

Final Report

Phase 3 of the Water Conservation Workshops conducted under the HB 05-1254 Water Efficiency Grant Program

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CD with Workshop Presentations, Attendee Database and Questionnaire Results

Hardcopy of questionnaires provided under separate cover

Section 1

Workshop Goals and Objectives

The Water Conservation Workshops were conceived to provide a consistent set of information to Colorado's water community regarding water conservation planning and implementation. The Workshops were conducted by meshing standardized lectures regarding State planning requirements and guidelines with locally driven content. Great Western Institute and our project partners (Colorado WaterWise Council and Western Resource Advocates) functioned as both program developers and facilitators - working with the local community to develop individualized Workshop programs and speaker docket. During the Workshops, our team not only facilitated the discussions but gave technical lectures, as well. Our technical lectures proved to be vital to help address key Workshop goals, which included establishing a common language of water conservation for use around the state, and educating the water community regarding state planning requirements and grant programs.

Overall Objectives

The most recent set of Workshops – the third in a series of Workshops conducted under a grant graciously provided by the Colorado Water Conservation Board (CWCBC) – reached four communities not previously reached by early workshops, namely Greeley, Pagosa Springs, Grand Junction and La Junta. With these four Workshops conducted in the summer of 2007, a total of 11 Water Conservation Workshops were held over the past 16 months all with similar objectives:

- Develop a consistent set of definitions and nomenclature regarding water conservation, water use efficiency and wise water use;
- Teach what constitutes meaningful water conservation planning and implementation from a practical, economic, political, and legal perspective;
- Educate water planners regarding state and other resources available to provide technical, financial, and other assistance to those looking to develop and implement more meaningful water conservation programs; and
- Share information and stories regarding past successes and failures regarding water conservation, water use efficiency, and wise water use that have occurred on a local level across the state.

Vital to this phase of Water Conservation Workshops were the facilitated discussions that evolved during the day and one half of content presentations and forums. At each and every Workshop, lengthy discussions ensued regarding numerous topics relevant to water conservation planning and implementation. These discussions helped to identify numerous challenges and opportunities related to future water conservation efforts to be conducted on a local, regional and statewide scale. A presentation of the key outcomes from these discussions is provided later in this report.

The key messaging that was included in the advertisements distributed via email in May, as well as in the announcement of each of the individual Workshop programs included the following:

Why Attend the Workshop?

- To help facilitate the ongoing dialogue between and among water users, elected officials, and interested citizens
- To discuss the components of effective water conservation planning – for municipal, industrial, commercial and agricultural uses (with an admitted focus on M&I water management)
- To provide valuable information to the community on the economics and current practices regarding water conservation planning and implementation
- To provide an opportunity for local water users and providers to share their experiences and recent lessons learned
- To promote more visibility and understanding of local conservation efforts across the state.

Who is Invited?

Water utility managers; elected and appointed officials; water resource managers; directors of special districts and home owners associations; landscaping professionals; ditch company owners and managers; consultants; Statewide Water Supply Initiative (SWSI) and Interbasin (1177) Basin Roundtable Members; and anyone with a strong interest in water conservation.

Location Specific Goals

Another key objective for this phase of Water Conservation Workshops was to utilize the grassroots, locally driven dialogue to identify issues that local communities and water planners are facing regarding water conservation and water use efficiency. To this point, at three of the workshops, substantial emphasis was given to agricultural water conservation issues in both the development of the program and the Workshop advertisement since agricultural water use and management is at the fore of numerous basin roundtable discussions. Experts in agricultural water use and management, the effects and impacts of agricultural outputs on local economies, and alternative technologies for agricultural irrigation were included in the programs and technical lectures.

To help aid in the identification of local and regional issues, each Workshop attendee was asked to list their specific “goals” for the workshop. The list of workshop goals was then amended to include the participant specified goals. The amended list of workshop goals for each of the Workshops is provided below.

Greeley

Establish a common language for further discussions
Identify and describe state requirements and funding opportunities
Discuss planning process including how to set goals, manage saved water, enforce programs, and measure conservation efforts
Share information related to water conservation efforts in municipalities, on the farm and in special districts

Pagosa Springs

Provide education related to water conservation including:

- Establish common language for further discussions,
- Discuss financial impacts of water conservation,
- Discuss water resources benefits, and
- Discuss nexus of water conservation with new storage.

Review currently available grant programs from the State

Support development of a better understanding of local water issues and needs

Identify barriers to effective and meaningful water conservation

Discuss how individuals and organizations can do their part – especially with respect to how to encourage end users (i.e., home owners and HOAs) to conserve appropriately

Discuss how to educate “part-timers” (i.e., second home owners and seasonal visitors)

Discuss what to do with saved water including how to keep it in the streams

Discuss agricultural related issues

Grand Junction

Provide education related to water conservation including:

- Establish common language for further discussions,
- Discuss justification for water conservation if saved water just goes downstream to California and/or Nevada, and
- General education on planning related to:
 - What are the steps
 - How to manage saved water
 - How to set goals
 - How to manage outdoor water and sprinkler systems
 - How to develop and use land use codes and restrictions
 - How to identify and control leaks

Discuss state planning requirements and funding opportunities

Discuss local water conservation activities (including new construction plan review)

Discuss regional water conservation activities

Provide networking opportunity

La Junta

Provide education related to water conservation including:

- Establish common language for further discussions, and
- Discuss techniques for more meaningful water conservation planning related to
 - How to manage water rates/value of water
 - How to include and engage the community
 - How to set goals
 - How to conducting planning on a regional level (SECWCD role)

Discuss state planning requirements and funding opportunities

Discuss local water conservation activities and what is different in the lower Arkansas

River Valley with lack of growth and prevalence of direct water rights

Builder/developer issues including landscaping guidelines

Section 2

Workshop Attendees, Programs and Sponsors

Workshop Attendance

Table 1 summarizes relevant information regarding the individual workshops, including date conducted, number of attendees and the primary meeting sponsors. A total of 154 individuals attended the four workshops. Attachment A presents a listing of the attendees for all four of the workshops.

Table 1 – Summary of Water Conservation Workshop Logistics

Location	Date	Number of Attendees	Local Sponsor(s)
Greeley	May 31 and June 1	38	City of Greeley; Central Colorado Water Conservancy District
Pagosa Springs	June 13 and 14	52	Pagosa Area Water & Sanitation District; San Juan Citizens Alliance; San Juan Water Conservancy District
Grand Junction	July 9 and 10	36	Clifton Water District; City of Grand Junction; Ute Water Conservancy District; Town of Palisade; Drought Response Information Program (DRIP)
La Junta	July 16 and 17	28	City of La Junta; Southeast Colorado Water Conservancy District

A summary of the background of the 154 attendees is provided in Table 2.

Table 2 – Summary of Types of Organizations in Attendance

Organization Type in Attendance	Number in Attendance
City/Town > 10,000	25
City/Town < 10,000	4
Special District > 10,000	10
Special District < 10,000	7
County	7
Water Conservation/Conservancy District	11
Elected Officials (includes State, County, City and Special Districts)	10
Legislative Staff	5
Non-Profit	15
Consultant	15
Realtor	6
Educator	12
Landscaper	4
Federal	4
State	10
Press	2
Other	12

The Workshop participants included 24 Basin Round Table members from across the state.

Workshop Programs

A listing of the specific agendas developed for each Workshop is provided in Attachment B. As previously stated, the Workshop agendas contained content related to the need to broadcast information on a common language of water conservation, and existing state planning requirements and funding programs. The agendas also attempted to provide for ample opportunities for local discussions and dialogue regarding locally important issues.

For example, the Pagosa Springs program included discussions from various interest groups and entities regarding the uses for saved water, including improving water supply reliability during times of drought and increasing local stream flows for recreational and environmental benefits. Agricultural water management and research “cracker barrels” (i.e., informal and friendly discussions marked by open exchanges between panelist and the audience) occurred in both Greeley and La Junta. A cracker barrel on water rates was also included in the Greeley Workshop.

The importance of these cracker barrels cannot be down played. They served to not only allow for the exchange of information and points-of-view, but they also provided one of the key mechanisms for identifying issues related to local and regional water conservation opportunities and challenges.

Role of the Workshop Sponsors

The local sponsors for each workshop provided the meeting place and food and refreshments during the Workshops, supported local media engagement and announcements, and assisted with identifying and engaging the local speakers and the target audience.

Each Workshop was also sponsored by the combined support of the Colorado WaterWise Council, which provided person power in the form of engaging speakers and making presentations. Select members of the Colorado WaterWise Council, Western Resource Advocates and Great Western Institute also provided assistance in developing and preparing workshop notebook content as part of the in-kind match on the project.

At final tally, the in-kind and cash contribution provided by the various project sponsors came to 34% of the overall project cost.

Section 3

Participant Questionnaires

An important component of all the Workshops was the collection of questionnaire responses (formerly called “exit surveys” during the Phase 1 Workshops). The questionnaire was designed to collect information regarding attendee contact information and organization, and organizational need with respect to three key areas related to water conservation planning and implementation:

- Information;
- Technical assistance; and
- Financial assistance.

These three areas were further segmented into needs related to specific water conservation planning and implementation issues.

Although the questionnaire used during Phase 3 was similar to those used during the previous two phases, the Phase 3 questionnaire contained some revisions and refinements not contained in the previous questionnaires such that a direct comparison of the responses from all the phases of Workshops was not possible; however, general trends related to water user needs for information, technical assistance and financial assistance could be made.

The Phase 3 questionnaires allowed for the collection of information regarding the respondent’s affiliation and type of water use. This information was used to help characterize the needs of different types of water users/providers (e.g., municipal provider, agricultural provider, wter conservancy district, etc.). Note that some of the Workshop attendees could not be characterized as water users/providers. These groups (e.g., consultants, realtors, educators) were also identified and characterized to the extent reasonable.

A summary of the key elements of the questionnaire is provided below. The “raw” questionnaires have been provided to the CWCB under separate cover.

To begin with, the questionnaire was completed by about 55% of the Phase 3 workshop attendees, in that 85 surveys were completed. Table 3 presents a summary of the respondents that submitted questionnaires.

Table 3 – Summary of Questionnaire Respondents

Segment	Number
Municipal Water Provider	27
Water Conservancy District	5
Agricultural Water User/Provider	10
Educator	6
Realtor	5
Consultant	11
County Staff	4
Other	6

The reader should note that the questionnaires did not necessarily obtain a statistically valid sampling of the various segments of water users and/or professionals identified in Table 3, and therefore some limitations must be recognized regarding the lack of statistical significance of the questionnaire responses. Nonetheless, the results of the questionnaire have some value in characterizing water user needs and perceptions within each of the geographies where the Workshops were held.

The specific responses collected for each of the four Workshops are summarized first, then a summary of the questionnaire responses by water user and professional type is provided. All questionnaire responses by location are provided on the attached CD for CWCB reference and use.

Greeley

Greeley participants indicated the most need for information and technical and financial assistance of any of the Workshops. More than half of all the respondents (8 of 13) indicated that there is a substantial need for **information** on water conservation implementation, and one half of the respondents indicated that there is a substantial need for **financial support** to implement water conservation plans and develop drought mitigation plans. At least one half of the respondents indicated that there is more than “some need” (i.e., a 1 or 2 on a scale of five) for the **majority of the informational, technical and financial assistance** categories included in the questionnaire. Only water infrastructure mapping had a cumulative response that was less than “some need” (i.e., less than a 3 on a scale of 1 to 5).

Pagosa Springs

Pagosa Springs participants had similar response to those identified in Greeley, with nearly 2 out of every 3 indicating a need for more **information** regarding implementation of water conservation measures and programs. A similar amount of questionnaire respondents indicated that **technical assistance** related to cost/benefit analyses of measures and programs is also one of the areas most important need regarding water conservation planning and implementation. Similar to Greeley, only water infrastructure mapping had a cumulative response that was less than “some need”.

Grand Junction

Grand Junction participants indicated the least need for water conservation resources of the four Workshops. In fact, about one third of the categories included in the questionnaire were deemed by the respondents as there being less than “some need”, including the following: water infrastructure mapping, applicability of specific measures and programs, use of saved water for environmental purposes, use of saved water for recreational purposes, use of saved water for sustaining return flows, water conservation of indoor water use and leak detection and repair. Grand Junction’s Workshop attendees also appear to indicate that financial assistance for drought mitigation planning less than “some need”. The questionnaire respondents indicated that **technical support** for water conservation implementation education, and **financial support** for water conservation planning are their greatest needs, with **information** for water conservation planning and implementation and **technical support** for outdoor water use management closely behind.

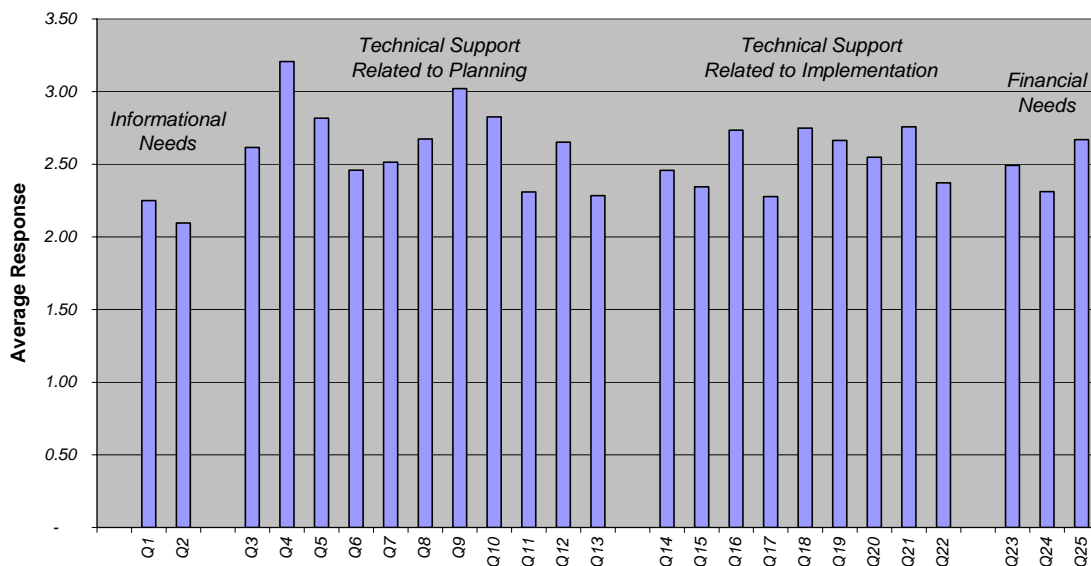
La Junta

La Junta respondents indicated that their greatest needs are **financial** – specifically for water conservation planning and implementation. **Information** related to water conservation planning and implementation also scored high, as did the need for **technical assistance** related to cost/benefit analyses of measures and programs. The use of saved water for recreational purposes scored as having the least need relative to the other categories, along with conducting water audits, and landscape management and certification.

Response Segmentation

Attachment C presents the summary of all the responses and a breakdown of responses by segment for each question including a ranking of the individual questions from greatest relative need to least relative need. For all respondents, **informational needs** were identified as the greatest need, with information related to water conservation implementation (Q2) as the front-runner by a substantial margin. **Information** related to water conservation planning (Q1) was second, followed closely by **technical assistance** for implementing outdoor water management (Q17), planning monitoring and measuring water conservation efforts (Q13), and conducting cost/benefit analyses of measures and programs (Q11), and **financial assistance** for water conservation implementation (Q24). **Technical assistance** for water conservation implementation education (Q15) and implementing water conservation monitoring and measuring efforts (Q22) were also ranked high by the questionnaire respondents. Figure 3* presents a summary of all the questionnaire responses.

Figure 3 - Summary of Questionnaire Responses



*the list of questions corresponding to Q1 through Q25 is provided in Attachment C.

Taken as a group, the respondents ranked technical assistance to map water infrastructure (Q4) as the least need relative to the other categories with technical assistance to support planning for saving water for recreational purposes (Q9) as a distant second. No questions other than these two had an average response of less than “some need”.

Attachment C presents the summary for each segment of responses obtained color coded to highlight the top 5 and bottom 5 needs as indicated by the respondents. In general, there are more differences across the segments than agreements. For example, agricultural water providers and users, and educators identified on average less than “some need” (i.e., greater than 3 on a scale of 1 to 5 with 1 being substantial need and 5 being no need) for the vast majority of areas of potential need; whereas, realtors and consultants identified on average a 2 or less for the same areas of potential need. That said, three key areas of agreement were identified. All segments agreed that information and financial support related to water conservation program implementation was at or near the top of identified needs; and technical support for water system infrastructure was at or near the bottom of needs.

Disagreements were more prevalent. For example, water conservancy districts identified technical assistance with general water conservation planning as their greatest need, whereas consultants, educators and others ranked this as near the bottom of their needs (and presumably for their clients needs as well). Municipal providers ranked this in the middle of the pack. Technical support related to uses for saved water was also substantially different for different groups. Nearly all the groups identified that technical support for saved water uses was not substantial, relative to other needs; however agricultural water users and providers ranked technical assistance to plan for using saved water for environmental flows and to sustain return flows near the top of their needs. Conversely, agricultural user indicated that financial support for water conservation planning and implementation was not a need, whereas most other groups excluding County staff, ranked financial support as at or near the top of their needs.

This difference in need for the different groups of water users and professionals is not surprising given the diversity of interests represented at the Workshops. However, each of the groups invested time to participate in the Workshops, further supporting the observation that diverse water interests across the state broadly recognize education efforts as valuable and important.

Section 4

Observations and Recommendations

Observations

In general, the Water Conservation Workshops have been a success, based on the attendance, the participant feedback and the current partnership of CWCB and local non-profits. The partnership and the Workshops have evolved over time, and will continue to do so as the next group of Workshops occurs.

We have seen the following positives as outcomes from the Workshops:

- We have had excellent attendance by elected and appointed officials, including state legislators, federal legislative staff, and county commissioners.
- We have seen the educational benefits of engaging IBCC round-table members, municipal and special district managers and other water professionals as Workshop participants.
- We have been able to take the feedback received from the Workshops and use it to support new legislation and improve local discussions relevant to improved water resources management.
- We have seen an increase in local and regional networking between the Workshop participants.
- We have seen a marked increase in the number and quality of CWCB planning grant applications.
- We have developed some good press helping to raise the general awareness of our communities to the value and importance of water conservation.

We need to continue to evolve the Workshops, responding to participant feedback, our observations and the needs of the participants and other local, regional and statewide initiatives. We also need to maintain a continuity of process, which creates the next level of water conservation training and policy dialogue.

An important component of each Workshop involved engaging the participants to identify issues that challenge the local water providers and interests. It was found that many local issues were shared across a wide geography, meaning that challenges for Greeley were also challenges for Pagosa Springs and Grand Junction. Of course, some of the local issues were also unique to a given geography, such as the outdoor watering challenges that Grand Junction has with ditch water being so widely available to customers at a very low prices.

In addition, some of the articulated issues transcended specific local geographies extending into regional and in some cases statewide jurisdictions. For example, the value of water is something that confounds and challenges many local water providers statewide. This issue, although appropriately managed at a local level, has regional and statewide implications. The economic value and impacts of water conservation and the various cost versus benefit implications of water conservation measures and programs is also influenced by local conditions and circumstances.

However, regional and statewide information may be leveraged by local planners to improve the effectiveness of local water conservation efforts.

With all that said, the following list was developed to capture the key issues that were raised during the Phase 3 Workshops, categorized by scale – state, regional, and local. Specific geographies are indicated where appropriate.

Statewide

- Water providers need help to define and characterize the value of water and how to price water, since water rates define the boundaries for cost/benefit analyses used to select water conservation activities.
- Water providers need help with determining/estimating the economic outputs associated with water use at all three scales - local, regional and statewide – such that water needs for sustainable communities including agricultural, environmental and recreational uses can be developed (this information is used to help develop water conservation goals).
- Special districts and some municipalities lack the resources to do water conservation and drought mitigation planning, including hiring and managing consultants. How can the state help better fund special districts? Can the state promote more regional cooperation and plan develop and implementation efforts?
- Organizations on the west slope, and perhaps some on the east slope, may need to incorporate Lake Powell into their drought mitigation planning. How can the state help provide information and resources such that Lake Powell is included in an appropriate manner?
- All citizens need more readily available water education at all levels, starting at pre-K to 12, and in our colleges as well, through improved appropriate and approved course content, technology, and media coverage.
- Water providers and users would benefit from more resources being available from the state regarding who has plans, what are contained in plans, how much money is needed to plan and implement, what water conservation programs are effective, how water conservation programs are monitored and measured, how saved water is tracked and saved, and how much money the state has available for planning and implementation.

Regional

- Counties and local governments need help to better understand the role of water conservation in supporting growth, maintaining and improving local water supply reliability for all uses, and supporting environmental and recreational needs. This information will help to establish water conservation goals on a regional level.
- Counties and developers need technical and financial assistance with master planning, and developing appropriate and implementable controls for new construction through zoning, plan review and water availability assessments.
- Counties and local governments need to work together to improve and maintain consistent messaging to water end users (e.g., citizens, homeowner associations, businesses, institutional users, etc.).
- Water conservancy districts need technical and financial assistance in coordinating and supporting the development of regional plans for water resources management and water conservation.

Local

- Local water providers and users need to better understand the cost and benefit of water conservation activities.
- Local water providers need better information regarding the cost/benefit of specific water conservation measures and programs.
- Local water providers and users need better water conservation monitoring and measurement tools, which include having well defined and broadly accepted metrics for tracking changes in customer water use.
- Local water providers and users need help in developing better water pricing and rate structures, including developing water budgets for individual customers – residential, commercial, institutional and industrial.
- Local water users need to better understand the water quality impacts related to water use and water conservation activities.

Recommendations

The success of the Workshops provided insight into additional activities that the CWCB should consider, include:

- Continue to support the Workshops being conducted by Colorado-based non-profits, water utilities, special districts and water conservancy districts in geographies not previously accessed and in some locations desiring additional Workshops – including, but not limited to, the Grand Valley, Upper Colorado, Yampa and White River basins, in and near Durango, Douglas County, and the lower South Platte and Arkansas River basins – as these efforts support local water conservation planning and implementation, the 1177 basin round table dialogue and processes, and the SWSI Phase II efforts.
- Support the ongoing water conservation policy dialogue currently occurring as part of the Workshops through the administration and performance of the Office’s various legislative mandates, especially those related to water resources and water conservation education and technical assistance.
- Use information and outcomes obtained during the implementation of the Workshops to support legislation and other policy development that assist the Office, CWCB and DNR in the performance of their legislative mandates.

In addition, GWI and its partners need to continue to develop and leverage the Workshops as grassroots outreach into the various Colorado geographies, for purposes of educating our citizens, elected and appointed officials, and our water managers and professionals, and promoting the benefits of water conservation to as broad an audience as will listen.

Next year’s Workshops will need to include new and developing content related to commercial, industrial and institutional water conservation, new uses of GIS and satellite data in developing and monitoring meaningful water conservation activities, and the benefits and challenges of regional water conservation planning. The Workshops will also need to expand the audience of participants to include more HOA managers, developers and irrigators.

