain Home instead of a resort in Sun Valley and apply that savings to funding research and program development!*

Poster session:

- *Have the judges of the poster competition have more diverse array of specialties.*

- *As I mentioned in the comments for the student poster session, matching judges to poster content areas would make a tremendous difference in the quality of judging both for the judges and students.*
- *Give students 2 minutes for introductions and allow each to show 1 slide with photos -brief "pop ups" attendees to give brief introductions to their research occurred in a least one session and was very well received. -keep food out longer during poster session Great meeting*
- *It might be beneficial to have more time for student professional development in either a student "track" where students have presentation time as well (in addition to poster session).*
- *It would be better if posters presented in a larger room.*
- *Gayle Dana asked that at the next Tri-State meeting we hold a short workshop for student poster presenters on how to give a quick 2 minute presentation to relay your research and to encourage people to attend their poster at the session (tips and pointers).*
- *It would be nice to have something for grad students OTHER than a poster session-- either a meet & greet (w/or without PIs) or something introducing (especially new) grad students how EPSCoR works & what opportunities they have for them*
- *Poster sessions - more space and a longer time to view and discuss. Perhaps sequence over several days, preview all, visit with a set of students, visit with another set of students. Consider a virtual venue with ability to pose questions or indicate interest/arrange meeting presenters.*
- *Better organization of the poster session, including judging. The person in charge (Valery) did a rather sloppy job at it - no proper preparation, no proper tracking of reviews received (didn't care about the names of the judges from which she received reviews), and was hard to find during the session.*
- *Every audience should have the chance to select his favorite poster.*

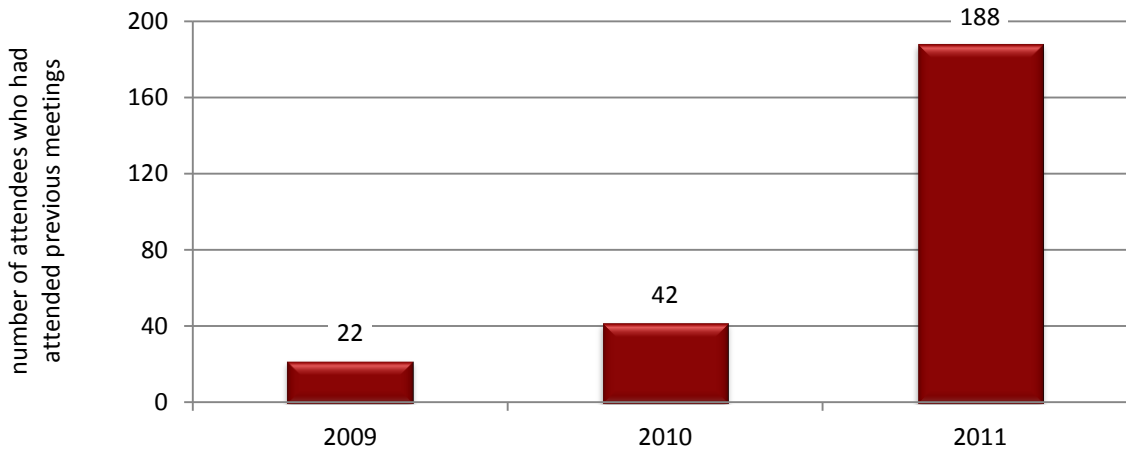
General:

- *More bandwidth, especially for web-centric workshops like HIS.*
- *Would have preferred not have needed to bring my lap top. Or if I had to bring my lap top having been able to use it in my room.*
- *Diversity of the lunch food should be increased.*
- *Must have coffee available in the afternoon!*
- *I really cannot criticize anything about this meeting.*
- *Honestly, I felt like this meeting was extraordinarily well organized and put together. I can't think of many changes or improvements.*
- *It was a quite effective meeting, and I'm very grateful to be a part of this tri-state collaboration. Thank you very much.*
- *Great job on the conference.*
- *I would not suggest anything, the conference was great. Keep up the good work.*

Impact of Tri-State Consortium attendance on project participants

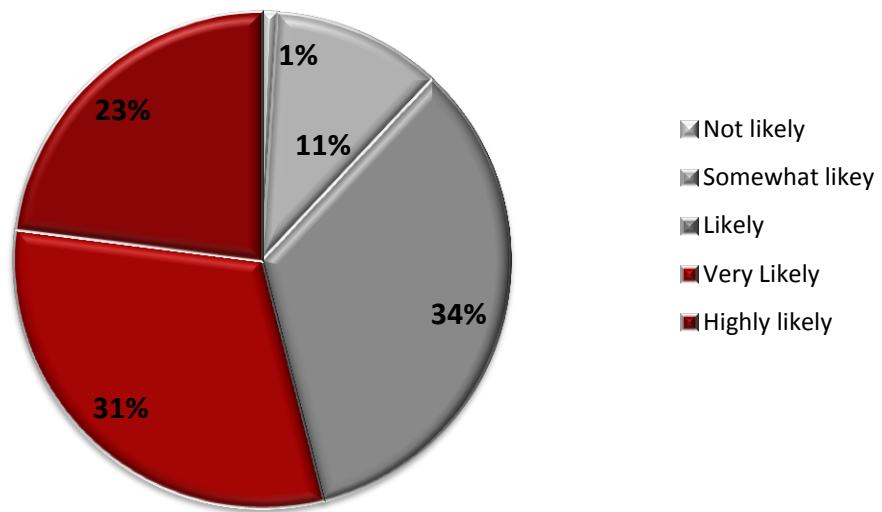
Survey respondents provided information regarding their participation at the Tri-State Consortium meetings and the impact participation had on their research activities and research collaborations. First, respondents reported prior meetings they attended. Of the 188 meeting attendees, only 22 had attended the first meeting and 42 had attended the second meeting. This data is presented in Figure 9.

Figure 9. Attendance at Tri-state Consortium Meetings



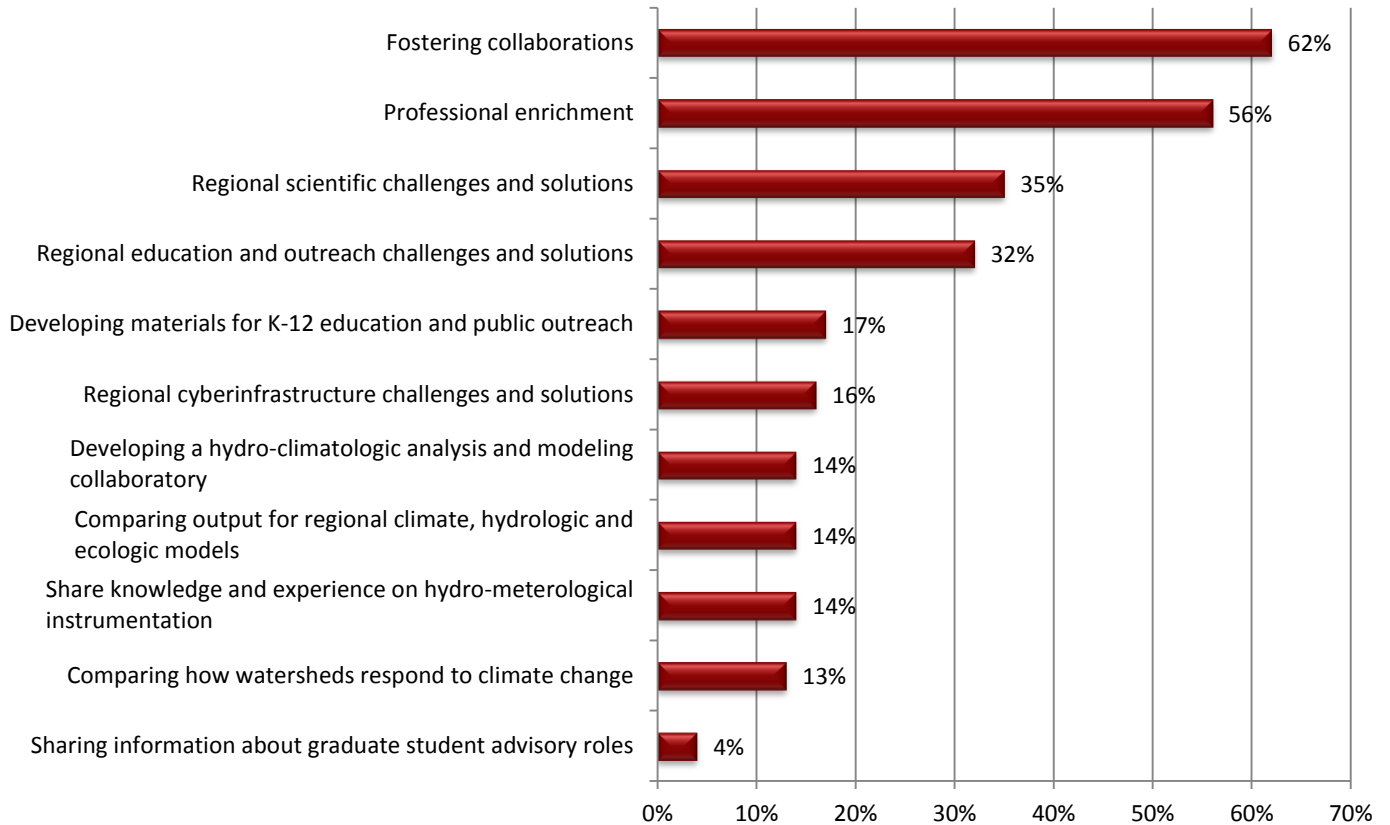
Respondents explained their likelihood of utilizing the information presented at the workshop. Figure 10 shows that 88% reported *likely to highly likely* to utilize the information presented.

Figure 10. Likelihood of respondents of utilizing the information presented in the workshop



Next respondents reported their reasons for attending the Western Consortium meeting. They were asked to select all applicable reasons from the list provided. This data is presented in Figure 11. The majority of respondents attended to foster collaborations (62%) and for professional enrichment (56%). Respondents were also able to list additional reasons in an open-ended question following the list provided, and those responses are provided following the figure.

Figure 11. Respondents’ reasons for attending the Western Consortium Meeting

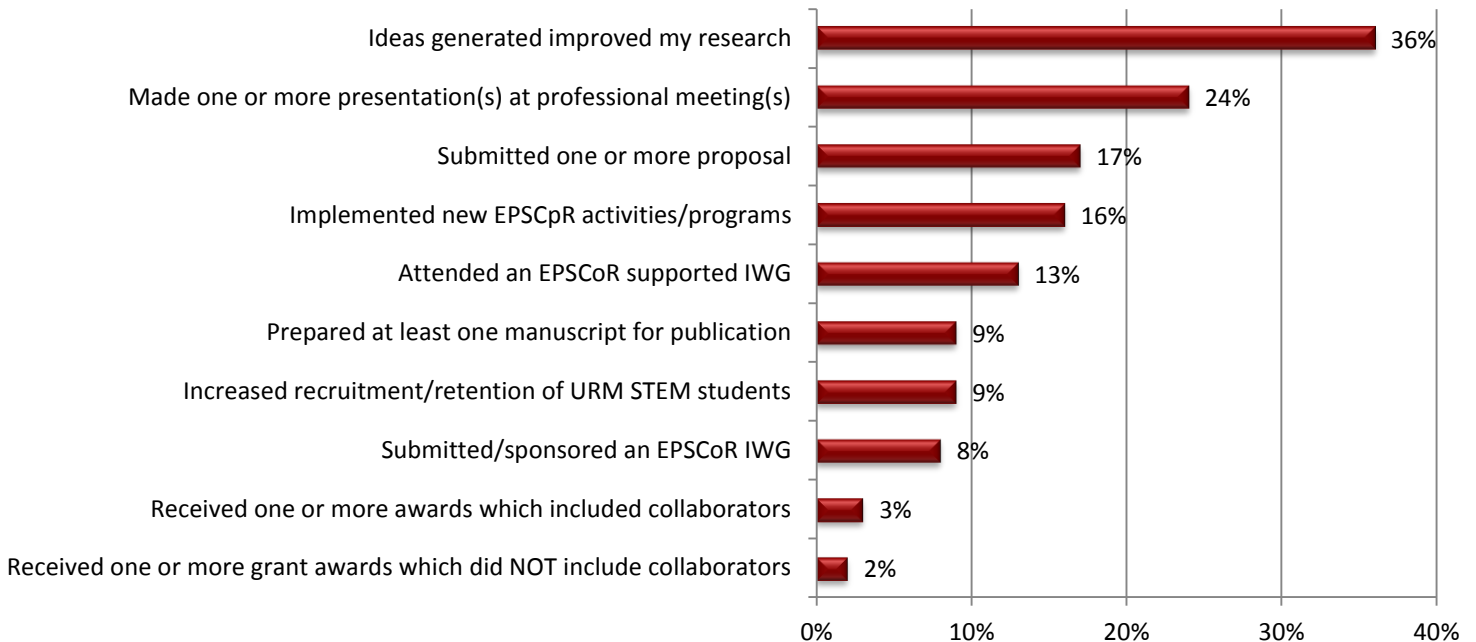


Other reasons provided by respondents for attending the meeting:

- *Because I am willing to discuss my work with anyone that will listen!*
- *Invited speaker(2)*
- *Promoting my work and research in the poster session*
- *Promotion and integration of the Tri-State Diversity Strategic Plan*
- *Economics, water, and climate change*
- *New grad student trying to understand aspects of interdisciplinary research*
- *Integration of research and education*
- *Attended as co-PI of NV track 1 project*
- *Because I am expected to*

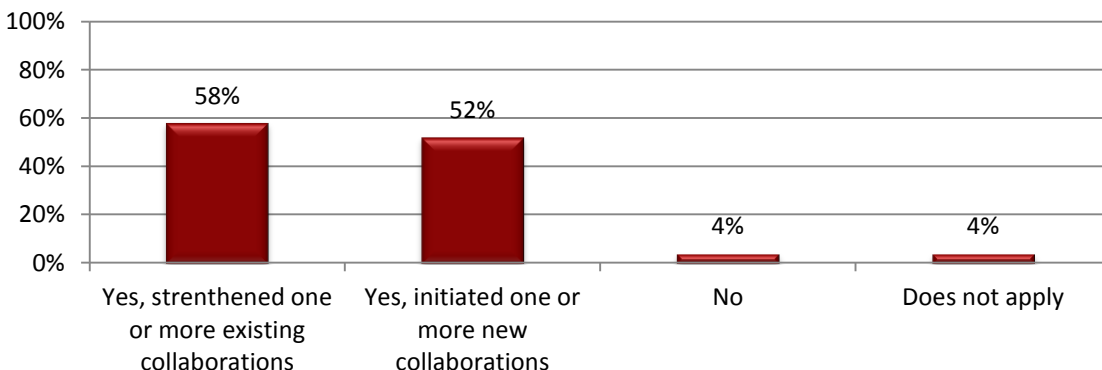
Respondents indicated professional activities they engaged in as a result of attendance at the 2009 or 2010 Tri-State Consortium meetings. Respondents were asked to select all applicable options, and the percentage of respondents selecting each activity is presented in Figure 11. Respondents reported that attendance at prior Tri-State meetings resulted in generating ideas that improved their research (36%) and presentation(s) at professional meeting(s). In addition to items listed in Figure 12, one respondent said, “Made new collaborations for research and outreach”.

Figure 12. Percentage of respondents reporting professional activities which resulted from attendance at prior Tri-State meetings



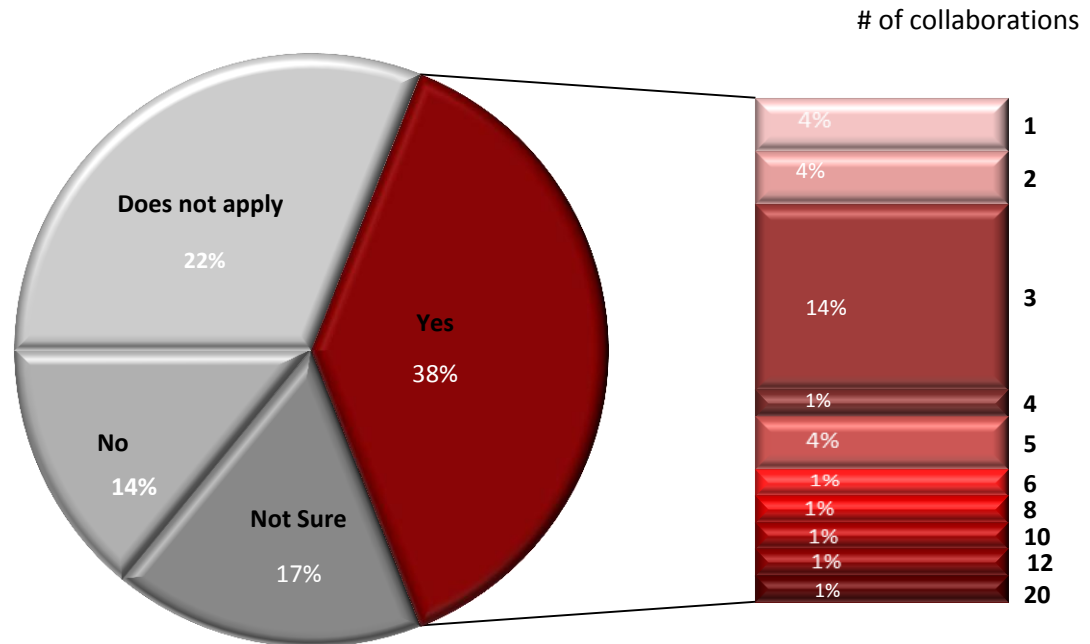
Respondents provided information regarding collaborations that resulted from this or prior Tri-State Consortium meetings. Respondents were asked to select all applicable options. In Figure 13, respondents’ responses are provided regarding whether they strengthened existing or initiated one or more new collaborations at this meeting. More than half of respondents reported strengthening (58%) or initiating new (52%) collaborations.

Figure 13. Percentage of respondents strengthening or initiating new collaborations while attending this meeting



In Figure 14, data is presented indicating if respondents' at this Tri-State Consortium meeting strengthened a collaborative relationship within the Tri-State region that started as a result of attending the 2009 or 2010 meeting. Respondents who replied *yes* (38%) also reported the number of collaborations strengthened. Twenty-four percent of attendees strengthened three or more collaborations.

Figure 14. Percentage of respondents indicating if this Tri-State Consortium meeting strengthened a collaborative relationship within the Tri-State region that started as a result of attending the 2009 or 2010 meeting



Commendations and recommendations for the Tri-state meeting

Based on the results of this evaluation the following commendations and recommendations for the EPSCoR Tri-State Consortium annual meeting and workshops have been identified.

Commendations

The meeting has expanded greatly as compared with the previous years. The vast majority of sessions received average ratings of *good* to *excellent*. One primary goal for the conference was to support new and build on existing collaborative relationships. Many respondents commented that best part of the meeting was the ability to collaborate. Additionally, more than half of respondents reported that they both made new and strengthened existing relationships as a result of attending. The student poster session was very well received and had many positive comments from presenters, attendees and judges.

Recommendations

1. There was a significant gender disparity between people who attended the tri-state conference (65% male) and people who completed the evaluation form (33% male). Ethnicities were not requested on the registration form so the ethnicities of people who attended the meeting are unknown. It is possible that there is also an ethnic disparity.

Note this gender disparity to project participants and encourage males to complete the evaluation form in the future. To determine the actual ethnicity of meeting attendees request ethnicity on the online Tri-state registration form.

2. Respondents commented that they would prefer that keynote or plenary presentation not take place during lunchtime. They would have rather had additional time during meals for breaks, networking and collaborating.

Consider whether there is room elsewhere in the schedule for these presentations on some or all days of the meeting.

3. Many respondents spoke highly of the conference for providing opportunities for collaboration, however, some respondents did provide suggestions for improvement in this area.

Consider whether implementation of these suggestions would improve future conferences and attendees' ability to initiate and strengthen existing collaborations.

- *Provide a list of participants with institutions and emails so that participants can follow up with each other*
- *Provide participants with time and space to talk to provide additional informal discussion opportunities*
- *Treat breaks as though they are sessions, with longer times for discussion and collaboration, rather than having lunch time speakers so participants can discuss with colleagues*

4. Survey respondents had many positive comments regarding the poster session, yet made several suggestions about ways to improve upon the way it was currently conducted.

Consider respondents' comments to improve the poster session. Suggestions include:

- *Provide a larger room to facilitate better flow through the room*
- *Improve the ability to hear the poster presenters*
- *Schedule social events (drinks and refreshments) separately*
- *Provide more time*

5. Some respondents commented that the budget should be more carefully considered when organizing future meetings. Attendees commented that perhaps the conference could be shortened by 1 day.

Consider the location and length of the event to maximize funds available for research activities. Four comments were made regarding the conference facilities and the cost of such a nice meeting site. Additionally, a few comments were made about shortening the meeting by one day, which would be one way of saving meeting costs.

3.2 CyberInfrastructure (CI) Training Opportunities

Background

The purpose of the Cyberinfrastructure (CI) training opportunities grants is to offer and support CI training in computation and climate change to EPSCoR participants to broaden knowledge and perspectives on computation and climate change research. Faculty and students in the tri-states may apply for and receive funding to attend workshops worldwide on computation and climate change. Workshops and trainings are also offered by EPSCoR participants such as the *Climate Modeling* and *HIS* workshops presented at the Tri-state Consortium.

Participants

Between September 2010 and May 2011, five different CI training opportunities have been attended by ten EPSCoR participants as shown in Figure 15.

Figure 15. CI Training Opportunities

Date	Name of workshop	Attendees			
		State	Gender	Ethnicity	Position
November 13-19, 2010	Supercomputing 2010 Education Program	NV	Male	Caucasian	Grad student - Masters
November 30-Dec. 3, 2010	2 nd IEEE International Conference on Cloud Computing Technology and Science	NV (2) NM	Male (3)	Hispanic, Pac Islander, Other	Grad student – Ph.D. (3)
February 9-11, 2011	Workshop on Active Internet Measurement	NV (2)	Male (2)	Asian, Other	Grad student – Ph.D. (2)
May 16-20, 2011	IEEE International Parallel & Distributed Processing Symposium	NV (2)	Male (2)	Asian, Other	Post-doc, Grad student – Ph.D.
May 7-11, 2011	ACM CHI 2011	NV (2)	Male (2)	Caucasian (2)	Faculty, Grad student – Ph.D.

Findings

EPSCoR participants who attended CI training opportunities completed a short email survey after returning from the training. Nine out of the 10 attendees completed evaluation form. The graduate student who attended the ACM CHI 2011 did not return the evaluation form after several requests. Figure 16 presents their ratings on whether participation increased scientific capabilities and increased their CI-literacy. The training opportunities were primarily rated “met expectations” to “exceeded expectations” with one rating of “far exceeded expectations” given. Attendees also answered open-ended questions and their responses are presented below. They are grateful to the EPSCoR project for enabling them to attend the CI trainings.

Figure 16. Ratings of CI Training Opportunities

Supercomputing 2010 Education Program	
Increased scientific capabilities?	Met my expectations
Increased CI-literacy?	Met my expectations
How training increased your CI-literacy (awareness, skills and knowledge).	
<ul style="list-style-type: none"> I learned about several projects implementation of cyber-infrastructure that ranged from local US universities' undertakings to large international projects like LHC. I attended a workshop during which I have learned about and used Vensim, a software package for modeling various processes including environmental ones. This software can be both used to assist research of environment and to make demonstrational models for educational use. During this conference I have also got familiar with the latest trends in distributed processing 	
Will this training enhance your ability to conduct research in your field?	
<ul style="list-style-type: none"> Yes, I got familiar with a wide range of techniques and technologies that are applicable to remote and distributed computing and to computing in education. 	
How training increased awareness, skills and knowledge in the area of climate change or other scientific disciplines	
<ul style="list-style-type: none"> My training did not cover any environmental sciences directly. 	
2nd IEEE International Conference on Cloud Computing Technology and Science	
Increased scientific capabilities?	Exceeded my expectations, Met my expectations (2)
Increased CI-literacy?	Exceeded my expectations, Met my expectations (2)
How training increased your CI-literacy (awareness, skills and knowledge).	
<ul style="list-style-type: none"> I found useful for my research the following: learning frameworks and infrastructure in detail, and existing associated tools, for building large-scale cloud-based applications. I learned the similarities and differences between technologies and approaches, and understood their advantages and disadvantages involved. This training extended my CI-literacy about the subject and computing in general. I am now more aware of the new trends and future of distributed computing. I attended hands on tutorials on Open Source cloud platforms including Nimbus, Twister, OpenStack, OpenNebula and Eucalyptus. The cloud computing conference helped me understand how actually clouds work. I also got to learn several technologies and tools used to develop, deploy, and maintain cloud application. I am working on a web application which fits the bit for the cloud computing. This conference helped me understand technologies and tools that I should be using to deploy my web application on cloud. 	
Will this training enhance your ability to conduct research in your field?	
<ul style="list-style-type: none"> It was an invaluable experience to learn the current trend and challenges in large-scale and data-intensive scientific research. It was a great opportunity to learn how scientific research can benefit from cloud and parallel computing technology. This training enhanced my ability to conduct research in Computing Engineering by gathering awareness and a more clear view of the current state of cloud computing, new computing techniques, frameworks, services and applications available in commercial and academic environments. It will not directly help me doing my research directly related to climate change or related science but it will certainly help me implement the solution and existing climate models running on large clusters. 	
How training increased awareness, skills/knowledge in the area of climate change/other scientific disciplines	
<ul style="list-style-type: none"> It increased my understanding to develop data-intensive scientific software applications and their complexities involved in designing and constructing the infrastructure and framework. Real-time access to a large amount of data requires careful and sophisticated designs of both hardware and software to provide reliable and secure data storage and delivery. Many studies have been done in parallel computing using new cloud/web based techniques mainly related to the MapReduce framework. I was able to see use cases of solutions to these problems including processing of LIDAR data and scientific modeling applications in hybrid HPC and Cloud infrastructure. N/A 	

Comments	
<ul style="list-style-type: none"> • It was truly an invaluable opportunity to learn the advanced technology and methodologies in the field of cloud and parallel computing. Future scientific research is in the trend of utilizing technology in this field to achieve the results that may be difficult to obtain otherwise. It was very useful for me to learn what can be done and contributed to other interdisciplinary scientific research fields. • I am currently enrolled in a Cloud Computing and Web 2.0 at the ECE Dept. at UNM and the material presented did not provide a complete view of the field of cloud computing. This training opportunity filled in the gaps and extended my literacy. I would like to thank NM EPCOR State Office for providing this training opportunity. • I thank EPSCOR for providing me an opportunity to attend. It was a great conference to learn about cloud computing. 	

Workshop on Active Internet Measurement

Increased scientific capabilities?	Far exceeded my expectations, Exceeded my expectations
Increased CI-literacy?	Exceeded my expectations, Met my expectations

How training increased your CI-literacy (awareness, skills and knowledge).
<ul style="list-style-type: none"> • Since the subject of the training is directly related to my research area, I got a lot of awareness of other research groups at universities worldwide. Listening their presentations and having p2p conversations gave me experience and knowledge of hundreds of papers quickly, in a 3 days.

Will this training enhance your ability to conduct research in your field?
<ul style="list-style-type: none"> • Yes. I presented my studies and get opinions, questions of other people having similar research studies which help gain a lot of experience. • Certainly Yes. I met with many researchers working in my area. I learnt what all other researcher doing. We will also do some joint work with some of those researchers.

How training increased awareness, skills/knowledge in the area of climate change/other scientific disciplines
<ul style="list-style-type: none"> • It was the first time I attended a conference about network topology measurements which I will be studying during my PhD. I got a better understanding of current research studies. I had valuable conversations with other researchers , professors in other universities. • We discussed the current and future state of Internet measurement and analysis. Through this workshop, many well-known and successful researchers get together from all around the world working on CI related topics. Attending this workshop gave me the opportunity of meeting with all this well-known researchers. Additionally, I presented our research project. This gave me the opportunity of getting many valuable comments and suggestions about our project.

Comments
<ul style="list-style-type: none"> • Overall, I appreciate this training and would like to attend many such later. This opportunity helps present my own studies and get online feedback from the research community and also helps me follow the current studies worldwide. • Thank you very much for providing such a great opportunity.

IEEE International Parallel & Distributed Processing Symposium

Increased scientific capabilities?	Far exceeded my expectations, Met my expectations
Increased CI-literacy?	Far exceeded my expectations, Met my expectations

How training increased your CI-literacy (awareness, skills and knowledge).
<ul style="list-style-type: none"> • Parallel processing makes programs run faster because there are more processors running it. Parallelism describes executions that physically execute simultaneously with the goal of solving a problem in less time or solving a larger problem in the same time. In fact, parallel processing can provide optimum computations in data portal. During the program, different aspects of parallel processing were discussed such as Heterogeneity in Computing, Reconfigurable Architectures, Distributed Computing, Communication Architecture for Scalable Systems, High-Performance Computing, High-Performance Grid Computing, and so forth. Moreover, Intel Platinum Patron Night was held by Intel company during the symposium. That was an exciting opportunity for attendees to network and learn about the Intel Academic Community's free resources to support parallel computing research and teaching. • It offered a holistic view of advanced data computation and storage options, which definitely help me to understand the cutting-edges of the hardware and software, and will help setting up the visualization lab at UNLV with the hands-on experience from the training workshop.

Will this training enhance your ability to conduct research in your field?	
<ul style="list-style-type: none"> • Yes, the symposium is an international well-known forum for engineers and scientists from around the world to present their latest research findings in all aspects of parallel computation. In addition to technical sessions of submitted paper presentations, the meeting offers workshops, tutorials, and commercial presentations and exhibits. • Yes, it helps me to understand the subject from a systematic and updated way. Also those experts were from around the world and provided excellent lectures and training experience. 	
How training increased awareness, skills/knowledge in the area of climate change/other scientific disciplines	
<ul style="list-style-type: none"> • This symposium is not directly related to climate change, however it is more related to cyberinfrastructure component, in particular, enhancing computations in data portal. • N/A 	
Comments	
<ul style="list-style-type: none"> • I hope that faculty and graduate students involved in different components of the climate change project have a chance to attend more training programs in future. • Many thanks for the funding opportunity. Hope to be funded later. 	
ACM CHI 2011	
Increased scientific capabilities?	Exceeded my expectations
Increased CI-literacy?	Exceeded my expectations
How training increased your CI-literacy (awareness, skills and knowledge).	
<ul style="list-style-type: none"> • Being a conference on human-computer interaction, ACM CHI-2011 is intimately related to CI, in particular to the user's understanding and utilization of CI technology and resources. My awareness and knowledge of such CI aspects have certainly increased through my participation to CHI-2011. 	
Will this training enhance your ability to conduct research in your field?	
<ul style="list-style-type: none"> • Certainly. This is the premier annual international conference in human-computer interaction, which is one of my two main areas of research (besides software engineering). Advances in this are very dynamic, very fast, from interaction paradigms and styles, to innovative software applications, to newly created technologies and devices. In order to advance their work, all researchers in this area need to be aware of the results uncovered and the major trends identified at this conference. 	
How training increased awareness, skills/knowledge in the area of climate change/other scientific disciplines	
<ul style="list-style-type: none"> • New solutions for human-computer interactions have been reported at this conference. Information and knowledge acquired by attending the conference relates to and informs many aspects of interface development of the Nevada Climate Change Portal and its associated software framework for model interoperability. These constitute the two key objectives of the NV Climate Change projects' cyber-infrastructure component. 	
Comments	
<ul style="list-style-type: none"> • I'd like to thank NSF EPSCoR and NSHE for the opportunity to participate to this scientific summit so significant and directly related to CI developments in the NV Climate Change projects. 	

Commendations and recommendations

The project is commended for the supporting EPSCoR participants' development through CI training opportunities. However, there is a significant lack of diversity among participants. All participants are male. Two are Asian, three are Caucasian, one Hispanic, one Pacific Islander, and three other. Only 20% are underrepresented minorities. Additionally, nine are from Nevada, one from New Mexico, and none are from Idaho. It is recommended that project directors and component leads encourage attendance by females and underrepresented minorities at these trainings. New Mexico and Idaho need to encourage greater participation in CI training opportunities. In addition, a more detailed evaluation tool should be developed to track the impact of the CI training opportunities on participants. SmartStart will work with program directors to develop more detailed demographic and survey items to assess the usefulness, quality, and impact of CI training opportunities.

3.3 New Mexico educational materials development

Background

The main goals of the New Mexico educational materials development are to develop middle and high school curricula relating to climate change, water resources, and the science, technology, engineering and math (STEM) pipeline that prepares students for studying those areas and to distribute those materials around the state.

Participants

The primary participants are five New Mexico Institute of Mining and Technology (NMT) Masters of Science Teaching (MST) students. These students are all professional teachers of middle and high school students working towards a Master's degree in teaching. As a culmination of their work at NMT, students create a science-based curriculum. Project coordinators work with the MST students interested in developing EPSCoR-related curricula. Students start their Independent Studies to develop the curriculum at various times throughout the year and usually take about a year to complete them.

Findings

Currently, the curricula are discussed between the students and EPSCoR staff. Guidance is provided in choosing projects that align with the students' interests and EPSCoR goals and during development of the materials to ensure they will be ready for distribution. The MST students are using the curriculum with their students. There is not currently a formal assessment of the curriculum materials. Students have not yet completed their curriculum development, but many are slated to finish by the end of summer 2011.

Commendations and recommendations

The project is commended for the development of new curriculum materials that better prepare middle and high school students in the STEM areas. It is important that curriculum is aligned with New Mexico and national science and climate change standards and standardized tests. To demonstrate this alignment, standards that are being addressed should be clearly stated in the description of each lesson. When materials are placed online they should be searchable by standard addressed and by topic.

It is recommended that formative and summative evaluation plans and tools be developed and implemented to track the progress and success of the program. SmartStart will work with project coordinators to develop an evaluation plan. The plan may include post-surveys for the MSTs as well as pre/post surveys for the students being taught the new curriculum. SmartStart will assist program directors in the survey development, conduct of the evaluation, and analysis of evaluation data. Results will be included in the quarterly SmartStart evaluation reports.

3.4 New Mexico Supercomputing Challenge

Background

The main goals of this program are to teach teams of middle and high schools students how to use powerful computers to analyze, model and solve real-world problems and to teach computational thinking in science and engineering to high school students. The teams have mentors that provide support and answer questions for them throughout the year.



There are a variety of different activities throughout the year in which the teams or their teachers participate, including:

- Summer Teacher's Institute - teachers are taught computer modeling and how to help their students with their modeling projects
- Summer Roundups - workshops are given locally for teams and teachers on an as-needed basis. These workshops teach computer modeling, how the challenge works, and other materials to both students and teachers.
- Kickoff - teams have introductory classes on modeling, data analysis, and other topics related to the SCC
- Proposals - teams write a proposal for a project that is reviewed and commented on by members of industry and academia
- Interim Reports and Evaluations - teams write up their progress about halfway through the year. The teams travel to a college near them and present their current work. These presentations and reports are also reviewed and commented on by members of industry and academia and suggestions are given to help the teams and/or their projects and point out areas to focus on to help them complete their projects
- Final Reports - teams write up a final report at the end of the year. The final reports are judged to determine finalists but feedback is given to all the teams.
- Expo - the culmination of the year - teams presents their work to panels of judges and receives feedback on their presentations and reports. Awards, scholarships, and prizes are given to many different teams, not just the winners.

SCC is a year-round program, which begins in the summer with the Summer Teachers Institute for teachers and continues through the Expo, which concludes the activities for the year, usually in late April. STI & Kickoff are at conducted at NMT, Interims are done at a college local to the team, and the Expo is at Los Alamos National Lab (LANL).

Participants

For the Supercomputing Challenge, support is provided for three new teams. Primary participants are high school students, their teachers, and volunteers from academia and industry. For the April 2011 Expo and Awards Ceremony, there were 15 volunteers from academia and 122 from industry (95 of those from the LANL, where the Expo is conducted). Middle school and a few elementary school student teams participate as well.

Findings

Informally, a formative evaluation has been conducted in that success is measured by teams completing the challenge, continuing from one year to the next, and by their improvement in their projects. A challenge employee provided some assessment of the schools' Challenge progress. Three schools were brought in in 2010. Two schools have been working well and have submitted interim reports, which she states is a significant milestone for the project. The third school has not been successful in getting a team. That teacher instead has focused on supporting two other high schools and a middle school. She reported that the EPSCoR support has been very important to the Challenge and in a financially very tough year, it has helped generate enthusiasm.

Commendations and recommendations

The NM SCC is commended for developing a project for middle and high school students that allows them to use computational thinking and computers analyze, model and solve real-world problems. Annual participation and demographics of participants should be tracked. It is also recommended that formative and summative evaluation plans and tools be developed and implemented to track the progress and success of the program. SmartStart will work with project coordinators to develop an evaluation plan. The plan will include development of evaluation instruments such as pre- and post-surveys to be given to both student and teacher participants of the Supercomputing Challenge to assess the usefulness and success of the many SCC project components. SmartStart will assist in the conduct of the evaluation and assist in the analysis of evaluation data. Results will be included in the quarterly SmartStart evaluation reports.

3.5 New Mexico GUTS program



Background

Growing up thinking scientifically (GUTS) means learning to look at the world and ask questions, develop answers to the questions through scientific inquiry, and design solutions to their problems. It is a summer and after-school science, technology, engineering and math (STEM) program for middle school students. It was designed to be a feeder program for the Supercomputing Challenge.

Participants

Primary participants are middle school students, their teachers, and volunteers from academia and industry. Teachers form the clubs at their schools and interested students join. The EPSCoR-supported teams have 25, 30, and 11 students. Project GUTS is a year-round program. Teachers can attend the Summer Teacher's Institute in the summer, Roundtables are conducted at the end of each semester in which teams present and discuss their work. The program culminates with the teams attending the Supercomputing Challenge Expo.

Findings

No formative or summative evaluations have been conducted for the GUTS program.

Commendations and recommendations

The project PIs and coordinators are commended on developing a STEM program for middle school students that can prepare them for participation in the Supercomputing Challenge and other STEM activities. Annual participation and demographics of participants should be tracked. It is also recommended that formative and summative evaluation plans and tools be implemented to track the progress and success of the program with students, teachers and volunteers from academia and industry. SmartStart will work with project coordinators to develop an evaluation plan, develop evaluation instruments, assist in the conduct of the evaluation, and assist in the analysis of evaluation data. Results will be included in the quarterly SmartStart evaluation reports.

3.6 External Advisory Committee (EAC) Report Recommendations and Evaluation Plan

Background

The External Advisory Committee (EAC) met on February 17, 2011 with project management and participants to review the project status. Through their report, the EAC offered comments on, questions of, and recommendations for the Track 2 Tri-State Cyberinfrastructure Project (TSCP). These are outlined below general recommendations and specific recommendations by objective. When an EAC comment relates to an evaluation issue, suggestions for evaluation responses are provided.

EAC recommendations and evaluation plan

1. The EAC commended the TSCP leadership group for adding the Innovation Working Groups. The process for soliciting and evaluating proposals appears sound. The EAC anticipates hearing of success from proposals and projects generated by these working groups.

The evaluator, in collaboration with the project PI, developed a Technical Writing Assistance Workshop and Proposals survey (Appendix D) to assess the usefulness of the writing assistance and to track proposal submission and funding that can be attributed to participation in the workshop. Results will be reported in the Q3 report.

2. The EAC recommended that TSCP leadership think more deeply about assessment metrics. The EAC stated that standard measures of scientific output, such as publications and presentations, are not particularly relevant here in measuring proposed outcomes. The EAC was concerned to see that the 2010 project evaluator's report cited some of the very metrics (e.g., number of data tables) that they noted last year as meaningless or irrelevant. Metrics are critical to clarify the efficacy of the project's accomplishments, but the key to their value is that they be measures of the quality and value of TSCP activities and not just statistics. The EAC urged the TSCP leadership to work with the project evaluator to eliminate poor metrics and replace them with ones that are meaningful or that can support changes in project direction.

The new evaluator will conduct an annual post-survey of impacts related to achievement of project goals. Additionally, focus groups and/or follow-up phone interviews along with video interviews and testimonials will be incorporated into the evaluation plan to measure impact related to project goals.

3. The EAC commented that the long-term impact of the project would be substantially strengthened by tying both CI objectives and CI outcomes to STEM research outcomes. In particular, the project should identify specific STEM research outcomes that would have not have been possible to achieve without the improved CI, but that became possible upon completion of the CI. The EAC suggested that information about each achievement should focus on: (a) what could not be accomplished before CI deployment and the CI's impact on research productivity; (b) what new capabilities were enabled by the new CI; and (c) what STEM research outcomes resulted from the new capabilities, as this would be especially valuable in the context of the climate change science topic of the TSCP.

In the annual post-survey mentioned above, the evaluator will address this issue by asking the three questions identified by the EAC. The evaluator will conduct a qualitative analysis of the responses using NVivo 9 to identify themes.

4. The EAC suggests that the evaluator identify mechanisms to improve the rate and quality of survey responses. The New Mexico group has a feedback survey available that, with a little tailoring, could be leveraged more broadly.

The evaluator will revise current surveys to include questions on demographics and better align them with individual programs and identified project goals. To improve survey response rate, the evaluator will ask project PI/Co-PI/ Component Leads/coordinators to send an introductory email encouraging people to complete the survey. The evaluator will send personalized invitations and several reminders to non-completers.

5. The EAC concurred that diversity is a concern and hoped to see that next year the project is able to both implement IWG suggestions and achieve better representation in project activities. *The evaluator will include questions on demographics on all surveys and registration forms to track growth.*

Objective 1 - Connectivity

The EAC was pleased that the project's agenda frontloaded the physical deployments into project year one.

1. The EAC stated that the central task for physical CI is to establish its value to the tri-state STEM research enterprise. They made suggestions for 1) the use of websites to log CI usage for specific group activities and 2) an annual CI usage survey that includes testimonials of usage. *The evaluator will work with the Connectivity component lead to identify ways to log CI usage for specific group activities and to develop CI usage questions that can be incorporated into the annual survey. During video interviews, the evaluator will request testimonials of CI usage from interviewees.*

Objective 2 - Interoperability

The EAC recognized the importance of the efforts to improve data and model interoperability and they liked the capability that is being developed to help scientists better manage and provide access to data (especially field data). However, the EAC felt the efforts of this project fell short in terms of interaction with users, as it was not clear to them who the target users are and whether the capability being developed really responds to their needs. Thus, they offered the following suggestions:

1. The EAC suggested that the project leadership identify target users and work directly with them to identify realistic requirements.

In coordination with the Interoperability lead, the evaluator has developed a Data Portal survey (Appendix C of this report). The survey was sent to all Track 2 EPSCoR members (n=277) in April 2011. Eleven responses have been received so far. Results will be reported in the Q3 report. At the Track 2 project PI's recommendation, the evaluator will work with the Interoperability lead to contact Catherine Plaisant, the Associate Director of the Human-Computer Interaction Lab at U. Maryland (<http://www.cs.umd.edu/hcil/members/cplaisant/>) to talk with our EPSCoR groups about user needs and interactions.

2. The EAC further suggested that the project choose a small number (3–6) of programs needing the regional climate modeling system, as targets for special attention as “early adopters”.

As the regional climate modeling system is being piloted, the evaluator will develop a formative survey and/or will conduct focus groups with initial users to align the system with users’ needs.

3. The EAC noted that progress metrics are an important aspect of the project; however, it was unclear to them what metrics are being considered to quantify progress in the area of model and data interoperability and how those metrics inform changes in project direction. In addition, the committee suggested addressing how the CI development has enabled work or yielded results not possible without it.

The evaluator will work with the Interoperability lead to develop quantitative metrics to assess progress in the area of model and data interoperability. Additionally, the evaluator, will include in the annual post-survey mentioned above, questions that assess how the developed CI had enabled work or yielded results that would have not been possible without it.

Objective 3 - Cyberlearning

The EAC in its review of the cyberlearning (CL) activities of the project found several positive aspects to the activities undertaken in year two. These activities fall into two major categories of higher education and pre-college.

1. In terms of higher education activities, the EAC felt the number and content of workshops offered for graduate students, post-docs, and faculty was appropriate and, based upon the limited metric of open-ended evaluations, well-received. However they felt this activity also lacked metrics to measure effectiveness beyond the surface level. The EAC recommended, in collaboration with the project evaluator, that more in-depth measures be developed to gauge the effectiveness of the workshops.

The evaluator will work with the cyberlearning lead to develop and refine surveys to include questions pertaining to the impact of participation in the cyberlearning activity. A question pertaining to the impact of participating in cyberlearning activities, in general, will also be included in the annual post-survey.

2. Additionally, a key issue in the EAC’s assessment of the CL achievements is the effectiveness of how the CI improvements have impacted the education initiatives. While the educational and training interactions appear useful, and the number of instructors and students involved are significant, the committee wonders if these activities could still exist in the absence of the CI improvements funded by the grant.

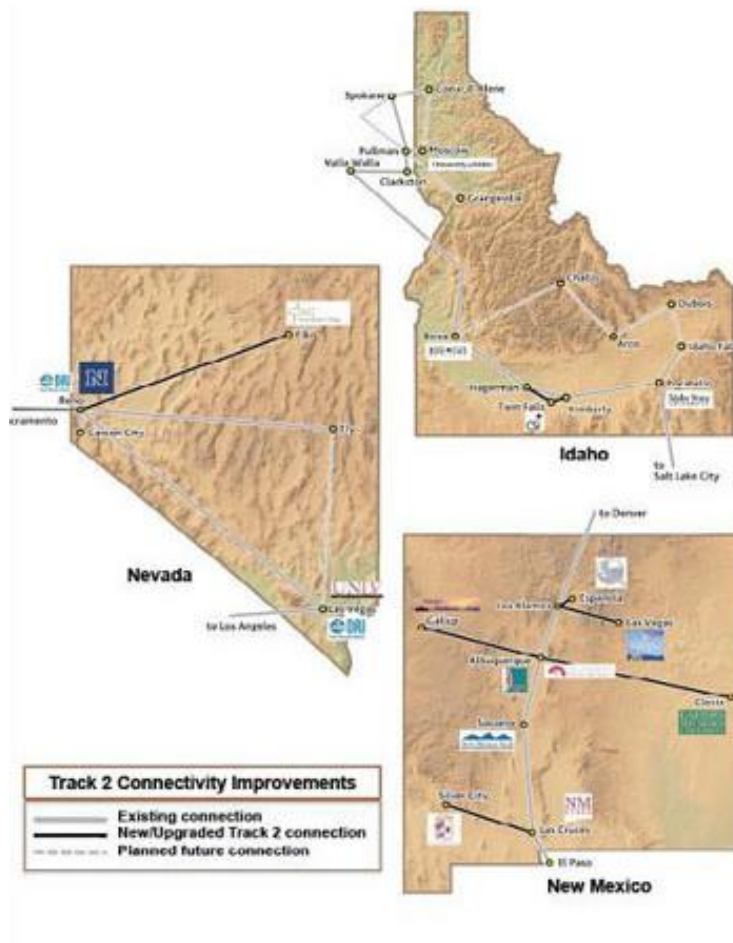
To address the “value-added” effect of cyberlearning and cyberinfrastructure, the annual post-survey will include questions such as, “Is there increased capacity to reach more people?” “Could you have conducted these activities without the CI improvements?” If increased capacity isn’t apparent then the evaluator will encourage the cyberlearning lead to re-focus and re-align activities to make better use of new cyberinfrastructure.

3. In terms of the pre-college-level activities, the EAC felt the project has made considerable progress from the previous year, though activities vary considerably from state to state. The EAC cautions the TPSC leadership that in order to have a lasting impact, it will be important to involve as many middle and high school teachers as possible in the field testing of the materials. This may be limited by funds, but field trials are extremely important in the development cycle.

The evaluator will work with the CL lead and program coordinators to learn more about the materials being developed (e.g., whether it one set of materials to be used with one type of group of students or many different sets/types of materials to be used with many different types of groups of students?) to identify cost-efficient, effective ways to evaluate the usefulness and impact of educational materials.

4. The EAC noted that examples of specific CL activities during the first year focused almost exclusively on use of climate system modeling and model data generated in the tri-state area. As there are also significant educational services and offerings on climate study provided by other groups and available across the U.S. and the world, an issue to address is how the new and improved CI in the tri-state group can provide greater access to these resources for educational use.

The evaluator will work with the CL component lead to answer the following questions: 1) What are these resources?, Who would use them?, What CI is necessary to use them?, and 4) do the Tri-states have the CI necessary to use them? The evaluator will work with lead and program coordinators to obtain answers specific to their activities, and then embed questions within surveys about what resources are being used and who is accessing them.



Section 4. Commendations and Recommendations for the Track 2 EPSCoR Project

Based on the results of this evaluation the following commendations and recommendations for the Track 2 EPSCoR project have been identified.

4.1 Commendations

The EPSCoR Track 2 project has made tremendous progress during the past two years. Tri-state consortium meeting attendance has almost doubled from the first to the third meeting. Almost all meeting activities received good or excellent ratings. Eighty-three percent of participants said the meeting was better than average or among the best. Eighty-eight percent are likely to highly likely to use the information presented. Fifty-two percent have initiated new collaborations. Ten faculty/graduate students attended CI training opportunities. They said the CI training opportunities have been very useful to increase their scientific literacy, enhance ability to conduct research and increase climate change awareness and skills. The New Mexico education materials development is progressing strongly. The SCC and GUTS programs are expansive in their outreach to middle and high school teachers and students. The EAC commended the Track 2 project in its establishment of Innovation Working Groups and a process for soliciting and evaluating proposals.

4.2 Recommendations

1. The evaluator made specific recommendations pertaining to the Track 2 activities, including the Tri-state meeting, CI Training opportunities, New Mexico education materials development, New Mexico Supercomputing Challenge, and New Mexico GUTS program on pages 25, 30, 31, 33, and 34 of this report.

Review these recommendations, share them with individuals in charge of the activities, and consider implementing them to improve future meetings and programs.

2. The majority of tri-state meeting attendees are male (65%). Only 12% of the people who completed the tri-state meeting evaluation form are underrepresented minorities. In addition, no females have attended CI training opportunities and only two out of 10 are underrepresented minorities.

Project and program directors and coordinators at all levels need to actively recruit and encourage females and underrepresented minorities to become involved in the various aspects of this EPSCoR project.

3. The EPSCoR Track 2 project and state-level programs need to establish metrics to assess standardized demographic information, impact of participation, and value-added benefits. To address this issue, the evaluator will conduct the following evaluation activities:
- ***Develop and conduct an annual post-survey of all Track 2 EPSCoR participants to measure:***
 - *Impacts related to achievement of project goals.*
 - *Value-added impacts and outcomes that can be attributed to new CI capabilities of connectivity and interoperability.*
 - *Conduct focus groups and interviews*
 - ***Conduct a qualitative analysis of post-survey, focus group, and interview data to identify common themes***
 - ***Create an annual videotape of interviews and testimonials***
 - ***Revise or develop evaluation forms for the following programs:***
 - *Tri-state consortium annual meeting and workshops*
 - *CI Training opportunities*
 - *New Mexico education materials development*
 - *New Mexico Supercomputing Challenge*
 - *New Mexico GUTS program*

Appendix A: Tri-state Consortium Evaluation Form

Thank you for attending the Third Annual Western Tri-State Consortium Meeting. We hope you found the sessions informative and useful in furthering EPSCoR's goals.

The goal of the Western Tri-State Consortium meeting was to provide a venue for further integration of cyberinfrastructure (CI), research, and education as well as continuing to work towards achieving the Consortium's goals for increasing diversity. In addition we are seeking to broaden the collaborative partnerships to be more inclusive of those who will ultimately use the results of the climate research to manage resources in their region.

Please help us assess the sessions you attended.

Thank you for your support and participation !

1. Attended Wednesday, April 6th, 2011 (Day 1)

Yes No

Please rate the quality of the session/sessions you attended, in providing you information and promoting inter-institutional and interdisciplinary collaboration.

2. Concurrent Sessions: 8:30am - 11:30am

	Poor	Fair	Good	Very Good	Excellent
Cyberinfrastructure (CI) Working Group (Benedict, Ames, Dascalu)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Diversity Working Group (Casella, Daniel, Penney)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Climate Change and Climate Modeling Workshop (Darko Koracin)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

3. Luncheon Talk

	Poor	Fair	Good	Very Good	Excellent
Standards and Sharing in Mature Organizations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. Concurrent Sessions: 1:00-2:30

	Poor	Fair	Good	Very Good	Excellent
Cyberinfrastructure (CI) and Research (Benedict, Ames & Dascalu)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Enacting Cyberlearning with Analysis and Visualization of Data (Kent Crippen, UNLV)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Climate Change and Climate Modeling Workshop (Darko Koracin)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5. Concurrent Sessions: 3:00-4:30

	Poor	Fair	Good	Very Good	Excellent
Data Portal for Research and Education Users/CI Policy (Benedict, Ames & Dascalu)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Connecting Education & Outreach with Research (Sara Penney and Michele Casella)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Climate Change and Climate Modeling Workshop (Darko Koracin)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6. If you attended the Climate Change and Climate Modeling Workshop please rate it in regards to the following:

	Workshop content:	Workshop pace:	Overall Quality:	Likelihood of recommendation
Rating	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

7. Please comment about the Wednesday session you liked 1) the most and 2) the least.

Tri-State Consortium Meeting (Day 2) Thursday, April 7th, 2011

8. Attended Thursday, April 7th, 2011 (Day 2)

Yes No

Please rate the quality of the session/sessions you attended, in providing you information and promoting inter-institutional and inter-disciplinary collaboration.

9. Concurrent Sessions: 8:45am - 11:45am

	Poor	Fair	Good	Very Good	Excellent
Climate Drivers & Landscape Response	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Catchment Science (John Wilson)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Economics of Water and Land Use (Kelly Cobourn)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
HIS Workshop (Dan Ames)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

10. Luncheon & Keynote

	Poor	Fair	Good	Very Good	Excellent
USGS Forest mortality responses to climate change stresses at regional to global scales (Craig Allen)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

11. Concurrent Sessions: 1:45-3:15

	Poor	Fair	Good	Very Good	Excellent
Water Quality in Snowmelt Dominated Systems: Coupled Hydrology and Biogeochemistry (Paul Gabrielsen, Mike Pullin)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Integrated and Interdisciplinary Modeling (Tim Link)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strategies for Effective Education & Outreach Activities In Research Projects (Jacque Ewing-Taylor)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Carbon and nitrogen dynamics in semi-arid ecosystems: Responses to Climate change from mechanisms to landscape processes (Marie-Anne de Graaff, Kevin Feris)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12. Concurrent Sessions: 3:45-5:15

	Poor	Fair	Good	Very Good	Excellent
Enabling Climate Change Research: Monitoring Environmental Parameters (Mike Pullin and Paul Gabrielsen)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Use of Climate Records (John Mejia)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Climate Change Education (Lawrence Rudd)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Connecting Agencies and Researchers (Bob Parmenter)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

13. If you participated in the HIS session please rate the workshop in regards to the following:

	Workshop content:	Workshop pace:	Overall Quality:	Likelihood of recommendation
Rating	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

14. Please rate the Student Poster Session regarding the following :

	Poor	Fair	Good	Very Good	Excellent
Research Quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Oral Presentation Quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Visual Presentation Quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Promoting Critical Dialog	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments about the poster session:

15. At minimum, please comment about the session you liked 1) the most and 2) the least.

Tri-State Consortium Meeting (Day 3) Friday, April 8th, 2011

16. Attended Thursday, April 7, 2011

Yes No

Please rate the quality of the session/sessions you attended, in providing you information and promoting inter-institutional and interdisciplinary collaboration.

17. A.M. Presentations

	Poor	Fair	Good	Very Good	Excellent
Tri--State Diversity Plan	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Presentation by NSF EPSCoR: The Perspective on Collaborative and Interdisciplinary Science - Moving Forward	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

18. Concurrent Sessions: 10:00am-11:45am

	Poor	Fair	Good	Very Good	Excellent
Water Resources: State and Change (Robert Heinse, Laurel Salto, Amanda White)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Communicating Climate Change Science to Non--Scientists (Eileen Everett and Jessica Sapunar Jursich)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

19. Afternoon Session and Synthesis: 1:00pm-4:00pm

	Poor	Fair	Good	Very Good	Excellent
Plenary: From the Digital Pueblo to a Consortium for FullDome Development Regional Partnerships for Research, Education and Economic Development (Ed Angel)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Meeting Synthesis Moderator: William Michener	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Next Steps for Further Development of Consortium Collaboration (William Michener, Gayle Dana, Peter Goodwin)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

20. At minimum, please comment about the session you liked 1) the most and 2) the least.

Participant Feedback

21. Please select your reason for attending the Western Consortium Meeting: (select all that apply)

- | | |
|---|---|
| <input type="checkbox"/> Fostering collaborations | <input type="checkbox"/> Developing materials for K-12 education and public outreach |
| <input type="checkbox"/> Regional scientific challenges and solutions | <input type="checkbox"/> Developing a hydro-climatologic analysis and modeling collaboratory |
| <input type="checkbox"/> Professional enrichment | <input type="checkbox"/> Comparing output for regional climate, hydrologic and ecologic models |
| <input type="checkbox"/> Regional education and outreach challenges and solutions | <input type="checkbox"/> Share knowledge and experience on hydro-meteorological instrumentation |
| <input type="checkbox"/> Comparing how watersheds respond to climate change | <input type="checkbox"/> Sharing information about graduate student advisory roles |
| <input type="checkbox"/> Regional cyberinfrastructure challenges and solutions | |

Other (please specify)

22. Did attending this meeting strengthen an existing collaboration, or initiate a new collaborative relationship, within the Tri-State region ? (check all that apply)

- Yes, strengthened one or more existing collaborations
- Yes, initiated one or more new collaborations
- No
- Does not apply

23. Will you utilize the information presented in the workshop/sessions you attended in your research ?

- Not Likely Somewhat Likely Likely Very Likely Highly Likely

24. How did this meeting compare to other meetings you have attended ?

- Among the worst Below Average Average Better than Average Among the Best

25. Please rate the meeting regarding :

	Poor	Fair	Good	Very Good	Excellent
Pre-meeting communication	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Meeting Agenda	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Logistics/hotel	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Food & beverages	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Network Break Timing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Network Break Length	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Meeting Organization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Promoting Inter-Institutional Collaboration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Promoting Inter-Disciplinary Collaboration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

26. What did you find most useful about the meeting?

27. What did you find least useful about the meeting?

28. Please provide us with your suggestions for improvement.

Prior Attendance

29. Please indicate which Tri-State Consortium Meetings you have attended.

- 2009 (Boise, Idaho) 2010 (Lake Tahoe, Nevada)

30. Please indicate whether any of the following have resulted from your attendance at any of these prior Tri-State meetings. (please select all that apply)

- | | |
|---|--|
| <input type="checkbox"/> Ideas generated improved my research | <input type="checkbox"/> Increased recruitment/retention of URM STEM students |
| <input type="checkbox"/> Submitted one or more proposal | <input type="checkbox"/> Received one or more awards which included collaborator(s) |
| <input type="checkbox"/> Made one or more presentation at professional meeting(s) | <input type="checkbox"/> Received one or more grant awards which did NOT include collaborator(s) |
| <input type="checkbox"/> Implemented new EPSCoR activities/programs | <input type="checkbox"/> Attended an EPSCoR supported IWG |
| <input type="checkbox"/> Prepared at least one manuscript for publication | <input type="checkbox"/> Submitted/Sponsored an EPSCoR IWG |

If Other (please specify)

31. Did attending this meeting strengthen a collaborative relationship within the Tri-State region that started as a result of attending the 2009 or 2010 meeting ?

- No Not sure Yes Does not apply

If "Yes", How many individual collaborations would you estimate are a result of the Tri-state Meetings?

Demographic and Institutional Background

32. State

- Idaho Nevada New Mexico

33. Gender

- Female Male

34. Race/Ethnicity (check all that apply)

- American Indian or Alaskan Native Asian
 Hispanic Native Hawaiian/Pacific Islander
 Black/African American Prefer not to respond
 White

Other (please specify)

35. Professional Role

- Undergraduate Programmer, Technical Administrator
 Graduate Faculty Administrative Staff
 Post Doc K-12 Teacher

Other (please specify)

36. Affiliation

- Boise State NM Highlands University of NV-Reno
 Idaho State NM State EPSCoR State Office NV
 University of Idaho University of NM
 NM Museum Natural History Desert Research Institute EPSCoR State Office NM
 NM Tech University of NV-Las Vegas EPSCoR State Office ID

Other (please specify)

Appendix B: CI Training Opportunities Evaluation Form

Idaho, Nevada and New Mexico EPSCoR CI Post Training Survey

1. Your name: _____
2. Which Training did you attend?
 - The Weather Research & Forecasting Model (June 21-25, Boulder, CO)
 - Interdisciplinary Modeling (July 12 – 30, Reno, NV)
 - TeraGrid (August 2-5, Pittsburgh, PA)
 - Other (please specify: _____)
3. Please list the dates you attended the training _____
4. Which are you?
 - Faculty
 - Post-doc
 - Graduate student - Masters
 - Graduate student – Ph.D.
 - Undergraduate student
5. To what degree did this training meet your expectations for increasing your scientific capabilities?
 - ____ Far exceeded my expectations
 - ____ Exceeded my expectations
 - ____ Met my expectations
 - ____ Did not meet my expectations
 - ____ N/A
6. To what degree did this training meet your expectations for increasing your CI-literacy?
 - ____ Far exceeded my expectations
 - ____ Exceeded my expectations
 - ____ Met my expectations
 - ____ Did not meet my expectations
7. Will this training enhance your ability to conduct research in your scientific field? Please explain.
8. Briefly describe how this training increased your awareness, skills and knowledge in the area of climate change or other scientific disciplines (if applicable).
9. Briefly describe how this training increased your CI-literacy (awareness, skills and knowledge).
10. Was the application review and award process timely?
11. Comments

Appendix C: Data Portal Survey

2011 EPSCoR Track 2 Data Portal Survey

Page 1 - Question 1 - Choice - One Answer (Bullets)

[Mandatory]

What state are you in?

- Nevada
- New Mexico
- Idaho

Page 1 - Question 2 - Open Ended - One Line

[Mandatory]

What is your name?

Page 1 - Question 3 - Open Ended - One Line

[Mandatory]

What is your primary e-mail address?

Page 1 - Question 4 - Choice - One Answer (Bullets)

[Mandatory]

What type of data do you have?

- Point-Time Series or single Observations/measurements
- Area-Time Series or single Observations/measurements
- Model outputs (point-time series or single values)
- Model outputs (area-time series or single values)
- Model outputs (gridded time-series or single)
- Remote sensing (aerial or space-borne)
- GIS data
- LiDAR
- Documents
- Other, please specify

Page 1 - Question 5 - Choice - One Answer (Bullets)

[Mandatory]

What is the format of the data?

- | | |
|--|--|
| <input type="radio"/> ESRI Shapefile | <input type="radio"/> ASCII/Unicode - Tab-separated values |
| <input type="radio"/> NetCDF | <input type="radio"/> ASCII/Unicode - XML |
| <input type="radio"/> GeoTIFF | <input type="radio"/> ASCII/Unicode - other |
| <input type="radio"/> HDF | <input type="radio"/> Excel |
| <input type="radio"/> LAS | <input type="radio"/> Word Processor |
| <input type="radio"/> ASCII/Unicode - Comma-separated values (CSV) | <input type="radio"/> PDF |
| | <input type="radio"/> Other, please specify |

Page 1 - Question 6 - Open Ended - One Line

[Mandatory]

What is the current number of files of this type in your collection?

Page 1 - Question 7 - Open Ended - One Line

[Mandatory]

What is the projected number of data products of this type that you expect to produce by the end of the EPSCoR project(s)?

Page 1 - Question 8 - Open Ended - One Line

[Mandatory]

What is the current storage volume (GB) of the data products of this type?

Page 1 - Question 9 - Open Ended - One Line

[Mandatory]

What is the project storage volume (GB) of the data products of this type?

Page 1 - Question 10 - Choice - One Answer (Bullets)

[Mandatory]

Do you already have metadata for these data? If so, in what format?

- No metadata
- FGDC - XML
- FGDC - Other
- ISO 19115 - XML
- EML
- Dublin Core
- Darwin Core
- Other, please specify

Thank you for sending your data set information.
If you have any questions about the Tri-state Data Portal please contact:

Karl Benedict
University of New Mexico
kbene@edac.unm.edu
(505) 277-3622



Appendix D: Technical Writing Assistance and Proposals Survey



Page 1 - Question 1 - Open Ended - One or More Lines with Prompt [Mandatory]

Please answer these questions.

- What is your name?
- What is your email address?

Page 1 - Heading

Quality and Usefulness of Technical Writers Assistance

Page 1 - Question 2 - Choice - One Answer (Bullets) [Mandatory]

How many times did you use the Technical Writers Assistance services?

- 1
 - 2
 - 3
 - More than 3. Please specify how many.
-

Page 1 - Question 3 - Open Ended - Comments Box [Mandatory]

Please indicate the month(s) and year(s) you received these services. Write in a month/year for each time you used the service.

.....

.....

.....

Page 1 - Question 4 - Choice - One Answer (Bullets) [Mandatory]

How would you rate the usefulness of the editing services provided to you:

- Greatly improved my proposal(s)
- Somewhat improved my proposal(s)
- Did not improve my proposal(s)

Page 1 - Question 5 - Choice - One Answer (Bullets) [Mandatory]

If your proposal(s) was funded, do you feel that the editorial services contributed the success?

- My proposal(s) was not funded.
- The editorial services probably did not contribute to the success of my proposal.
- The editorial services probably increased the chances of my proposal being funded.
- The editorial services were essential to my proposal being funded.

Would you use this service again?

- Yes
- No
- Please explain why or why not.

How can we improve these editorial services and make them more useful for you?

Status of Proposals Submitted

How many proposals did you submit during this time period from September 1, 2008 to August 31, 2010?

- 1 [Skip to 2]
- 2 [Skip to 3]
- 3 [Skip to 4]
- 4 [Skip to 5]
- 5 [Skip to 6]
- 6 [Skip to 7]
- 7 [Skip to 8]
- 8 [Skip to 9]
- 9 [Skip to 10]
- 10 [Skip to 11]

Has the proposal you submitted been funded, pending, or denied?

- Funded [Skip to End]
- Pending [Skip to End]
- Denied [Skip to End]

If it was funded, please provide the following information:

- PI/CoPI names _____
- Proposal title _____
- Funding agency _____
- Amount funded _____
- Award date _____

If your proposal was denied, did you resubmit?

- No
- Not yet but I plan to resubmit.
- Yes

[Repeated questions have been deleted from this Word document form of the survey]

Thank You Page

We appreciate the time that you have taken to complete this survey.
If you have any questions, please feel free to contact us.

Lisa Kohne, External Evaluator:
lkohne@smartstartecs.com

Gayle Dana, Project Principal Investigator:
gayle.dana@dri.edu

