

January 18, 2013

Colorado Water Conservation Board Attn: Kevin Reidy 1313 Sherman Street, Room 721 Denver, CO 80203

### Subject: Recharge Colorado Purchase Order OE PDA 1300000017 Final Report

Dear Mr. Reidy:

Attached please find the final report for our Water-Energy Nexus Workshop series (purchase order OE PDA 1300000017) for your review and comment. If you have any comments or questions regarding this report, please transmit those to us by January 31, 2013.

As you will see in our final report, the feedback we received from the participants was positive and there is interest in Colorado for continuing and furthering this discussion. We look forward to opportunities to further our collaboration with you on this timely and important work. Please contact me with any question you may have at (303) 894-6339 or roodc@rechargecolorado.org.

Sincerely,

Caitlin C. Road

Caitlin Rood Program Manager Recharge Colorado

### 2013

### Water-Energy Nexus Workshops – Phase I

Workshops for Practitioners

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Figure 1 – Water-Energy Nexus Flow Chart

### **Project Overview and Goals**

Three workshops were hosted by Recharge Colorado in December 2012 to bring together the water and energy provider communities to initiate a local, watershed based dialogue regarding the Water-Energy Nexus (WEX). These workshops were, in part, the result of recent past national discussions on the same topic, headed by notable organizations such at the Alliance for Water Efficiency (AWE) and the American Council for and Energy-Efficient Economy (ACEEE) who jointly produced <u>Addressing the Energy-Water nexus:</u> <u>A Blueprint for Action and Policy Agenda</u> (Blueprint). The Blueprint developed by more than 50 individuals in the water and energy efficiency fields, laid out 8 thematic elements of its blueprint for action. Two of those thematic elements are specifically related to the December workshops:

- Increase the level of collaboration between the water and energy communities in planning and implementing programs.
- Pursue education and awareness opportunities for various audiences and stakeholders.

By the very nature of the local support for Recharge Colorado's workshops – embodied by the financial and other support provided by those organizations listed in Table 1 - the Blueprint for Action is reasonably considered to be "informative and direction setting." As the authors indicated, they hope that the energy and water conservation communities will learn from it and be motivated to act.

To this point, the workshops were focused on achieving a number of goals and objectives. Overall, the workshops were conceived to facilitate the dialog with local, regional and state stakeholders and use the discussions to characterize combined water and energy savings opportunities concurrently and on a regional basis in Colorado. As stated in the grant application, the goals of the workshops included the following:

- Increase collaboration between water and energy communities at the local (river basin and sub-river basin) level.
- Allow for an opportunity to characterize energy saving opportunities throughout the processes of pumping, conveying, treating, distributing, and reclaiming water.
- Explore the water efficiency savings in the energy field and through the various water use efficiency efforts that local communities and organizations have, and will continue to implement.
- Characterize challenges and opportunities for more comprehensive and coordinated water-energy systems management (including a focus on utilities that provide both water and energy services to their customers).

It was conceived from the start that this project will be the first phase of future workshops and therefore serve as a template for additional workshops to be conducted in other basin geographies. Future workshop goals will likely be amended to include more detailed characterization of ongoing water and energy demand side management, identifying potential synergies; and exploring opportunities for improved collaboration in water and energy supply development. Although these issues were discussed during the three WEX workshops conducted for this project, additional effort and focus in the future may be warranted. In accordance with the grant, this final report provides an overview of the workshops and their outcomes, as well as recommendations for follow-up activities based on the discussions and contributions of workshop participants. Appendices with supplemental information are attached including:

- Lunchtime keynote speaker (William Sarni of Deloitte Consulting LLP) presentation on "21<sup>st</sup> Century Water – Risks and Stewardship<sup>1</sup>";
- Lists of workshop invitees and participants;
- Exit survey raw data;
- Results of electronic voting during the workshops; and
- Results of participant breakout group efforts related to identifying potential action items to support improved WEX project and program planning and implementation.

### Table 1 – Sponsoring Organizations

Deloitte Western Resource Advocates Colorado Springs Utilities Aurora Water Colorado WaterWise City of Fountain Colorado River District Northern Water Southeastern Colorado Water Conservancy District City of Boulder Colorado Rural Electric Association Colorado Energy Office Colorado Foundation for Water Education Rocky Mountain Section of the American Water Works Association

This project was also funded by a generous grant from the Colorado Water Conservation Board through its Office of Water Conservation and Drought Planning.

<sup>&</sup>lt;sup>1</sup> Note that it was originally conceived that the panel members would give formal presentations during the workshops; however, time constraints limited the panelists to prepared comments. Therefore, the only formal presentation at the workshops was provided by the Keynote Speaker, Mr. William Sarni of Deloitte Consulting LLP. This MS PowerPoint presentation is attached as Appendix A.

### **Overview of Workshops**

The three WEX workshops were conducted during the week of December 10<sup>th</sup> through 13<sup>th</sup> at the following locations:

- Glenwood Springs (at the Glenwood Springs Community Center) (December 10<sup>th</sup>)
- Berthoud (at Northern Water's Administrative Offices) (December 12<sup>th</sup>)
- Colorado Springs (at Colorado Springs Utilities Environmental Center) (December 13<sup>th</sup>)

Appendix B presents a listing of the workshop attendees at each location.

Given the nature of the project, each workshop was considered a unique discussion with water and energy concerns influenced by local issues, local perceptions, and local needs embodied by the workshop attendees. In addition, each workshop was informed by the successes and challenges that occurred during the prior workshops – regarding process and how activities and discussions were facilitated and scheduled. Each workshop was, therefore, part of an evolving effort with each day's gathering, conducted as a "self-contained" focus group which was used to explore and advance discussions and issues that were of specific interest to that locale.

For this reason, the outcomes from each workshop are not necessarily consistent or comparable. However, major themes and community needs that were voiced by the various workshop participants shared commonalities that are described later in this report.

Overall, the facilitation of the workshops worked toward identifying and developing an understanding of each of the following "areas of interest", which would allow for recommending next steps in forwarding the water-energy nexus dialogue:

- Basin specific issues;
- Action items/next steps;
- Key players/stakeholders; and
- Funding opportunities.

Given that the workshop participants, and the facilitation team, did not necessarily know how the discussions in the workshop would evolve during the day, the information developed by the end of the day at each location did not necessarily address all four of these areas of interest. Nonetheless, our team's assessment of the workshops is that they were successful in moving the WEX dialogue forward and that meaningful information was collected through the process to address those goals specified in the grant (as listed in the previous section). We drew this conclusion, in part, based on the 86% of workshop participants responding that they agreed or strongly agreed that the workshop format was conducive to meeting the goals of the workshop and that the outcomes of the workshop were valuable (see Appendix C for a complete presentation of participant exit surveys).

Table 2 presents a summary of the exit surveys produced as a result of each workshop.

### Table 2 – Exit Survey Scoring Summary

		Average Scoring	
	Colorado River	South	Arkansas River
	Basin	Platte/Metro	Basin
		Basin	
Number of Surveys Collected	17	24	16
Issue			
Workshop Content Met Expectations	1.88	1.93	1.56
Workshop Was Useful	1.82	1.98	1.63
Goals of Workshop were Clearly Outlined	2.03	2.17	1.69
Goals of the Workshop were Met	2.21	2.13	1.94
Format of the Workshop was Conducive to			
Meeting the Stated Goals	1.84	2.09	1.67
Outcomes of the Workshop were Valuable	1.69	2.05	1.83
Average Overall "Score"	1.91	2.06	1.72

1=strongly agree, 2=agree, 3=disagree, 4=strongly disagree

Based on the results of the exit surveys, the overall rating of the workshops was considered to be positive (with the average rating of all questions combined indicated as less than 2, or in other words between "strongly agree" and "agree," shading closer to "agree"). The largest group, the South Platte/Metro Basin workshop, had consistently worse scores than the Colorado and Arkansas workshop. The decrease in participant satisfaction may have resulted from this being the largest workshop (it was attended by more than 35 participants). Our team observed that having more than 20 participants impacted the quality of the dialogue, and that some frustration occurred when time was not allotted for all the workshop attendees to share their thoughts and concerns.

To this point, a dot voting exercise that was used in the Colorado River Basin workshop to identify and articulate attendee interests was well received by the attendees. However, this exercise consumed a substantial amount of time, cutting into other important workshop content, such as the panel discussions. It was therefore removed from the agenda for the two following workshops. It became clear from the discussions and the exit surveys, that a smaller group that was allowed the flexibility to explore more deeply specific areas of interest was more effective in achieving the goals of the exercise, and left participants feeling more engaged and represented by the events of the day (versus the larger group). The larger group proved to be somewhat unwieldy in comparison to the smaller groups given the time limits (only one day for the workshop) and the broad workshop agenda.

Nonetheless, the vast majority of the workshop attendees concurred that the workshop produced valuable outcomes<sup>2</sup>. As one attendee wrote, "I think something important has been started here."

 $<sup>^{2}</sup>$  43 of 50 surveyed participants indicated that they strongly agreed or agreed that the workshop produced valuable outcomes, or 86%. More than 90% strongly agreed or agreed that the workshop content met expectations.

Another noteworthy survey result voiced by the workshop participants was that one of the most valuable aspects of the workshop was the mix of attendees, and the related opportunities for networking. This was a direct result of the workshop design, addressing one of the key goals of the grant award.

The other stated goals of the workshops related to characterizing and exploring energy and water efficiencies, and identifying areas of potential future collaboration between the energy and water providing communities were accomplished in the workshops during the panel discussions and other portions of the facilitated dialogue (e.g., breakout sessions). The results of these discussions are presented in the section that follows.

Based on the participant feedback, and the perceptions of the facilitation team, future WEX workshops should be developed with the following in mind:

- The workshops function best as basin specific focus groups, with enrollment limited to less than 20 individuals chosen to represent water and energy interests, as well as local political and environmental concerns.
- Facilitation activities should focus on creating dialogue related to identifying interests and concerns; using content experts to present short case studies of projects and programs relevant to the workshop goals and participant interests.
- Ample time should be included in the workshops for networking and informal discussions to allow for new relationships and connections to be formed.
- More focus should be placed on issue identification and story-telling, as opposed to identifying specific activities for follow-up, to support the stated workshop goals<sup>3</sup>.

<sup>&</sup>lt;sup>3</sup> At the early stages of dialogue facilitation, it is important to allow all the issues and concerns to be articulated such that values can be identified and shared, before positions are established, and tasks are identified.

### Workshop Outcomes

The workshops were designed to promote discussions and dialogue between the water and energy provider communities in the three river basins where the workshops were held – Colorado, South Platte/Metro Basin and Arkansas. In addition, the workshops sought to support local story telling related to ongoing efforts to improve water use and energy use efficiencies, as well as plan of future energy and water supply development. As per the grant specified goals, the workshops aimed to create discussions that:

- Characterized energy saving opportunities throughout the processes of pumping, conveying, treating, distributing, and reclaiming water;
- Explored the water efficiency savings in the energy sector and through the various water use efficiency efforts that local communities and organizations have, and will continue to implement; and
- Characterized challenges and opportunities for more comprehensive and coordinated water-energy systems management (including a focus on utilities that provide both water and energy services to their customers).

However, the discussions that ensued were broader in nature, given the interests of the local community

and the breadth of issues related to the WEX as it exists in locations throughout the state.

To this second point, the WEX was defined during the workshops as the connections between the four key areas of water and energy resource management, as depicted by the blue arrows in Figure 1. The organizations that plan for and implement water and/or energy supply development and water demand and/or energy management typically operate within one or perhaps two of the four boxes shown in Figure 1; however they rarely stray from tasks or activities that are confined to these boxes. The workshops, therefore, were focused on getting the dialogue started bringing together the organizations and individuals that work within each of these boxes; such that a discussion of the connections between the boxes could begin.



### Urgency of the Discussion

To begin the process of engaging the workshop participants, each workshop was asked to respond to the following questions regarding the nature and the urgency of the WEX dialogue. First, each was asked if the issues regarding the WEX could be resolved. The next question asked was "what is the level of urgency" associated with the WEX discussion. The combined results of the voting on these two questions from all three workshops are summarized in the table below.

Is the WEX Solvable?		Is the WEX Discussion		
Unsolvable	12%	Urgent/Overdue?	29%	
Solvable	69%	Timely?	66%	
Don't Know	18%	Not Ready at this Time?	5%	
(rounding error)	1%	A Distraction from More Pressing Issues?	0%	

Based on the responses to the two questions, it is apparent that the water and energy provider communities believe that the WEX discussion is important and needs to begin, such that solutions to the issues can be crafted and implemented. To this point, the workshops are well timed based on community needs and ongoing water and energy provider planning efforts.

### **Issues Related to the WEX**

In addition, the workshops were successful in uncovering a number of issues and concerns that exist with regard to forwarding a meaningful discussion of the WEX. For example, when asked to identify the key issues and/or challenges in the Colorado River Basin, workshop participants identified those issues listed in Table 4.

Table 4 - Colorado	River Basin Dot	Plotting on Key	Issues Related to	Water Energy Ne	xus
			issues neided to		~~~

Issue	Total votes/ Water Interest Votes/ Energy Interest Votes	Ranking with Water Interests	Ranking with Energy Interests
Better Coordination of Water and Energy Supply	34/19/9	2	4
Better Coordination of Water and Energy	34/19/13	2	2
Demand Management			
Improved Reliability/Security/Dependability of	31/9/15	6	1
Water Supply			
Additional Education	31/16/8	4	5
Improvement of Institutional Constraints	30/9/12	6	3
Improved Protection/Management of Natural	25/20/2	1	7
Systems			
Improved Management of Land Use	17/10/0	5	8
Improved Infrastructure	16/8/6	8	6

As a result of a similar discussion, the South Platte and Metro Basin workshop participants identified key areas of concern (see Table 5) to include most of these same issues, including more education<sup>4</sup>, better coordination of water and energy supply development efforts, better coordination of water and energy demand management efforts, and better land use planning and management. The South Platte and Metro Basin workshop also identified a number of other key issues limiting current collaborations and coordination of water and energy projects. These other key issues, which are listed in Table 5, include a few notable additions<sup>5</sup> to those listed by the Colorado workshop participants such as:

- Accounting for externalized costs for both water supply and energy supply
- Food production (as it relates to water and energy consumption)
- Data collection and generation management
- Data assessment modeling
- Regionalization of utilities/planning
- Allowing for more flexible water right laws

These issues are highlighted here because of their relative importance to the overall discussion and their relative complexity. For example, the true costs to produce and deliver energy and water to customers are not necessarily included in the current cost of services. As water and energy infrastructure age, as new regulations impact the costs of water and energy production, as sources of new energy and water supply change, costs of services will increase. Customers are not well informed as to the true cost of the services that they rely upon.

Food production is an issue that is so large that it deserves an entire group of workshops to allow for issue identification and evaluation to occur. Colorado produces a great deal of crop food and livestock. Issues exist regarding the WEX and the production of feed, the use and transport of agricultural chemicals, the transport of feed to livestock and of livestock to production, the need and desire to maintain local food sources, etc. Embedded in this issue is the need for high quality data with which to analyze and evaluate options and alternatives.

Workshop participants also identified that data collection and management, as well as data analysis tools are lacking with regard to integrated resource planning at the basin-wide level for both energy and water supply. The import and breadth of these issues is daunting, albeit critical to future collaborative planning. Future workshops may need to focus on creating research and funding mechanisms to improve data collection and management, as well as analysis methods for characterizing water and energy supply needs, and estimating project size and need.

Regionalization of utilities was identified as an institutional issue that may improve collaborative water and energy project planning and implementation. A number of municipalities that maintain both energy and water utilities within their control find that coordinating meter reading, billing, and messaging efforts within

<sup>&</sup>lt;sup>4</sup> Including education of customers, consumer, trade allies, supply chain, contractors and decision makers.

<sup>&</sup>lt;sup>5</sup> These are notable in part because they require some additional description to assist the reader in understanding the issue raised.

Table 5 - South Platte and Denver Metro Basins Dot Plotting on Key Issues Related to Water Energy Netro Plotting on Key Issues Related to	exus
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Issue	Total votes/	Ranking with	Ranking with
	Water Interest Votes/	Water	Energy
	Energy Interest Votes	Interests <sup>a</sup>	Interests <sup>a</sup>
Shift to Renewables	26/14/12	3	2
Education of customers, consumer, trade allies,	25/18/7	2	8
supply chain, contractors and decision makers			
Water law	24/19/5	1	12
Integrated energy and water retrofits/audits,.	23/13/10	4	3
Customer support			
Increased efficiency at facility or plant	21/8/13	6	1
Combined water supply/energy supply planning	21/11/10	5	3
Project assessment. Accounting for externalized	18/8/10	6	3
costs both water supply and energy supply.			
Water loss management	17/8/9	6	7
Food	15/5/10		3
Date collection/generation. management	13/6/7	13	8
Performance contracting	12/5/7		8
Regionalization	11/8/3	6	
Data assessment/modeling	11/7/4	10	
Research	10/4/6		11
Codes and standards	10/7/3	10	
Legislation	8/5/3		
Facility rehabilitation	7/5/2		
Funding (any/all parts)	7/7/0	10	
Exchanges by those with integrated systems	7/2/5		12
Alternative water source	6/3/3		
Facility/project permitting/Relicensing	5/2/3		
Community planning (building/developers)	6/6/0		
Land use planning by county	4/4/0		
Facility/project construction	3/3/0		
Pump Timing with Hydro	2/1/1		
Tiered energy development with water supply	0/0/0		

<sup>a</sup> rankings for top 13 in each category of interest

a single organization improves customer understanding of the nexus, as well as supports combined demand side management efforts. Future regionalization, either through combined institutions and/or coordinated operations and partnerships (e.g., Wise Water Partnership) allows for the sharing of infrastructure and resources that cannot be accomplished through other means.

Finally, the South Platte and Metro Basin participants discussed that current law governing water rights need to be more flexible, especially as it related to interruptible water supply agreements and exchanges. This was an issue that was identified by participants in all three workshops; however, the workshop participants indicated this as one of the most significant barriers to progress.

The Arkansas basin workshop participants identified similar issues that limit collaborations along the WEX. They identified those listed in Table 6.

Issue	Total votes/ Water Interest Votes/ Energy Interest Votes	Ranking with Water Interests	Ranking with Energy Interests
Overcome Community Bias or Ignorance	26/12/14	2	1
Climate Change / Uncertainties	18/15/3	1	6
Better Understanding of Water and Energy Imbedded in Food	14/6/8	5	2
Fluidity / Transfer of Water Rights	13/12/1	2	9
Limits of Capital to Invest in Technology (for agriculture)	13/8/5	4	4
Lack of Resources	11/5/6	7	3
Public Private Disconnect	10/5/5	7	4
Institutional Boundaries (procedures, structures)	7/6/1	5	9
Better Data Collection: Management to support Decision Making	5/2/3	9	6
Better Analysis Models	3/1/2	10	8

### Table 6 - Arkansas River Basin Dot Plotting on Key Issues Related to Water Energy Nexus

Another method was used in the workshops to further characterize limitations that organizations experience regarding conducting better planning and implementation of water and energy resources management, either in collaboration or not. Using voting machines, South Platte/Metro Basin and Arkansas River workshop participants were asked to rate how often certain issues limited ongoing efforts to plan and implement resource management programs related to the WEX – with allowable responses being often, sometimes, rarely and never. The results of these voting exercises are summarized in Table 7.

As can be seen from the results of the voting presented in Table 7, most of the identified limitations are either often or sometimes experienced by participating organizations. For example, about 75% of organizations that participated indicated that the lack of reliable data often or sometimes impacts integrated planning and implementation. Similarly, 75% of organizations indicated that a lack of resources and water rights related issues often or sometimes impact integrated planning and implementation. Institutional procedures were limiting (often or sometimes) to 95% of the participating organizations.

Issue (Limitation)	Often	Sometimes	Rarely	Never
Lack of Available Infrastructure	17%	54%	3%	26%
Lack of Available Communication Channels	11%	57%	29%	3%
Limits of Current Institutional Procedures	37%	58%	5%	0%
Limits of Current Organizational Mission	12%	41%	23.5%	23.5%
Coordination with Land Use Planning	18%	42%	37%	3%
Impacts of Private Land Owner Decisions	17%	52%	28%	3%
Impacts of Water Rights (e.g., lack of flexibility, impact of water	26%	48%	13%	13%
court, etc.)				
Lack of Available Resources	36%	39%	14%	11%
Lack of Reliable Data Upon which to Base Decisions	22%	54%	24%	0%

### Table 7 – Characterization of Limitations Impacting Collaboration on the Water-Energy Nexus

Based on the results of the voting and discussions, it is clear that there are a number of limitations

### **Important Story Telling**

Another important component of the workshops was that attendees, including the panelists, were given the opportunity to share stories and anecdotes regarding past successes and challenges that occurred within or tangential to their organizations. Within the scope of this project, it is not possible to capture all the stories and anecdotes that were shared between the workshop participants both formally and informally as a result of the three days of activities. However, numerous examples of storytelling can be acknowledged for contributing to the overall success of the WEX workshops in that they added to the overall learning of the participants, contributed to the flow of the discussions, and affected the overall workshop outcomes.

### Action Items

The participants at each workshop were tasked to develop a list of action items to address a selected set of key issues identified during the day's activities in breakout groups. Due to the different number of participants attending the three workshops, the nature of the breakout groups varied by location. For example, in the Glenwood Springs workshop (for the Colorado River Basin), the breakout groups developed action lists for each of the top five issues listed in Table 4. Due to the size of the South Platte/Metro Basin workshop, the breakout groups were divided along service lines. To this point, there were seven groups – local and regional water providers (2 different groups), local and regional energy providers (2 different groups), state, federal and NGOs/universities. Finally, the Arkansas River Basin had breakout groups to address each of the four top issues identified in Table 6 (noting that the group decided to not address climate change and related uncertainties; replacing it with limits on investment capital for improved technology in the agricultural sector).

The breakout groups created lists of actions that may help address the identified issue (or in the case with the South Platte/Metro, the breakout groups developed actions items for each group of stakeholders focused on the issues that were most germane to those groups). The results of the breakout group efforts are provided in Appendix E.

### **Observations and Recommendations**

### Observations

The three WEX workshops provided a unique opportunity for two communities of professionals - namely water and energy providers - to come together and discuss issues of mutual interest. The workshops in many ways represented the first time these organizations shared interests and challenges regarding addressing the WEX, which is becoming increasingly important over time, as resources are pinched, demands increase, and uncertainties continue to accrue. There appears to be no question that the need for increased collaboration between water and energy providers exists, for organizations understand that managing overlaps and synergies can create win-win scenarios with respect to planning for and implementing new supply development and improving demand side management. In addition, there was a clear need to include the agricultural sector in ongoing and future discussions – given the importance of agriculture to local and regional economics, water and energy supply and demand mechanics, and due to the overall role of food supply in community sustainability. However, there are a number of roadblocks and/or limits that impede opportunity for discussions and fruitful actions, and therefore progress, to move forward.

Through the process of conducting the workshops and interacting with the workshop participants, a number of key issues were identified that were the subject of concern – identifying roadblocks and limitations, both perceived and real. These issues were brought up repeatedly by workshop participants in the three different geographies of the state underscoring their importance and breadth of impact. The issues were characterized as specific needs that are currently unmet or not addressed by current programs at the local, regional, or state level. In no specific order, the key issues which are of vital importance to improving collaborative efforts addressing the WEX, include:

- More and broader education
- Focused applied research
- Funding support
- Improved collaborations
- Water rights legislation

Each of these issues is discussed in more detail below.

### **More and Broader Education**

Participants in all workshops felt that more and broader education is needed to overcome "ignorance and bias" and "apathy" at all levels of the State's citizenry, including water and energy customers, legislators and elected officials, private and public organization leaders, the media, and the public in general. Education and public messaging campaigns were identified as mechanisms to engage and inform intended audiences; however, the need is so great that any one program will not succeed in creating the reach or buzz necessary to influence voters, legislators, and/or customers using (and wasting) our water and energy products. For this reason, workshop participants across the state pointed to the coordinated use of local, regional, state, and federal resources to create and implement integrated programs addressing the current lack of

awareness and concern over the growing importance of combined water and energy resource management efforts – creating messaging that is locally based but tied to a statewide effort.

Key areas of messaging that are needed include, but are not limited to:

- The value of water as compared to its relatively low cost
- The value of energy as compared to its relatively low cost
- The use of water and energy in food production
- The importance of local food production in community sustainability
- The importance of efficient water and energy use

The workshop participants perceive that without effective, integrated educational and public information programs, achieving success on the other key issues may be hampered, at best, and impossible at worst. In addition, the participants articulated that the message related to the WEX needs to be clear, tying energy and water together, and simple.

### **Focused Applied Research**

A number of issues were collectively identified by the workshop participants regarding data and research needs. For example, numerous participants indicated that reliable data is not readily available to support planning and implementation of various WEX projects. This is due to inadequate data collection and management techniques, limited data collection funding, and limited data warehousing and sharing. In addition, appropriate data analysis tools for characterizing and evaluate project costs and impacts are not available. To address these shortcomings, workshop participants pointed to the need for focused, applied research to improve the reliability and availability of data that can be used to support integrated resource planning and project implementation.

Some potential research areas include, but are not limited to:

- Determine the real cost of providing reliable water and energy supplies to customers
- Evaluate costs and market demands for renewable energy supplies
- Evaluate impacts of energy development on future water resources (for both cooling water needs and the needs of fossil fuel production)
- Characterize energy efficiencies by water utilities, in treatment and distribution of water and wastewater
- Evaluate the feasibility for hydro pump back projects and micro-hydro projects including characterizing efficiencies, costs and power distribution opportunities
- Improve methods for characterizing uncertainties associated with climate change and drought on water and energy supply
- Characterize energy and water needs for food production and distribution in different geographies and micro-climates
- Evaluate new agricultural practices that improve water and energy use efficiencies
- Conduct rain water harvesting pilot projects

### **Improved Funding Support**

All of the above listed research and educational projects and efforts will require funding support from local, regional, state and federal entities, through public and private sources. Investment funding will also be needed to support innovation and shifts from current practices to new, more efficient practices, especially in energy and food production as new technologies are brought to the marketplace<sup>6</sup>. To meet future needs of the state and local communities, funding sources will need to be authorized and appropriated in manner that is reliable and sustainable. Severance taxes on mineral and fossil fuel exploration; new construction permitting, impact and use fees; general fund and enterprise fund sources; and service fees, as well as other sources, should all be considered to support the various programs and projects that were identified through the WEX workshop by the participants.

### **Improved Collaboration**

Water and energy providers, and those organizations that influence and/or support their efforts, have, for the most part, operated in separate "silos." For example, water utilities, as a rule, do not evaluate the impact of future energy development on their water supplies; and energy utilities do not evaluate the impact of future water development for municipal and industrial use on energy supply. In another example, the State organization that manages and promotes energy demand side management (i.e., the Colorado Energy Office (CEO)) does not share resources or coordinate programs with the State's Office of Water Conservation. At the federal level, permitting of water projects in the state are managed through one permitting entity (e.g., the US Army Corps of Engineers), whereas energy projects are permitted through another (i.e., Federal Energy Regulatory Commission). These disconnects and incongruities impact opportunities for organizational collaboration at all levels.

There are, however, examples of organizations that break down the silos, most notably those municipal entities that have both water and energy utilities (e.g., Colorado Springs Utilities, Fort Collins, Loveland, Longmont, etc.). Although not perfect, these organizations benefit from collaboration and shared resources. For example, many organizations with both electric and water utilities maintain more sophisticated water metering systems (e.g., advanced metering infrastructure (AMI)) than those organizations that only provide water. Sophisticated metering leads to a better understanding of customer water use patterns, and therefore allows for better integration of customer efficiency programs related to demand side management and conservation.

Future collaboration between water and energy utilities can be supported and promoted through local and statewide efforts. For example, building codes could be improved to create incentives for combined water and energy efficiencies. Permitting and land use planning could be altered to support more efficient and sustainable developments. Local and state organizations could also develop builder and contractor incentive and training programs that would impact new construction and retrofits of existing construction. It is imperative that local, regional and state organizations continue to improve collaborations, working locally and cooperating regionally.

<sup>&</sup>lt;sup>6</sup> One participant noted that agriculture, as a business, is quick to implement proven technologies, but must rely on government funding and subsidies to support research and development before new technologies will be considered.

### Water Rights Legislation

Workshop participants were quick to identify specific clarifications and/or improvements that are needed to improve WEX project development and planning with regard to current state law regarding two specific water rights issues:

- Develop legislation to allow for more flexibility in sharing water rights including interruptible water supplies and cooperative agreements; and
- Clarify the impact of water conservation and improved water use efficiencies on water rights (and if appropriate develop incentives for water conservation).

Without movement by the legislature, in cooperation with the State Engineer's Office (SEO) and the Department of Natural Resources (DNR), water and energy utilities may be limited in their options for implementing certain types of resource development and efficiency programs. Clarification of these two issues would allow for better business planning for both the public and private sectors.

### Recommendations

Embedded in the observations are many actions that are recommended for further evaluation and implementation; however the time frame for these efforts to proceed is unclear due to funding and other resource limitations. To this point, a list of specific recommendations was developed for short-term implementation by the State as a result of the workshops, addressing the noted observations and the overall needs of the State and local communities.

The specific recommendations for the State, in general, and CWCB, specifically, are as follows:

- Continue supporting the WEX workshops in other geographies in Colorado to engage additional water and energy providers; and gather additional local information regarding needs and limitations.
- Initiate a collaborative dialogue between the CWCB and the CEO regarding combining and/or coordinating DSM programs (especially as it relates to data collection, and program monitoring and verification activities).
- Initiate discussions with the SEO regarding water rights legislation for interruptible water supply and other cooperative agreements.
- Develop and/or establish clarification with the SEO regarding the impact of water conservation on water rights and share the results with the IBCC and Basin Round Tables statewide.
- Support the inclusion of water and energy needs of food production and distribution in future IBCC and Basin Round Table discussions.
- Establish funding mechanisms to support additional educational and research programs related to the WEX (e.g., coordinate funding with the CEO, expand the use of Water Efficiency Grant funding and/or the Water Supply Reserve Account, etc.).
- Support local and regional collaboration efforts between water and energy utilities.

Appendix A

Keynote Presentation – 21<sup>st</sup> Century Water – Risks and Stewardship



# 21<sup>st</sup> Century Water - Risks and Stewardship

**Recharge Colorado** 

**November 2012** 

Will Sarni Deloitte Consulting LLP 0

### Water risk as a business ISSUE

## Water and the US Economy

production, temporarily shuts down plants" eenews, "Drought reduces water available for energy 9/11/12 "Drought may cost \$20 billion in crop insurance" CNN Money, 8/3/12

"Severe Drought Seen as Driving Cost of Food Up" Associated Press, 7/25/12 "Low water levels threaten US farm goods" Financial Times, 12/5/12 Water Risk and Water Stewardship Strateg

## Competition for water vs. drought



Population – increase to 8 billion in the next 20 years.



Economic growth - 6 percent growth in developing countries and 2.7 percent in developed countries.





Rise of the middle class - between 1990 and 2000 population grew by a factor of four and freshwater withdrawal grew by a factor of nine.



China - By 2050 73 percent of its population will be urban up from 46 percent today. Water Risk and Water Stewardship Strate

### Water Risk and Water Stewardship Strate

Energy – There is a projected 40 percent increase in energy increase equals an increase in freshwater needs of 165 %. demand by 2030. in the US energy sector. This projected

Food - The agriculture sector will need to increase production by 70 to 100 percent to meet demand in the next 20 years.







Energy, water and food nexus



## Water scarcity

## What is the demand vs. supply gap?



World Economic Forum

by 2030





www.usf.uni-kassel.de

# Who cares about water risk?

# Investors – the CDP Water Disclosure Project

- The Carbon Disclosure Project (CDP) Water Disclosure was launched in 2010.
- investors with assets of US\$ 50 The CDP WD represents 470 trillion



Research **EIRIS Investment** companies and investors failing to protect company remain unaware of both current and future water risks and are therefore "The vast majority of value"<sup>4</sup>

"Being a responsible water user is an opportunity being responsible makes it easier for us to do for us – it helps build stronger relationships and enhances our social license to operate: with local communities and governments <u>business." Anglo American</u>

"Water may turn out to be the biggest commodity story of the 21st century"<sup>7</sup>

- Morgan Stanley

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www.cdproject.net



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### **Global 500 Findings**

- 2 Water represents a strategic opportunity to improve financial and brand performance
- 71% of respondents reported a total of 319 water-related opportunities.
  - 78% of opportunities are expected to materialize now or within the next 5

years.

 Some opportunities have sales potential of more than €800 million by 2020.



Global 500 Findings

- 4 Assessing and addressing exposure to water-related supply chain risk is on the rise
- 71% of respondents are now able to state whether or not they are exposed to supply chain risks (up from 62% in 2011).
  - 29% of respondents still remain unaware.
- More respondents
  (39%) require key suppliers to report on water use, risks, and management.
  - There is still room for improvement.

Yes No Don't Know Near-term (0-5 years) Long-term (>5 years) Unknown



### Percentage of Reported Risks

### Global 500 Findings

5 Collective action as an approach to addressing risks and opportunities

- 74% of respondents report goals and actions related to collective action initiatives.
- Community engagement (56%)
- Supply chain and watershed management (43%)
- Collective action (38%)
- Public policy (24%)
- Benefits: increased business continuity, license to operate and brand value
- Opportunities: gain fresh ideas, increase momentum for change and pool resources



**Global 500 - Sector Highlights** Consumer Staples sector

### **Consumer Staples**

RESPONSE RATE	RISKS IN DIRECT OPERATIONS	*	OPPORTUI
	Respondents exposed to risk		Respondents
	YES	ş	
	74%	26%	
	% of respo	ndents	
	Water stress or scarcity	55%	Cost savings
(32/45)	Flooding	38%	Brand value
2011 Besnonse Rate: 73% (27/37)	Declining water quality	31%	New sales
	Rising discharge compliance costs	24%	Other
Sector Hesponse Hate Breakdown Tobacco: 6/8	Tightening withdrawal limits	24%	
Beverages: 7/8 Food Products: 6/11	Higher water prices	17%	
Food & Staples Retailing: 6/11	Reputational damage	17%	

\* Difficutty obtaining operational permits was also reported by 14% of respondents

14%

Inadequate infrastructure

Household Products: 2/2 Personal Products: 5/5

### NITIES

oondents identifying opportunities	YES NO 7	81% 15% 4%	% of respondents	t savings 48%	od value 24%	r sales 14%	ar 38%
Respond				Cost sar	Brand v	New sak	Other

### Global 500 - Sector Highlights 2 Energy sector

### Energy

### **RESPONSE RATE**

### 44%

### (25/57)

### 2011 Response Rate: 47% (25/53)

Sector Response Rate Breakdown Oil, Gas & Consumable Fuels: 24/50 Energy Equipment & Services: 1/7

### **RISKS IN DIRECT OPERATIONS\***

Respondents exposed to risk

YES	ş
87%	13%
% of respon	dents
Regulatory uncertainty	48%
Nater stress or scarcity	30%
Bulbool	22%
Rising discharge c <mark>ompliance costs</mark>	22%
rightening wit <mark>ndrawal limits</mark>	17%
Declining water quality	13%
Nater efficiency requirements	13%

### **OPPORTUNITIES**

Respondents iden	tifying opportu	nities
	YES	۰- ۵
	61%	30% 9%
	%	of respondents
Cost savings		35%
New sales		13%
Other		30%

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13%

Reputational damage

\* Difficulty obtaining operations permit was also

reported by 13% of respondents

### **Global 500 - Sector Highlights** Otility sector

### Utilities

### **RESPONSE RATE**

### 63%

### (19/30)

### 2011 Response Rate: 59% (16/27)

Sector Response Rate Breakdown Independent Power Producers & Electric Utilities: 12/20 Gas Utilities: 0/2 Energy Traders: 1/1 Multi-Utilities: 6/7

### **RISKS IN DIRECT OPERATIONS**

risk
9
exposed
espondents

Respondents exposed to ris	×	
	YES	80 %
	71%	24% 6%
	% of respo	ondents
Flooding		44%
Regulatory uncertainty		44%
Water stress or scarcity		33%
Restricted operational wate	r permits	33%
Declining water quality		28%
Rising discharge complia <mark>ic</mark>	e costs	28%
Tightening withdrawal lim <mark>it</mark> s		28%
Higher water prices		7000

### **OPPORTUNITIES**

opportunities YES NO ?	71% 24%6%	% of respondents	28%	22%	11%	44%
Respondents identifying c			Brand value	Cost savings	New sales	Other

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## Stewardship

# Water management to stewardship

### Water Management

Focused on immediate, direct and indirect business costs of scarcity and efficient use of the resource

### Internal Operations

- Consistent, high-quality supply can no longer be assumed given increasing drought and flooding
- Managing water as an input must extend beyond the unit cost of water to include business continuity, brand value, and regulatory considerations

Value Chain Business Partners

- Complex supply chains cross watersheds and contain hidden water-related business risks
- Hidden risks in the supply chain magnify exposure to water risk
- Effectively managing water-related business risk through the value chain is paving the way for innovation and new business opportunities

### Water Stewardship

Focused on long-term availability of clean water for stakeholders in impacted watersheds

## Watershed Stakeholders

- Effective long-term water stewardship occurs on the scale of the local watershed in partnership with local communities and NGOs
- Disclosure of water-related efforts allows companies to gain trust, build relationships, and mitigate tensions
- Watershed-level stewardship has strategic value for global business

addressing water scarcity; stewardship is the most inclusive and Companies are at different levels of maturity with respect to long-term approach. Copyright © 2012 Deloitte Development LLC. All rights reserved.

## Elements of water stewardship

# A step forward in one category improves water stewardship performance.

### DISCLOSE

- Disclose water-related information to stakeholders
  - Publish water-related analysis in financial reports
    - Audit/assure water-related data
- Be transparent in reporting

### GOVERN

- Oversee water policy, strategy, or management plan at board level
  - Develop concrete water-related goals
    - Innovate and invest in water technology
      - Manage brand and reputation
- accountability through public policy Establish water management and lobbying efforts

freshwater used to produce goods and services across water volumes consumed and/or polluted per unit of <sup>1</sup> A water footprint is defined as the total volume of geographically explicit indicator, showing not only both direct and indirect operations. It is a time, but also locations.

(industry or company-level), customers,

investors)

regulators, NGOs, other water users

communities, governments and

(employees, suppliers, local

stakeholders on water-related issues

Engage internal and external



### FOOTPRINT

- Direct operations: Measure water wastewater discharges (quantity withdrawals, recycling/reuse, and quality)
- supplier water use and discharges Indirect operations: Measure (quantity and quality)
- Measure water footprint of products

## **ASSESS RISKS & OPPORTUNITIES**

- regulatory, and reputational waterrelated risks (direct and indirect Assess physical/operational, operations)
  - Prioritize risks and develop a mitigation plan
- related opportunities (direct and Evaluate and implement waterindirect operations)

• •	Business Continuity A comprehensive view	Innovation • Historically, water	<ul><li>Brand Value</li><li>Sound water</li></ul>	License to Operate • Water is a local issue
	of corporate water use can have significant financial impact (e.g., reduced potential for	management practices have focused on securing water supplies, and	<ul> <li>Count watch stewardship can align corporate and environmental goals</li> <li>Avoiding negative</li> </ul>	and misuse of water resources can lead to regulatory or consumer conflict
	capital costs to secure, process, and discharge water, and compliance issues)	<ul> <li>Identifying reuse and recycling opportunities can reduce costs and</li> </ul>	consumer perceptions can lead to increased revenues	<ul> <li>Considering         operational and local             community needs can             maintain this license in             the supply chain and         </li> </ul>
•	These benefits can be leveraged in the supply chain and in direct operations	diversify supply, mitigating risk in direct operations		direct operations, and support business continuity and brand value
		Risk M	itigated	
Operational	>	>		>
Regulatory		>	>	>
Reputational	>		×	<b>^</b>
	Responding to w	/ater-related risks can miti company's	gate risk and identify opp value chain	ortunities across a

Benefits of water stewardship

# The paradigm shift in water as a resource



Water Stewardship – Top Three Actions
Track water use against energy use—how much water is associated with direct energy use (onsite), purchased energy and in your supply chain
Develop an understanding of your water footprint and water risk within the watershed
Engage stakeholders within the watershed to develop a collective water and energy conservation and management plan
Energy and Power – Top Three Actions
"Watershed-scale thinking" -view energy development (oil and gas, biofuels, etc.) and power generation within the context of the local watershed
Consider renewables (low water footprint) for watersheds experiencing water stress or scarcity
Engage stakeholders within the watershed to develop a collective water and

Managing the energy water nexus

energy conservation and management plan

## Thank You!

### Will Sarni

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Appendix C

Exit Surveys



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### **Colorado River Basin Water-Energy Nexus Workshop** Monday, December 10, 2012

### Exit Survey

- 1. Name (optional)
- 2. The content of the workshop met my expectations. (Circle one and explain)
- Strongly Agree Agree Disagree Strongly Disagree Please explain: Not sure on my expectiations coming, in-other than learning from other participants - but certainly learned allot, made some excellent, contacts, have some good ideas for implementation at watershed 3. I found the workshop useful. (Circle one and explain)
- Strongly Agree Agree Disagree Strongly Disagree.
  Please explain: Great starting point for thought on how to incorporate into the point of water/energy nergins issue, opportunities, possible pitots into onr wateshed is
- 4. The goals of the workshop clearly outlined? (Circle one)
- per artine of goals at beginning. Please explain: Sounds ING FROM WOUL
- 6. The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Really well facilitated and organized. Please explain:
- 7. The outcomes of the workshop were valuable. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain: Good start. Would like to see the recommendations Further vetted trefined - maybe more pilots identified.
- 8. What did you find most valuable in the workshop? The moming sessions were great \_ good brainstorming about local/regional/state issues. I liked to hear about successiv 9. What did you find least valuable in the workshop? and the all the Amelia's presentation rand the global vew by The last exercise was tough. That same I would have pretered to brainstorm on a topic I was more familiar with. 10. What would you do differently if you were organizing the workshop? On point 9, see it tolks were more interested in working on certain issues rather than others while balancing out the 11. What actions do you plan to take as a result of this workshop? Number OF folks Engaging some of the meeting pathcipants to work help with our wateshed planning process. Follow up in some reports lexamples shared today



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### xit Survey

- 1. Name (optional)
- 2. The content of the workshop met my expectations. (Circle one and explain) Strongly Agree (Agree Disagree Strongly Disagree Please explain:

My expectations were not well defined.

- I found the workshop useful. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- The goals of the workshop clearly outlined? (Circle one) Strongly Agree (Agree Disagree Strongly Disagree
- The goals of the workshop were met? (Circle one) Strongly Agree Agree Disagree Strongly Disagree Please explain:

The goals may beau been too large to pully address in

Time available , The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain) 6. Strongly Agree Agree Disagree Strongly Disagree Please explain:

The next round should be more focused

7. The outcomes of the workshop were valuable. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:

I think something important has been started here.

8. What did you find most valuable in the workshop?

The interest of a very maried group in addressing a difficult,

- 9. What did you find least valuable in the workshop?
- 10. What would you do differently if you were organizing the workshop?

It probably needs he a 20,3 day invent to derve deeper into issues and develop more truct between the attenders.

11. What actions do you plan to take as a result of this workshop?

Try to be more open mended toward the Roaring Fork Colleborative and other bain organizations.



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### Exit Survey

- 1. Name (optional)
- 2. The content of the workshop met my expectations. (Circle one and explain) Strongly Agree ('Agree) Disagree Strongly Disagree Please explain:

Yes speakers covered topics well

- 3. I found the workshop useful. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain: I learned more
- The goals of the workshop clearly outlined? (Circle one) Strongly Agree Agree Disagree Strongly Disagree Ues
- The goals of the workshop were met? (Circle one) Strongly Agree (Ágree Disagree Strongly Disagree Mayor topics/solutions iDentifies
- 6. The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explaint interaction / Breaks important
- 7. The outcomes of the workshop were valuable. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 8. What did you find most valuable in the workshop? Conversation to coldiers main i peas
- 9. What did you find least valuable in the workshop? Agenda was Very ambitinous
- 10. What would you do differently if you were organizing the workshop? Braad to Specific Focus Funnels So get us Braad to Specific it was done well but get us to groups we are intervested in. 11. What actions do you plan to take as a result of this workshop? Design for the month Discuss Brugy Reliability in Region for Long Term W/ others.



Monday, December 10, 2012

### t Survey

**GREAT WESTERN INSTITUTE** 

- 1. Name (optional)
- 2. The content of the worksnop met my expectations. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain: Wash 4 Sure What would be covered

3. I found the workshop useful. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:

More information

- 4. The goals of the workshop clearly outlined? (Circle one) Strongly Agree Agree Disagree Strongly Disagree
- 5. The goals of the workshop were met? (Circle one)
  Strongly Agree Agree Disagree Strongly Disagree
  Please explain:
  Ambutions expectations hard to meet all of the work of t
- 6. The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:

Much particepation

- The outcomes of the workshop were valuable. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 8. What did you find most valuable in the workshop? Hearing usues / panelists on other are as
- 9. What did you find least valuable in the workshop?

Were other local primicipalities invited (Menwood Spg, Basat, Corbondale?) 11. What actions do you plan to take as a result of this workshop? She what were wing regarding water 10. What would you do differently if you were organizing the workshop? tulities





### **Exit Survey**

- 1. Name (optional)
- The content of the workshop met my expectations. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain: WWE ADAY OF THE WOUSNY SMACHTODERS

IN FORMATION BOWER PARTUPANTS

- 3. I found the workshop useful. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- The goals of the workshop clearly outlined? (Circle one) Strongly Agree Agree Disagree Strongly Disagree
- The goals of the workshop were met? (Circle one) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain: W GrupTIN OF THE THUMATIC (who was VOM Jood) "STE DUNG" THE MTG too MUCH.RY ASCING A LOT OF MUSTIN'S. LET THE CONVERSATIN From MORE, 7. The outcomes of the workshop were valuable. (Circle one and explain)
- Strongly Agree Agree Disagree Strongly Disagree TAKE KWAY FROM THE NETWORK OPPS. Please explain:
- 8. What did you find most valuable in the workshop?

THE WIDE BANKE OF DIALOGUE

9. What did you find least valuable in the workshop?

NA

10. What would you do differently if you were organizing the workshop?

TAULIATOR ASALA LEES QUESTIONS DENNERS COMMENTS. I TAUK IT SHUT DOWN THE CAMPINTERACTOR ADD What actions do you plan to take as a result of this workshop? 11. What actions do you plan to take as a result of this workshop?

MAXIMIZE uy Existents fromenes à projects.



Colorado River Basin Water-Energy Nexus Workshop Monday, December 10, 2012 **Exit Survey** 

- 1. Name (optional)
- 2. The content of the workshop met my expectations. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:

explain: Wented Mole discussion of the environmented consideration of water energy use. Tack more of reduction is use of the workshop useful. (Circle one and explain) By Agree Agree Disagree Strongly Disagree cultured of our reflection work explain: 3. I found the workshop useful. (Circle one and explain) Strongly Agree (Agree) Disagree Strongly Disagree Please explain:

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focused

- 4. The goals of the workshop clearly outlined? (Circle one) Strongly Agree (Agree) Disagree Strongly Disagree
- 5. The goals of the workshop were met? (Circle one) Strongly Agree, Agree, Disagree Strongly Disagree Please explain:
- 6. The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain) Strongly Agree Agree (Disagree) Strongly Disagree Please explain: parels were too long; pour was all over the board

local, regionel, states global. Hade it hand to keep 7. The outcomes of the workshop were valuable. (Circle one and explain) Strongly Agree (Agree) Disagree Strongly Disagree Please explain:

- 8. What did you find most valuable in the workshop? Hoving the topic discussed
- 9. What did you find least valuable in the workshop?

Not enough thinking out of the box

- 10. What would you do differently if you were organizing the workshop? Just keep pushing the ball forward
- 11. What actions do you plan to take as a result of this workshop?

flid out more about how much energy can be soved with well consider a vice versa





### **Exit Survey**

- 1. Name (optional)
- 2. The content of the workshop met my expectations. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 3. I found the workshop useful. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 4. The goals of the workshop clearly outlined? (Circle one) Strongly Agree Agree Disagree Strongly Disagree Not before the Graworkshop started
- 5. The goals of the workshop were met? (Circle one) Strongly Agree (Agree) Disagree Strongly Disagree Please explain:

Yes but was rushed at end to achieve so less thoughtful

6. The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:

Nice range of activities

- 7. The outcomes of the workshop were valuable. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain: +ough to Know how to address local/muni issues w/o expertise
- 8. What did you find most valuable in the workshop?

9. What did you find least valuable in the workshop?

10. What would you do differently if you were organizing the workshop?

Articulark format more before workshop

11. What actions do you plan to take as a result of this workshop?



### t Survey

1. Name (optional)

RECHARGE

- 2. The content of the workshop meg/my expectations. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 3. I found the workshop useful. (Circle one and explain) Strongly Agree Agree /Disagree Strongly Disagree Please explain:
- 4. The goals of the workshop clearly outlined? (Circle one) Strongly Agree Agree Disagree Strongly Disagree
- 5. The goals of the workshop were met? (Circle one) Strongly Agree / Agree / Disagree Strongly Disagree Please explain:
- 6. The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain) Warked well being less formal & mare Strongly Agree Agree Disagree Strongly Disagree Please explain:

7. The outcomes of the workshop were valuable. (Circle one and explain) Look forward to heports from all three workshops Strongly Agree / Agree) Disagree Strongly Disagree Please explain:

What did you find most valuable in the workshop? 8.

Some new faces & perspectives

9. What did you find least valuable in the workshop?

Weather satside

- 10. What would you do differently if you were organizing the workshop?
- 11. What actions do you plan to take as a result of this workshop?

Fallow up on next 2 war &shops



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### **Exit Survey**

- 1. Name (optional)
- 2. The content of the workshop met my expectations. (Circle one and explain) Strongly Agree (Agree) Disagree Strongly Disagree Please explain: Very educational, uncertain about next steps
- 3. I found the workshop useful. (Circle one and explain) Strongly Agree (Agree) Disagree Strongly Disagree Please explain: Tenned a lot
- The goals of the workshop clearly outlined? (Circle one) (Strongly Agree) Agree Disagree Strongly Disagree
- The goals of the workshop were met? (Circle one) Strongly Agree Agree (Disagree) Strongly Disagree Please explain: Outcomes didn't seem local enough ... which means solutions probably won't get executed
- 6. The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain) Please explain: It might be more productive to get an assessment ) of regional enerytwater supply to demand issues out on the table / wall early 7. The outcomes of the workshop were valuable. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree

Strongly Agree Agree Disagree Strongly Disagree Please explain: I learned a lot

- 8. What did you find most valuable in the workshop?
- 9. What did you find least valuable in the workshop? Rey I couldn't really relate to the key note talking about large corporations ... but it was interesting

10. What would you do differently if you were organizing the workshop? I think if you keep it regional #@ each basin & then collect the results & do internal analysis on its state/federal implications that might be the most effective 11. What actions do you plan to take as a result of this workshop? Use of time

don't know ...





### **Exit Survey**

- 1. Name (optional)
- The content of the workshop met my expectations. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- I found the workshop useful. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 4. The goals of the workshop clearly outlined? (Circle one) Strongly Agree Agree Disagree Strongly Disagree
- The goals of the workshop were met? (Circle one) Strongly Agree Agree Pisagree Strongly Disagree Please explain:
- The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree
   Please explain:
- The outcomes of the workshop were valuable. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 8. What did you find most valuable in the workshop? - LEARNING BEOUT THE EARROY STRE - CONVERSATIONS BETWEEN PORTICIPONTS - STICKY NOTE EXERCISE
- 9. What did you find least valuable in the workshop? THE LAST RHEACISE. IT WASN'T CLEAR ON WHAT WAS WANTED OUT OF IT.
- 10. What would you do differently if you were organizing the workshop? Be NORE CLEAR ON OUTCOMES DRJ 19FED BT BEGINDING OF DAY BND RE ITERATE THROJGHAST DAY
- 11. What actions do you plan to take as a result of this workshop? XCCELS SOURCES I FOUND OUT REOUT TODAL



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### Exit Survey

- 1. Name (optional)
- 2. The content of the workshop met my expectations. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain: Wash't sure what to expect but enjoyed the day.
- 3. I found the workshop useful. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain: I enjoy any talks involving energy usage and potential squings
- 4. The goals of the workshop clearly outlined? (Circle one) Strongly Agree Agree Disagree Strongly Disagree Tracy outlined goals of beginning of meeting
- 5. The goals of the workshop were met? (Circle one) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree
   Please explain:
- 7. The outcomes of the workshop were valuable. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain: Heard and participated in some great conversation.
- 8. What did you find most valuable in the workshop? Networking
- 9. What did you find least valuable in the workshop? N/A
- 10. What would you do differently if you were organizing the workshop? N/A
- 11. What actions do you plan to take as a result of this workshop? Get other utilities involved in the water-energy nexus.





### Monday, December 10, 2012

### Survey

- 1. Name (optional)
- 2. The content of the worksnop met my expectations. (Circle one and explain) Strongly Agree Disagree Strongly Disagree Please explain: A Little work focus on residential energy & water efficiency than I was Expecting.
- I found the workshop useful. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 4. The goals of the workshop clearly outlined? (Circle one) Strongly Agree Agree Disagree Strongly Disagree
- 5. The goals of the workshop were met? (Circle one) Strongly Agree Agree Disagree Strongly Disagree Please explain: We started to no out of time. Lots of content for the time frame!
- The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain)
   Strongly Agree Agree Disagree Strongly Disagree
   Please explain:
- 7. The outcomes of the workshop were valuable. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain: As loving as the work is continued & it doesn't sit on the sheff.
- 8. What did you find most valuable in the workshop? Coathering of various interests, Tracy did a great job facilitating.
- 9. What did you find least valuable in the workshop?

Oil & Gas was missing. Big part of water & energy in our basin.

10. What would you do differently if you were organizing the workshop?

11. What actions do you plan to take as a result of this workshop?

Attempt to Collaboration with watershed groups on conservation projects.



### Monday, December 10, 2012

### **Exit Survey**

1. Name (optional)

ECHARGE

- The content of the workshop met my expectations. (Circle one and explain)
   Strongly Agree Agree Disagree Strongly Disagree
   Please explain:
- I found the workshop useful. (Circle one and explain)
   Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 4. The goals of the workshop clearly outlined? (Circle one) Strongly Agree Agree Disagree Strongly Disagree
- 5. The goals of the workshop were met? (Circle one) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree
   Please explain:
- The outcomes of the workshop were valuable. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 8. What did you find most valuable in the workshop? (CARNOD A LOT MORE ABOUT THE ENGREY SIDE OF THE EQUATION.
- 9. What did you find least valuable in the workshop?
- 10. What would you do differently if you were organizing the workshop?

NOT MUCH

11. What actions do you plan to take as a result of this workshop?

HOD ENGRAY (WATTER RELATIONSHIPS TO MY EDUCATIONAL WORK. ITS NOT JUST A WATTER QUALITY ISSUE (FRACKING ....)



### Monday, December 10, 2012

### it Survey

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- 1. Name (optional
- 2. The content of the workshop met my expectations. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain: I was consure of what this wookshop was about and how my participation would be beneficial.
- I found the workshop useful. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 4. The goals of the workshop clearly outlined? (Circle one) Strongly Agree Agree Disagree Strongly Disagree
- The goals of the workshop were met? (Circle one)
   Strongly Agree Agree Disagree Strongly Disagree
   Please explain:
- The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain)
   Strongly Agree Agree Disagree Strongly Disagree
   Please explain:
- The outcomes of the workshop were valuable. (Circle one and explain)
   Strongly Agree Agree Disagree Strongly Disagree
   Please explain:
- 8. What did you find most valuable in the workshop?
- 9. What did you find least valuable in the workshop?
- 10. What would you do differently if you were organizing the workshop?
- 11. What actions do you plan to take as a result of this workshop?

I will take what I learned back discuss and see how we can tee and



### Monday, December 10, 2012

### Survey

**GREAT WESTERN INSTITUTE** 

- 1. Name (optional)
- 2. The content of the workshop met my expectations. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 3. I found the workshop useful. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 4. The goals of the workshop clearly outlined? (Circle one) Strongly Agree (Agree) Disagree Strongly Disagree
- The goals of the workshop were met? (Circle one) Strongly Agree Agree Disagree Strongly Disagree Kerp to schedule Please explain:
- 6. The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 7. The outcomes of the workshop were valuable. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 8. What did you find most valuable in the workshop? Explained Xecl Energys Cigreement with Denver for Shushame Call relaxation. Tohn Stulp elogiciently defended the prior appropriation 9. What did you find least valuable in the workshop? System, which had been attacked

Too much dowdling too they of the

10. What would you do differently if you were organizing the workshop?

Keep to schedule

11. What actions do you plan to take as a result of this workshop?

- although future contents could be valuable





### **Exit Survey**

- 1. Name (optional)
- The content of the workshop met my expectations. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- I found the workshop useful. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 4. The goals of the workshop clearly outlined? (Circle one) Strongly Agree Agree Disagree Strongly Disagree
- The goals of the workshop were met? (Circle one) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- The outcomes of the workshop were valuable. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 8. What did you find most valuable in the workshop? CASE STUDIES
- 9. What did you find least valuable in the workshop? DIDN'T SEEM TO GET TO DUTCOMES/NEXT STEP NOT SURE WHAT THE VOTING BIT WAS SUPPOSED TO BE FOR
- 10. What would you do differently if you were organizing the workshop? CLEARER DIRECTION MORE TIME ON WHATS NEXT
- 11. What actions do you plan to take as a result of this workshop?





### Monday December 10, 2012

Survey

- 1. Name (optional)
- 2. The content of the workshop met my expectations. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- Found the workshop useful. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 4. The goals of the workshop clearly outlined? (Circle one) Strongly Agree Agree Disagree Strongly Disagree
- 5. The goals of the workshop were met? (Circle one) Strongly Agree Disagree Strongly Disagree Please explain:
- 6. The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- The outcomes of the workshop were valuable. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 8. What did you find most valuable in the workshop? DWERSTY of perspect
- 9. What did you find least valuable in the workshop?
- 10. What would you do differently if you were organizing the workshop?
- 11. What actions do you plan to take as a result of this workshop?

FOUDRUP W OTTLEN AUS research M Co State

### it Survey

- 1. Name (optional) 🌷
- 2. The content of the workshop met my expectations. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:

l'expected to bown from others siewpoints and I did

 I found the workshop useful. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:

Thouk you for initing me. I learned old and I will appreciate the nexus instead of loothe it.

- 4. The goals of the workshop clearly outlined? (Circle one) Strongly Agree Agree Disagree Strongly Disagree
- 5. The goals of the workshop were met? (Circle one) Strongly Agree Agree Disagree Strongly Disagree Please explain: We did it. I don't know how we got there. its kind of a blue but it looks like we can check off every youl on the list.
- 6. The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:

Tracy is a great facilitator and able to shift on the fly.

- The outcomes of the workshop were valuable. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 8. What did you find most valuable in the workshop?

net working

9. What did you find least valuable in the workshop?

nothing

- 10. What would you do differently if you were organizing the workshop? Bet good coffee right away
- 11. What actions do you plan to take as a result of this workshop?

talk more with our marketing people look for more connections between water and energy over coffee

### **Evit Survey**

- - Please explain: I understand more perspectives of the people of entities working In Water/Energy.
- 4. The goals of the workshop clearly outlined? (Circle one) Strongly Agree Agree Disagree Strongly Disagree
- 5. The goals of the workshop were met? (Circle one) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 6. The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 7. The outcomes of the workshop were valuable. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain: Yes- let's Get the industry Lauroschim Joing!
- 8. What did you find most valuable in the workshop?

Meeting other participants of indestanding their challenges and perspectives.

9. What did you find least valuable in the workshop?

Dot voting . interesting .. but what are we doing with it?

- 10. What would you do differently if you were organizing the workshop?
- 11. What actions do you plan to take as a result of this workshop?

thelp advance this topic of water of Energy Clients.

t Survey

- 1. Name (optional)
- 2. The content of the workshop met my expectations. (Circle one and explain) Strongly Agree Disagree Strongly Disagree Please explain: R-eally enjoyed the collaborative and innovative

- 3. I found the workshop useful. (Circle one and explain) Strongly Agree (Agree) Disagree Strongly Disagree Please explain:
- 4. The goals of the workshop clearly outlined? (Circle one) Strongly Agree Agree Disagree Strongly Disagree
- 5. The goals of the workshop were met? (Circle one) Strongly Agree (Agree ) Disagree Strongly Disagree Please explain:
- 6. The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 7. The outcomes of the workshop were valuable. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 8. What did you find most valuable in the workshop? Fanel discussions lunch key note speaker.
- 9. What did you find least valuable in the workshop?

Voting with dots. -> What's next?

- 10. What would you do differently if you were organizing the workshop? The slides for voting were hard to read
- 11. What actions do you plan to take as a result of this workshop?

Discuss with utitity water staff.

- 1. Name (optional)
- 2. The content of the workshop met my expectations. (Circle one and explain)
- Strongly Agree ) Agree Disagree Strongly Disagree
  - Please explain:

- 3. I found the workshop useful. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 4. The goals of the workshop clearly outlined? (Circle one) ly Disagree - have been set ont variers ircle one) at baginning Strongly Agree Agree Disagree Strongly Disagree
- 5. The goals of the workshop were met? (Circle one) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 6. The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain) Strongly Agree (Agree) Disagree Strongly Disagree Please explain:
- 7. The outcomes of the workshop were valuable. (Circle one and explain) Strongly Agree ) Agree Disagree Strongly Disagree Please explain:
- 8. What did you find most valuable in the workshop?

peril disussions

9. What did you find least valuable in the workshop?

Since land

10. What would you do differently if you were organizing the workshop?

11. What actions do you plan to take as a result of this workshop?

discussiventes with colleagues

- 1. Name (optional)
- 2. The content of the workshop met my expectations. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain: The same la barree learned more

- I found the workshop useful. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 4. The goals of the workshop clearly outlined? (Circle one) Strongly Agree Agree Disagree Strongly Disagree Is it water consumption reduction? I think examples of the nexus
  5. The goals of the workshop were met? (Circle one) Strongly Agree Agree Disagree Strongly Disagree Drain stooming. Indriving the Please explain: I don't know what the output was supposed discussion to be, There was alot of discussion, but not a lot of conclusions.
- The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain: The format was too broad. I didn't like the non-secret "secret ballot.
   Asking why you uoted in the ninority doesn't toster
   The outcomes of the workshop were valuable. (Circle one and explain)
   Strongly Agree Agree Disagree Strongly Disagree and explain)
- Strongly Agree Agree Disagree Strongly Disagree  $\mathcal{U}$ Please explain:
- 8. What did you find most valuable in the workshop?

9. What did you find least valuable in the workshop?

- 10. What would you do differently if you were organizing the workshop?
  - Start with some concepts to drive the discussion.
- 11. What actions do you plan to take as a result of this workshop?

### **Exit Survey**

- 1. Name (optional) 🥻
- 2. The content of the workshop met my expectations. (Circle one and explain) Strongly Agree (Agree) Disagree Strongly Disagree Please explain:

Good discusion among a variety of stakeholdes

I found the workshop useful. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:

Great to hear all perspectives

4. The goals of the workshop clearly outlined? (Circle one) Strongly Agree Agree Disagree Strongly Disagree

5. The goals of the workshop were met? (Circle one) Strongly Agros Strongly Agree Agree Disagree Strongly Disagree Please explain:

I think we call have speat more fine itentifying priority areas for action ad plans to achieve that.

6. The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:

hard

- 7. The outcomes of the workshop were valuable. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain: losed
- 8. What did you find most valuable in the workshop?

Mening different pospectives.

9. What did you find least valuable in the workshop?

Last exercise of listing allow a copulies.

10. What would you do differently if you were organizing the workshop?

11. What actions do you plan to take as a result of this workshop?

Report at to comput, following with a few new acquainteness

Survey

1. Name (optional) 2. The content of the workshop met my expectations. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain: I found the workshop useful. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain: 4. The goals of the workshop clearly outlined? (Circle one) The brainsterming entercise was Net described he the paint Strongly Agree Agree Disagree Strongly Disagree 5. The goals of the workshop were met? (Circle one) Strongly Agree Agree Disagree Strongly Disagree Not sure, blat think some very good iteas Please explain: Cove and of it 3. The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain: Why were the NFG+ valer pple separated The Smill group discussions. Sepred canter productive 7. The outcomes of the workshop were valuable. (Circle one and explain) Strongly Agree (Agree Disagree Strongly Disagree Please explain: 8. What did you find most valuable in the workshop? Idea to capitalize on OSM Energy Utility credits to help pay for water cans activities 9. What did you find least valuable in the workshop? Trying to fit concepts into categories 10. What would you do differently if you were organizing the workshop? Min NRG/HzO Folks in fable discussiony Not very so much about cadegories

11. What actions do you plan to take as a result of this workshop?

) Meet W CEO Re La connections + plaining 3) meet w/ PUC Re DMS idea Scenarie planning 3) meet w/ Trewiss Res Perfermence Continuets 10) meet w/ Jordan © NREL Re Plaining
#### Survey

- 1. Name (optional)
- 2. The content of the workshop met my expectations. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain: Neutral to shiptly positive
- 3. I found the workshop useful. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 4. The goals of the workshop clearly outlined? (Circle one) Strongly Agree Agree Disagree Strongly Disagree
- 5. The goals of the workshop were met? (Circle one) Strongly Agree (Agree) Disagree Strongly Disagree

- It may have been in the pre-event Materials. In the start of the event it was a bit unclear.

yelding

Please explain: Interms ? identifying usines, tasks, resources (generally) — The listing process (early p.m.) was a bit confusing / poorly 6. The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain) or quiged Strongly Agree Agree Disagree Strongly Disagree Please explain: 1 like mix of panels, Q&A, polling & snoll gaze.

The outcomes of the workshop were valuable. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree explain: Not serve yet - depends what exactly was captured & how it is used Please explain:

8. What did you find most valuable in the workshop?

Panels & small groups

9. What did you find least valuable in the workshop?

Discussion trying to yield the "A groups" -Very cargusing I hard to follow & contribute 10. What would you do differently if you were organizing the workshop?

A bit more structure explanation RE: "Agwinging" discussion - purpose, etc.

. Cond, with other organizations while state.

#### Exit Survey

1

- 1. Name (optional)
- 2. The content of the worksnop met my experiment. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree

Please explain: Wasn't sure what to expect

3. I found the workshop useful. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:

Interesting concepts to take back to office

- 4. The goals of the workshop clearly outlined? (Circle one) Strongly Agree Agree Disagree Strongly Disagree WISH'F SWE What WE Appet
- 5. The goals of the workshop were met? (Circle one) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain)
   Strongly Agree Agree Disagree Strongly Disagree
   Please explain:
- The outcomes of the workshop were valuable. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 8. What did you find most valuable in the workshop?

New concepts to me

- 9. What did you find least valuable in the workshop? Not knowing understanding agende
- 10. What would you do differently if you were organizing the workshop? Any to attact upper Mg1. of organizous
- 11. What actions do you plan to take as a result of this workshop?

talk of work group

- 1. Name (optional)
- The content of the workshop met my expectations. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 3. I found the workshop useful. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 4. The goals of the workshop clearly outlined? (Circle one) Strongly Agree (Agree) Disagree Strongly Disagree
- 5. The goals of the workshop were met? (Circle one) Strongly Agree Agree Disagree Strongly Disagree Please explain: But would have liked to see more about the wheet + who
- 6. The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain)
   Strongly Agree Agree Disagree Strongly Disagree
   Please explain: Fult risked & end + people loosing Steam.
- 7. The outcomes of the workshop were valuable. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain: A lot was discussed but more talk about Solutions would have been telpful
- 8. What did you find most valuable in the workshop? Learning about the expectations of different organizations
- 9. What did you find least valuable in the workshop?
- 10. What would you do differently if you were organizing the workshop?

- 1. Name (optional)
- The content of the workshop met my expectations. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 3. I found the workshop useful. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain: Elicitated issues reporting with levery I was not Killy once of.
- 4. The goals of the workshop clearly outlined? (Circle one) Strongly Agree (Agree) Disagree Strongly Disagree It was a little cartosing about overall goals & stratue.
- The goals of the workshop were met? (Circle one)
   Strongly Agree Agree Disagree Strongly Disagree
   Please explain:
- The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree
   Please explain:
- The outcomes of the workshop were valuable. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 8. What did you find most valuable in the workshop? The interactions with other nembers across different areas of interact.
- 9. What did you find least valuable in the workshop? Some of the part discussions come have been more detailed
- 10. What would you do differently if you were organizing the workshop?

Pack Loss Into Die Day.

- ·· Survey

1. Name (optional)

2. The content of the worksnop met my expectations. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:

- I found the workshop useful. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 4. The goals of the workshop clearly outlined? (Circle one) Strongly Agree Agree Disagree Strongly Disagree
- Strongly Agree Agree Disagree Strongly Disagree Please explain:

(I arrived late, missed introduction, So may not have been 5. The goals of the workshop were met? (Circle one) fully informed

- 6. The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain: I think more a larger proportion of time devoted to providing information would have been appropriete
- 7. The outcomes of the workshop were valuable. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 8. What did you find most valuable in the workshop?

Information provided

9. What did you find least valuable in the workshop?

is group moto brackout sessions

10. What would you do differently if you were organizing the workshop?

leave out breakout sessions

Still considering

#### t Survey

- 1. Name (optional)
- 2. The content of the workshop met my expectations. (Circle one and explain) Strongly Agree / Agree Disagree Strongly Disagree Please explain:
- 3. I found the workshop useful. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 4. The goals of the workshop clearly outlined? (Circle one) Strongly Agree Agree Disagree Strongly Disagree
- 5. The goals of the workshop were met? (Circle one) Strongly Agree Agree Disagree Strongly Disagree for me yes. Please explain:
- 6. The format of the workshop was conducive to mean strongly Agree Agree Disagree Strongly Disagree Please explain: This is a vary complete to put and the strongly Agree Agree Disagree valuable. (Circle one and explain) Start from for the workshop were valuable. (Circle one and explain) Start from the strongly Agree Agree Disagree Strongly Disagree for the workshop.
- 8. What did you find most valuable in the workshop?
- 9. What did you find least valuable in the workshop?
  Getty 5. gggd down in Server tas
  Centry afternon
  10. What would you do differently if you were organizing the workshop?

I dent know

Will be Communicated of my networks. Water shed process & Dever Freeprint Houson Council

- 1. Name (optional)
- The content of the workshop met my expectations. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:

STILL NOT QUITE SLARE WHAT THE GOAL WAS

- 3. I found the workshop useful. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 4. The goals of the workshop clearly outlined? (Circle one) Strongly Agree Agree Disagree Strongly Disagree
- The goals of the workshop were met? (Circle one) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 6. The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain)
   Strongly Agree Agree Disagree Strongly Disagree
   Please explain:
- The outcomes of the workshop were valuable. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 8. What did you find most valuable in the workshop?

- HEARING FROM OTHERS

9. What did you find least valuable in the workshop?

FRUSTRATING STRUCTURE

10. What would you do differently if you were organizing the workshop?

11. What actions do you plan to take as a result of this workshop?

WAIT TO HEAR WHAT THE OUTCOME WAS & WHAT THE NEXT STEP IS

- 1. Name (optional)
- 2. The content of the workshop met my expectations. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain: Moethy Altracting with other professioners
- I found the workshop useful. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:

Sahl

- 4. The goals of the workshop clearly outlined? (Circle one) Strongly Agree Agree Disagree Strongly Disagree twos not very clear ys for for cond
- 5. The goals of the workshop were met? (Circle one) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 6. The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain: bagged down by process brainstenny and categorizing Ma (arge greep was methedime Authority)
- The outcomes of the workshop were valuable. (Circle one and explain)
   Strongly Agree Agree Disagree Strongly Disagree
   Please explain:
- 8. What did you find most valuable in the workshop?

Ge#7

9. What did you find least valuable in the workshop?

10. What would you do differently if you were organizing the workshop?

cee #C

rootine rollaborations retrather munits

#### <sup>–</sup> (it Survey

- 1. Name (optional
- The content of the workshop met my expectations. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 3. I found the workshop useful. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 4. The goals of the workshop clearly outlined? (Circle one) Strongly Agree Agree Disagree Strongly Disagree

NOT SURF OF GOAL

- The goals of the workshop were met? (Circle one) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain)
   Strongly Agree Agree Disagree Strongly Disagree
   Please explain:

FORMAT WAS GOOD

The outcomes of the workshop were valuable. (Circle one and explain)
 Strongly Agree Agree Disagree Strongly Disagree
 Please explain:

MORE QUESTIONS THAN ANSWERS ... MAMBE THAT WAS THE POINT ?

- 8. What did you find most valuable in the workshop?
- 9. What did you find least valuable in the workshop?

10. What would you do differently if you were organizing the workshop?

SEE COMMENTS ON OTHER SHEEP

#### t Survey

- 1. Name (optional)
- The content of the workshop met my expectations. (Circle one and explain)
   Strongly Agree Agree Disagree Strongly Disagree
   Please explain:
- 3. I found the workshop useful. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 4. The goals of the workshop clearly outlined? (Circle one) Strongly Agree Agree Disagree Strongly Disagree
- 5. The goals of the workshop were met? (Circle one) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree
   Please explain:
- The outcomes of the workshop were valuable. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 8. What did you find most valuable in the workshop?
- 9. What did you find least valuable in the workshop?

10. What would you do differently if you were organizing the workshop?

- 1. Name (optional)
- The content of the workshop met my expectations. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 3. I found the workshop useful. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 4. The goals of the workshop clearly outlined? (Circle one) Strongly Agree Agree Disagree Strongly Disagree
- 5. The goals of the workshop were met? (Circle one) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree
   Please explain:
- The outcomes of the workshop were valuable. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 8. What did you find most valuable in the workshop? Thinking About the workshop?
- 9. What did you find least valuable in the workshop?

- 10. What would you do differently if you were organizing the workshop?
- 11. What actions do you plan to take as a result of this workshop?
  - See where the Nexus exist.

- 1. Name (optional)
- The content of the workshop met my expectations. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 3. I found the workshop useful. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 4. The goals of the workshop clearly outlined? (Circle one) Strongly Agree Agree Disagree Strongly Disagree
- 5. The goals of the workshop were met? (Circle one) Strongly Agree Agree Disagree Strongly Disagree Please explain: Goals were outlined well and focused on
- The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree
   Please explain.
- 7. The outcomes of the workshop were valuable. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain: I con use the mode when developing projects
- 8. What did you find most valuable in the workshop?

Networking and learning about challenges to meet yeals

- 9. What did you find least valuable in the workshop?
- 10. What would you do differently if you were organizing the workshop?

11. What actions do you plan to take as a result of this workshop? Contacting people to discuss organizations & projects

- 1. Name (optional)
- The content of the workshop met my expectations. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 3. I found the workshop useful. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 4. The goals of the workshop clearly outlined? (Circle one) Strongly Agree Agree Disagree Strongly Disagree
- 5. The goals of the workshop were met? (Circle one) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree
   Please explain:
- The outcomes of the workshop were valuable. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 8. What did you find most valuable in the workshop?

Collaboration, hearing different views

- 9. What did you find least valuable in the workshop?
- 10. What would you do differently if you were organizing the workshop?
- 11. What actions do you plan to take as a result of this workshop?

making a bretter effect on

(IUMMUICUM) Mede 12500S

- 1. Name (optional)
- 2. The content of the workshop met my expectations. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree

Please explain:

- 3. I found the workshop useful. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 4. The goals of the workshop clearly outlined? (Circle one) Strongly Agree Agree Disagree Strongly Disagree
- The goals of the workshop were met? (Circle one) Strongly Agree Disagree Strongly Disagree Please explain:

6. The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:

- 7. The outcomes of the workshop were valuable. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain: A data is shared.
- 8. What did you find most valuable in the workshop?

voting questions wil good debission.

9. What did you find least valuable in the workshop?

The break out session. Sat up people & already Unew what they were doing. 10. What would you do differently if you were organizing the workshop?

Mix+ables. Better rating.

- 1. Name (optional)
- 2. The content of the workshop met my expectations. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:

I that didn't have concrete expectations, but we talked a lot about the W/E Nexus." 3. I found the workshop useful. (Circle one and explain)

Strongly Agree / Agree ) Disagree Strongly Disagree Please explain:

It broadened my horizons infurther into energy <u>Community</u> & clarified my position (to myself) as stradling the 4. The goals of the workshop clearly outlined? (Circle one) WE fance.

- Strongly Agree Agree Disagree Strongly Disagree
- The goals of the workshop were met? (Circle one) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 6. The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:

We spent a little too long in brainstorming mode & not quite enough on Solving mode.

7. The outcomes of the workshop were valuable. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:

For me in my organization, I am not sure I have actionable outcomes. I some of the byproducts of the meeting t 8. What did you find most valuable in the workshop? process Will be of value, however.

The panels. Having each person spend a few minutes describing their efforts I world gave valuable perspectives.

- 9. What did you find least valuable in the workshop?
- 10. What would you do differently if you were organizing the workshop?

stations the overhead presentations Very difficult to read & m get value from.

11. What actions do you plan to take as a result of this workshop?

Approach my own role in the organization more broadly. Brief my superiors on process & outcomes/results of the meeting.

- 1. Name (optional)
- The content of the workshop met my expectations. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 3. I found the workshop useful. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 4. The goals of the workshop clearly outlined? (Circle one) Strongly Agree Agree Disagree Strongly Disagree
- The goals of the workshop were met? (Circle one)
   Strongly Agree Agree Disagree Strongly Disagree
   Please explain:
- The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain)
   Strongly Agree Agree Disagree Strongly Disagree
   Please explain:
- The outcomes of the workshop were valuable. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 8. What did you find most valuable in the workshop?

Ag panel & meeting CWCB

9. What did you find least valuable in the workshop?

figuring out how to categorize issues

- 10. What would you do differently if you were organizing the workshop?
- 11. What actions do you plan to take as a result of this workshop?

- 1. Name (optional)
- 2. The content of the workshop met my expectations. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain: Who mathue, where the gust mix of people
- 3. I found the workshop useful. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain: Somethick ... Next Steps?
- 4. The goals of the workshop clearly outlined? (Circle one) Strongly Agree Agree Disagree Strongly Disagree
- 5. The goals of the workshop were met? (Circle one) Strongly Agree Agree Disagree Strongly Disagree Please explain: Thught we were going to develop tangible measurable goals It implement in an Community in the Next 1-3 415.
- 6. The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain: Good panels, powerpoint by Will
- The outcomes of the workshop were valuable. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 8. What did you find most valuable in the workshop? Increasing my awaress of issues, players
- 9. What did you find least valuable in the workshop?

10. What would you do differently if you were organizing the workshop? A Sens more partoiponts - Key Stakeholders. Overview of Ark Basin-geography, issues, examples of successes.

**Exit Survey** 

- 1. Name (optional)
- 2. The content of the workshop met my expectations. (Circle one and explain)
  - Strongly Agree )Agree Disagree Strongly Disagree

Please explain: THIS WAS A GOOD SYSTEM WIDE DISCUSSION OF ENGLAGY-WATEN -1000, THIS K-IND OF INTENDISIDINE APPROACH WHITH MULTIPLE DIVENSE STAKEHOUPONS IS VALUABLE 3. I found the workshop useful. (Circle one and explain)

Strongly Agree Agree Disagree Strongly Disagree Please explain: CONNECTINO WITH SHUMAL PHODUL

- 4. The goals of the workshop clearly outlined? (Circle one) Strongly Agree Agree Disagree Strongly Disagree
- 5. The goals of the workshop were met? (Circle one) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 6. The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree

Please explain: THIS SIZE OF GROUP WAS CONDUC, JE TO ENTERACTION ADISCUSSION

- The outcomes of the workshop were valuable. (Circle one and explain)
   Strongly Agree Agree Disagree Strongly Disagree
   Please explain:
- 8. What did you find most valuable in the workshop? CONTACTS MADE
- 9. What did you find least valuable in the workshop?
- 10. What would you do differently if you were organizing the workshop?
- 11. What actions do you plan to take as a result of this workshop?  $\Lambda HACH OUT TO PHORIE I MULT$

- 1. Name (optional)
- 2. The content of the workshop met my expectations. (Lircle one and explain) Strongly Agree Agree Disagree Strongly Disagree Explores ALL relevount 15502 Please explain:
- 3. I found the workshop useful. (Circle one and explain) (Strongly Agree Agree Disagree Strongly Disagree Learned lets from experts Please explain:
- The goals of the workshop clearly outlined? (Circle one) Strongly Agree Agree Disagree Strongly Disagree
- 5. The goals of the workshop were met? (Circle one) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 6. The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 7. The outcomes of the workshop were valuable. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 8. What did you find most valuable in the workshop? Shared Juscussion/ Rarning
- 9. What did you find least valuable in the workshop?

Maps of CO energy + Wester-Systems works 2 hand h-1-1

10. What would you do differently if you were organizing the workshop?

Inderstand better how energy water nexus issued Can promote a more sustainable + competitive 11. What actions do you plan to take as a result of this workshop?

- 1. Name (optional)
- 2. The content of the workshop met my expectations. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree

Please explain: Carnew a solid under standing of it and a small suit case of 3. I found the workshop useful. (Circle one and explain) Strongly Agree Disagree Strongly Disagree Please explain: See # 2 We carre up with.

- 4. The goals of the workshop clearly outlined? (Circle one) The work fine '
- 5. The goals of the workshop were met? (Circle one) Strongly Agree Agree Disagree Strongly Disagree Please explain:

lossenuf to be malleable for Regnons yet defind any to give derection.

- The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree
   Please explain:
- 7. The outcomes of the workshop were valuable. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain: Dean better informed SW Rat Surfrood!
- 8. What did you find most valuable in the workshop?

le conversations at Re end.

9. What did you find least valuable in the workshop?

10. What would you do differently if you were organizing the workshop? " Chekins" were The items we were to "vole" on w/ The " Chekins" were Unclear to me. There were several interpretations of 11. What actions do you plan to take as a result of this workshop? each Pat mode it had to Vote' Bonupon Retopus

#### Exit Survey

- 1. Name (optiona
- 2. The content of the workshop met my expectations. (Circle one and explain) Please explain: I DIDN'T REALLY HAVE ANYEXPECTATIONS, ASI WASN'T TOTALLY CLOAR BROUT INTENTIONS
- 3. I found the workshop useful. (Circle one and explain) Strongly Agree (Agree) Disagree Strongly Disagree Please explain:
- 4. The goals of the workshop clearly outlined? (Circle one) Strongly Agree Agree Disagree Strongly Disagree
- The goals of the workshop were met? (Circle one) Please explain: L think what we ended up as the was different than What was that id whe morning The format of the workshop was and

6. The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree

I prosted not any agenda That didn it really look Please explain: li the "day"

- 7. The outcomes of the workshop were valuable. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 8. What did you find most valuable in the workshop? THE BLOND OF PEOPLE
- 9. What did you find least valuable in the workshop?

10. What would you do differently if you were organizing the workshop? A Clearer agenda, more dwarse or better prepared

11. What actions do you plan to take as a result of this workshop?

Don't know yet

punaisto

- 1. Name (optional)
- 2. The content of the workshop met my expectations. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 3. I found the workshop useful. (Circle one and explain) Having a chunce to hear other's thoughts i limitations Strongly Agree Agree Disagree Strongly Disagree Please explain:
- cularly helpful Way no 4. The goals of the workshop clearly outlined? (Circle one) Strongly Agree Agree Disagree Strongly Disagree
- 5. The goals of the workshop were met? (Circle one) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 6. The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 7. The outcomes of the workshop were valuable. (Circle one and explain) Please explain: I circled both bicause I part to see whith happens - if there is an oppin to have to ther concessations, then admere BSLIC it's a "one and done" - then disagore. 8. What did you find most valuable in the workshop? Strongly Agree Agree Disagree strongly Disagree

albo geprecided Trarey as the familiance have a third party 9. What did you find least valuable in the workshop? I way disappointed that ab spy Whiting did not participate as filly - at rate pt, 12 For from the 10. What would use the topm.

10. What would you do differently if you were organizing the workshop?

- 1. Name (optional)
- The content of the workshop met my expectations. (Circle one and explain)
   Strongly Agree Agree Disagree Strongly Disagree
   Please explain:
- 3. I found the workshop useful. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 4. The goals of the workshop clearly outlined? (Circle one) Strongly Agree Disagree Strongly Disagree
- 5. The goals of the workshop were met? (Circle one) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain)
   Strongly Agree Agree Disagree Strongly Disagree
   Please explain:
- The outcomes of the workshop were valuable. (Circle one and explain)
   Strongly Agree Agree Disagree Strongly Disagree
   Please explain:
- 8. What did you find most valuable in the workshop? Open dialog of information and possibilities.
- 9. What did you find least valuable in the workshop?
- 10. What would you do differently if you were organizing the workshop?
- 11. What actions do you plan to take as a result of this workshop? Begin to discuss for community leadership and buyany

- 1. Name (optional)
- 2. The content of the workshop met my expectations. (Circle one and explain) Strongly Agree / Agree ) Disagree Strongly Disagree chad no expectations Please explain:
- 3. I found the workshop useful. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Knowing other perspectives is always valuable Please explain:
- 4. The goals of the workshop clearly outlined? (Circle one) Strongly Agree Agree Disagree Strongly Disagree
- 5. The goals of the workshop were met? (Circle one) Strongly Agree Agree Disagree Strongly Disagree athink so Please explain:
- 6. The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- The outcomes of the workshop were valuable. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain: well see
- 8. What did you find most valuable in the workshop?

other perspectives

- 9. What did you find least valuable in the workshop?
- 10. What would you do differently if you were organizing the workshop?

Separate water & every for some thategies Combine for some strategies 11. What actions do you plan to take as a result of this workshop? further engagement

- 1. Name (optional)
- The content of the workshop met my expectations. (Circle one and explain)
   Strongly Agree Agree Disagree Strongly Disagree
   Please explain:
- 3. I found the workshop useful. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 4. The goals of the workshop clearly outlined? (Circle one) Strongly Agree Agree Disagree Strongly Disagree
- The goals of the workshop were met? (Circle one) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- The outcomes of the workshop were valuable. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 8. What did you find most valuable in the workshop? Group Think - everyone engaged
- 9. What did you find least valuable in the workshop?
- 10. What would you do differently if you were organizing the workshop?
- 11. What actions do you plan to take as a result of this workshop? Contribute to be engaged in the path forward

#### Arkansas River Basin Water-Energy Nexus Workshop

12

- 1. Name (optional)
- 2. The content of the workshop met my expectations. (Circle one and explain) Strongly Agree (Agree) Disagree Strongly Disagree Please explain:
- I found the workshop useful. (Circle one and explain) Strongly Agree (Agree ) Disagree Strongly Disagree Please explain:
- 4. The goals of the workshop clearly outlined? (Circle one) Strongly Agree (Agree ) Disagree Strongly Disagree
- 5. The goals of the workshop were met? (Circle one) Strongly Agree (Agree ) Disagree Strongly Disagree Please explain:
- 6. The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain) Strongly Agree (Agree) Disagree Strongly Disagree Please explain:
- 7. The outcomes of the workshop were valuable. (Circle one and explain) Strongly Agree (Agree ) Disagree Strongly Disagree Please explain:
- 8. What did you find most valuable in the workshop? The addition of food production to the nexus.
- 9. What did you find least valuable in the workshop? sales pitch for performance contracting
- 10. What would you do differently if you were organizing the workshop?

Ensure Renewable Energy was addressed even if scheduled presenter gets ill-need backup

- 11. What actions do you plan to take as a result of this workshop?
  - Integrate this info into our community Climate action plan, Use Less water

- 1. Name (optional)
- The content of the workshop met my expectations. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 3. I found the workshop useful. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 4. The goals of the workshop clearly outlined? (Circle one) Strongly Agree Agree Disagree Strongly Disagree
- 5. The goals of the workshop were met? (Circle one) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 6. The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 7. The outcomes of the workshop were valuable. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain: Not Sure
- 8. What did you find most valuable in the workshop? Discussions / Conversations among diverse participants

9. What did you find least valuable in the workshop? Digital Voting. I didn't think the questions/statements were clear enough for me to answer. I could have used a little more time to answer since I'm a "minker" - golta think 10. What would you do differently if you were organizing the workshop? About it '

I would add next steps at the end. I felt like we did a lot of worke, but now I don't know conat's next.

11. What actions do you plan to take as a result of this workshop? Probably nothing specific to the outputs of the workshop, but will continue current collaborations (and enhance them thru hew contacts.

- 1. Name (optional)
- 2. The content of the workshop met my expectations. (Circle one and explain) Strongly Agree (Agree) Disagree Strongly Disagree Please explain:
- 3. I found the workshop useful. (Circle one and explain) Strongly Agree (Agree) Disagree Strongly Disagree Please explain:
- 4. The goals of the workshop clearly outlined? (Circle one) Strongly Agree (Agree) Disagree Strongly Disagree
- 5. The goals of the workshop were met? (Circle one) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 6. The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain) Strongly Agree (Agree ) Disagree Strongly Disagree Please explain:
- 7. The outcomes of the workshop were valuable. (Circle one and explain) Strongly Agree) Agree Disagree Strongly Disagree Please explain:
- 8. What did you find most valuable in the workshop?

Insights on water

9. What did you find least valuable in the workshop?

Instatutional Boundries

- 10. What would you do differently if you were organizing the workshop?

11. What actions do you plan to take as a result of this workshop? Let More envolved with local issues reputive to water & power

VAV

1.	Name (optional)		
2.	The content of the workshop met my expectations. Uircle one and explain)		
	Strongly Agree Agree Disagree Strongly Disagree		
	Please explain: FAR RICHER THAN I EXPECTED		

- 3. I found the workshop useful. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain: THIS IS WHAT I DO EVAILY DAY; DIRECT APPLICABILITY
- 4. The goals of the workshop clearly outlined? (Circle one) Strongly Agree Agree Disagree Strongly Disagree
- 5. The goals of the workshop were met? (Circle one) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- The outcomes of the workshop were valuable. (Circle one and explain)
   Strongly Agree Agree Disagree Strongly Disagree
   Please explain:
- 8. What did you find most valuable in the workshop?

DIDLOGLIE & INFORMATION EXCHANCE BETWEEN & VARIETY OF PARTICIPANTS

- 9. What did you find least valuable in the workshop?
- 10. What would you do differently if you were organizing the workshop?
- 11. What actions do you plan to take as a result of this workshop?

ENGLE MY FIRIENDS, FAMILY, & CO-WOIZKERS IN THE DISCUSSION, COMPLETE & PLD IN THE SYSTEM DYNAMICS OF INTEGRATED ENERGY-WATER PLANNING & MOMT.

Gurvey

- 1. Name (optional)
- 2. The content of the workshop met my expectations. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 3. I found the workshop useful. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Ser NO. 8 Please explain:
- 4. The goals of the workshop clearly outlined? (Circle one) Strongly Agree Agree Disagree Strongly Disagree
- 5. The goals of the workshop were met? (Circle one) Strongly Agree Agree Disagree Strongly Disagree Hard to see a product. Fin not gure where this is going Please explain:
- 6. The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain: Nicity For (iliter to d
- 7. The outcomes of the workshop were valuable. (Circle one and explain) Strongly Agree (Agree) Disagree Strongly Disagree Please explain:
- 8. What did you find most valuable in the workshop? Meck Ark, R. Stake holders Be able to shore water issues
- 9. What did you find least valuable in the workshop?

Takes a whole day

- 10. What would you do differently if you were organizing the workshop?
- 11. What actions do you plan to take as a result of this workshop? May be Contected by fellow perticipents.

- 1. Name (optional)
- 2. The content of the workshop met my expectations. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain: # 15 A SUBSCET TOWTO GET LOST IN TOTO CUERYNAY BUSNESS AND WOOD TO BE REMAINED.
- 3. I found the workshop useful. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain: I CAMC AWAY OF MANY NEW INCAS
- 4. The goals of the workshop clearly outlined? (Circle one) Strongly Agree Agree Disagree Strongly Disagree STATED CLEARLY IN ALL MATOUR
- The goals of the workshop were met? (Circle one)
   Strongly Agree Agree Disagree Strongly Disagree
   Please explain:
- 6. The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain: YES GOON PANCES HUN FREAL DOWN OF THE TOPICS MND PROCARM
- The outcomes of the workshop were valuable. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 8. What did you find most valuable in the workshop?
- 9. What did you find least valuable in the workshop?  $\gtrsim$
- 10. What would you do differently if you were organizing the workshop?

Lottle storter

Follow por topics, REPORTS AND CONTActs

Fyit Survey

- 1. Name (optional)
- The content of the workshop met my expectations. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 3. I found the workshop useful. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain:
- 4. The goals of the workshop clearly outlined? (Circle one) Strongly Agree (Agree) Disagree Strongly Disagree
- The goals of the workshop were met? (Circle one)
   Strongly Agree Agree Disagree Strongly Disagree
   Please explain:
- The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree
   Please explain:
- 7. The outcomes of the workshop were valuable. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain: A GREE BASET A LITTLE DIS SOLNTED
- 9. What did you find least valuable in the workshop?
- 10. What would you do differently if you were organizing the workshop?
- 11. What actions do you plan to take as a result of this workshop?

TAKE SOME REESPECTIVE BLER TO My WORKWE GUZALP

**Exit Survey** 

- 1. Name (optional)
- 2. The content of the workshop met my expectations. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain: we discussed appropriate asperts of the W-ENERUS.
- 3. I found the workshop useful. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain: I appreciated hearing about the differing perspectives and mances of the issue.
- The goals of the workshop clearly outlined? (Circle one) Strongly Agree Agree Disagree Strongly Disagree My Understan Ling Wat the add Was
- 5. The goals of the workshop were met? (Circle one) Stout the W-E apros fo decide how to address the issue. Strongly Agree Agree Disagree Strongly Disagree Please explain: I've vot sure ve govined where needed to address issue, tweever, we ENEXUS May not be, its own issue to solve. It's a Characteristic of resource use that could inform planning for resource -> 6. The format of the workshop was conducive to meeting the goals of the workshop. (Circle one and explain)
- Strongly Agree Agree Disagree Strongly Disagree GVEV Please explain: I fend to think the group was to large,
- 7. The outcomes of the workshop were valuable. (Circle one and explain) Strongly Agree Agree Disagree Strongly Disagree Please explain: I an not sure if there was a significant outcome sther than 1 for me personally (meeting other people with 8. What did you find most valuable in the workshop?

what did you find least valuable in the workshop? I prophy this will help control inte-gration. of Energy + worker. 9. What did you find least valuable in the workshop?

10. What would you do differently if you were organizing the workshop? We spent a lot of time identitying aspects of WAE, but I spused wost people in the grap give and have a good understanding of the issue. If seems we could have the focused move on articles to 11. What actions do you plan to take as a result of this workshop? Still deciding... 10. What would you do differently if you were organizing the workshop?

Appendix D

**Results of Electronic Voting from Workshops** 

# Colorado River Basin Audience Response System Results

December 10, 2012

### Question Details (002-001)

### Total Responses: 18





Participant	Response	Weight
Keypad 71	[No Response]	1
Keypad 74	[No Response]	1
Keypad 72	[No Response]	1
Keypad 42	No	1
Keypad 41	No	1
Keypad 66	No	1
Keypad 38	[No Response]	1
Keypad 67	Yes	1
Keypad 70	No	1
Keypad 65	No	1
Keypad 46	No	1
Keypad 51	No	1
Keypad 39	No	1
Keypad 69	No	1
Keypad 43	Yes	1
Keypad 64	[No Response]	1
Keypad 40	I don't know	1
Keypad 52	No	1
Keypad 54	I don't know	1
Keypad 57	[No Response]	1
Keypad 53	I don't know	1
Keypad 56	No	1
Keypad 55	No	1
-----------	----	---
Keypad 68	No	1

#### Question Details (002-002)

# Total Responses: 21

**Question 3** Do you believe this workshop is? 1. Needed/timely 2. Long overdue/urgent 3. A distraction from other pressing issues 4. Interesting, but not ready at this time C Hours

in in

Do you believe this workshop is? 30% 80% 10% 50% 20% 20% 20% 823 1.81 123 Association and a ing. A distriction were string, but from other wall ready at this are the higher (B) (1200) pressing factors

Participant	Response	Weight
Keypad 71	[No Response]	1
Keypad 74	[No Response]	1
Keypad 72	[No Response]	1
Keypad 42	Long overdue/urgent	1
Keypad 41	Long overdue/urgent	1
Keypad 66	Needed/timely	1
Keypad 38	Needed/timely	1
Keypad 67	Needed/timely	1
Keypad 70	Needed/timely	1
Keypad 65	Needed/timely	1
Keypad 46	Needed/timely	1
Keypad 51	Needed/timely	1
Keypad 39	Needed/timely	1
Keypad 69	Needed/timely	1
Keypad 43	Needed/timely	1
Keypad 64	Needed/timely	1
Keypad 40	Needed/timely	1
Keypad 52	Long overdue/urgent	1
Keypad 54	Needed/timely	1
Keypad 57	Needed/timely	1
Keypad 53	Needed/timely	1
Keypad 56	Long overdue/urgent	1

Keypad 55	Needed/timely	1
Keypad 68	Needed/timely	1

# South Platte and Denver Metro River Basin Audience Response System Results

December 12, 2012

# Question Details (002-001)

# Total Responses: 28

Do you believe the waterenergy nexus is a Gordian knot (unsolvable)?

0 ===

- 1. Yes 2. No
- 3. I don't know



Participant	Response	Weight
Keypad 71	[No Response]	1
Keypad 74	No	1
Keypad 72	I don't know	1
Keypad 42	No	1
Keypad 41	[No Response]	1
Keypad 66	[No Response]	1
Keypad 38	No	1
Keypad 67	No	1
Keypad 70	No	1
Keypad 65	I don't know	1
Keypad 46	[No Response]	1
Keypad 51	No	1
Keypad 39	No	1
Keypad 69	No	1
Keypad 43	No	1
Keypad 64	No	1
Keypad 40	No	1
Keypad 52	No	1
Keypad 54	No	1
Keypad 57	No	1
Keypad 53	[No Response]	1
Keypad 56	No	1

Keypad 55	No	1
Keypad 68	No	1
Keypad 48	No	1
Keypad 45	[No Response]	1
Keypad 73	No	1
Keypad 63	I don't know	1
Keypad 61	I don't know	1
Keypad 47	No	1
Keypad 50	No	1
Keypad 58	[No Response]	1
Keypad 44	[No Response]	1
Keypad 62	No	1
Keypad 60	No	1
Keypad 59	No	1
Keypad 14	[No Response]	1
Keypad 49	[No Response]	1

#### Question Details (002-002)

#### **Total Responses: 33**

Do you believe this workshop is:

- 1. Needed/timely
- 2. Long overdue/urgent
- 3. A distraction from other pressing issues
- 4. Interesting, but not ready at this time

C Hart

Do you believe this workshop is? 70% in 50% SIN 1004 6076 ..... 20% 45 10% 0% 1000 014 Readed/Trimely Lang overflor/segret Addredian vieweding tast Transition out waily at the Ca State arrenting labeled

Participant	Response	Weight
Keypad 71	Long overdue/urgent	1
Keypad 74	Needed/timely	1
Keypad 72	Needed/timely	1
Keypad 42	Needed/timely	1
Keypad 41	Needed/timely	1
Keypad 66	Needed/timely	1
Keypad 38	Long overdue/urgent	1
Keypad 67	Needed/timely	1
Keypad 70	Needed/timely	1
Keypad 65	[No Response]	1
Keypad 46	Long overdue/urgent	1
Keypad 51	[No Response]	1
Keypad 39	Needed/timely	1
Keypad 69	Needed/timely	1
Keypad 43	Interesting, but not ready at this time	1
Keypad 64	Needed/timely	1
Keypad 40	Needed/timely	1
Keypad 52	Needed/timely	1
Keypad 54	Needed/timely	1
Keypad 57	Needed/timely	1
Keypad 53	Long overdue/urgent	1
Keypad 56	Needed/timely	1

Keypad 55	Needed/timely	1
Keypad 68	Needed/timely	1
Keypad 48	Long overdue/urgent	1
Keypad 45	Long overdue/urgent	1
Keypad 73	Needed/timely	1
Keypad 63	Interesting, but not ready at this time	1
Keypad 61	Needed/timely	1
Keypad 47	Long overdue/urgent	1
Keypad 50	[No Response]	1
Keypad 58	Needed/timely	1
Keypad 44	Long overdue/urgent	1
Keypad 62	Interesting, but not ready at this time	1
Keypad 60	Long overdue/urgent	1
Keypad 59	Needed/timely	1
Keypad 14	[No Response]	1
Keypad 49	[No Response]	1

# Question Details (002-021)

# Total Responses: 25

Lack of available infrastructure (e.g. power lines, power line corridors, etc) 1. Often 2. Sometimes

(a) 100

- 3. Rarely
- 4. Never
- 5.I don't know



Participant	Response	Weight
Keypad 71	Sometimes	1
Keypad 74	Sometimes	1
Keypad 72	Rarely	1
Keypad 42	Sometimes	1
Keypad 41	Rarely	1
Keypad 66	[No Response]	1
Keypad 38	Sometimes	1
Keypad 67	[No Response]	1
Keypad 70	[No Response]	1
Keypad 65	Sometimes	1
Keypad 46	Rarely	1
Keypad 51	[No Response]	1
Keypad 39	Sometimes	1
Keypad 69	Sometimes	1
Keypad 43	Often	1
Keypad 64	Sometimes	1
Keypad 40	I don't know	1
Keypad 52	[No Response]	1
Keypad 54	Rarely	1
Keypad 57	Sometimes	1
Keypad 53	[No Response]	1
Keypad 56	[No Response]	1

Keypad 55	I don't know	1
Keypad 68	[No Response]	1
Keypad 48	Sometimes	1
Keypad 45	Sometimes	1
Keypad 73	Rarely	1
Keypad 63	[No Response]	1
Keypad 61	Sometimes	1
Keypad 47	Rarely	1
Keypad 50	Often	1
Keypad 58	Never	1
Keypad 44	Sometimes	1
Keypad 62	Often	1
Keypad 60	[No Response]	1
Keypad 59	[No Response]	1
Keypad 14	[No Response]	1
Keypad 49	[No Response]	1

#### Question Details (002-022)

# Total Responses: 25

Lack of available Lack of Available Communications communications channels (e.g. Channels no forum for discussions to 50% 483 50% occur) 1. Often 40% 30% 2. Sometimes ism-3. Rarely 10% 25 4. Never 1253 0% Oten locations 1 Berly Reid: tien't bie 5.1 don't know G 0=

in the

Participant	Response	Weight
Keypad 71	Sometimes	1
Keypad 74	Rarely	1
Keypad 72	I don't know	1
Keypad 42	Often	1
Keypad 41	Sometimes	1
Keypad 66	[No Response]	1
Keypad 38	Rarely	1
Keypad 67	[No Response]	1
Keypad 70	[No Response]	1
Keypad 65	Sometimes	1
Keypad 46	Sometimes	1
Keypad 51	[No Response]	1
Keypad 39	Sometimes	1
Keypad 69	Sometimes	1
Keypad 43	Sometimes	1
Keypad 64	Sometimes	1
Keypad 40	Rarely	1
Keypad 52	[No Response]	1
Keypad 54	Rarely	1
Keypad 57	Rarely	1
Keypad 53	[No Response]	1
Keypad 56	[No Response]	1

Keypad 55	Sometimes	1
Keypad 68	[No Response]	1
Keypad 48	Sometimes	1
Keypad 45	Often	1
Keypad 73	Rarely	1
Keypad 63	[No Response]	1
Keypad 61	Sometimes	1
Keypad 47	Sometimes	1
Keypad 50	Rarely	1
Keypad 58	Rarely	1
Keypad 44	Often	1
Keypad 62	Rarely	1
Keypad 60	[No Response]	1
Keypad 59	[No Response]	1
Keypad 14	[No Response]	1
Keypad 49	[No Response]	1

# Question Details (002-023)

# Total Responses: 24

**Current Institutional Procedures** Current Institutional Procedures (e.g. THWHADI) 101 100 70% 50% 1. Often 50% 42% 2. Sometimes 50% 244 3. Rarely 2175 8%. 1270 4. Never 100 in. 094 0% Oten locations) Serie ( Reid: Acres 2 544 5.1 don't know 0 ===

Participant	Response	Weight
Keypad 71	Sometimes	1
Keypad 74	Sometimes	1
Keypad 72	[No Response]	1
Keypad 42	Sometimes	1
Keypad 41	Rarely	1
Keypad 66	[No Response]	1
Keypad 38	Sometimes	1
Keypad 67	[No Response]	1
Keypad 70	[No Response]	1
Keypad 65	Sometimes	1
Keypad 46	Sometimes	1
Keypad 51	[No Response]	1
Keypad 39	Often	1
Keypad 69	Sometimes	1
Keypad 43	Sometimes	1
Keypad 64	Often	1
Keypad 40	Rarely	1
Keypad 52	[No Response]	1
Keypad 54	Sometimes	1
Keypad 57	Sometimes	1
Keypad 53	[No Response]	1
Keypad 56	[No Response]	1

Keypad 55	Often	1
Keypad 68	[No Response]	1
Keypad 48	Often	1
Keypad 45	Sometimes	1
Keypad 73	Sometimes	1
Keypad 63	[No Response]	1
Keypad 61	Sometimes	1
Keypad 47	Often	1
Keypad 50	Often	1
Keypad 58	Sometimes	1
Keypad 44	Sometimes	1
Keypad 62	Sometimes	1
Keypad 60	[No Response]	1
Keypad 59	[No Response]	1
Keypad 14	[No Response]	1
Keypad 49	[No Response]	1

#### Question Details (002-024)

### Total Responses: 23

Current Institutional Missions (e.g. charter of organization precludes certain activities, limits jurisdiction) 1. Often 2. Sometimes 3. Rarely 4. Never 5.1 don't know

0 ==



Participant	Response	Weight
Keypad 71	Sometimes	1
Keypad 74	Sometimes	1
Keypad 72	Rarely	1
Keypad 42	Never	1
Keypad 41	Often	1
Keypad 66	[No Response]	1
Keypad 38	[No Response]	1
Keypad 67	[No Response]	1
Keypad 70	[No Response]	1
Keypad 65	Rarely	1
Keypad 46	[No Response]	1
Keypad 51	[No Response]	1
Keypad 39	Sometimes	1
Keypad 69	Rarely	1
Keypad 43	Sometimes	1
Keypad 64	Sometimes	1
Keypad 40	Never	1
Keypad 52	[No Response]	1
Keypad 54	Rarely	1
Keypad 57	I don't know	1
Keypad 53	[No Response]	1
Keypad 56	Sometimes	1

Keypad 55	[No Response]	1
Keypad 68	Never	1
Keypad 48	Rarely	1
Keypad 45	Never	1
Keypad 73	Rarely	1
Keypad 63	[No Response]	1
Keypad 61	[No Response]	1
Keypad 47	Sometimes	1
Keypad 50	Often	1
Keypad 58	Sometimes	1
Keypad 44	Sometimes	1
Keypad 62	Sometimes	1
Keypad 60	[No Response]	1
Keypad 59		1
	[No Response]	1
Keypad 14	[No Response]	1

#### Question Details (002-025)

5.1 don't know

#### **Total Responses: 25**

Lack of Coordination with Land Use Planning (e.g. water/energy planning not connected to land use planning) 1. Often 2. Sometimes 3. Rarely 4. Never

(a) 100



Participant	Response	Weight
Keypad 71	Sometimes	1
Keypad 74	I don't know	1
Keypad 72	[No Response]	1
Keypad 42	I don't know	1
Keypad 41	I don't know	1
Keypad 66	[No Response]	1
Keypad 38	Often	1
Keypad 67	[No Response]	1
Keypad 70	[No Response]	1
Keypad 65	Sometimes	1
Keypad 46	Rarely	1
Keypad 51	[No Response]	1
Keypad 39	Rarely	1
Keypad 69	Sometimes	1
Keypad 43	Sometimes	1
Keypad 64	I don't know	1
Keypad 40	Never	1
Keypad 52	[No Response]	1
Keypad 54	Rarely	1
Keypad 57	Rarely	1
Keypad 53	[No Response]	1
Keypad 56	Often	1

Keypad 55	Rarely	1
Keypad 68	[No Response]	1
Keypad 48	Rarely	1
Keypad 45	Sometimes	1
Keypad 73	Often	1
Keypad 63	[No Response]	1
Keypad 61	Sometimes	1
Keypad 47	Sometimes	1
Keypad 50	Sometimes	1
Keypad 58	I don't know	1
Keypad 44	Rarely	1
Keypad 62	I don't know	1
Keypad 60	[No Response]	1
Keypad 59	[No Response]	1
Keypad 14	[No Response]	1
Keypad 49	[No Response]	1

#### Question Details (002-026)

#### **Total Responses: 24**

Decisions Made by Private Land Owner Rights (e.g. private land owner rights trump components of integrated resource planning) 1. Often 2. Sometimes 3. Rarely 4. Never

0 ==

5.I don't know



Participant	Response	Weight
Keypad 71	Rarely	1
Keypad 74	I don't know	1
Keypad 72	[No Response]	1
Keypad 42	I don't know	1
Keypad 41	Sometimes	1
Keypad 66	[No Response]	1
Keypad 38	Sometimes	1
Keypad 67	[No Response]	1
Keypad 70	[No Response]	1
Keypad 65	Sometimes	1
Keypad 46	Sometimes	1
Keypad 51	[No Response]	1
Keypad 39	Sometimes	1
Keypad 69	Rarely	1
Keypad 43	I don't know	1
Keypad 64	Never	1
Keypad 40	Rarely	1
Keypad 52	[No Response]	1
Keypad 54	I don't know	1
Keypad 57	I don't know	1
Keypad 53	[No Response]	1
Keypad 56	Often	1

Keypad 55	Sometimes	1
Keypad 68	[No Response]	1
Keypad 48	Rarely	1
Keypad 45	Sometimes	1
Keypad 73	Rarely	1
Keypad 63	[No Response]	1
Keypad 61	[No Response]	1
Keypad 47	Often	1
Keypad 50	Sometimes	1
Keypad 58	I don't know	1
Keypad 44	Sometimes	1
Keypad 62	I don't know	1
Keypad 60	[No Response]	1
Keypad 59	[No Response]	1
Keypad 14	[No Response]	1
Keypad 49	[No Response]	1

#### Question Details (002-027)

#### **Total Responses: 24**

Water Rights (e.g. separation of energy and water supply uses limits coordination of water rights portfolios) 1. Often 2. Sometimes 3. Rarely 4. Never 5.1 don't know

(a) 100



Participant	Response	Weight
Keypad 71	Rarely	1
Keypad 74	Sometimes	1
Keypad 72	[No Response]	1
Keypad 42	[No Response]	1
Keypad 41	I don't know	1
Keypad 66	[No Response]	1
Keypad 38	I don't know	1
Keypad 67	[No Response]	1
Keypad 70	[No Response]	1
Keypad 65	Often	1
Keypad 46	Sometimes	1
Keypad 51	[No Response]	1
Keypad 39	Often	1
Keypad 69	Sometimes	1
Keypad 43	Often	1
Keypad 64	I don't know	1
Keypad 40	Never	1
Keypad 52	[No Response]	1
Keypad 54	Sometimes	1
Keypad 57	Sometimes	1
Keypad 53	[No Response]	1
Keypad 56	Often	1

Keypad 55	Sometimes	1
Keypad 68	[No Response]	1
Keypad 48	I don't know	1
Keypad 45	Sometimes	1
Keypad 73	Rarely	1
Keypad 63	[No Response]	1
Keypad 61	Sometimes	1
Keypad 47	Sometimes	1
Keypad 50	Sometimes	1
Keypad 58	Never	1
Keypad 44	Sometimes	1
Keypad 62	Sometimes	1
Keypad 60	[No Response]	1
Keypad 59	[No Response]	1
Keypad 14	[No Response]	1
Keypad 49	[No Response]	1

#### Question Details (002-028)

# Total Responses: 21

Lack of Resources (e.g. our organization is too small to have staff available to work on these issues) 1. Often 2. Sometimes 3. Rarely 4. Never 5.1 don't know

0 ==



Participant	Response	Weight
Keypad 71	Often	1
Keypad 74	[No Response]	1
Keypad 72	[No Response]	1
Keypad 42	Never	1
Keypad 41	Rarely	1
Keypad 66	[No Response]	1
Keypad 38	Sometimes	1
Keypad 67	[No Response]	1
Keypad 70	[No Response]	1
Keypad 65	Often	1
Keypad 46	Sometimes	1
Keypad 51	[No Response]	1
Keypad 39	Sometimes	1
Keypad 69	Sometimes	1
Keypad 43	Sometimes	1
Keypad 64	Rarely	1
Keypad 40	Sometimes	1
Keypad 52	[No Response]	1
Keypad 54	Sometimes	1
Keypad 57	[No Response]	1
Keypad 53	[No Response]	1
Keypad 56	Sometimes	1

Keypad 55	Sometimes	1
Keypad 68	[No Response]	1
Keypad 48	Never	1
Keypad 45	Sometimes	1
Keypad 73	Often	1
Keypad 63	[No Response]	1
Keypad 61	[No Response]	1
Keypad 47	Sometimes	1
Keypad 50	Rarely	1
Keypad 58	Sometimes	1
Keypad 44	Often	1
Keypad 62	[No Response]	1
Keypad 60	[No Response]	1
Keypad 59	[No Response]	1
Keypad 14	[No Response]	1

# Question Details (002-029)

# Total Responses: 23



Participant	Response	Weight
Keypad 71	Sometimes	1
Keypad 74	[No Response]	1
Keypad 72	Sometimes	1
Keypad 42	Sometimes	1
Keypad 41	[No Response]	1
Keypad 66	[No Response]	1
Keypad 38	Often	1
Keypad 67	[No Response]	1
Keypad 70	[No Response]	1
Keypad 65	Rarely	1
Keypad 46	Sometimes	1
Keypad 51	[No Response]	1
Keypad 39	Rarely	1
Keypad 69	[No Response]	1
Keypad 43	Sometimes	1
Keypad 64	Sometimes	1
Keypad 40	Often	1
Keypad 52	[No Response]	1
Keypad 54	Sometimes	1
Keypad 57	Sometimes	1
Keypad 53	[No Response]	1
Keypad 56	Sometimes	1

Keypad 55	Sometimes	1
Keypad 68	[No Response]	1
Keypad 48	Often	1
Keypad 45	Sometimes	1
Keypad 73	Rarely	1
Keypad 63	[No Response]	1
Keypad 61	Sometimes	1
Keypad 47	Often	1
Keypad 50	Often	1
Keypad 58	Rarely	1
Keypad 44	Sometimes	1
Keypad 62	Sometimes	1
Keypad 60	[No Response]	1
Keypad 59	[No Response]	1
Keypad 14	[No Response]	1
Keypad 49	[No Response]	1

# Arkansas River Basin Audience Response System Results

# December 13, 2012

#### Question Details (002-001)

# Total Responses: 19

Do you believe the waterenergy nexus is a Gordian knot (unsolvable)?

(e) =:

- 1. Yes 2. No
- 3. I don't know



Participant	Response	Weight
Keypad 71	Yes	1
Keypad 74	[No Response]	1
Keypad 72	I don't know	1
Keypad 42	No	1
Keypad 41	No	1
Keypad 66	No	1
Keypad 38	I don't know	1
Keypad 67	[No Response]	1
Keypad 70	I don't know	1
Keypad 65	[No Response]	1
Keypad 46	[No Response]	1
Keypad 51	[No Response]	1
Keypad 39	Yes	1
Keypad 69	I don't know	1
Keypad 43	[No Response]	1
Keypad 64	No	1
Keypad 40	Yes	1
Keypad 52	Yes	1
Keypad 54	[No Response]	1
Keypad 57	I don't know	1
Keypad 53	[No Response]	1
Keypad 56	[No Response]	1

Keypad 55	No	1
Keypad 68	[No Response]	1
Keypad 48	No	1
Keypad 45	No	1
Keypad 73	[No Response]	1
Keypad 63	[No Response]	1
Keypad 61	[No Response]	1
Keypad 47	[No Response]	1
Keypad 50	[No Response]	1
Keypad 58	No	1
Keypad 44	[No Response]	1
Keypad 62	Yes	1
Keypad 60	[No Response]	1
Keypad 59	[No Response]	1
Keypad 14	[No Response]	1
Keypad 49	Yes	1

#### Question Details (002-002)

#### **Total Responses: 22**

Do you believe this workshop is:

- 1. Needed/timely
- 2. Long overdue/urgent
- 3. A distraction from other pressing issues
- 4. Interesting, but not ready at this time

C PERMIT

Do you believe this workshop is?

Participant	Response	Weight
Keypad 71	Long overdue/urgent	1
Keypad 74	[No Response]	1
Keypad 72	Long overdue/urgent	1
Keypad 42	Needed/timely	1
Keypad 41	Needed/timely	1
Keypad 66	Long overdue/urgent	1
Keypad 38	Needed/timely	1
Keypad 67	[No Response]	1
Keypad 70	Long overdue/urgent	1
Keypad 65	[No Response]	1
Keypad 46	Long overdue/urgent	1
Keypad 51	[No Response]	1
Keypad 39	Needed/timely	1
Keypad 69	Interesting, but not ready at this time	1
Keypad 43	[No Response]	1
Keypad 64	Needed/timely	1
Keypad 40	Needed/timely	1
Keypad 52	Needed/timely	1
Keypad 54	[No Response]	1
Keypad 57	Needed/timely	1
Keypad 53	[No Response]	1
Keypad 56	Long overdue/urgent	1

Keypad 55	Needed/timely	1
Keypad 68	[No Response]	1
Keypad 48	Needed/timely	1
Keypad 45	Needed/timely	1
Keypad 73	[No Response]	1
Keypad 63	[No Response]	1
Keypad 61	[No Response]	1
Keypad 47	[No Response]	1
Keypad 50	Long overdue/urgent	1
Keypad 50 Keypad 58	Long overdue/urgent Long overdue/urgent	1 1
Keypad 50 Keypad 58 Keypad 44	Long overdue/urgent Long overdue/urgent [No Response]	1 1 1
Keypad 50 Keypad 58 Keypad 44 Keypad 62	Long overdue/urgent Long overdue/urgent [No Response] Long overdue/urgent	1 1 1 1
Keypad 50 Keypad 58 Keypad 44 Keypad 62 Keypad 60	Long overdue/urgent Long overdue/urgent [No Response] Long overdue/urgent [No Response]	1 1 1 1 1 1
Keypad 50 Keypad 58 Keypad 44 Keypad 62 Keypad 60 Keypad 59	Long overdue/urgent Long overdue/urgent [No Response] Long overdue/urgent [No Response] [No Response]	1 1 1 1 1 1 1
Keypad 50 Keypad 58 Keypad 44 Keypad 62 Keypad 60 Keypad 59 Keypad 14	Long overdue/urgent Long overdue/urgent [No Response] Long overdue/urgent [No Response] [No Response] [No Response]	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

#### Question Details (002-021)

#### **Total Responses: 18**

Lack of available infrastructure (e.g. power lines, power line corridors, etc) 1. Often 2. Sometimes 3. Rarely

0 ==

- 4. Never
- 5.I don't know



Participant	Response	Weight
Keypad 71	[No Response]	1
Keypad 74	[No Response]	1
Keypad 72	Sometimes	1
Keypad 42	I don't know	1
Keypad 41	[No Response]	1
Keypad 66	[No Response]	1
Keypad 38	I don't know	1
Keypad 67	[No Response]	1
Keypad 70	Sometimes	1
Keypad 65	[No Response]	1
Keypad 46	Sometimes	1
Keypad 51	I don't know	1
Keypad 39	Often	1
Keypad 69	I don't know	1
Keypad 43	[No Response]	1
Keypad 64	Rarely	1
Keypad 40	[No Response]	1
Keypad 52	Rarely	1
Keypad 54	[No Response]	1
Keypad 57	I don't know	1
Keypad 53	[No Response]	1
Keypad 56	Often	1

Keypad 55	I don't know	1
Keypad 68	[No Response]	1
Keypad 48	Sometimes	1
Keypad 45	Sometimes	1
Keypad 73	[No Response]	1
Keypad 63	[No Response]	1
Keypad 61	[No Response]	1
Keypad 47	[No Response]	1
Keypad 50	Often	1
Keypad 50 Keypad 58	Often [No Response]	1
Keypad 50 Keypad 58 Keypad 44	Often [No Response] [No Response]	1 1 1
Keypad 50 Keypad 58 Keypad 44 Keypad 62	Often [No Response] [No Response] Rarely	1 1 1 1
Keypad 50 Keypad 58 Keypad 44 Keypad 62 Keypad 60	Often [No Response] [No Response] Rarely [No Response]	1 1 1 1 1
Keypad 50 Keypad 58 Keypad 44 Keypad 62 Keypad 60 Keypad 59	Often [No Response] [No Response] [No Response] [No Response]	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Keypad 50 Keypad 58 Keypad 44 Keypad 62 Keypad 60 Keypad 59 Keypad 14	Often [No Response] [No Response] [No Response] [No Response] [No Response]	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

#### Question Details (002-022)

# Total Responses: 14

Lack of available Lack of Available Communications communications channels (e.g. Channels no forum for discussions to 50% 50% occur) 1. Often 40% 30% 2. Sometimes 11% ism-3. Rarely 10% 76 26 4. Never 1 ΞĒ 200 0% (all alles is a set Often. **Beely** locations Neer 5.1 don't know 0 == -

Participant	Response	Weight
Keypad 71	Sometimes	1
Keypad 74	[No Response]	1
Keypad 72	[No Response]	1
Keypad 42	Never	1
Keypad 41	[No Response]	1
Keypad 66	[No Response]	1
Keypad 38	I don't know	1
Keypad 67	[No Response]	1
Keypad 70	Sometimes	1
Keypad 65	[No Response]	1
Keypad 46	Rarely	1
Keypad 51	[No Response]	1
Keypad 39	Sometimes	1
Keypad 69	I don't know	1
Keypad 43	[No Response]	1
Keypad 64	I don't know	1
Keypad 40	[No Response]	1
Keypad 52	Often	1
Keypad 54	[No Response]	1
Keypad 57	Sometimes	1
Keypad 53	[No Response]	1
Keypad 56	Sometimes	1

Keypad 55	Sometimes	1
Keypad 68	[No Response]	1
Keypad 48	Sometimes	1
Keypad 45	Sometimes	1
Keypad 73	[No Response]	1
Keypad 63	[No Response]	1
Keypad 61	[No Response]	1
Keypad 47	[No Response]	1
Keypad 50	[No Response]	1
Keypad 58	[No Response]	1
Keypad 44	[No Response]	1
Keypad 62	[No Response]	1
Keypad 60	[No Response]	1
Keypad 59	[No Response]	1
Keypad 14	[No Response]	1
Keypad 49	[No Response]	1

# Question Details (002-023)

#### **Total Responses: 15**

**Current Institutional Procedures** Current Institutional Procedures (e.g. THWHADI) 50% 674 628 555 555 255 255 255 255 105 105 105 405 1. Often 2. Sometimes 3. Rarely -4. Never Oten Serie ( locations: 10.00 5.1 don't know 0 ===

Participant	Response	Weight
Keypad 71	Rarely	1
Keypad 74	[No Response]	1
Keypad 72	Often	1
Keypad 42	Sometimes	1
Keypad 41	[No Response]	1
Keypad 66	[No Response]	1
Keypad 38	Sometimes	1
Keypad 67	[No Response]	1
Keypad 70	Often	1
Keypad 65	[No Response]	1
Keypad 46	Often	1
Keypad 51	[No Response]	1
Keypad 39	Often	1
Keypad 69	Often	1
Keypad 43	[No Response]	1
Keypad 64	I don't know	1
Keypad 40	[No Response]	1
Keypad 52	Sometimes	1
Keypad 54	[No Response]	1
Keypad 57	Often	1
Keypad 53	[No Response]	1
Keypad 56	Sometimes	1
Keypad 55	[No Response]	1
-----------	---------------	---
Keypad 68	[No Response]	1
Keypad 48	Often	1
Keypad 45	Sometimes	1
Keypad 73	[No Response]	1
Keypad 63	[No Response]	1
Keypad 61	[No Response]	1
Keypad 47	[No Response]	1
Keypad 50	[No Response]	1
Keypad 58	[No Response]	1
Keypad 44	[No Response]	1
Keypad 62	[No Response]	1
Keypad 60	[No Response]	1
Keypad 59	[No Response]	1
Keypad 14	[No Response]	1
Keypad 49	Sometimes	1

## Question Details (002-024)

### **Total Responses: 12**

Current Institutional Missions (e.g. charter of organization precludes certain activities, limits jurisdiction) 1. Often 2. Sometimes 3. Rarely 4. Never 5.1 don't know

0 ==



Participant	Response	Weight
Keypad 71	Rarely	1
Keypad 74	[No Response]	1
Keypad 72	[No Response]	1
Keypad 42	Never	1
Keypad 41	[No Response]	1
Keypad 66	[No Response]	1
Keypad 38	Sometimes	1
Keypad 67	[No Response]	1
Keypad 70	Sometimes	1
Keypad 65	[No Response]	1
Keypad 46	Never	1
Keypad 51	[No Response]	1
Keypad 39	Never	1
Keypad 69	Often	1
Keypad 43	[No Response]	1
Keypad 64	Often	1
Keypad 40	[No Response]	1
Keypad 52	Rarely	1
Keypad 54	[No Response]	1
Keypad 57	[No Response]	1
Keypad 53	[No Response]	1
Keypad 56	[No Response]	1

Keypad 55	Sometimes	1
Keypad 68	[No Response]	1
Keypad 48	Never	1
Keypad 45	[No Response]	1
Keypad 73	[No Response]	1
Keypad 63	[No Response]	1
Keypad 61	[No Response]	1
Keypad 47	[No Response]	1
Keypad 50	[No Response]	1
Keypad 58	[No Response]	1
Keypad 44	[No Response]	1
Keypad 62	[No Response]	1
Keypad 60	[No Response]	1
Keypad 59	[No Response]	1
Keypad 14	[No Response]	1
Keypad 49	Sometimes	1

## Question Details (002-025)

5.1 don't know

## **Total Responses: 16**

Lack of Coordination with Land Use Planning (e.g. water/energy planning not connected to land use planning) 1. Often 2. Sometimes 3. Rarely 4. Never

(a) 100



Participant	Response	Weight
Keypad 71	Rarely	1
Keypad 74	[No Response]	1
Keypad 72	Sometimes	1
Keypad 42	Rarely	1
Keypad 41	[No Response]	1
Keypad 66	[No Response]	1
Keypad 38	Often	1
Keypad 67	[No Response]	1
Keypad 70	Sometimes	1
Keypad 65	[No Response]	1
Keypad 46	Often	1
Keypad 51	[No Response]	1
Keypad 39	Rarely	1
Keypad 69	Sometimes	1
Keypad 43	[No Response]	1
Keypad 64	I don't know	1
Keypad 40	[No Response]	1
Keypad 52	Sometimes	1
Keypad 54	[No Response]	1
Keypad 57	Sometimes	1
Keypad 53	[No Response]	1
Keypad 56	Often	1

Keypad 55	Rarely	1
Keypad 68	[No Response]	1
Keypad 48	I don't know	1
Keypad 45	[No Response]	1
Keypad 73	[No Response]	1
Keypad 63	[No Response]	1
Keypad 61	[No Response]	1
Keypad 47	[No Response]	1
Keypad 50	[No Response]	1
Keypad 58	[No Response]	1
Keypad 44	[No Response]	1
Keypad 62	Rarely	1
Keypad 60	[No Response]	1
Keypad 59	[No Response]	1
Keypad 14	[No Response]	1
Keypad 49	Sometimes	1

## Question Details (002-026)

### **Total Responses: 16**

Decisions Made by Private Land Owner Rights (e.g. private land owner rights trump components of integrated resource planning) 1. Often 2. Sometimes 3. Rarely 4. Never

(a) 100

5.I don't know



Participant	Response	Weight
Keypad 71	Sometimes	1
Keypad 74	[No Response]	1
Keypad 72	Often	1
Keypad 42	I don't know	1
Keypad 41	[No Response]	1
Keypad 66	[No Response]	1
Keypad 38	Sometimes	1
Keypad 67	[No Response]	1
Keypad 70	Rarely	1
Keypad 65	[No Response]	1
Keypad 46	Often	1
Keypad 51	[No Response]	1
Keypad 39	[No Response]	1
Keypad 69	I don't know	1
Keypad 43	[No Response]	1
Keypad 64	I don't know	1
Keypad 40	[No Response]	1
Keypad 52	Rarely	1
Keypad 54	[No Response]	1
Keypad 57	I don't know	1
Keypad 53	[No Response]	1
Keypad 56	Sometimes	1

Keypad 55	Sometimes	1
Keypad 68	[No Response]	1
Keypad 48	Sometimes	1
Keypad 45	Often	1
Keypad 73	[No Response]	1
Keypad 63	[No Response]	1
Keypad 61	[No Response]	1
Keypad 47	[No Response]	1
Keypad 50	[No Response]	1
Keypad 58	[No Response]	1
Keypad 44	[No Response]	1
Keypad 62	Rarely	1
Keypad 60	[No Response]	1
Keypad 59	[No Response]	1
Keypad 14	[No Response]	1
Keypad 49	Sometimes	1

## Question Details (002-027)

### **Total Responses: 15**

Water Rights (e.g. separation of energy and water supply uses limits coordination of water rights portfolios) 1. Often 2. Sometimes 3. Rarely 4. Never 5.1 don't know

0 ==



Participant	Response	Weight
Keypad 71	I don't know	1
Keypad 74	[No Response]	1
Keypad 72	I don't know	1
Keypad 42	Never	1
Keypad 41	[No Response]	1
Keypad 66	[No Response]	1
Keypad 38	[No Response]	1
Keypad 67	[No Response]	1
Keypad 70	[No Response]	1
Keypad 65	[No Response]	1
Keypad 46	Often	1
Keypad 51	[No Response]	1
Keypad 39	Often	1
Keypad 69	I don't know	1
Keypad 43	[No Response]	1
Keypad 64	Often	1
Keypad 40	[No Response]	1
Keypad 52	Rarely	1
Keypad 54	[No Response]	1
Keypad 57	Sometimes	1
Keypad 53	[No Response]	1
Keypad 56	Rarely	1

Keypad 55	I don't know	1
Keypad 68	[No Response]	1
Keypad 48	Sometimes	1
Keypad 45	Sometimes	1
Keypad 73	[No Response]	1
Keypad 63	[No Response]	1
Keypad 61	[No Response]	1
Keypad 47	[No Response]	1
Keypad 50	[No Response]	1
Keypad 58	[No Response]	1
Keypad 44	[No Response]	1
Keypad 62	Never	1
Keypad 60	[No Response]	1
Keypad 59	[No Response]	1
Keypad 14	[No Response]	1
Keypad 49	Often	1

## Question Details (002-028)

## **Total Responses: 16**

Lack of Resources (e.g. our organization is too small to have staff available to work on these issues) 1. Often 2. Sometimes 3. Rarely 4. Never 5.1 don't know

0=



Participant	Response	Weight
Keypad 71	Rarely	1
Keypad 74	[No Response]	1
Keypad 72	Often	1
Keypad 42	Never	1
Keypad 41	[No Response]	1
Keypad 66	[No Response]	1
Keypad 38	Often	1
Keypad 67	[No Response]	1
Keypad 70	Often	1
Keypad 65	[No Response]	1
Keypad 46	Often	1
Keypad 51	[No Response]	1
Keypad 39	[No Response]	1
Keypad 69	Often	1
Keypad 43	[No Response]	1
Keypad 64	I don't know	1
Keypad 40	[No Response]	1
Keypad 52	Often	1
Keypad 54	[No Response]	1
Keypad 57	Often	1
Keypad 53	[No Response]	1
Keypad 56	Often	1

Keypad 55	Sometimes	1
Keypad 68	[No Response]	1
Keypad 48	Never	1
Keypad 45	Rarely	1
Keypad 73	[No Response]	1
Keypad 63	[No Response]	1
Keypad 61	[No Response]	1
Keypad 47	[No Response]	1
Keypad 50	[No Response]	1
Keypad 58	[No Response]	1
Keypad 44	[No Response]	1
Keypad 62	Sometimes	1
Keypad 60	[No Response]	1
Keypad 59	[No Response]	1
Keypad 14	[No Response]	1
Keypad 49	Often	1

## Question Details (002-029)

## **Total Responses: 16**



Participant	Response	Weight
Keypad 71	Rarely	1
Keypad 74	[No Response]	1
Keypad 72	Rarely	1
Keypad 42	Rarely	1
Keypad 41	[No Response]	1
Keypad 66	[No Response]	1
Keypad 38	Rarely	1
Keypad 67	[No Response]	1
Keypad 70	Sometimes	1
Keypad 65	[No Response]	1
Keypad 46	Often	1
Keypad 51	[No Response]	1
Keypad 39	I don't know	1
Keypad 69	Sometimes	1
Keypad 43	[No Response]	1
Keypad 64	I don't know	1
Keypad 40	[No Response]	1
Keypad 52	[No Response]	1
Keypad 54	[No Response]	1
Keypad 57	Sometimes	1
Keypad 53	[No Response]	1
Keypad 56	Sometimes	1

Keypad 55	Often	1
Keypad 68	[No Response]	1
Keypad 48	Often	1
Keypad 45	Sometimes	1
Keypad 73	[No Response]	1
Keypad 63	[No Response]	1
Keypad 61	[No Response]	1
Keypad 47	[No Response]	1
Keypad 50	[No Response]	1
Keypad 58	[No Response]	1
Keypad 44	[No Response]	1
Keypad 62	Rarely	1
Keypad 60	[No Response]	1
Keypad 59	[No Response]	1
Keypad 14	[No Response]	1
Keypad 49	Sometimes	1

Appendix E

Action Items Developed By Workshop Breakout Groups

# **Appendix E**

Listing of action items developed during small group breakout sessions as each of the three waterenergy nexus workshops. The breakout groups were organized in accordance with the subheading under each workshop header.

## Colorado

### Education/Information

 Use a broad range of resources (round tables, Colorado Mesa University, Colorado River District, Schools/School District, CWCB, Colorado Foundation for Water Education (CFWE), CSU Extensions, water and energy providers, irrigators, watershed organizations) to broadcast messaging on the value of water and energy at a local level using a simple message.

#### Water supply reliability/security/dependability

- Develop legislative changes to allow for more flexible water rights (e.g., interruptible supply agreements) and modify state water law to incentivize water conservation.
- State Engineers Office should develop rules to comply with impact of potential future Colorado Compact call.
- Develop regional water conservation plan(s).
- Develop/support more regional cooperation on water project development and water supply sharing.
- Develop cooperative partnership (or similar) with regional energy providers to provide local energy supply and micro-grid management (with the intention to allow for more sharing of electrical power using current supplies and transmission capacity)
- Coordinate with USFS on future community water storage and water supply needs.
- Coordinate hydropower opportunities with Reclamation and FERC.

#### Institutional Limitations

- Focus on water energy nexus education including issues related to cost evaluations and joint business planning and collaboration.
- Develop means to remove risks for innovation (e.g., improve water rights flexibility, improve pricing for services both for power and water).
- Establish State and Federal funding mechanism to support innovation for planning, piloting, and implementation

#### Coordination of water and energy demand management efforts

• Initiate coordination between planning codes, building codes, incentives and related education (by utilities and municipalities).

- Encourage water reuse at the household level (e.g., greywater for irrigation) to reduce overall energy needs for wastewater treatment.
- Initiate coordination between water and energy utilities to explicitly outline/define opportunities for energy and potable water conservation and establish pilot programs at the regional level
- Modify/clarify state water law with regard to how water conservation is addressed (e.g., with respect to agricultural efficiencies, municipal diversions, etc.).
- Develop federal research funding mechanisms to improve efficiencies between water and energy demand management.

#### Coordination of water and energy supply development

- Support Glenwood Springs creation of its own municipal power utility and purchase electricity/gas wholesale from suppliers and evaluate potential opportunities for geothermal energy use locally.
- Improve ability to retrofit existing storage with small hydro (which includes having/developing the means to sell and distribute power locally).
- Assess methods to reduce reservoir evaporation and transmission losses (e.g., create deeper reservoirs, locate storage closer to uses).
- Evaluate energy savings and/or generation options at wastewater treatment works.
- Evaluate improvements to existing water systems (e.g., improve pump efficiencies, install solar power for ditch operations and monitoring, etc.).
- Support Holy Cross purchasing power from XCEL and distributing it to customers, which will allow Holy Cross to create renewable energy incentives and put pressure on XCEL to create more local renewable energy.
- Coordinate regional assessment of water and energy needs, incorporating climate change uncertainties/drought, to evaluate and where appropriate pilot low-water use energy sources.
- Create State-based forum to share stories and promote local/regional WEX successes (round tables, CWCB, CFWE, Colorado Water Congress, DoLA).

## South Platte/Metro

#### Local Water Providers

- Develop and implement meaningful water conservation program
- Evaluate facility upgrades/rehabilitation that may result in energy efficiencies
- Evaluate new hydroelectric generation opportunities
- Conduct customer education/marketing vis-à-vis connecting water use and energy use
- Evaluate setting goals for resource use reduction at the utility/municipality level
- Evaluate energy requirements and costs of new water sources
- Assess water exchanges to accomplish reuse without pumping
- Evaluate non-potable irrigation of parks and open space versus using treated water to reduce treatment energy needs
- Assess water portfolio management to avoid pumping, for example use gravity sources

#### Local Energy Providers

- Evaluate cogeneration to lower energy demand at wastewater treatment plant by burning methane from digester (Longmont).
- Conduct education and public information efforts and business opportunities regarding conservation programs and incentives for residential and commercial customers (Fort Collins and Longmont).
- Conduct garden tours for Xeriscape programs, landscape career development (Loveland)
- Develop rebates and incentives to target multi-family buildings. Split incentives between owners and residents.
- Fund Loveland Housing Authority to develop first geothermal project.
- Support the permitting of small hydro plant constructed in the existing system serving Longmont, Loveland and Ft. Collins.
- Fort Collins is reviewing building codes in 2013. Boulder County recently adopted new building regulations.
- Install new metering infrastructure. (Fort Collins has a new system. Electricity and water enables new rate structures, education, feedback, behavior change, DR/EV/RE. Water metering could enable leak detection. Could lead to true dependent rates and threshold notification.)
- Loveland is adopting a new sustainability plan.
- Fort Collins rates are seasonal and tiered. Could go to time of use billing.
- Get customers engaged on conservation activities to reduce both water and energy use.
- Consider whether conservation programs be explicitly funded on billing layout

#### **Regional Water Providers**

- Support the permitting of small hydro plant constructed in the existing system serving Longmont, Loveland and Ft. Collins.
- Support landscape water conservation education. Evaluate reducing water treatment requirements.
- Develop customer education regarding WEX.
- Promote flexible marketplaces for water supplies.
- Need to better link energy savings to water conservation programs
- Evaluate providing water to oil and gas companies for development (e.g., Encana drillers, parent companies, construction, water providers).
- Develop common messaging and education regionally and statewide for both energy and water issues
- Link energy to water conservation plans
- Support Windy Gap firming project for both water and energy supply (PRPA is one of the largest participants)
- Create better linkages associated with climate change to planning efforts including mitigation (energy) and adaptation (water).

#### **Regional Energy Providers**

- Create renewable energy portfolio
- Develop goals for coal retirement and gas conversions (to help reduce energy related water demand)
- Develop rebate programs for combined water and energy efficiency
- Support combined water/energy audits
- Support/conduct customer/legislator/decision-maker education

### State

- Conduct agricultural energy study.
- Compare agricultural water conservation study from CWCB to CEO study results.
- Develop/support information meetings between State entities
- Support integrated energy resource planning (e.g., PSCo docket is underway, bidding in spring/summer of 2013).
- Explore "water sharing" as a value to include in wind bids.
- Conduct scenario development and electric utility planning. Connect PUC and CWCB regarding scenario planning.
- Develop total energy needs of water portfolios within the SWSI planning process.
- Support small hydro plant permitting with FERC to increase the number of permits and CEO resources.
- Promote use of CWCB/CWRPDA loans for Ag projects with hydro.
- Develop DSM "strategic issues" Docket for May/June 2013
- Develop water efficiency best practices guide compare with electric utility efficiency programs
- Conduct rain water harvesting pilot program
- Support better collaboration between the CWCB and CEO staff
- Conduct scenario planning presentation CWCB and PUC

### Federal

- Evaluate pumped storage timing for selected facilities (e.g., Carter Lake, Mt Elbert).
- Assess renewable energy optimization
- Regionalization. Participate in groups and coordinate with water districts, municipalities, etc.
- Legislation. Analyze proposed policies to inform policy makers and public on effects.
- Increased Efficiency. Improve power plant efficiencies (cooling systems). Storage and conveyance loss reduction.
- Funding. Support new grant programs and applicable research.
- Continue to support water law changes to improve water rights flexibility.
- Shift to renewable as appropriate (e.g., National Renewable Energy Laboratory).
- Data Assessment. Improve and continue collection of flow and storage data to support better forecasting.

- Conduct public education and outreach with tours, public education programs, reports, and training.
- Evaluate food production impacts of WEX, including land use impact regarding biomass energy.
- Alternative Water Sources. Assessment of alternative water sources for use in energy projects.
- Support project assessments. Technical feasibility and impacts on water and energy.
- Evaluate and implement retrofits and facility rehabilitation integrating energy and water demand efficiencies.
- Permitting.
- Support local and regional water supply/energy supply planning.
- Conduct and support research regarding hydraulics and conveyance, endangered and invasive species, drought and water supply forecasting, cooling system improvements, and future impacts of energy development on water resources.

#### NGOs/Universities

- Conduct research regarding WEX projects (e.g., pump back hydro, micro-hydro, etc.)
- Support legislation regarding PUC engagement to promote low water energy sources
- Conduct research and outreach on energy efficiency at water utilities
- Participate in funding discussions. Provide letter writing to support worthwhile programs.
- Support improvements amendments to Codes and Standards
  - Advocate for changes which expedite distributed solar
  - Integrate water and energy efficiency into building codes
- Support a shift to renewables
  - Public education raise awareness.
  - Engagement at PUC proceedings and IRPs
  - o Promote low water use renewables
- Conduct education
  - o Seminars
  - o Newsletters
  - o Classes and symposia
  - o Residential and commercial pamphlets
  - Watershed group (Platte Croup, Cheery Creek, Clear Creek, Big Thompson) support of utility (Loveland Water and Power, Xcel, other munis) conservation efforts
  - o Meet with legislators
  - Technical reports for decision makers
  - o Relationship building
  - o Information sharing
  - Raising awareness
  - o Internships

### Arkansas

### Improve Flexibility of Water Rights

- Support improved interruptible agricultural water supply and cooperative agreements (including changing from 3 in 10 where 3 years are subject to new use/7 years revert to original use, and protection for the uninterrupted supply legislation might be required/flexibility
- Coordinate data collection systems among water providers and water uses within state/region
- Expand the cooperative agreements that are mutually beneficial including the private sector

### Improve Understanding of Water and Energy Embedded in Food

- Improve local food production and "to market" processes
- Support improved data mining and data development that connects energy, water, and food
- Support improved analysis and synthesis of research results
- Support business /economic development assessments considering energy, water, and food with a watershed focus
- Conduct more economic analysis ([Why? Competitive advantage? Show trade off or monetization of different meat of food product practices (grain versus grass fed beef)]

### Address Limits of Capital to Invest (especially with respect to improving agricultural efficiency)

- Look at utilities working as ESCOs
- Look at different accounting to justify conservation cost savings to gain support for capital investment.
- Create mandates to builders through building code changes to develop funding sources supporting improved agricultural efficiencies.
- Support creation of carbon tax
- Gain public and political support for rate increase or rate surcharge targeted for an area
- Develop a working/consortium/advocacy group
- Develop, test, and apply innovative technology
- Tap into research, and university research money
- Support community backing for military energy water efforts to assist with Department of Defense funding. Then apply benefits to community support their public and private partnerships.
- Respond to private investment groups regarding opportunities
- Develop education materials

#### Education/Overcoming Ignorance and Apathy

- Reframe/reword the conversation one common voice
- Establish best practices

- Use crisis to reframe the conversation and as a teaching opportunity/rationale for changing behaviors/thinking related to the future impacts (e.g. flooding as a result of the Waldo Canyon fire).
- Find, recruit, and engage influential entities, people, spokes people and spokes models.
- Conduct on the ground projects that demonstrate a change in thinking
- Find common ground and needs
- Find and prioritize solutions that address and help multiple stakeholders. Address many of the problems. Intersecting solutions, multiple benefits, (social, economic, environmental).
- Support K-12 education. Change behavior of families.
- Raise awareness and influence of QLI
- Educate NGOs, leaders, and elected officials
- Identify who owns the problem (or who should own it). What are the roles and responsibilities of governmental institutions and individuals.