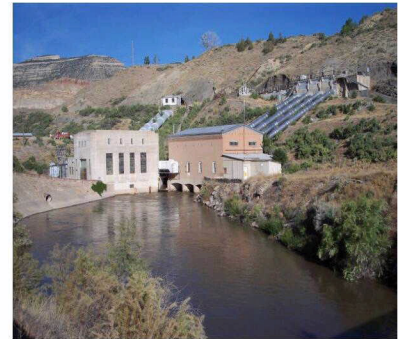




Mapping the Colorado Basin Roundtable's Water Policy Networks

March 2008



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Executive Summary

In the summer of 2007, a survey was conducted with the Colorado Basin Roundtable and over a hundred water stakeholders identified by the Colorado Basin Roundtable members. The stakeholders in the study are diverse, with many different affiliations, interests, and roles within the water community. Most respondents are involved in the HB05-1177 process, participating on one or more roundtables. They were asked questions designed to help understand how the people involved in and on the periphery of the roundtable process are connected to one another, and where and how stronger connections can be built. The findings represent a snapshot of a single point in time, when the roundtable process was 18 months old and in the process of establishing direction based on a new administration and emerging technical work.

The roundtable process has many goals to undertake, from the activities discussed in this report, to the work underway this year, to the ultimate goal of developing a structure to guide transbasin diversions without harming individual basins. When HB05-1177 created the roundtable process, it explicitly included stakeholders who have had less of a voice in the past. The question now is whether the more inclusive structure has the potential for more inclusive decisions to meet the goals of the roundtables.

The analysis of the stakeholders within the Colorado Basin Roundtable and their network of contacts suggests that in this roundtable, *not all interests have the same level of investment in the water roundtable process*. It also suggests that the different interests are about more than just consumptive and non-consumptive or east and west.

Challenges to Address. Some stakeholders on the Colorado Basin Roundtable who prioritize *protecting consumptive needs* are the least likely to see the roundtables as successful at meeting their individual goals or their goals for the roundtables. They do not see members of the Colorado Basin Roundtable as being influential in statewide water policy and management issues, but rather look to others in their networks who are outside the roundtable. They are disconnected, in terms of frequency of information exchange and trust, from many members of the Colorado Basin Roundtable. This combination of findings suggests that these stakeholders who prioritize consumptive needs continue to look outside the roundtable process for the decision-making power and venues. Historically, their needs have been met by the current system, with the legal structure of prior appropriation and market driven aspects of water management being effective tools for achieving their desired outcomes.

Not all stakeholders on the Colorado Basin Roundtable with a focus on consumptive needs fall into this group. For some, including small municipal providers, the *current system is broken*, and even the roundtable process is not going to fix it. These stakeholders do not see the process as meeting their desired outcomes. They too are disconnected from the roundtable process, but unlike the previous group, it is not because their needs are being met elsewhere; it is because their needs are not being met anywhere. Not all of these stakeholders are focused on consumptive needs, but they are all focused on the failure of their needs to be met by the current system.

Strengths to Build Upon: In contrast to the previous two groups, some of the stakeholders on the Colorado Basin Roundtable whose consumptive needs are primarily focused on *agricultural* needs are positively engaged in the roundtable process. They may not be sharing information as actively with roundtable members as other stakeholders tend to, but they do trust the stakeholders at the table and see some successes in the process.

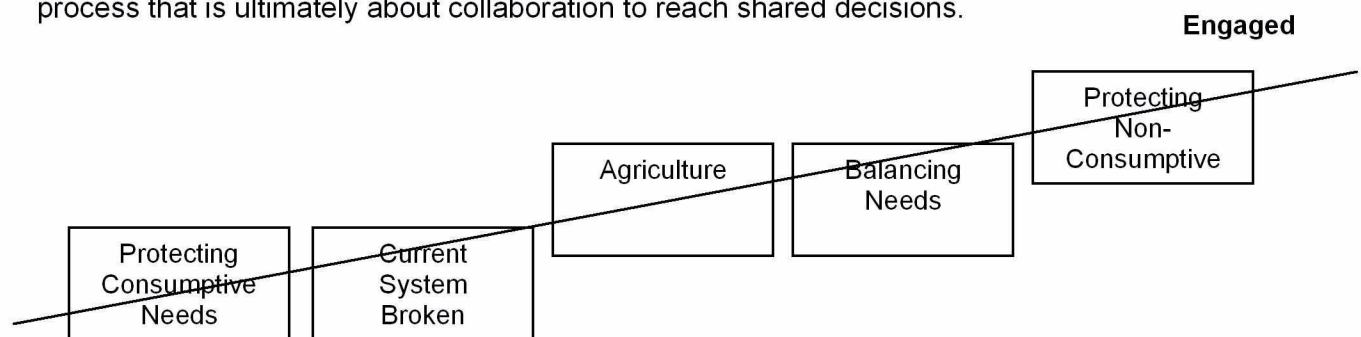
For other stakeholders on the Colorado Basin Roundtable, while they may have a consumptive or non-consumptive need that they want to see met, ultimately, they are approaching water policy and management issues with an eye toward *balancing needs*. These pragmatic stakeholders are communicating with and trusting of many different stakeholders, across many different interests. Their commitment to seeing all needs met may be part of why they are engaged in the roundtable process, which is a unique opportunity to bring all the interests together.

Finally, one group of stakeholders on the Colorado Basin Roundtable is perhaps the most connected to the roundtable process – those who prioritize *protecting non-consumptive needs* over all others. They are a densely connected group of stakeholders who frequently exchange information, trust each other, and see each other as influential in statewide water policy and management issues. They see success in the roundtable process and they are very actively connected to it via their strong networks with stakeholders inside the Colorado Basin Roundtable and stakeholders in other roundtables. With the historical water management system not prioritizing non-consumptive needs, the roundtables are a new venue for their voices to be heard. Perhaps for this reason, they are more fully engaged than many of the stakeholders who prioritize consumptive needs.

What does this all mean for the Colorado Basin Roundtable and its future?

First, if some of the individuals who prioritize consumptive needs are not viewing the Colorado Basin Roundtable as successful or its members as influential, they have no reason to consider the roundtable a mechanism for meeting their needs. They are similar to the “veto” power of a single individual in a consensus process. If the process fails to bring everyone into the decision, the “veto” can prevent the decision from ever being adopted and implemented. In this case, if these stakeholders believe their needs will be met outside the roundtable, they have no need to negotiate with other members on the roundtable, and thus no reason to help ensure the implementation of the roundtable’s objectives.

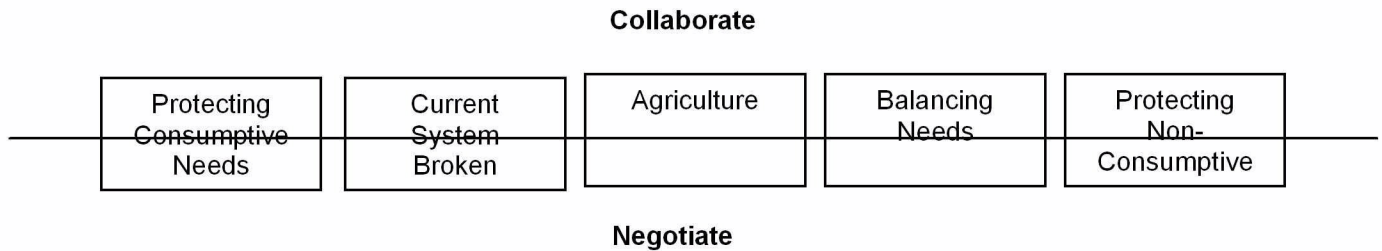
One way to look at the findings is to think about the need for balance at the Colorado Basin Roundtable. Some stakeholders have little reason to be in the process, while for others, the process is a unique opportunity to be more involved. The “balance” of their personal investment in the process is uneven. It’s not just about power – it’s about willingness to engage in a process that is ultimately about collaboration to reach shared decisions.



Disengaged

As long as the disconnect between reasons for involvement remains so high in the Colorado Basin Roundtable, the process will be out of balance. If reasons can be found to engage some of the most disconnected stakeholders, including those whose consumptive needs are met by

the historical system and those who have given up on the market system, the process may increase its likelihood of success by balancing the interests at the table.



The disconnect between reasons for involvement will affect more than just the Colorado Basin Roundtable. While other roundtables may or may not have similar challenges, the HB1177 process ultimately seeks to address not just basin issues, but interbasin transfers as well. Without understanding and addressing differentials in power and investment within individual roundtables, cross-roundtable collaborations that can be successfully implemented may be difficult to achieve.

The Colorado Basin Roundtable also holds a unique position within the roundtable process, making its success vital to the rest of the process. Based on the Department of Natural Resource's roundtable membership data, the Colorado Basin Roundtable is more connected to other roundtables through overlapping non-voting members than any other roundtable. It bridges the Western Slope roundtables with the rest of the state. Additionally, the roundtable has leaders who have the potential to work effectively with other roundtables. The respondents holding elected roles as of the summer of 2007 within the Colorado Basin Roundtable are respected as influential members of the water policy and management community. As such, they can help in expanding the desired cooperation between basins.

The report describes, in detail, the findings from a survey that is a snapshot in time – the summer of 2007. Yet, the issues that it describes are complex challenges that exist within many collaborative efforts. To achieve its goals, the Colorado Basin Roundtable may need to go beyond its current efforts to complete specific activities, build relationships, and educate its members. It may also need to reconsider how to create an investment in the process by stakeholders who are currently disengaged and looking outside the roundtable to meet their needs.

Next Steps

If the HB1177 process seeks to find collaborative solutions to the need for equitable distribution of water in Colorado, the process must be successful at engaging the wide array of interests in a meaningful dialogue that can result in shared decisions. To understand whether this can occur in at least one roundtable, a first step is to look at the communication, trust, and shared beliefs between stakeholders connected to and participating in the Colorado Basin Roundtable.

Based on the findings of the survey, collaborative opportunities may be created by:

- Ensuring that representatives of all the interests are attending the meetings, sharing information, and having opportunities to interact and build trust;
- Increasing the dialogue between the basins by expanding interactions through more formal, overlapping membership at the roundtable by roundtable level;

- Defining “success” for the roundtables in a way that includes meeting the needs of a variety of interests, helping create a reason for engagement by all participants;
- Ensuring that stakeholders outside the roundtable process are learning about the successes in the roundtable process; and
- Encouraging those with a desire to balance needs and build cooperation to take leadership roles not only within their roundtable, but across roundtables.

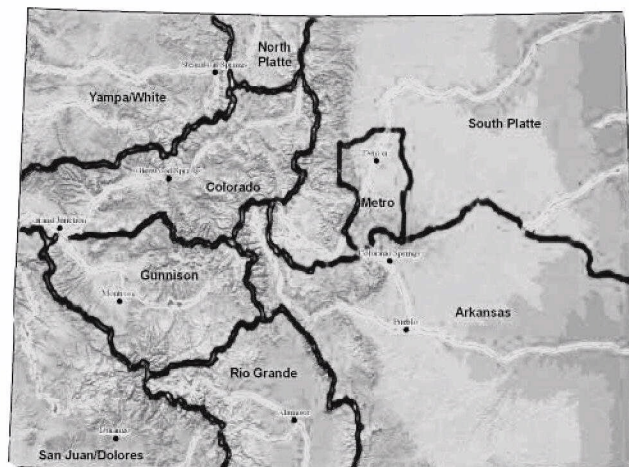
Ultimately, the message to take away is that a tremendous opportunity exists within the roundtable process, and within the Colorado Basin Roundtable in particular, to connect the different interests who may be prioritizing different goals and enable them to participate in a shared process, building connections with one another.

Introduction

In an attempt to shift the way water conflicts are “settled”, the Colorado legislature in 2005 passed HB05-1177, (the “Water for the 21st Century Act”), which created nine water basin roundtables and one Interbasin Compact Committee (Figure 1).

Per the enabling statutes, goals of this formalized process include creating “locally driven, collaborative solutions to water supply challenges” (37-75-104(1)(a), C.R.S.) and ultimately ensuring the “equitable division of the state’s waters” (Colorado House Bill 05-1177). The water roundtable process demonstrates the growing recognition that comprehensive water planning efforts must include a wide range of stakeholders, representing diverse interests including environment, agriculture, recreation, local domestic water providers, industry, and owners of water rights. Collaborative decision-making structures like the roundtables have tremendous potential, but they also suffer from the complexity of interpersonal and interest-based stakeholder interactions.¹

Figure A. HB05-1177 Water Basins



Survey Focus

Approximately 18 months into the roundtable process, this survey was implemented with one roundtable, the Colorado Basin Roundtable, to begin to understand how the process is working across a number of key dimensions:

- Who views the process as successful and who does not?
- Is the process engaging a broad range of stakeholders, both by demographics, but also by values, beliefs, and desired outcomes from the process?
- Where do influence, trust, shared beliefs, and opportunities for successful collaboration exist within the networks of water stakeholders involved and not involved in the roundtable process?

This study of the Colorado Basin Roundtable asked questions about important issues related to how roundtable members and other water stakeholders connect to one another, including:

- Desired outcomes that respondents hope to achieve through the roundtable process for themselves and their organizations, as well as the outcomes they desire for the roundtable process as a whole.
- Priorities that respondents hope the roundtable process will address.
- Progress that respondents believe the roundtables have made on specific activities.
- Communication networks that exist between Colorado Basin Roundtable members and with water stakeholders in other roundtables as well as outside the roundtable process.

¹ For more information about the water roundtable process please visit: <http://ibcc.state.co.us/>.

- Influence in water policy and management issues among water stakeholders.
- Trust between water stakeholders that others will keep their interests in mind.
- Demographics of water stakeholders responding to the survey, including age, years in water policy, and other traditional demographics as well as water rights ownership and affiliations with different interests involved in water policy and management.

One way to understand and address the questions above is through social network research with the roundtable participants and those peripheral to, but not actively involved in, the roundtables. Network analysis has been applied to many different policy and inter-organizational settings, including water issues. Among its outcomes, the research can help improve levels of collaboration by identifying peripheral stakeholders whose untapped interests and expertise could be drawn into the process (Cross & Parker, 2004; Milward & Provan, 1998) and help understand where and why alliances form (Weible & Sabatier, 2005). Social network questions in this survey asked participants to identify specific individuals who are important to them in a variety of ways. For example, one question in the survey asked participants to identify those people with whom they most frequently exchange information related to water policy and management. Analyzing this information helps to understand if certain individuals or groups of individuals are more likely to be communicating regularly with each other on water issues, while other individuals may be more isolated.

Survey Timing

The survey participants were contacted and surveyed between May and August in 2007. At the time, the roundtables were charged with developing a needs assessment plan, a grants process, and continuing their intra-basin dialogues on basin specific issues. The results of the survey reflect this point in time during the roundtable process and the experiences of water stakeholders with the process up until that time.

Survey Participants

The target audience for the survey was members of the Colorado Basin Roundtable and other water stakeholders they identified while taking the survey. In total, 50 Colorado Basin Roundtable members were invited to participate and 46 completed the survey. The 46 who completed the survey identified an additional 191 water stakeholders, each of whom were invited to participate in the study. The external stakeholders each received an invitation by phone as well as email invitations. Those who could not be reached or chose not to return the phone calls did not receive an email invitation with the survey link. One hundred and eighteen of the external water stakeholders participated in the survey and 95 of those participating completed all questions in the survey (81%). The total response rate was 68% for surveys returned by the external stakeholders. This high participation rate matches the overwhelmingly positive and supportive responses from stakeholders when the study was explained and their participation requested. In all, 164 individuals – 46 basin members plus 118 external stakeholders -- participated in the research.

Conclusion

The discussion in the chapters to follow explores and interprets key findings that focus on the Colorado Basin Roundtable. The information may also be relevant to other roundtables and water stakeholders in Colorado. A more detailed analysis of the findings is in Appendix A.

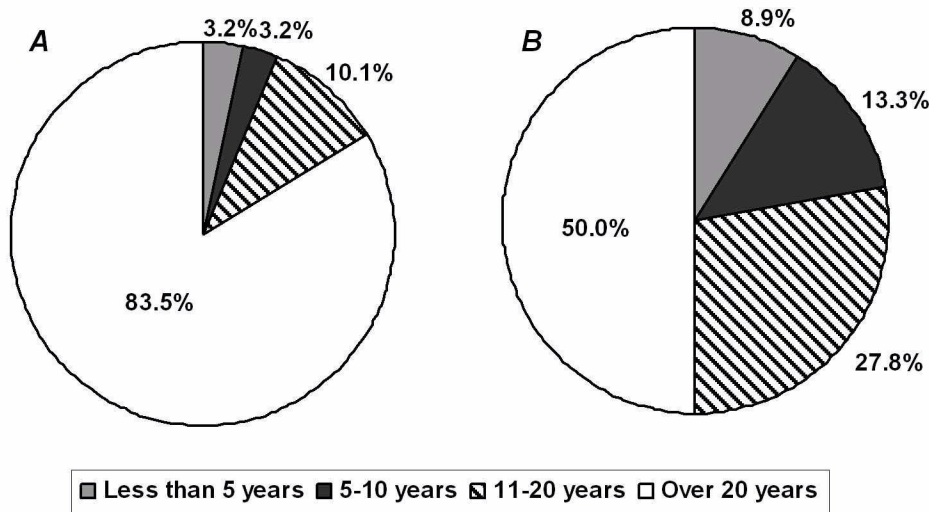
Section 1: Demographics of Survey Participants²

The 164 respondents who completed most or all of the survey provided a great deal of demographic information. It is important to keep in mind that the analysis is not based on a random sample of water stakeholders in Colorado. Rather, it focuses on connections identified by the target population – in this case, the Colorado Basin Roundtable members. The degree to which certain demographic groups are under- or over-represented reflects, in part, the extensiveness of a group's network as well as its cohesion. It is these connections that are of interest; therefore, the size of a given group cannot be inferred to determine the proportion of a group in the broader population of water stakeholders. Purposely and importantly, this network analysis does provide information that can be used to better understand perceptions of HB1177's success, interactions between water stakeholders, trust within groups in the water community, and influence in the water policy and management communities.

Basic Demographics for All Respondents

Overall, the respondents to the survey have a long history in water issues and have lived in Colorado for many years. Most respondents were long-term residents of Colorado, with 83.5% living in the state for over 20 years. Another 10.1% reported living in the state between 11-20 years. Only 6.4% of respondents reported living in the state 10 years or less. Exactly one-half of respondents reported over 20 years of involvement in water issues, with only 8.9% reporting less than 5 years of involvement in water issues. Women were significantly less likely to have a long history in water issues, with one third of women involved in water issues for 10 years or less.

Chart 1.1: Years Living in Colorado (A) and Years Actively Involved in Water Issues (B) for all Survey Respondents



In terms of roundtable involvement, 22% of respondents reported no involvement with any roundtable. Half of the respondents (53.2%) reported involvement in a roundtable for more than one year. Female respondents were significantly less likely to be members of any roundtable, and when they did report membership, they were less likely to have been on the roundtable for

² Details of the demographics reported in this section can be found in the Appendix A, Tables A1.1 – A1.8.

more than a year. Not surprisingly, roundtable members were significantly more likely to have resided in Colorado for more than 20 years. However, roundtable members were not significantly more likely to be individuals who have been involved in water issues for a long time.

With regard to personal characteristics, the respondents to the survey are largely in their 40s and 50s, with 12.7% reporting that they are 40 years old or younger and 19.6% reporting that they are 61 years old or older. The vast majority, 83.5%, of respondents are male.

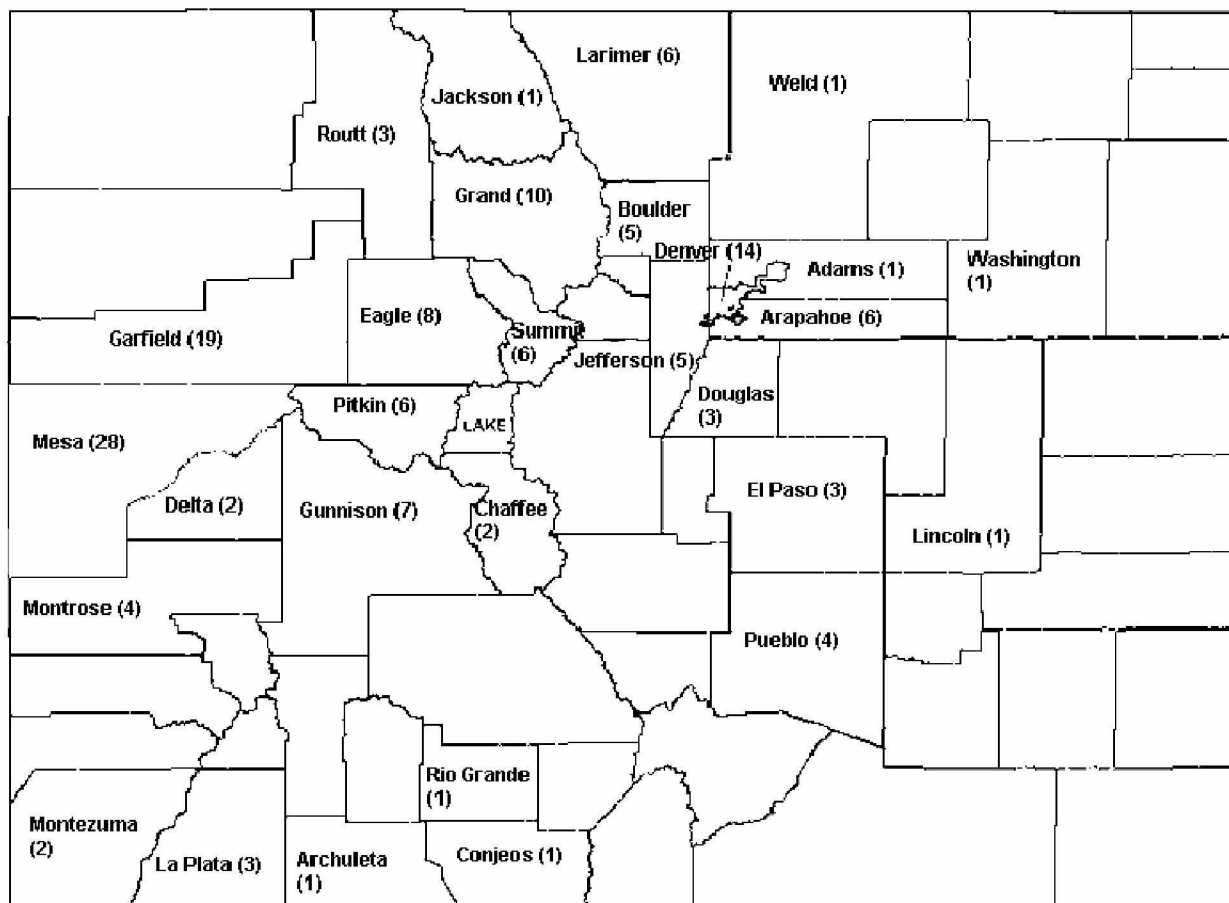
Water Rights

Three quarters of the respondents do not own water rights individually. Of the one quarter who do, the rights range from 1860s rights to rights as recent as 2003, with half before 1900 and half after. In contrast, 60.3% of respondents represent organizations that own water rights, with most of the organizations owning more than 1000 acre-feet of storage rights and/or greater than 100 CFS of flow rights. Individuals representing organizations that own water rights were significantly more likely to report involvement with a roundtable.

Geographic Diversity

Respondents are from throughout Colorado, with the highest percentage of respondents on the West Slope. As the survey respondents outside the Colorado Basin Roundtable were all identified by members of that roundtable, a higher participation level from individuals in western

Figure 1.1: Total Number of Participants from each County



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counties is to be expected. Southeastern Colorado was the least represented area among the respondents, and overall East Slope respondents tended to be in the more populated Front Range counties. See Figure 1.1 for county by county distribution of the respondents.

Affiliations

Respondents reported 44 different types of affiliations, which were grouped into seven general categories.³ Respondents were allowed to select multiple affiliations to capture most accurately their role in the water community. “Any elected or appointed public position” refers to municipal, county, and state level elected positions. Similarly, “Any government position, non-elected” refers to non-elected government staff at the municipal, county, state, and federal level. Those affiliated with quasi-governmental water districts were not included in the government categories, but rather in a separate affiliation, “Water districts.” “Other affiliations” refers to individuals who reported themselves as consultants, private industry, non-profit, or some other role that does not fall into any of the categories specifically related to water and water interests that were included in the affiliation list.

Table 1.1: Self-Reported Affiliations of All Respondents

Affiliations of All Respondents	Number of Respondents	Percent of Respondents*
Any elected or appointed public position	17	10.4%
Any government position, non-elected	59	36.0%
Agriculture	16	9.8%
Environment and recreation	37	22.6%
Water districts	49	29.9%
Water industry	35	21.3%
Other affiliation	27	16.5%

* Percentages add up to more than 100 as respondents were permitted to select up to three affiliations.

³ Each respondent was allowed to identify up to three affiliations, selecting from a list of 44 options. To create the seven categories of affiliations, the 44 options were grouped as follows:

- Any elected or appointed public position: Elected Office: Municipal, Elected Office: County, Elected Office: State, Other: Colorado Water Conservation Board.
- Any government position, non-elected: Non-Elected Government: Municipal, Non-Elected Government: County, Non-Elected Government: State, Non-Elected Government: Federal.
- Agriculture: Consultant: Agriculture, Other Private Enterprises: Rainfed/Dryland Agriculture, Other Private Enterprises: Irrigated Agriculture.
- Environment and recreation: Consultant: Water quality, Consultant: Environmental/conservation, Non-Governmental/Non-Profit: Environmental Group, Non-Governmental/Non-Profit: Watershed Group, Non-Governmental/Non-Profit: Land Trust, Non-Governmental/Non-Profit: Conservation Group, Consultant: Recreation, Other Private Enterprises: Recreation/Tourism Company, Non-Governmental/Non-Profit: Recreation Group.
- Water districts: Special Districts: Water Conservation District; Special Districts: Water Conservancy District; Special Districts: Irrigation District; Special Districts: Other special district; Special Districts: Rural Water District.
- Water industry: Consultant: Governmental Relations; Other Private Enterprises: Research Institute/University; Other Private Enterprises: Engineering Firm/Consultant; Other Private Enterprises: Legal Firm/Consultant; Consultant: Water Resources; Other Private Enterprises: Public Utility.
- Other affiliation: Other Affiliations: Any other affiliation; Non-Governmental/Non-Profit: Other-Non Profit; Other Private Enterprises: Other; Consultant: Other consultant.

Roundtable Membership and Involvement

Fifty-three out of the 164 survey respondents (32.3%) reported working with the Colorado Basin Roundtable between meetings as part of subcommittees or other activities. Twelve of the fifty-three respondents are working with the Colorado Basin Roundtable even though they are not members or even observers of the roundtable. They are helping the roundtable gather information, work on the needs assessment, educate water stakeholders, and connect with other roundtables.

Overall, 78% of survey respondents are *participating in one or more roundtables* as a voting member (Table 1.2), non-voting member, staff, or observer. As the study focused on the Colorado Basin Roundtable, more respondents are members of that roundtable than any other. A more in-depth exploration of roundtable membership is included in Section 3.

Table 1.2: Respondent's Participation as Voting Members on Any Roundtable

	# Voting Members	% Voting Members
Arkansas	5	3.0%
Colorado	31	18.9%
Gunnison	6	3.7%
North Platte	1	0.6%
Metro	3	1.8%
Dolores/San Jan/San Miguel	4	2.4%
Yampa/White/Green	1	0.6%
South Platte	2	1.2%
Rio Grande	1	0.6%
IBCC	12	7.3%

Among the respondents, some affiliations were significantly more likely to be participating in the roundtable process, whether as voting members, non-voting members, observers, or liaisons. Those who self-reported that they are affiliated with environmental or recreational interests as well as those involved with a water district were significantly more likely to be participating with one or more roundtables. These results cannot be inferred to represent the proportion of interests in the broader water community; rather, as will be discussed further in the report, this may indicate each roundtable member brings more interests to the table than the formal interest they are appointed to represent.

Basic Demographics for Colorado Basin Roundtable Members

As noted above, the study focused on the Colorado Basin Roundtable and consequently has a high participation rate among the roundtable's members. Forty-six (86%) of Colorado Basin Roundtable members answered the survey. The Colorado Basin Roundtable members who replied to the survey represent almost all of the statutorily required participants on the

roundtable as well as some observers and liaisons to the roundtable.⁴ Almost 90% of Colorado Basin Roundtable respondents have been in Colorado for more than 20 years and half of the members have been actively involved in water issues for just as long. Forty-one of the forty-six respondents have been on the roundtable for more than a year, with only a couple respondents

Key Finding 1.1: Although HB1177 only requires each roundtable to have one representative each of environmental and recreational interests, almost one quarter of respondents from the Colorado Basin Roundtable reported an environmental or recreational affiliation.

brand new to the roundtable. Similar to the demographics of all survey respondents, most roundtable participants are in their forties and fifties and the vast majority are male. Over three quarters of the Colorado Basin Roundtable members live in Mesa, Grand, Garfield, Eagle, and Summit Counties, with the remaining roundtable members mostly from other Western Slope counties. Thirty percent of roundtable members own water rights and three quarters of roundtable members represent organizations that own water rights, with overlap between the two. Only nine members of the roundtable who completed the survey neither own water rights nor represent an organization owning water rights.

Eleven (23.9%) of the 46 respondents from the Colorado Basin Roundtable reported some form of environmental or recreational affiliation (Table 1.3). Both of the individuals appointed to represent environmental and recreational interests on the roundtable reported an environmental or recreational affiliation, as would be expected. Eight of the remaining nine respondents reporting an environmental or recreational affiliation are also appointed members of the roundtable and their appointments cross many different sectors. The remaining respondent is an observer to the table. This may suggest that while the statute creating the roundtables mandated two seats at the table to represent these interests, the Colorado Basin roundtable may have more representation than required due to the multiple affiliations of its members.

Table 1.3: Affiliations of Colorado Basin Roundtable Members

	Number of Respondents	Percent of Respondents*
Any elected or appointed public position	8	17.4%
Any government position, non-elected	18	39.1%
Agriculture	6	13.0%
Environment and recreation	11	23.9%
Water districts	18	39.1%
Water industry	14	30.4%
Other affiliations	5	10.9%

* Percentages add up to more than 100 as respondents were permitted to select up to three affiliations.

⁴ Statutorily required appointments to the roundtable include one member representing each county within the borders of the roundtable; one member representing the municipalities from each county within the borders of the roundtable; one member representing each water conservancy district and water conservation district within the borders of the roundtable; one member appointed by the legislature; ten at-large members appointed to represent environmental interests, recreational interests, agricultural interests, local domestic water provider interests, industrial interests, at least five of whom own adjudicated water rights. In addition to the voting members, three non-voting members must be appointed to represent entities outside the basin who own water rights within the basin or, if three such individuals are not available, three who have interests in and knowledge about water matters.

Conclusion

The respondents are a diverse group of stakeholders who represent many interests, most parts of the state, and all of the roundtables. They are a mixture of individuals with water rights, representing organizations with water rights, and with no water rights. Though they are diverse, it is important to remember that they are not representative of all water stakeholders in Colorado. They were identified for participation based on their relationships with individuals on the Colorado Basin Roundtable. While the findings cannot be inferred to all roundtables or water stakeholders, they can be used as a map of issues, challenges, opportunities, and examples of water policy networks in action in the Colorado Basin Roundtable.

Section 2: Respondents' Values⁵

The 164 survey respondents were asked many different questions to understand better their values related to water policy and management in Colorado. Analyzing the answers to their questions, the respondents fell into five distinct clusters, each with its own characteristic values and desired outcomes from the Colorado Basin Roundtable and HB1177 process. The description below provides a rich overview of each cluster, a comparison between them, and specific details about the Colorado Basin Roundtable respondents as compared to other respondents. These clusters will be used throughout the remainder of the report to understand better the survey responses from the Colorado Basin roundtable and the other stakeholders in the water policy and management community that they identified.

Defining Different Values

The water roundtables are a means of gathering people together whose values may be in conflict. Though it is not possible to make all values compatible, it is necessary to make decisions that include a wide array of interests. Explicitly recognizing the role that values play in the decision-making process is a useful starting point for tackling water challenges. Not only does it allow for a search for commonalities, but also creates an opportunity to understand assumptions that underlie solutions brought to the table by different interests.

To begin this exploration of values, respondents were asked for their level of support, from strongly agree to strongly disagree, for the following nine statements related to priorities for the HB1177 roundtable process to address.⁶

- Allocation and management of water resources through the market;
- Protecting existing individual water rights;
- Water transfers to high growth areas/sectors;
- Balancing water supplies and demands;
- Increasing cooperation among water basins;
- Protecting the agricultural economy and way of life;
- Protecting the recreational economy and its water needs;
- Protecting ecosystems and non-human species (or just the environment); and
- Balancing the water demands between consumptive uses and non-consumptive uses.

Answers to the nine statements were analyzed using cluster analysis (see Appendix A) which identified five distinct groups of individuals who represent different values. Membership in the clusters has no relationship to the affiliations that respondents reported, but rather, is based entirely on responses to the nine statements on priorities that are listed above. The clusters are:

- Protecting Consumptive Needs;
- Agriculture;

⁵ Details of the data on respondent values can be found in Appendix A, Tables A2.1 – A2.13

⁶ The focus areas and the statements were derived from the Statewide Water Supply Initiative report (CDM, 2004), a Colorado Institute of Public Policy report (2006), and discussions with key stakeholders.

- Balancing Needs;
- Protecting Non-Consumptive Needs; and
- Current System Broken.

Below is a description of each group along with an exploration of the desired outcomes for HB1177 and the Colorado Basin Roundtable as articulated by (1) members of the Colorado Basin Roundtable; and (2) the external stakeholders. Respondents shared the outcomes they desire for water policy and management, for the Colorado Basin Roundtable, and for the HB1177 process overall.



PROTECTING CONSUMPTIVE NEEDS

The thirty-five respondents in this cluster are seeking coordination within basins, between roundtables, and across the state to balance agricultural and municipal water needs. Many respondents emphasized protecting existing individual water rights, and Front Range respondents heavily prioritized meeting the needs of growing municipal areas.

Analysis of Survey Statements of Support: Members of this cluster are:

- Highly supportive of protecting existing individual water rights;
- Highly supportive of cooperation among basins; and
- Moderately supportive of agriculture, water transfers to high growth sectors, and balancing supply and demand.

Desired Outcomes of Colorado Basin Roundtable Respondents: These Colorado Basin Roundtable members report that their desired outcomes from the Roundtable and the HB1177 process include an increase in cooperation within the basin and statewide, a better informed and educated water community, and planning for the future. They also identified outcomes related to storage projects and other water infrastructure, protecting current water rights, and protecting West Slope needs.

Examples of Desired Outcomes of Colorado Basin Roundtable Respondents:

- “Unity within the state of Colorado.”
- “Achieve a broader understanding of water policy and management issues.”
- “More solutions on the Western Slope.”
- “Develop and protect water rights and assets.”

Desired Outcomes of External Respondents: Approximately one quarter of the members of this cluster live in Denver County and another quarter in other Front Range counties. The rest live in the central and western parts of the state. Most of these respondents emphasize protecting individual and interest-based water rights, with the Front Range respondents heavily prioritizing meeting urban water needs. Some respondents want to balance growth and agriculture needs and many emphasized the need for coordination between roundtables and water basins.

Examples of Desired Outcomes of External Respondents:

- “Improved water supply for agriculture and a stable water supply for cities.”
- “One or more of the roundtables could be vehicles for solidifying and institutionalizing agreements made between Denver Water and other parties.”
- “Better cohesion and understanding among Colorado River basin roundtables.”
- “Preserve water for West Slope future development.”
- “Ideas that will maximize use [of water] while respecting individual water rights.”



AGRICULTURE

More so than any other cluster, the nineteen respondents in this cluster focus on agricultural needs specifically and consumptive needs in general. They want the roundtable process to protect individual water rights and the prior appropriation doctrine. They are not supportive of non-consumptive needs as a priority in the state. Those from the Western Slope prioritize protecting Western Slope water from transmountain diversions.

Analysis of Survey Statements of Support: Members of this cluster are:

- Highly supportive of cooperation among basins, balancing water supply and demand, agricultural interests, and protecting existing individual water rights; and
- Not supportive of water transfers to high growth sectors and non-consumptive needs.

Desired Outcomes of Colorado Basin Roundtable Respondents: All the Colorado Basin Roundtable members in this group support protecting individual water rights, and most emphasize Western Slope needs. References to cooperation and consensus are also articulated, but within the context of needing to preserve individual water rights and meeting consumptive water needs.

Examples of Desired Outcomes of Colorado Basin Roundtable Respondents:

- “No impact to water rights.”
- “Preserve, protect, and enhance water availability in western Colorado.”
- “Non-consumptive uses should not expect special attention to achieve their goals.”
- “Consumptive use is prioritized over non-consumptive use.”

Desired Outcomes of External Respondents: No external stakeholders in this cluster live in the Denver-metro area, but some live in the northern and southern parts of the Front Range. Half of the external stakeholders in this cluster are from the Western Slope. The desired outcomes prioritized by these stakeholders heavily focus on agriculture, consumptive use, protecting current rights, and reuse of water. Some stakeholders also want to increase stakeholder understanding of consumptive and agriculture water issues and protecting Western Slope water.

Examples of Desired Outcomes of External Respondents:

- “Keeping water for agricultural production.”
- “Safeguarding the time-tested and generation-invested prior appropriation doctrine.”
- “Develop models that are beneficial to agriculture.”
- “Limits on diversions from the West Slope to the East Slope.”



BALANCING NEEDS

The fifty respondents in this cluster are from throughout Colorado and prioritize a wide range of water uses, including agricultural, municipal, environmental, and recreational. They share in common a desire to develop a collaborative, inclusive process to find cooperative solutions that meet multiple needs. They also emphasize the importance of increasing knowledge individually and in the broader water community. As many respondents in this cluster do prioritize one need over another, their emphasis on cooperation may be based in a pragmatic belief that their prioritized needs cannot be met unless all interests are being included and addressed.

Analysis of Survey Statements of Support: Members of this cluster are:

- Highly supportive of balancing water supply and demand as well as consumptive and non-consumptive uses, increasing cooperation among the basins, protecting existing individual water rights, environmental needs, and agricultural needs; and
- Supportive of allocation and management of water through the market.

Desired Outcomes of Colorado Basin Roundtable Respondents: Common words used by these roundtable members include integration, trust, cooperation, and better understanding. The roundtable members emphasize the need for increased understanding and knowledge of water issues, including thorough needs assessments. While some prioritize one need over others, their desired outcomes still include a more integrated approach. Some stakeholders identify consumptive needs, others identify non-consumptive needs, but no one rejects the importance of either.

Examples of Desired Outcomes of Colorado Basin Roundtable Respondents:

- “Understand interests of others in the water community.”
- “Minimize conflict over water resource related issues.”
- “Better cooperation between basins for addressing state water needs.”
- “Water is used conservatively and wisely and water rights are honored.”
- “Bring together the very diverse interest groups and work to find solutions which are mutually beneficial.”

Desired Outcomes of External Respondents: The external stakeholders in this cluster are scattered throughout the state, with approximately one third on the Western Slope and 12% in the middle of the state. One-third are in the Denver-metro area and another 18% are elsewhere on the Front Range. The overriding themes among the desired outcomes of these stakeholders are cooperation and learning. They emphasize both consumptive and non-consumptive needs as well as consensus building to meet both. Although some focus on conservation issues, their desired outcomes incorporate water rights and consumptive needs. Commonly used words include balance, equity, and cooperation. Some stakeholders in this group focus on infrastructure issues such as storage and specific projects around the state.

Examples of Desired Outcomes of External Respondents:

- “To begin to have an open and honest dialogue... we also need to move beyond dialogue and begin to find and implement water supply solutions.”
- “Better integration between water rights, water quality, and instream flow values.”
- “Development of projects and/or programs that address consumptive needs in a manner that also protects instream values.”
- “I do not believe this process will necessarily produce solutions, but I think it is crucial that it be perceived as a process that enables the voices of all stakeholders to be heard and considered.”
- “Better public understanding of the importance of return flows to downstream water users.”



PROTECTING NON-CONSUMPTIVE NEEDS

The forty-seven respondents in this cluster emphasized outcomes that will protect non-consumptive needs and cooperative approaches to reaching those outcomes. They want to keep water in rivers, but most are supportive of meeting agricultural and municipal needs provided that environmental and recreational issues are addressed in long-term, sustainable ways. The respondents are overwhelmingly from the Western Slope and many want to create a unified voice within basins or across basins to protect Western Slope water resources.

Analysis of Survey Statements of Support: Members of this cluster are:

- Highly supportive of environmental, recreational, and agricultural water needs as well as balancing consumptive and non-consumptive uses and increasing cooperation between the basins;
- Generally supportive of balancing water supply and demand and protecting existing individual water rights; and
- Not supportive of using the market to allocate and manage water resources and water transfers to high growth sectors.

Desired Outcomes of Colorado Basin Roundtable Respondents: Roundtable members in this cluster reported desired outcomes that include recreational and environmental priorities. Most of the stakeholders emphasize integrated solutions and stakeholder involvement in developing solutions. They repeatedly emphasize keeping water in the rivers and many focus on long-term, sustainable solutions. Some of these roundtable members also emphasize meeting Western Slope needs by creating a united front against Front Range interests, often as a way of protecting non-consumptive needs.

Desired Outcomes of External Respondents: Unlike all other clusters, over half of the external stakeholders in this cluster are from the Western Slope and most of the remaining stakeholders are from the central part of the state. Fewer than one quarter are from the Front Range. They prioritize non-consumptive needs, emphasize cooperation, and also emphasize the need for within and across basin consensus. In addition to clearly being focused on environmental and recreational issues, there is a strong theme

Examples of Desired Outcomes of Colorado Basin Roundtable Respondents:

“Protection of non-consumptive uses of water instead of increased diversions to the Front Range.”

“Better appreciation and understanding for the environmental needs in the basin and state.”

“More upfront public input to water management issues.”

“Bottom-up instead of top-down management of water issues.”

“Provide for a unified voice against additional transmountain diversions.”

Examples of Desired Outcomes of External Respondents:

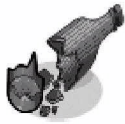
“Locally driven priorities for non-consumptive needs.”

“Increased public awareness of risks to Western Slope water.”

“I don't want western Colorado water/snowmelt transported transmountain to the thirsty and wasteful Front Range communities.”

“A true interbasin compact that will preserve basin of origin ecological flows and recreational values and will, generally, not permit additional transmountain diversions or ecologically damaging, large scale pump-backs.”

of local control, protecting Western Slope needs, and opposing transbasin diversions. A number of the stakeholders expressed concerns that the roundtable process will not be able to achieve their desired outcomes.



CURRENT SYSTEM BROKEN

These nine respondents focus on various needs, including local government, environmental, and recreational. What binds them together is their strong opposition to market-driven allocations of water and dissatisfaction with current water law and management in Colorado. They are supportive of cooperation between the basins and generally supportive of balancing consumptive and non-consumptive needs.

Analysis of Survey Statements of Support: Members of this cluster are:

- Supportive of non-consumptive needs, cooperation between basins, balancing water supply and demand, and balancing consumptive and non-consumptive uses; and
- Strongly against protecting existing individual water rights, using the market to manage water resources, and transfers to high-growth sectors.

Desired Outcomes of Colorado Basin Roundtable Respondents: Individuals from the roundtable want local government water needs, not market forces, to drive water policy decisions.

Examples of Desired Outcomes of Colorado Basin Roundtable Respondents:

“Basin-wide solutions based on good policy, not market forces.”

“Adequate water for the 21st Century”

Desired Outcomes of External Respondents: The external stakeholders are from both western and eastern Colorado. Their desired outcomes are very critical of current policies and practices in Colorado. Most of these stakeholders focus on recreational and environmental needs, but some stakeholders focus on municipal water issues. The common theme among the desired outcomes of these stakeholders is their critical eye toward current policy.

Examples of Desired Outcomes of External Respondents:

“Development of policies through informed and educated legislation”

“Insistence of strong water conservation measures on the Front Range.”

“A moratorium on water deals/projects until solutions have been agreed upon.”

“Colorado is a shining example of waste”

“Colorado has some of the worst water laws in the nation regarding the public's right to float through private lands.”

West versus East

All five clusters have respondents from both the western and eastern slopes, suggesting some shared values throughout the state. However, west and east respondents differ from each other. Regardless of cluster, many West Slope respondents are seeking outcomes related to protecting their water from transmountain diversions. However, this shared goal is driven by different concerns. For example, in the *Protecting Consumptive Needs* cluster, Western Slope respondents want to protect their water to allow for future growth on the West Slope. In contrast, in the *Protecting Non-Consumptive Needs* cluster, Western Slope respondents reject additional transmountain diversions because it will take water out of rivers and create recreational and environmental problems.

Key Finding 2.1: Even when respondents on the East and West sides of the state share similar priorities (e.g. protecting non-consumptive uses of water), they may be seeking very different outcomes.

Comparing Values

The previous sections described the values of the clusters and their desired outcomes. Another way to understand the importance of each cluster is to identify those values that are significant points of difference and similarity between groups. In the charts to follow, the average support for each cluster is shown for each of the nine statements.

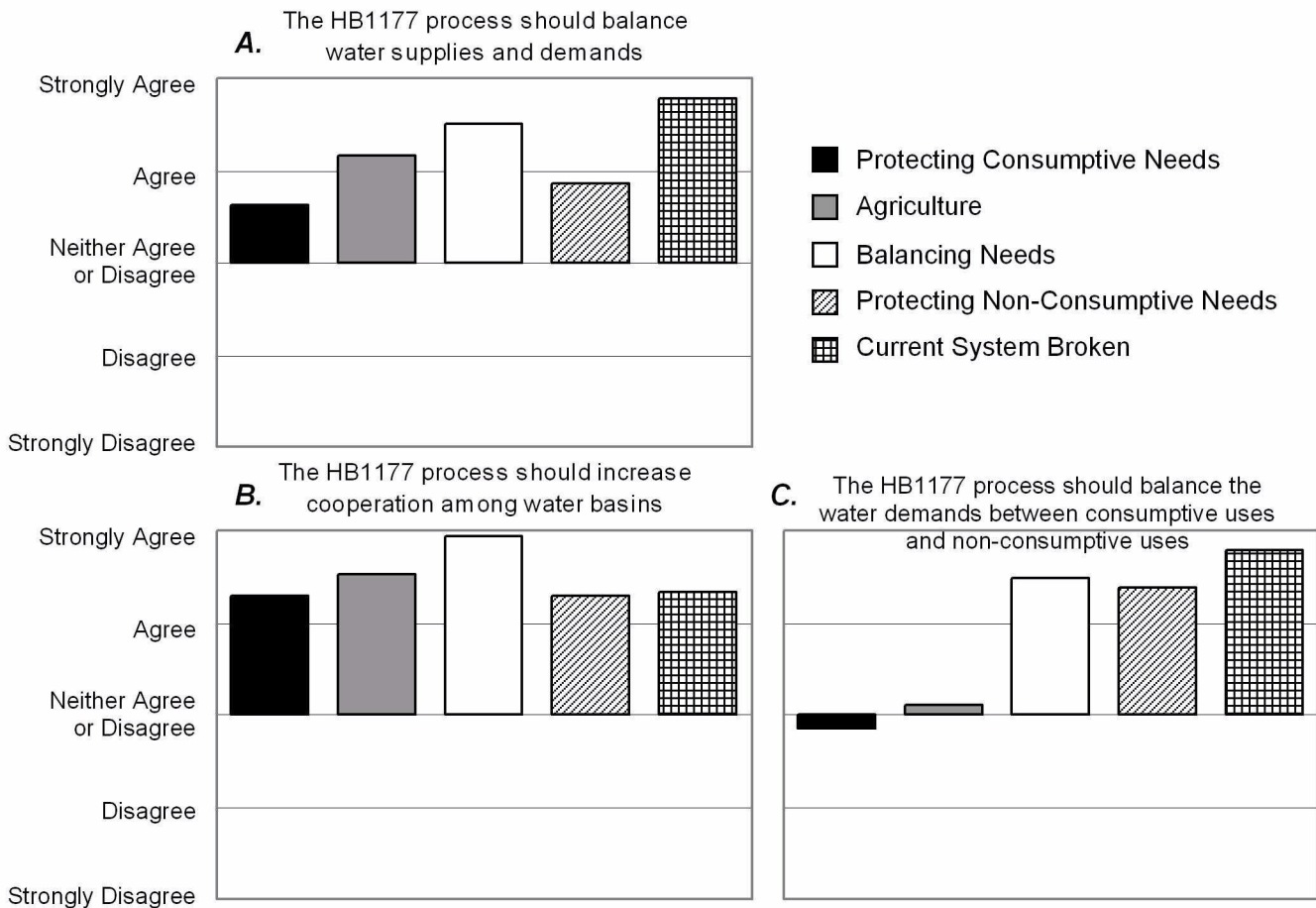
First, the areas with the most agreement between clusters are the need for balancing water supplies and demands (Chart 2.1, A) and increasing cooperation among water basins (Chart 2.1, B). All of the clusters agree on both of these issues, though levels of support vary. In particular, the *Protecting Consumptive Needs* and *Protecting Non-Consumptive Needs* cluster are the least likely to agree on balancing water supply and demand. One of the defining

features of the *Balancing Needs* cluster is its extremely high support of increasing cooperation among water basins.

Key Finding 2.2: Most respondents agree that cooperation is needed between the basins and water supplies and demands should be balanced. Not all agree that consumptive and non-consumptive uses of water should also be balanced.

When respondents were asked whether water demands should be balanced between consumptive and non-consumptive uses, a very different pattern emerges (Chart 2.1, C). Both the *Protecting Consumptive Needs* and *Agriculture* clusters are neither in support, nor strongly against, this priority for the HB1177 process, but the other three clusters very strongly support it.

Chart 2.1: Supporting Cooperation and Balance by Belief Clusters

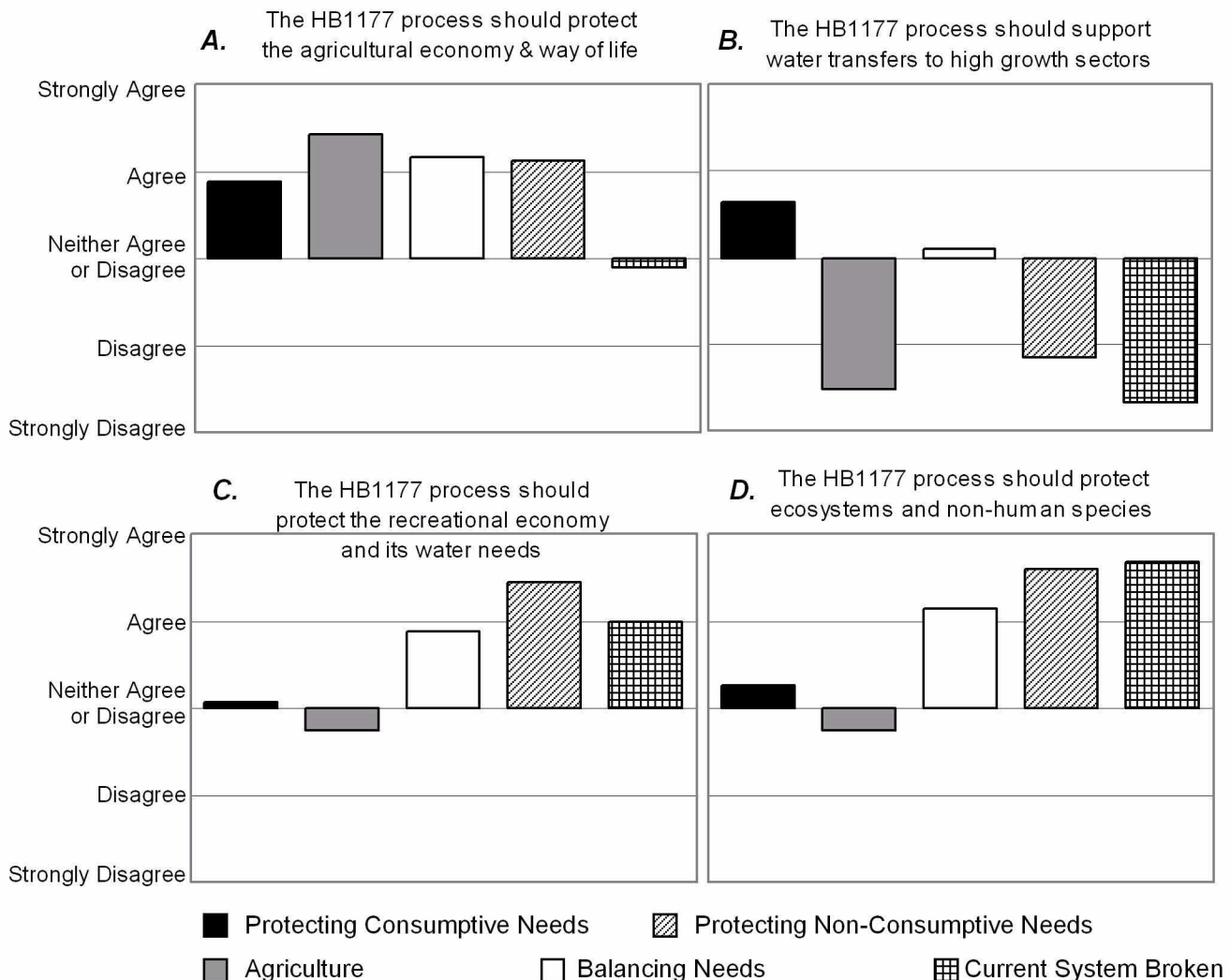


When asked about how much the HB1177 process should support four different uses of water, much less agreement was found than on the questions about cooperation and balancing uses (Chart 2.2). Almost all clusters agree that the process should protect the agricultural economy and way of life (A), but only one cluster, *Protecting Consumptive Needs*, is supportive of water transfers to high growth sectors (B). This cluster's support for water transfers is one of its defining features, making it quite different from all other clusters.

Key Finding 2.3: Meeting agricultural needs is the only type of water use that many respondents agree the HB1177 process should support. The respondents supportive of water transfers to high growth sectors are not supportive of environmental and recreational uses of water.

When asked whether the HB1177 process should protect the recreational economy and its water needs (C & D), both the *Protecting Consumptive Needs* and *Agriculture* clusters do not agree, while the other three clusters are very supportive (Chart 2.2). The *Protecting Non-Consumptive Needs* cluster is the strongest supporter. Similarly, when asked whether the process should protect ecosystems and non-human species, the same three clusters are in support, with the *Protecting Non-Consumptive Needs* and *Current System Broken* most supportive.

Chart 2.2: Support for Different Uses of Water by Belief Clusters

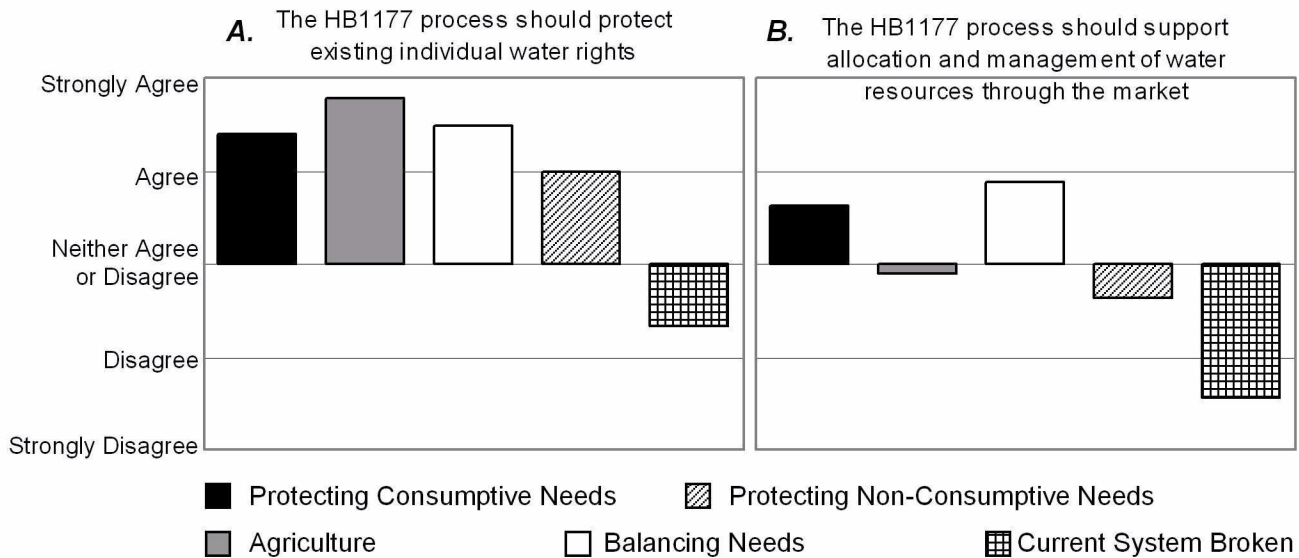


The respondents were asked how much they agree that the HB1177 process should prioritize the protection of individual water rights (Chart 2.3, A). Only the *Current System Broken* respondents disagree with this statement, while the *Agriculture* respondents are in the strongest agreement.

Key Finding 2.4: Although many respondents support the HB1177 process protecting individual water rights, many do not believe the process should support the allocation and management of water resources through the market.

Finally, respondents were asked how much they agree that the HB1177 should support the allocation and management of water resources through the market (Chart 2.3, B). The *Balancing Needs* cluster is the most likely to agree, followed by the *Protecting Consumptive Needs* cluster. The *Current System Broken* cluster strongly disagrees, almost as much as they disagree on an earlier statement – water transfers to high growth sectors.

Chart 2.3: Support for Existing Water Rights and Management of Water through the Market by Belief Cluster



Agreement: As can be seen in the charts and narrative above, there are areas of agreement between all clusters. For example, four of the five clusters are supportive of protecting existing water rights and the agricultural economy and way of life. Although the *Current System Broken* cluster disagreed with many statements, they share a desire for cooperation among basins and balancing water supply and demand.

Disagreement: The areas of differences are also important to keep in mind. The allocation and management of water resources through the market is clearly a controversial issue, as are the different uses of water, with the exception of agricultural uses. The roundtable process may need to address these differences as it moves forward.

Values Compared to Demographics

Values are not as closely related to demographics as one might expect. Each cluster has members who personally own water rights, others who represent organizations with water rights, some with both, and some with no water rights. Men and women are represented within

each cluster, as are people of all ages and years of experience in water policy and management. The one area where demographics differ across clusters is in the affiliations reported by cluster members. Respondents who identified as elected or appointed officials of a roundtable are underrepresented in the *Protecting Consumptive Needs* and *Agriculture* clusters (Chart 2.4). However, respondents with non-elected government positions are not over or under represented in any significant way in the different clusters.

Chart 2.4: Cluster Membership of Respondents Reporting Elected & Appointed and Government Affiliations

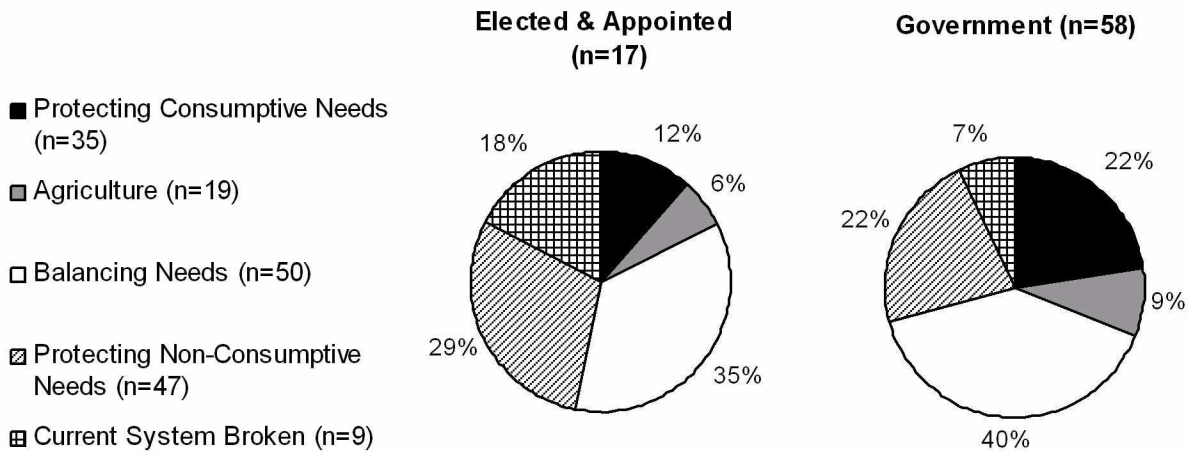
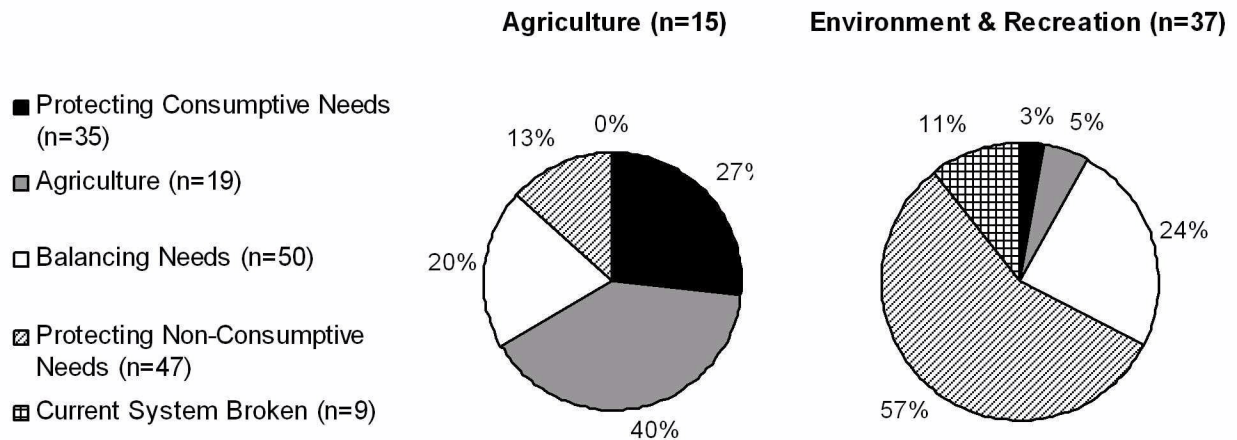


Chart 2.5: Cluster Membership of Respondents Reporting Agricultural and Environmental & Recreational Affiliations

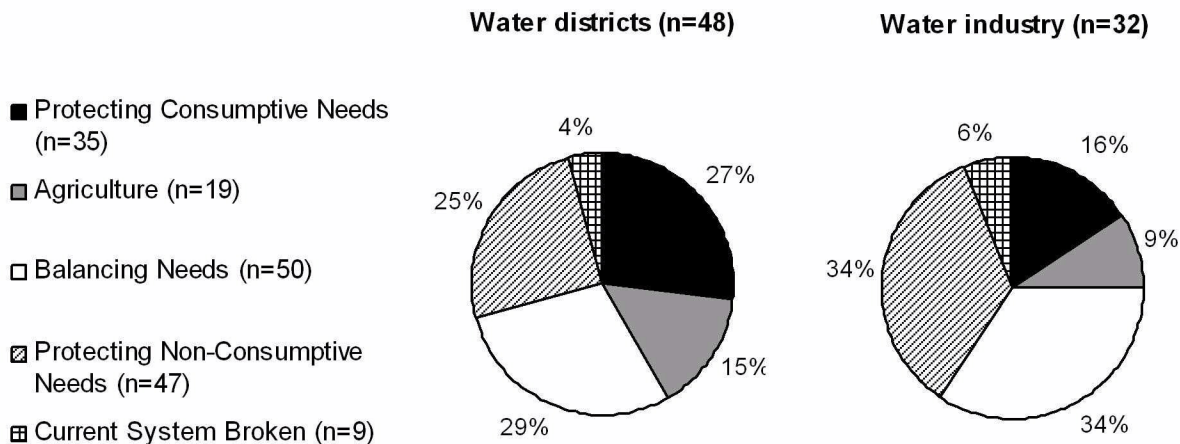


Key Finding 2.5: Respondents with environmental or recreational affiliations are more likely to have beliefs that support non-consumptive uses or beliefs that strongly disagree with the current system's structure.

Respondents with agricultural affiliations are significantly more likely to be members of the *Agricultural* cluster and are not represented at all in the *Current System Broken* cluster (Chart 2.5). They are less likely to be represented in the remaining three clusters. Of the respondents with environmental or recreational affiliations, only eight percent are in the *Protecting Consumptive Needs* and *Agriculture* clusters. They are significantly more likely to be in the *Protecting Non-Consumptive Needs* and *Current System Broken* clusters.

Other affiliations, including water districts and water industry, are not significantly over or under represented in any of the clusters (Chart 2.6).

Chart 2.6: Cluster Membership of Respondents Reporting Water District and Water Industry Affiliations



Overall, the value clusters are most closely related to three key sectors: agriculture, environmental or recreational, and elected or appointed officials. Respondents from government, special district, water industry, and other organizations are scattered across the five clusters.

Specific to the Colorado Basin Roundtable:

- Members of the Colorado Basin Roundtable are represented in all five clusters;
- Members with environmental and recreational affiliations are significantly more likely to be in the *Balancing Needs* and *Protecting Non-Consumptive Needs* clusters; and
- The elected members of the Colorado Basin Roundtable, including the chair, vice-chair, secretary, treasurer, and IBCC representatives are represented in four of the five clusters, with no representation in the *Current System Broken* cluster.

Conclusion

The five clusters of values are similar to what previous studies in the water community have found. Using a much more complex set of questions, the Colorado Institute of Public Policy report (2006) identified a group of respondents whose defining feature was dissatisfaction with the current system. The report also found distinctions between those focused on consumptive uses and non-consumptive uses. The similarity in the findings suggests the clusters are a legitimate and accurate way to describe the values of stakeholders in the water community. Concrete differences exist across water stakeholders, but just as importantly, clear agreement exists within groups of stakeholders, particularly their support for cooperation across basins and balancing water supplies and demands. The values clusters are an important part of the analyses to follow, as they help to understand many of the interactions and perceptions occurring around the HB1177 process and the Colorado Basin Roundtable.

Section 3: Success in the Roundtable and HB1177 Process⁷

As of the time of the survey, the HB1177 process was still a relatively new undertaking for Colorado. Many different activities had begun over the course of the first 18 months of the roundtable process, including developing a grants process and awarding grants, setting priorities within roundtables, preparing for the needs assessment, educating roundtable members, and dialogue both within and between tables. Based on input from roundtable chairs and the Department of Natural Resources, a set of activities underway in the Colorado Basin Roundtable and the HB1177 process were explored as part of the study. The extent to which respondents felt the roundtables were successful at each activity, as well as meeting their own goals for the process, helps us to understand how the process is currently being viewed. It should be noted that any activities that occurred after May of 2007 were not included in this study and respondents' responses reflect their perception of the status of the roundtables at the time of the study, from May to August 2007. Additionally, while the activities cover many of the required and desired outcomes from the roundtable, they do not cover the overarching goals of the roundtables, including developing "locally driven, collaborative solutions to water supply challenges" (37-75-104(1)(a), C.R.S.).

Perceptions of Colorado Basin Roundtable Success

Colorado Basin Roundtable members were asked whether their roundtable has been successful at meeting their personal water management goals, their goals for the Colorado Basin Roundtable, and their overall statewide policy goals. Overall, members reported that the roundtable has been less than moderately successful at meeting the various types of goals (Table 3.1, next page). However, some members noted in an open-ended question that the roundtable has not yet had time to accomplish many of its goals.

Key Finding 3.1: When the survey was taken, the roundtable process may have been too new for CO Basin Roundtable respondents to view it as highly successful. However, they do believe it has had some success with the grants process, educating its members, and fostering collaboration within the basin.

Colorado Basin Roundtable members were also asked whether their roundtable has been successful at accomplishing a variety of activities. For most questions, they responded that the roundtable has been only moderately successful at accomplishing the activities. Roundtable members reported that the roundtable has had the least success at developing a needs assessment plan, fostering collaboration across the basins, and outreach to stakeholders outside of the roundtables. On the other hand, the most success to date has been developing a grants process, educating its roundtable members, and fostering collaboration within the Colorado basin (Table 3.1, next page).

Some Colorado Basin roundtable members were more likely than others to report that the roundtable has been successful:

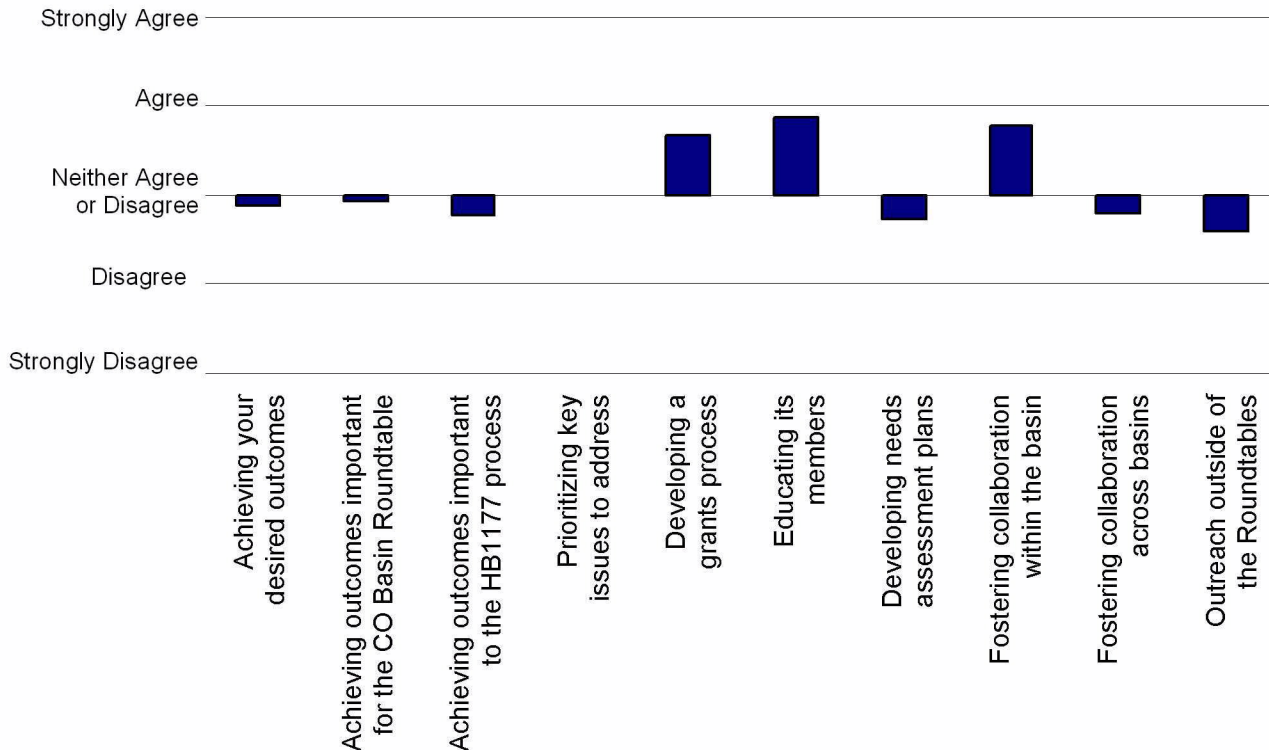
- Recreational and environmental affiliations were more likely to report that dialogue within the roundtable and outreach to stakeholders outside the roundtable have both been successful.

⁷ Details of the data in this section can be found in Appendix A, Tables A3.1 – A3.6.

- Elected or appointed officials were more likely to report that only dialogues between roundtables have been successful.
- Government affiliations were the most likely to feel the roundtable has been somewhat successful in accomplishing their goals; and
- Agriculture and special district affiliations were the least likely to believe that the roundtable has been successful in achieving their goals.⁸

Members with different affiliations may be more or less likely to see success as due to having different priorities for the roundtable or having been actively involved in different components of the roundtable process. For example, one interpretation of the environmental and recreational members who reported success with dialogue in the roundtable may be that they are feeling encouraged by roundtable conversations that include non-consumptive needs. Additionally, their positive view of outreach to other stakeholders may be due to the strong networks they already have in the environmental community. The Colorado Basin Roundtable members who hold formal elected roles on the roundtable were significantly more likely to believe the roundtable has been successful at fostering collaboration across basins. This may be because they are more aware of the outcomes of the process due to their level of involvement inside and outside the Colorado Basin Roundtable.

Table 3.1: Colorado Basin Roundtable Members' Average Perceptions of their Roundtable's Success at Meeting their Goals and Undertaking Specific Activities*



Members of some clusters were more likely to report that the Colorado Basin Roundtable has not been successful than members of other clusters, but the patterns of responses were not particularly strong or consistent. The only clear pattern was found among the members in the

⁸ Significance is at the .10 level for the roundtable success by affiliation findings.

Protecting Consumptive Needs cluster. Overall, they reported less success than the average roundtable member on most of the questions.

Perceptions of HB1177 Process Success

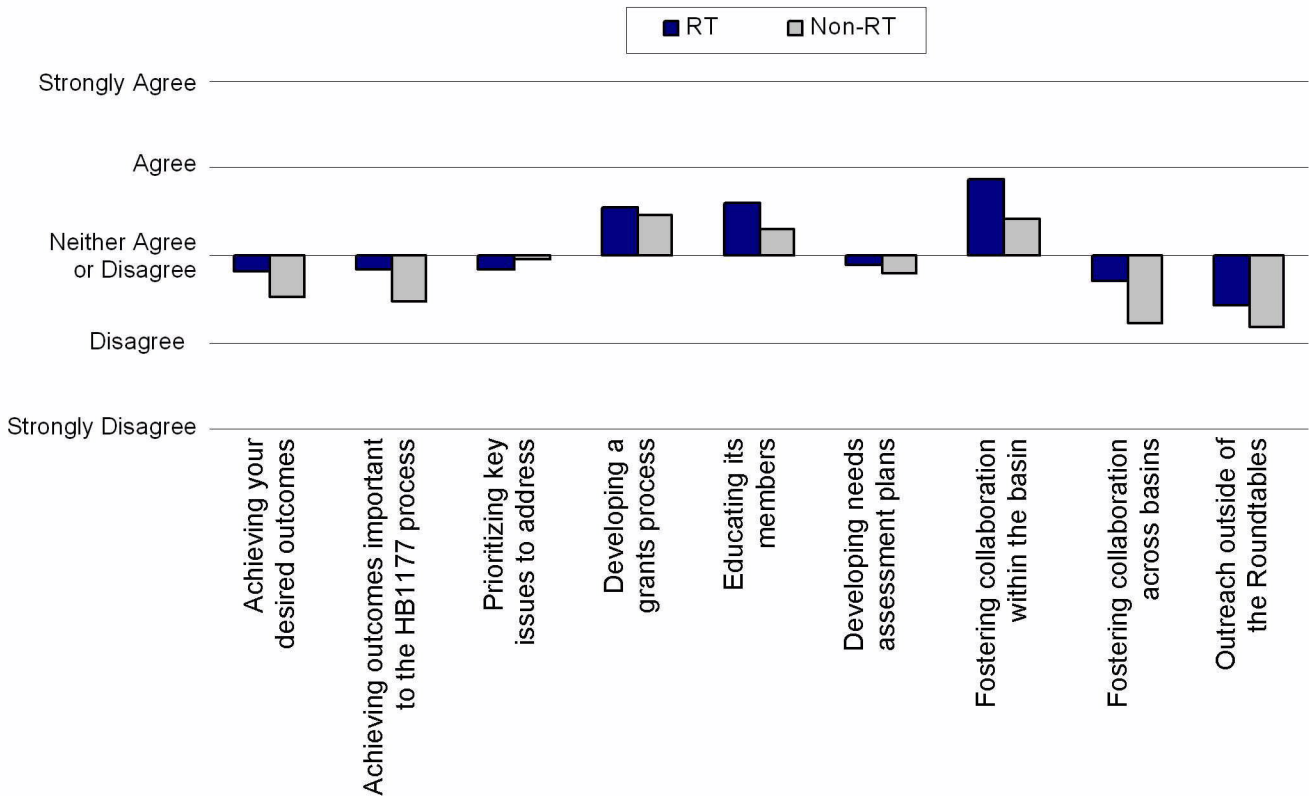
The survey respondents who were identified by Colorado Basin Roundtable members, but are not part of that roundtable, were asked the same questions, but more broadly focused on the overall HB1177 process. Similar to the Colorado Basin Roundtable member's report on their own roundtable's success, most respondents reported only moderate or less success for the overall HB1177 process. Respondents who were participating in any manner on a roundtable other than the Colorado Basin or the IBCC were more positive about roundtable successes than non-roundtable members. However, they were only significantly more likely to report that the

Key Finding 3.2:
 Respondents who are participating in the roundtable process were more likely to report it has been successful at fostering dialogue and collaboration within basins and across basins.

HB1177 process has been successful at fostering dialogue and collaboration within basins and across basins. This suggests that respondents in the roundtable process have seen an increase in dialogue and collaboration that is not yet evident to those outside the process.

The three activities that were seen by everyone as the most successful to date are developing a grants process, educating the roundtable members, and fostering collaboration within the Colorado basin.

Table 3.3: Average Perceptions of HB1177 Process Success



There are different perceptions of success for the HB1177 process among some groups of respondents. For example, the respondents who own individual water rights or who are affiliated with a special district were significantly less likely to believe that the process has been successful at prioritizing key water policy and management issues to address. Respondents with environmental or recreational affiliations, along with respondents whose affiliations fell into the "other" category, were significantly less likely to report that the HB1177 process has been successful across a variety of measures, including educating the roundtable members.

Key Finding 3.3:
Respondents in the *Balancing Needs* cluster were the most likely to agree the HB1177 process has been successful.

More than affiliation, the greatest difference in perceptions of success was found between individuals who fell into different clusters of beliefs. The *Balancing Needs* respondents were the most likely to agree that the HB1177 process has been successful at achieving their individual or organizational goals, their goals for the process, and completing most of the activities. In contrast, the *Protecting Consumptive Needs* and *Current System Broken* clusters were the least likely to believe the process is achieving their individual or organizational goals and their goals for the process. Interestingly, these are the two groups who are the least alike, with the former cluster being very supportive of the market approach to water management and the latter cluster being strongly against the market approach. This may suggest that the roundtable process is not approaching water policy and management from either a market or non-market focus, but some variant in between.

Key Finding 3.4:
Respondents from the *Protecting Consumptive Needs* and *Current System Broken* cluster were the least likely to believe the process is achieving their goals.

Conclusion

The Colorado Basin Roundtable respondents and other water stakeholders' responses to the survey suggest that the roundtable process has had some successes, but also has much work ahead. The survey was administered in the summer of 2007, only 18 months into the roundtable process. It is not surprising that many of the activities asked about are not yet seen as successful. However, the findings do suggest that water stakeholders' perceptions of success vary depending on their role and interests in the water community. With respondents who have different values perceiving success quite differently, one opportunity for the process may be to explore how current needs within the roundtable and HB1177 activities can be addressed satisfactorily for the broad range of interests.

Section 4: Roles and Relationships within the Water Community⁹

As already reported, we know a lot about the demographics of each respondent, such as their gender, age, roundtable membership, etc. We also learned another type of information about each respondent: how other respondents who took this survey perceive them. We asked respondents to tell us who in the water community they:

- Consider the most influential statewide;
- Exchange information with;
- Receive important information from;
- Believe most share their goals;
- Trust the most to keep their interests in mind, regardless of whether they share their goals; and
- Can depend on to follow through on a commitment.

Using the responses to these questions, we can explore how respondents view each other, as well as who else in the water community is an important contact for them. There are many ways to think about how the respondents view each other and other water stakeholders in the community. Understanding how water stakeholders' view each other will help to:

- Identify groups of stakeholders with positive views of each other, likely to be coordinating and partnering on water policy and management efforts together;
- Identifying types of stakeholders who bridge between groups, who may help bring different interests together; and
- Identify types of stakeholders who are isolated from many others, suggesting where more information and coordination is needed.

The discussion to follow examines the perceptions of survey respondents using the following groupings:

WITHIN THE CO ROUNDTABLE: Members of the Colorado Basin Roundtable were the original survey respondents and they were asked to report their perceptions of all other members of the roundtable.

LOOKING OUTSIDE THE CO ROUNDTABLE: Members of the Colorado Basin Roundtable were asked to identify water stakeholders outside their roundtable for each question and report their perceptions of those stakeholders. Everyone identified was invited to take the survey, and 68% of them responded.

OUTSIDE THE CO ROUNDTABLE: The water stakeholders outside the Colorado Basin Roundtable who agreed to participate in the survey were asked to identify other water stakeholders for each question and report their perceptions of these stakeholders. Many of these respondents identified each other.

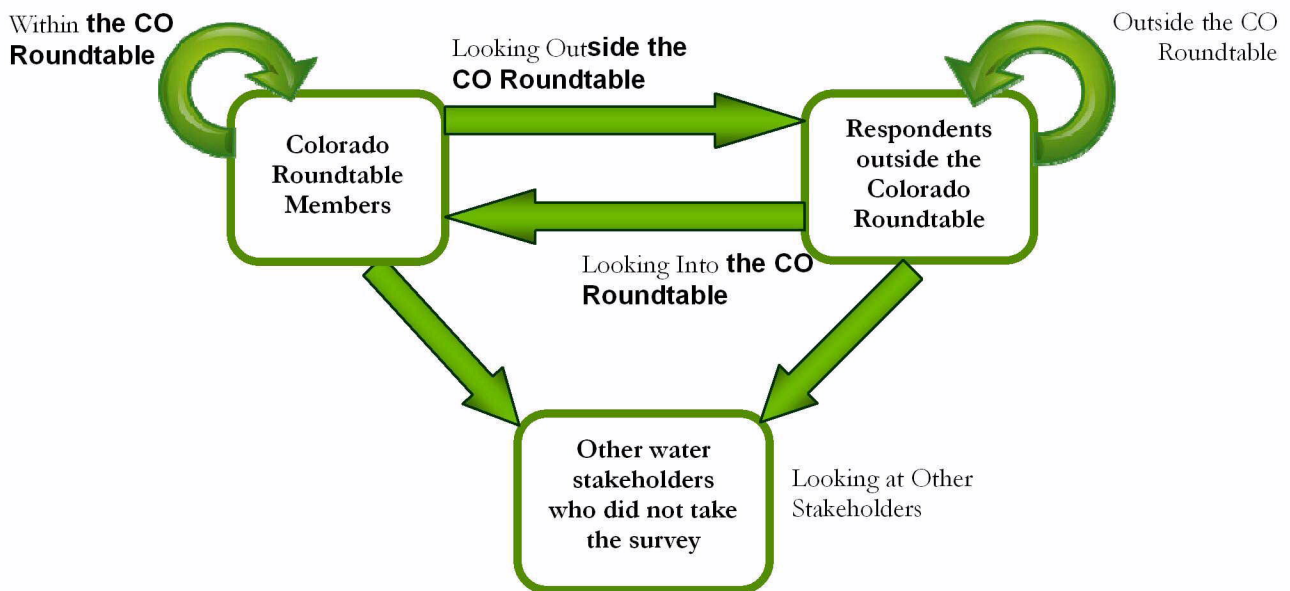
LOOKING INTO THE CO ROUNDTABLE: The water stakeholders outside the Colorado Basin Roundtable who agreed to participate in the survey sometimes identified members of the

⁹ Details of the data in this section can be found in Appendix A, Tables A4.1 – A4.6.

Colorado Basin Roundtable when they were asked to identify and report on their perceptions of water stakeholders.

LOOKING AT OTHER STAKEHOLDERS: Some of the water stakeholders who the Colorado Basin Roundtable members identified and reported their perceptions of chose not to take the survey. They are the “other stakeholders.” Also included in this group are those stakeholders identified by the survey respondents from outside the Colorado Basin Roundtable who are not among the total list of survey respondents. These are stakeholders for whom we only know how others perceive them, not what their perceptions are. Due to limited information about these stakeholders, they are largely not included in the analysis, except for in Section 5.

Figure 4.1: Information Available from the Network Survey Questions asked of Colorado Basin Roundtable Respondents and Respondents outside the Roundtable.



Perceptions of leadership WITHIN THE CO ROUNDTABLE and LOOKING INTO THE CO ROUNDTABLE

The individuals who hold elected positions on the Colorado Basin Roundtable, chair, vice-chair, secretary, treasurer, and IBCC representatives, are perceived WITHIN THE CO ROUNDTABLE as having significantly more influence than other members of the roundtable. The Colorado Basin Roundtable members perceive their elected officials to be people they trust, believe are dependable, believe have important information, are likely to share their goals, and are people they exchange information with frequently.

Key Finding 4.1: The Colorado Basin Roundtable’s elected officers are recognized by other roundtable members and water stakeholders at large as key members of the water policy and management community.

Other stakeholders who are LOOKING INTO THE CO ROUNDTABLE have similar perceptions, and are more likely to identify and perceive the elected officials of the roundtable as influential, trusted, dependable, sharing their goals, and having important information, as well as frequently exchanging that information, as compared to other members of the Colorado Basin Roundtable. As the Colorado Basin Roundtable undertakes cross-basin

dialogues, this finding suggest the leaders that of the roundtable during the time the survey was conducted, are, in fact, the right people to represent the roundtable throughout the state.

Within Clusters: Beliefs and Perceptions WITHIN THE CO ROUNDTABLE

Earlier in the report, the five clusters of survey respondents were created based on their responses to values questions. Among Colorado Basin Roundtable members, all five clusters are represented. The clusters were created based on the values respondents prioritized. The analysis to follow explores whether respondents within the clusters are interacting with and trusting of others in their cluster, suggesting some awareness of their shared values. It also explores the extent to which the respondents in each cluster are interacting with and trusting those outside their cluster, suggesting interactions that bridge between stakeholders with different values.

WITHIN THE CO ROUNDTABLE, the members of the *Protecting Non-Consumptive Needs* cluster have different views of each other as compared to the remaining roundtable members. As compared to how they perceive members of all other clusters, they are much more likely to perceive each other as trustworthy and dependable, as providing important information and

Key Finding 4.2: Members of the *Protecting Non-Consumptive Needs* cluster form a cohesive group based on trust and shared goals as compared to their perceptions of other members of the Colorado Basin Roundtable.

actively sharing that information with each other. The members of this cluster are also two and a half times more likely to report that they share each others' goals than that they share goals with those outside their cluster. This is a contrast to all other clusters, whose participants do not perceive very many others in their cluster or in the roundtable to share their goals. They also perceive each other to be more influential in broader water policy and management issues as well. These strong, positive perceptions suggest that the *Protecting Non-Consumptive*

Needs cluster is cohesive not only in terms of goals, but also in frequency of activity together and trust in one another. However, beyond their cohesiveness as a group, the members of this cluster are also distinctive in their high level of overall trust and perception of influence in the roundtable process. It may be that the *Protecting Non-Consumptive Needs* cluster respondents are finding, in the new roundtable process, an opportunity for those with their interests to gain new influence by participating. If this is true, they have a significant incentive to fully engage and trust in the process.

WITHIN THE CO ROUNDTABLE, the members of the *Protecting Consumptive Needs* cluster are more likely to perceive each other positively than others outside their cluster. Though they do have more trust in each other than those with differing beliefs, members of this cluster are still overall among the least likely to perceive anyone at the table as trustworthy or dependable .

Key Finding 4.3: Members of the *Protecting Consumptive Needs* cluster do not perceive members of the Colorado Basin Roundtable to have much influence in water policy and management statewide.

Additionally, they do not perceive many others, within or outside their cluster, to share their goals. Perhaps most striking, they are the least likely to identify others WITHIN THE CO ROUNDTABLE or members of their own cluster as having influence in water policy and management issues statewide. Compared to the high influence that the *Protecting Non-Consumptive Needs* cluster sees within the table, the *Protecting Consumptive Needs* cluster may see those outside the Colorado Basin Roundtable process as being the true decision-makers.

Key Finding 4.4: Although members of the *Protecting Consumptive Needs* and *Agriculture* clusters are somewhat more connected to those within their cluster, they are not as cohesive of groups as the *Protecting Non-Consumptive Needs* cluster.

In the *Agriculture* cluster, WITHIN THE CO ROUNDTABLE, this is less true. Members of the *Agriculture* cluster are more likely to report exchanging information and valuing the information exchanged from members of other clusters than members of their own cluster, but overall, they are not sharing information with the frequency seen in other clusters. Despite the infrequency of information exchange, members of the *Agriculture* cluster have high levels of trust not only with each other, but with most other members of the Colorado Basin Roundtable, quite the opposite of the *Protecting Consumptive Needs* cluster. This suggests that

in the case of the Colorado Basin Roundtable, trust may be forming for reasons other than frequency of interactions or information sharing, at least for members of this cluster. However, similar to the members of the *Protecting Consumptive Needs* cluster, members of the *Agriculture* cluster do not perceive many others, within or outside their cluster, to share their goals.

Key Finding 4.5: Although members of the *Agriculture* cluster perceive others in the roundtable to be trustworthy, they are not engaged in the exchange of information with the frequency of many other members of the roundtable.

The *Balancing Needs* respondents tend to rank the roundtable members within their cluster similarly to remaining members of the roundtable. As noted in Section Two on values, this cluster is focused on cooperation among all interests as a means for ensuring their priorities are met. The members of this cluster report similar perceptions of trust, dependability, frequency and importance of information shared, and influence for those within and outside their cluster. They are also the cluster with the highest perception of shared goals with those outside their cluster. All of these results suggest that they have the *potential to serve as bridges between different interests* in the Colorado Basin Roundtable, as their perceptions of the roundtable members outside their cluster are so similar to the perceptions within their cluster.

Key Finding 4.6: The respondents in the *Balancing Needs* cluster perceive many others in the Colorado Basin Roundtable to share their goals.

The *Current System Broken* cluster has too few members on the roundtable to analyze in similar depth. However, members of the cluster have very low perceptions of each other and the other roundtable members in terms of influence, trust, dependability information exchange, information importance, and shared goals. The two clusters whose members have the least positive perceptions across all the measures are the *Current System Broken* and *Protecting Consumptive Needs* clusters, which are the two clusters that also have the strongest held conflicting beliefs. It may be that the process has not fully engaged these individuals or their belief structures, thereby making it more difficult to trust and exchange information with others at the table.

Key Finding 4.7: The members of the *Current System Broken* and *Protecting Consumptive Needs* clusters may be the most disconnected from the roundtable process, with less trust and engaging in less interaction within and across clusters.

Perceptions and Affiliations OUTSIDE THE CO ROUNDTABLE and WITHIN THE CO ROUNDTABLE

Key Finding 4.8: Holding an elected position in the state or elected office on a roundtable is, not surprisingly, related to being perceived to have influence in water policy and management issues.

When roundtable and external stakeholders' affiliations were looked at in combination with the six measures of influence, trust, dependability, information exchange, information importance, and perception of shared goals, three clear patterns emerged. WITHIN THE CO ROUNDTABLE, the members' affiliations (e.g. water industry, government, etc.) are not related to whether they were identified as influential. OUTSIDE THE CO ROUNDTABLE

those who are perceived as the most influential in water policy and management issues are the individuals holding elected or appointed government positions. Although holding elected and appointed government positions in the broader water community was not related to influence within the Colorado Basin Roundtable, serving as an elected officer on the roundtable itself was related to influence for roundtable members. The results make sense, with elected officials in the state and elected officers within a roundtable often holding greater decision-making power than others do in the water policy and management community or on the roundtable.

Key Finding 4.9: Among many stakeholders who responded to the survey, the individuals who work for or with special districts are seen as supportive and helpful partners.

OUTSIDE THE CO ROUNDTABLE stakeholders who are associated with special districts, including water conservancy and conservation districts, irrigation districts, rural water districts, and other special districts are widely trusted, believed to be dependable, and frequently exchanging important information with other water stakeholders. They appear to be very actively engaged partners on water policy and management issues for many respondents.

Key Finding 4.10: The survey respondents are highly connected to the roundtable members with environmental or recreational affiliations, suggesting a more engaged network may exist within the environmental or recreational community than within communities associated with agricultural, government, or other affiliations.

Water stakeholders LOOKING INTO THE CO ROUNDTABLE were much more likely to identify roundtable members with environmental and recreational affiliations as the ones they trust, receive important information from, can depend on to follow through on a commitment, and believe share their goals. This finding is likely connected to the earlier findings related to the cohesiveness of the *Protecting Non-Consumptive Needs* cluster. Potentially, those with shared beliefs related to non-consumptive needs are communicating more frequently not only within the Colorado Basin Roundtable, but also outside it. Consequently, they may have reported more contacts for each perception question, their contacts may have been more likely to respond to the survey, or their contacts may

have been more likely to identify the roundtable member who originally identified them. Any of these scenarios would result in a disproportionate number of respondents with environmental or recreational interests who are connected closely to those with similar beliefs on the Colorado Basin Roundtable.

OUTSIDE THE CO ROUNDTABLE, respondents also identified stakeholders representing government organizations as individuals who share their goals in water policy and management. This may suggest that government employees are successfully balancing different interests in the water community and remaining relatively neutral in how others perceive them.

Key Finding 4.11:
Stakeholders representing government organizations are generally perceived as sharing their beliefs by many other stakeholders.

OUTSIDE THE CO ROUNDTABLE, the individuals least likely to be identified as trusted and as having shared goals are those who affiliated with the “other” category in the survey. These individuals may be more disconnected from the water community due to not having an affiliation that is as central to the water policy and management efforts in Colorado compared to other affiliations.

Information Exchange OUTSIDE THE CO ROUNDTABLE

Isolating one question, frequency of information exchange, and looking only at OUTSIDE THE CO ROUNDTABLE, many interesting things can be found. First, the person whose information exchange activities create the greatest potential to bridge between the many people connected to the Colorado Basin Roundtable is within the Department of Natural Resources (DNR), suggesting that the Department's leadership in the roundtable process has been embraced among the water stakeholders who responded to the survey. Second, when looking at the 26 individuals out of the 453 people named in the research¹⁰ who are the most central players in terms of information exchange, they are a very distinctive group. Sixteen out of the 26 completed the full survey.

Table 4.1: Response Rates by Affiliation among the 26 Most Central Stakeholders*

Affiliations	Respondents	Non-Respondents	Total	% Responded
Elected or Appointed	0	5	5	0%
Government	1	1	2	50%
Agriculture	1	0	1	100%
Water Industry	2	1	3	67%
Environment or Recreation	7	1	8	88%
Special District	7	3	10	70%

* Total respondents equal more than 26 due to some respondents reporting multiple affiliations.

Table 4.1 above shows the affiliations of all of the top 26 individuals in the information exchange network, with some individuals reporting more than one affiliation. Over half of the 26 individuals are affiliated with environmental or recreational interests or special districts. The response rate of the environmental group was very high, and higher than the response rate of

¹⁰ The 46 respondents from the Colorado Basin Roundtable identified 191 water stakeholders. The 114 water stakeholders outside of the Colorado Basin Roundtable who *completed the network questions* in the survey identified additional stakeholders, also outside the Colorado Basin Roundtable. The 453 people include the 191 stakeholders identified by the roundtable members plus the additional stakeholders identified by the 114 external respondents. Analysis of all 453 people external to the Colorado Roundtable is beyond the scope of this report.

most other affiliations. As explored earlier, the external stakeholders in the study are more likely to identify members of the Colorado Basin Roundtable who have environmental and recreational affiliations as their key contacts. The results support the interpretation that the environmental stakeholders identified by roundtable members were more likely to respond to the survey. Finally, none of the elected or appointed officials who are highly ranked in the information-sharing network, including three members of the Colorado Water Conservation Board, completed the survey. This is consistent with results across all elected and appointed officials, with very few completing the survey.

Key Finding 4.12: The individuals who most frequently exchange information with survey respondents are perceived as trustworthy, dependable, and influential by many respondents, and are overwhelmingly perceived as having shared goals by respondents to the survey.

Among those 16 who did respond to the survey, more than half live on the Front Range. The 16 include representatives of all nine water roundtables and the IBCC. They represent only three of the five values clusters. Four are in the *Protecting Consumptive Needs* cluster, seven are in the *Balancing Needs* cluster, and five are in the *Protecting Non-Consumptive Needs* cluster. None of the 16 respondents are found in either the *Agriculture* or *Broken System* clusters.

The 16 individuals who did respond are not only the ones who others most frequently exchange information with, they are also significantly more likely to be perceived positively

on the other network questions. This suggests that there is a relationship between the frequency of contact with key water stakeholders and perceptions of trust, dependability, influence, importance of information shared, and shared goals. It is on the last of these measures, perceptions of shared goals, that the greatest difference exists between the 16 most central stakeholders and all of the other stakeholders outside the Colorado Basin Roundtable. These 16 who are the respondents most frequently in communication with the rest of the respondents are overwhelmingly perceived by many other respondents to share their goals.

Conclusion

Values held by water stakeholders who are participating in or connected to the Colorado Basin Roundtable appear to have a great deal of alignment with how the stakeholders perceive others in the community. Stakeholders on the Colorado Basin Roundtable who prioritize non-consumptive needs have a tight network of active information sharing and trust. Stakeholders on the Colorado Basin Roundtable with agricultural priorities are generally trusting of others on the roundtable, but less tightly connected as a group than the non-consumptive cluster. Those who prioritize other consumptive needs are the least likely to be tightly connected to anyone, those who share their values or others at the roundtable. These differences may help to understand why and how different groups are getting – or not getting – their goals met by the roundtable or other water policy processes. One means for bridging these different groups may be the key individuals who are widely communicated with, trusted, and believed to share similar goals in water policy and management issues.

Section 5: Overlapping Roundtable Membership¹¹

The Roundtable process is intended not only to foster collaboration within a basin, but also across basins. The formal structure of the roundtables, with open participation from both appointed voting and non-voting members, enables this type of cross-basin collaboration. The question is whether or not the networks exist to allow the collaboration to occur. Two types of data were used to explore this question, with an emphasis on whether the Colorado Basin Roundtable has the networks needed to connect effectively with other basins and the IBCC.

Overlapping Involvement with the Colorado Basin Roundtable

Survey respondents were asked to self-report the roundtables they are involved with and their role on other roundtables. Among the survey respondents, there is overlap between participants in the Colorado Basin Roundtable and all of the other roundtables, including the IBCC. The voting members of the Colorado Basin Roundtable have limited involvement with other roundtables, with the exception of the IBCC.¹² The non-voting members of the Colorado Basin Roundtable are more involved with other roundtables and are serving as voting members on the Arkansas, Metro, and South Platte Roundtables.

The liaisons to the Colorado Basin Roundtable reported the most frequent involvement per person in other roundtables, with every other roundtable having between two and four of the same liaisons at their meetings as the Colorado Basin Roundtable. “Liaisons” refer to the individuals formally representing a state, federal, or university organization, but not officially members of the roundtable. Although the small group of nine survey respondents who report involvement with the Colorado Basin Roundtable as liaisons are actively involved in many other tables, they are the least likely of any roundtable participants to be involved, in any way, with the IBCC.

Key Finding 5.1: The Colorado Basin Roundtable has the greatest overlap in participants and observers with the Arkansas and Gunnison Basin Roundtable.

Many people reported observing roundtable meetings throughout the state and the observers overlap between roundtables. At least six individuals overlap between the observers of the Colorado Basin Roundtable and any other roundtable. The Colorado Basin Roundtable has the greatest overlapping formal and informal involvement with the Arkansas and Gunnison Basin Roundtables, including voting members, non-voting members, liaisons and observers.

Details of these relationships are below.

Voting Members: Of the 31 survey respondents who reported a voting role on the Colorado Basin Roundtable, overlap with other roundtables includes:

- One respondent serving as a non-voting member of the Arkansas Basin Roundtable;
- One respondent observing the Gunnison Roundtable; and

¹¹ Details of the data in this section can be found in Appendix A, Tables A5.1 – A5.3.

¹² Per the HB1177 legislation, the voting members of the roundtables must reside within the water basin. For this reason, it makes sense that the voting members of one basin roundtable are not also voting members of another basin roundtable. However, this does not preclude the voting members of one basin from being observers or non-voting members on another roundtable, an infrequent occurrence in this data.

- Two respondents serving as voting members of the IBCC.

Non-Voting Members: Among the seven survey respondents who reported a non-voting role on the Colorado Basin Roundtable, far more overlap exists with other roundtables. The overlap includes:

- One respondent serving as a voting member, one as an observer, and one as a liaison of the Arkansas Basin Roundtable;
- One respondent serving as a voting member of the Metro Roundtable;
- One respondent serving as a voting member and one serving as a non-voting member of the South Platte Basin Roundtable; and
- Two respondents serving as voting members of the IBCC.

Liaisons: Among the nine survey respondents who reported a liaison role on the Colorado Basin Roundtable, overlap with other basin roundtables includes:

- One respondent observing the IBCC; and
- Between two and four respondents serving as liaisons or other non-voting roles on each of the other roundtables, with the greatest overlap with the Gunnison Basin Roundtable.

Among the 29 survey respondents who reported that they have observed the Colorado Basin Roundtable in the last year, overlap with other basin roundtables includes:

- Eight respondents observing the Arkansas Basin Roundtable meetings;
- Twelve respondents observing, one voting member, and one reporting some other role with the Gunnison Basin Roundtable;
- Six respondents observing and one voting member of the North Platte Basin Roundtable;
- Seven respondents observing the Metro Roundtable meetings;
- Ten respondents observing the Dolores/San Juan/San Miguel Roundtable meetings;
- Eleven respondents observing and one voting member of the Yampa/White/Green Roundtable;
- Eight respondents observing and one liaison to the South Platte Roundtable;
- Seven respondents observing the Rio Grande Roundtable meetings; and
- Six respondents observing, four voting members, and one liaison to the IBCC.

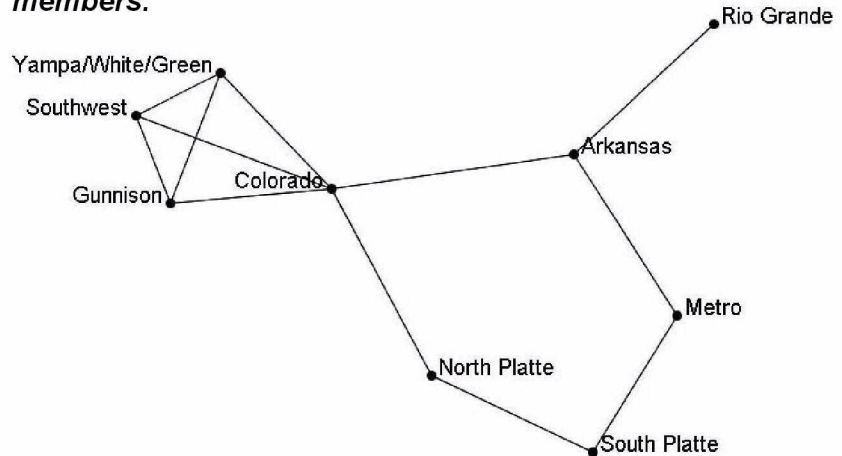
Overlapping Membership Between All Roundtables, the IBCC, the CWCB

Another way to look at overlapping membership is to explore the overlaps in formal roundtable involvement, including voting members, non-voting members, and liaisons. Using a membership list for all roundtables, the IBCC, and the Colorado Water Conservation Board (CWCB) that was provided by the Department of Natural Resources (DNR), overlap in documented members of the roundtables can be explored. Please note that, similar to the above analysis, this does not say anything about informal relationships between individuals, but

only their overlapping membership. Unlike the previous analyses, this data is not the self-reported involvement of stakeholders, but rather the documented involvement by the DNR.

The Colorado Basin Roundtable is the most central of the roundtables in terms of overlapping membership with other roundtables. The South Platte, Metro, North Platte, and Rio Grande have the least overlapping membership with other roundtables. The IBCC and CWCB, due to their smaller size and more restricted membership, have much less overlap with the roundtables than the roundtables do with each other. The diagram

Figure 5.1: Overlapping Roundtable Membership: Lines connect those roundtables with at least five shared members.



above (Figure 5.1) shows the relationships between roundtables in terms of overlapping members, with each line representing **at least five members who are involved in both roundtables**. Rather than being a geographic representation of the roundtables, the figure shows the interaction of the roundtables through overlapping membership. However, it is clear there is a relationship between proximity and interaction, as the four most densely connected roundtables are geographically adjacent to each other as well (Yampa/White/Green, Southwest, Gunnison, and Colorado). The Colorado Basin Roundtable is also the most central roundtable geographically in the state, and correspondingly, it is the most central roundtable in terms of overlapping membership.

Many of the individuals who are listed as members of multiple roundtables are liaisons from state, federal, and university organizations. It is worth noting that although these and other

Key Finding 5.2: In terms of overlapping membership between roundtables, the Colorado Basin Roundtable is the most central of the nine roundtables. This is partially due to the Western Slope roundtables in general having a great deal of overlap among participants, including both voting, non-voting, liaison, and other participants.

individuals may be listed as members of multiple roundtables, they may or may not be attending all of those roundtables. In fact, among the Colorado Basin Roundtable members, attendance by liaisons varies greatly, with some liaisons that were on the membership list in 2006 not attending a single meeting that year, while other liaisons attended almost every meeting during that year. The inconsistent attendance of roundtable members emphasizes the need for multiple formal connections between roundtables. As Figure 5.1 shows, the Colorado Basin Roundtable has less than five overlapping members with the Metro, South Platte, and Rio Grande roundtables, creating a potential communication breakdown if the few overlapping members are not consistently attending both the Colorado Basin Roundtable and their other roundtable.

The Role of Liaisons

Both the self-report data in the survey and the roundtable membership data from the DNR show liaisons from state, federal, and university organizations as highly likely to be involved in many different roundtables. This extensive membership in the roundtable process may lead to the

Key Finding 5.3: DNR's list of roundtable participants suggests that "liaisons" have the most extensive roundtable involvement as compared to most participants in the process. However, respondents who report that they are "liaisons" to any roundtable are not perceived as more influential, trusted, or otherwise central to the roundtable process by survey respondents.

liaisons playing a unique role. To better understand this, a few different analyses were conducted. First, all of the survey respondents who identified themselves as liaisons were compared to the remaining survey respondents in terms of their influence, trust, information exchange and other key relationships. Only 17 liaisons participated in the survey, nine of whom are liaisons to the Colorado Basin Roundtable as well as other roundtables. Among the liaisons on the Colorado Basin Roundtable, their average influence is lower than other members of the table, but not significantly. Among liaisons not on the Colorado Basin Roundtable, their average influence is significantly higher than other stakeholders. This is a consequence of two of the eight liaisons in this group having exceptionally high influence. On all other measures of how stakeholders perceive each other, liaisons have consistent, but not significant, lower averages. These measures include whether the liaisons are trusted to keep

others interests in mind, follow through on a commitment, provide valuable information, frequently exchange information, and share others goals for water policy and management.

Overall, despite their high level of involvement in roundtables, liaisons are not more influential or otherwise central among the respondents to the survey. The analysis of liaisons suggests that their unique involvement level does not also put them in a unique position to serve as bridges between roundtables. This, of course, is an analysis of liaisons responding to the survey in general and not of individual liaisons, who may have the potential to serve a bridging role.

Conclusion

Non-voting members of the Colorado Basin Roundtable are more likely to be involved with other roundtables than the voting members of the roundtable. Liaisons from the roundtable are the most likely, of any respondents, to be participating in some manner on multiple other roundtables. As the HB1177 is intended to lead to interbasin compacts, the overlapping involvement is a good sign of opportunities for dialogue. However, liaisons from state, federal, and university organizations are on multiple roundtables more frequently than most roundtable members, yet appear to have a relatively peripheral role in the water community. They are not frequently identified as individuals who exchange information, share valuable information, are trusted to keep others interests in mind, share beliefs, or are likely to follow through on a commitment. Their central role in terms of membership alone is not translating to serving as bridges between the roundtables. This may be a structural issue if the roundtable process is not encouraging full participation of liaisons and other non-voting members, in which case it can be addressed through increasing the role of these members. Alternatively, a structural change could be made to encourage additional overlapping membership among other types of roundtable appointees.

Concluding Remarks

If the HB1177 process seeks to find collaborative solutions for the equitable distribution of water in Colorado, the process must be successful in engaging the wide array of interests. To understand whether this can occur in at least one roundtable, a first step is to look at the communication, trust, and shared beliefs between stakeholders connected to and participating in the Colorado Basin Roundtable.

The findings explored in the previous sections suggest that trust does exist between stakeholders, both between those with similar affiliations and those with different affiliations. Although the Roundtable members and the survey respondents from outside the table have differing beliefs, their shared support of the roundtable process speaks to the potential for its success. However, disconnects and distrust exist between stakeholders with different interests must be addressed for successful collaboration to occur.

One means of addressing them may be through people who have central roles in the Colorado Basin Roundtable and in the water community more broadly. In the responses to the survey, the elected officials in the state and the elected officers on the Colorado Basin Roundtable are widely trusted as people who will keep others interests in mind. This trust is an opportunity to bridge differences. Another opportunity is the prevalence of respondents who believe that balancing water needs and focusing on collaboration between basins is the way to reach their individual water goals. Regardless of whether these respondents prioritize consumptive or non-consumptive needs, agricultural or municipal uses, their belief in the need for dialogue and balance creates the potential for them to bridge other interests and build trust and collaboration.

Perhaps one of the more encouraging findings is that despite the process still being quite new, many respondents see small successes already happening, including with the grants process, educating its members, and fostering collaboration within the basin. Not all respondents are seeing the same successes though, which may suggest that for some, their interests are still not being met. Additionally, respondents involved in the roundtables see more success in the process than those not directly involved, which may suggest that the activities and accomplishments of the roundtables are not well known to those outside the process.

Based on the findings of the survey, collaborative opportunities may be created by:

- Ensuring that representatives of all the interests are attending the meetings, sharing information, and having opportunities to interact and build trust;
- Increasing the dialogue between the basins by expanding interactions through more formal, overlapping membership at the roundtable by roundtable level;
- Defining “success” for the roundtables in a way that includes meeting the needs of a variety of interests, helping create a reason for engagement by all participants;
- Ensuring that stakeholders outside the roundtable process are learning about the successes in the roundtable process;
- Encouraging those with a desire to balance needs and build cooperation to take leadership roles not only within their roundtable, but across roundtables; and
- Identifying and learning from other roundtables that have created more buy-in from some of their stakeholders who prioritize consumptive needs.

Ultimately, the message to take away is that a tremendous opportunity exists within the roundtable process, and within the Colorado Basin Roundtable in particular, to connect the different interests who may be prioritizing different goals, to enable them to participate in a shared process, and to allow them to build connections with one another.

Appendix A: Methodological Notes

Additional Detail on the Survey Design and Implementation

Many survey questions were drawn from previous studies in other states on similar issues and previous studies in Colorado on the roundtable process (SWASI, 2005; Colorado Institute of Public Policy, 2006). Other survey questions were developed in partnership with the Public Education, Participation, and Outreach Work Group of the Interbasin Compact Committee (IBCC) and other key stakeholders in the roundtable process. The survey was piloted with 11 water stakeholders, representing participants and non-participants on roundtables and the IBCC. The questions were substantially modified after discussion with the pilot participants. The final survey design reflects the input of the Public Education, Participation, and Outreach Work Group and pilot participants, questions drawn from prior surveys, and the knowledge of the research team.

Limitations of the Survey Design

The survey captures a single point in time during the HB1177 process. The process is still relatively new. Each roundtable has a great deal of latitude in designing its structure, number of members, by-laws, etc. This analysis reveals the state of affairs at one point in time, starting from one roundtable, the Colorado Basin Roundtable. The results cannot be inferred to all of the roundtables.

Similarly, the results cannot be inferred to water stakeholders throughout Colorado. The design of the survey, using a network analysis approach, does not rely on random sampling of stakeholders. Rather, each member of the Colorado Basin Roundtable who took the survey had the opportunity to identify key individuals in water policy and management issues in Colorado who they exchange information with or to whom they are otherwise connected. The survey invitation only went to those individuals named by members of the Colorado Basin Roundtable. They are not representative of all stakeholders. However, the results are able to paint a picture of a group of stakeholders who are interconnected in many ways and heavily involved in water policy and management issues in Colorado.

Limitations of the Survey Recruitment Methods

The recruitment methods were very thorough, however in four cases, contact information was not available despite using multiple means to track down the water stakeholders identified by roundtable members. Individuals external to the survey who were frequently identified as influential in the water community were the least likely to agree to participate in the survey. Recruitment methods that relied upon the research team, rather than a well-respected water stakeholder, to invite these leading members of the water community may be partially responsible for the lower response rate among this group.

Additional Detail on the Survey Analysis and Findings

In the following pages, a table is displayed for each finding that was not fully detailed in the report. The tables includes a reference to the chart/page number in the original report, the number of respondents in the analysis, the data, significance levels, and any other information needed to fully understand the findings. The tables indicate statistical significance as follows:

one star (*) indicates that the finding is significant at the .10 level; two stars (**) indicate that the finding is significant at the .05 level. The number of respondents differs among tables as not everyone answered every question.

Section 1: Demographics of Survey Respondents

Table A1.1: Basic Demographics of Men, Women, Colorado Basin Roundtable Members, and All Survey Participants.

	CO Round-table (n = 46)	All (n = 158)		CO Round-table (n = 46)	All (n = 158)
Years living in Colorado			Months actively involved in roundtables		
Less than 5 years	0.0 %	3.2 %	Not involved in any roundtables	0.0 %	34.2 %
5-10 years	2.2 %	3.2 %	0-3 months	4.3 %	5.1 %
11-20 years	8.7 %	10.1 %	4-6 months	0.0 %	1.9 %
Over 20 years	89.1 %	83.5 %	7-9 months	4.3 %	3.2 %
Years actively involved in water			10-12 months	2.2 %	2.5 %
Less than one year	4.3 %	1.3 %	More than one year	89.1 %	53.2 %
1-4 years	8.7 %	7.6 %	Age		
5-10 years	8.7 %	13.3 %	18-30	0.0 %	1.9 %
11-20 years	26.1 %	27.8 %	31-40	4.3 %	10.8 %
Over 20 years	52.2 %	50.0 %	41-50	23.9 %	26.6 %
Gender			51-60	63.0 %	41.1 %
Male	91.3 %	83.5 %	61-70	2.2 %	12.0 %
Female	8.7 %	16.5 %	Over 70 years old	6.5 %	7.6 %

Table A1.2: Range of Water Rights Owned by Individual Roundtable Members and All Other Participants.

	CO Roundtable (n = 46)	CO Roundtable Percent	All (n = 164)	All Percent
Individual Water Rights				
Yes	14	30.4%	37	22.6 %
No	32	69.6%	121	73.8 %
Answer not given	0	0.0 %	6	3.7 %
Age of Water Right				
1860 – 1869	0	0.0 %	2	5.4 %
1870 – 1879	0	0.0 %	2	5.4 %
1880 – 1889	0	0.0 %	2	5.4 %

	CO Roundtable	CO Roundtable	All	All
1890 – 1899	3	21.4 %	7	18.9 %
1900 – 1909	3	21.4 %	6	16.2 %
1910 – 1919	3	21.4 %	3	8.1 %
1920 – 1929	0	0.0 %	0	0.0 %
1930 – 1939	1	7.1 %	4	10.8 %
1940 – 1949	0	0.0 %	0	0.0 %
1950 – 1959	0	0.0 %	1	2.7 %
1960 – 1969	0	0.0 %	1	2.7 %
1970 – 1979	0	0.0 %	0	0.0 %
1980 – 1989	1	7.1 %	2	5.4 %
1990 – 1999	1	7.1 %	2	5.4 %
2000 and since	0	0.0 %	1	2.7 %
Not administrable	0	0.0 %	1	2.7 %
Date of water right not given	2	14.3 %	3	8.1 %
Acre-Feet of Water Storage				
Less than 5 Acre- Feet	3	21.4 %	10	27.0 %
6 – 50 Acre-Feet	2	14.3 %	4	10.8 %
51 – 150 Acre-Feet	1	7.1 %	1	2.7 %
151 – 1000 Acre-Feet	0	0.0 %	5	13.5 %
1001+ Acre-Feet	3	21.4 %	5	13.5 %
Water Storage not given	5	35.7 %	12	32.4 %
Cubic Feet/Second Water Flow (CFS)				
Less than 1 CFS	4	28.6 %	13	35.1 %
1 – 10 CFS	4	28.6 %	10	27.0 %
11 – 100 CFS	2	14.3 %	8	21.6 %
Greater than 100 CFS	3	21.4 %	5	13.5 %
Water Flow not given	1	7.1 %	1	2.7 %

Table A1.3: Range of Water Rights Owned by Roundtable Members and All Participants' Organizations.

	CO Roundtable (n = 46)	CO Roundtable Percent	All (n = 164)	All Percent
Organization Water Rights				
Yes	34	73.9 %	94	57.3 %
No	10	21.7 %	62	37.8 %
Answer not given	2	4.3 %	8	4.9 %
Age of Water Right				
1860 – 1869	0	0.0 %	8	8.5 %
1870 – 1879	1	2.9 %	2	2.1 %
1880 – 1889	2	5.9 %	8	8.5 %
1890 – 1899	9	26.5 %	13	13.8 %

	CO Roundtable	CO Roundtable	All	All
1900 – 1909	4	11.8 %	12	12.8%
1910 – 1919	3	8.8 %	5	5.3 %
1920 – 1929	3	8.8 %	4	4.3 %
1930 – 1939	3	8.8 %	12	12.8%
1940 – 1949	0	0.0 %	1	1.1 %
1950 – 1959	2	5.9 %	8	8.5 %
1960 – 1969	2	5.9 %	5	5.3 %
1970 – 1979	1	2.9 %	2	2.1 %
1980 – 1989	0	0.0 %	0	0.0 %
1990 – 1999	0	0.0 %	1	1.1 %
2000 and since	0	0.0 %	0	0.0 %
Date of water right not given	4	11.8 %	13	13.8 %
Acre-Feet of Water Storage				
Less than 5 Acre- Feet	0	0.0 %	2	2.1 %
6 – 50 Acre-Feet	2	5.9 %	2	2.1 %
51 – 150 Acre-Feet	1	2.9 %	3	3.2 %
151 – 1000 Acre-Feet	4	11.8 %	13	13.8 %
1001+ Acre-Feet	21	61.8 %	57	60.6 %
Water Storage not given	6	17.6 %	17	18.1 %
Cubic Feet/Second Water Flow (CFS)				
Less than 1 CFS	0	0.0 %	3	3.2 %
1 – 10 CFS	6	17.6 %	10	10.6 %
11 – 100 CFS	5	14.7 %	15	16.0 %
Greater than 100 CFS	16	47.1 %	52	55.3 %
Water Flow not given	7	20.6 %	14	14.9 %

Table A1.4: Relationship Between Roundtable Membership and Ownership of Water Rights

	Roundtable or IBCC Member	Not a Roundtable or IBCC Member
	(n = 128)*	(n = 30)*
Yes, Individual Water Rights (n = 37)	33	4
No Individual Water Rights (n = 121)	95	26
Yes, Organization Water Rights (n = 94)	83	11
No Organization Water Rights (n = 62)	43	19

Table A1.5: Affiliations of All Participants and Colorado Basin Roundtable Participants.*

	(n=164)	Percent		(n=164)	Percent
Elected Officials	12	7.3 %	Environmental / Recreation	48	29.3%
Elected Office Municipal	8	4.9 %	Water Quality Consultant	5	3.0 %

	(n=164)	Percent		(n=164)	Percent
Elected Office County	3	1.8 %	Environmental Consultant	5	3.0 %
Elected Office State	1	0.6 %	Recreation Consultant	1	0.6 %
Government	60	36.6 %	Private Enterprises, Recreation	1	0.6 %
Non-Elected Municipal	19	11.6 %	Watershed Non-Profit	12	7.3 %
Non-Elected County	7	4.3 %	Land Trust Non-Profit	4	2.4 %
Non-Elected State	23	14.0 %	Conservation Non-Profit	8	4.9 %
Non-Elected Federal	11	6.7 %	Environmental Non-Profit	9	5.5 %
Agriculture	19	11.6 %	Recreation Non-Profit	3	1.8 %
Agriculture Consultant	3	1.8 %	Water Industry	42	25.6 %
Private Enterprises, Rain-Fed Agriculture	3	1.8 %	Water Resources Consultant	14	8.5 %
Private Enterprises, Irrigated Agriculture	13	7.9 %	Government Relation Consultant	4	2.4 %
Special District	54	32.9 %	Private Enterprises, Public Utility	5	3.0 %
Conservancy District	31	18.9 %	Private Enterprises, Research	3	1.8 %
Conservation District	11	6.7 %	Private Enterprises, Engineering	4	2.4 %
Irrigation District	5	3.0 %	Private Enterprises, Legal	12	7.3 %
Rural Water District	1	0.6 %			
Mutual Irrigation District	0	0.0 %			
Other Special District	6	3.7 %			
Other	30	18.3 %			
Other Consultant	2	1.2 %			
Other Private Enterprises	8	4.9 %			
Other Non-Profit	11	6.7 %			
Any Other	9	5.5 %			

* Many participants selected multiple affiliations, including multiple affiliations within a single affiliation category (e.g. Elected Officials). For this reason, numbers do not add up to the totals displayed for each group.

Table A1.6: Self-reported Participation on All Roundtables and the IBCC For All Survey Participants.

	Voting Member	Non-Voting Member	Liaison	Observer	Other	Total
Arkansas Roundtable	5	2	4	8	10	29
Colorado Roundtable	31	7	9	29	20	96

	Voting Member	Non-Voting Member	Liaison	Observer	Other	Total
Gunnison Roundtable	6	2	6	16	10	40
North Platte Roundtable	1		4	6	6	17
Metro Roundtable	3		3	8	9	23
Dolores / San Juan / San Miguel Roundtable	4		3	12	6	25
Yampa / White / Green Roundtable	1		4	11	6	22
South Platte Roundtable	2	1	4	9	11	27
Rio Grande	1		2	7	7	17
IBCC	12		2	11	9	34
Total	66	12	41	117	94	--

Table A1.7: Colorado Basin Roundtable Members' Counties of Residence

	CO Roundtable (n = 46)	Percent
Chaffee	1	2.2 %
Delta	1	2.2 %
Denver	1	2.2 %
Douglas	1	2.2 %
Eagle	7	15.2 %
El Paso	2	4.3 %
Garfield	7	15.2 %

	CO Roundtable (n = 46)	Percent
Grand	6	13.0 %
Gunnison	1	2.2 %
Larimer	1	2.2 %
Mesa	13	28.3 %
Pitkin	1	2.2 %
Routt	1	2.2 %
Summit	3	6.5 %

Table A1.8: Involvement in Any Roundtable by Affiliations for all Survey Participants.

	Involvement in a Roundtable	Involvement in a Roundtable Percent	Not involved in a Roundtable	Not involved in a Roundtable Percent
Elected Officials (n = 17)	16	94.1%	1	5.9%
Government (n = 59)	46	78%	13	22%
Agriculture (n = 16)	12	75%	4	25%
Special District (n = 49)	46	93.9%	3	6.1%
Environmental / Recreation (n = 37)	33	89.2%	4	10.8%
Water Industry (n = 35)	28	80%	7	20%
Other (n = 27)	19	70.4%	8	29.6%

Section Two: Respondents' Values

The five typologies introduced in this chapter were developed through a combination of quantitative and qualitative analysis. Survey participants were asked to respond with their level of agreement to nine statements covering a variety of priorities for the HB1177 process. One hundred and sixty survey respondents answered all nine of these questions. The data were analyzed using K-means cluster analysis to produce “typologies” among the respondents to the survey. Initial cluster centers are chosen using an Euclidean distance measure with subsequent iterations based upon the nearest Euclidean distance to the mean of the cluster. Multiple iterations are conducted until the cluster means no longer shift cases. This has the advantage of producing discrete groups that are usually easy to interpret. (Garson, 2006; Grant, n.d.). Once the typologies were created, ANOVAs and Games-Howell Post Hoc Tests were used to identify the statements where each typology differed significantly from the others.

The responses to open-ended questions about desired outcomes were analyzed within each typology, in two separate groups for each typology: outcomes desired by members of the Colorado Basin Roundtable and outcomes desired by other survey participants. The combination of significant differences on the value statements and themes in the desired outcomes was used to develop the narrative description of each typology.

The tables to follow provide information about the significant differences between typologies on specific statements, the demographics of the clusters, and the geographic distribution of respondents. The analysis is not broken out by roundtable members versus external stakeholders, as the numbers within the roundtable are low enough in the clusters to make it easy to identify specific individuals based on their demographics.

The conclusion from the ANOVA is that among the 160 respondents included in the five clusters, there is no value statement on which all are generally in agreement or disagreement. Conflicting views are significantly present between the five groups, with each group in conflict with every other group on multiple statements. A more thorough exploration of values may find more agreement (e.g. see Colorado Institute of Public Policy, 2006), but on the key issues covered by the nine statements, areas of disagreement are prominent.

In the main body of the report, tables 2.1 – 2.3 show differences between clusters on each of the nine statements. For all nine tables below (one table for each question), a yes is present if there is a significant difference (to .05 or better) between the mean answers of the two clusters involved, for that question. Significance was determined using a Games-Howell Post Hoc Test. The answer scale for all nine questions was from 1 = Strongly Agree to 5 = Strongly Disagree.

Table A2.1: Significant Differences Between Clusters on Question 1: HB1177 Should Support Water Transfers to High Growth Areas/Sectors

	Mean Answer	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5
Cluster 1: Protecting Consumptive Needs	2.37	---	Yes	Yes	Yes	Yes
Cluster 2: Agriculture	4.53	Yes	---	Yes		
Cluster 3: Balancing Needs	2.90	Yes	Yes	---	Yes	Yes

	Mean Answer	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5
Cluster 4: Protecting Non-Consumptive Needs	4.15	Yes		Yes	---	
Cluster 5: Current System Broken	4.67	Yes		Yes		---

Table A2.2: Significant Differences Between Clusters on Question 2: HB1177 Should Support Protecting the Agricultural Economy and Way of Life

	Mean Answer	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5
Cluster 1: Protecting Consumptive Needs	2.11	---	Yes			
Cluster 2: Agriculture	1.58	Yes	---			Yes
Cluster 3: Balancing Needs	1.84			---		Yes
Cluster 4: Protecting Non-Consumptive Needs	1.89				---	Yes
Cluster 5: Current System Broken	3.11		Yes	Yes	Yes	---

Table A2.3: Significant Differences Between Clusters on Question 3: HB1177 Should Support Protecting the Recreational Economy and its Water Needs

	Mean Answer	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5
Cluster 1: Protecting Consumptive Needs	2.94	---		Yes	Yes	
Cluster 2: Agriculture	3.26		---	Yes	Yes	Yes
Cluster 3: Balancing Needs	2.12	Yes	Yes	---	Yes	
Cluster 4: Protecting Non-Consumptive Needs	1.55	Yes	Yes	Yes	---	
Cluster 5: Current System Broken	2.00		Yes			---

Table A2.4: Significant Differences Between Clusters on Question 4: HB1177 Should Support Protecting Ecosystems and Non-Human Species (or just the Environment)

	Mean Answer	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5
Cluster 1: Protecting Consumptive Needs	2.74	---		Yes	Yes	Yes
Cluster 2: Agriculture	3.26		---	Yes	Yes	Yes
Cluster 3: Balancing Needs	1.86	Yes	Yes	---	Yes	
Cluster 4: Protecting Non-Consumptive Needs	1.4	Yes	Yes	Yes	---	
Cluster 5: Current System Broken	1.33	Yes	Yes			---

Table A2.5: Significant Differences Between Clusters on Question 5: HB1177 Should Support Increasing Cooperation Among Water Basins

	Mean Answer	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5
Cluster 1: Protecting Consumptive Needs	1.71	---		Yes		
Cluster 2: Agriculture	1.47		---	Yes		
Cluster 3: Balancing Needs	1.06	Yes	Yes	---	Yes	
Cluster 4: Protecting Non-Consumptive Needs	1.72			Yes	---	
Cluster 5: Current System Broken	1.67					---

Table A2.6: Significant Differences Between Clusters on Question 6: HB1177 Should Support Balancing the Water Demands Between Consumptive Uses and Non-Consumptive Uses

	Mean Answer	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5
Cluster 1: Protecting Consumptive Needs	3.14	---		Yes	Yes	Yes
Cluster 2: Agriculture	2.89		---	Yes	Yes	Yes
Cluster 3: Balancing Needs	1.52	Yes	Yes	---		
Cluster 4: Protecting Non-Consumptive Needs	1.62	Yes	Yes		---	
Cluster 5: Current System Broken	1.22	Yes	Yes			---

Table A2.7: Significant Differences Between Clusters on Question 7: HB1177 Should Support Balancing Water Supplies and Demands

	Mean Answer	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5
Cluster 1: Protecting Consumptive Needs	2.37	---		Yes		Yes
Cluster 2: Agriculture	1.84		---			Yes
Cluster 3: Balancing Needs	1.50	Yes		---	Yes	
Cluster 4: Protecting Non-Consumptive Needs	2.13			Yes	---	Yes
Cluster 5: Current System Broken	1.22	Yes	Yes		Yes	---

Table A2.8: Significant Differences Between Clusters on Question 8: HB1177 Should Support Protecting Existing Individual Water Rights

	Mean Answer	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5
Cluster 1: Protecting Consumptive Needs	1.60	---				Yes
Cluster 2: Agriculture	1.21		---		Yes	Yes

	Mean Answer	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5
Cluster 3: Balancing Needs	1.52			---	Yes	Yes
Cluster 4: Protecting Non-Consumptive Needs	2.00		Yes	Yes	---	Yes
Cluster 5: Current System Broken	3.67	Yes	Yes	Yes	Yes	---

Table A2.9: Significant Differences Between Clusters on Question 9: HB1177 Should Support Allocation and Management of Water Resources through the Market

	Mean Answer	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5
Cluster 1: Protecting Consumptive Needs	2.37	---			Yes	Yes
Cluster 2: Agriculture	3.11		---	Yes		Yes
Cluster 3: Balancing Needs	2.12		Yes	---	Yes	Yes
Cluster 4: Protecting Non-Consumptive Needs	3.36	Yes		Yes	---	Yes
Cluster 5: Current System Broken	4.44	Yes	Yes	Yes	Yes	---

Table A2.10: Cluster Demographics for All Participants

	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5
	Protecting Consumptive Needs	Agriculture	Balancing Needs	Protecting Non-Consumptive Needs	Current System Broken
	(n = 32)	(n = 19)	(n = 49)	(n = 45)	(n = 9)
Water Rights					
Yes, Individual Water Rights (n = 37)	7	9	10	9	2
No Individual Water Rights (n = 117)	25	10	39	36	7
Yes, Organization Water Rights (n = 92)	21	11	28	26	6
No Organization Water Rights (n = 60)	10	8	20	19	3
Organization Water Rights: No Answer Given (n = 2)	1		1		
Years Living in Colorado					
Less than 5 years (n=5)				3	2
5-10 years (n = 5)	2	1	1	1	
11-20 years (n = 16)			4	8	4
Over 20 years (n = 128)	30	18	44	33	3
Years actively involved in water					

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	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5
Less than 1 year (n = 2)		1			1
1-4 years (n = 12)	3		3	6	
5-10 years (n = 20)	3	2	8	7	
11-20 years (n = 43)	5	4	15	13	6
Over 20 years (n = 77)	21	12	23	19	2
Months Actively Involved in a Roundtable					
Not on any roundtable (n = 51)	13	8	14	12	4
0-3 months (n = 8)			3	4	1
4-6 months (n = 3)			2	1	
7-9 months (n = 5)	1	1	2		1
10-12 months (n = 4)			1	2	1
More than 1 year (n=83)	18	10	27	26	2
Age					
18-30 (n = 2)				2	
31-40 (n = 17)	3	1	7	4	2
41-50 (n = 41)	7	5	14	14	1
51-60 (n = 65)	16	8	20	17	4
61-70 (n = 19)	4	3	4	7	1
Over 70 years old(n=10)	2	2	4	1	1
Gender					
Male (n = 129)	27	18	43	34	7
Female (n = 25)	5	1	6	11	2
Affiliation Group					
Elected Officials (n =17)	2	1	6	5	3
Government (n = 58)	13	5	23	13	4
Agriculture (n = 15)	4	6	3	2	
Special District (n = 48)	13	7	14	12	2
Environmental / Recreation (n = 37)	1	2	9	21	4
Water Industry (n = 32)	5	3	11	11	2
Other (n = 25)	6	5	5	7	2

* Significance is not reported for this data as the chi-square is not an accurate measure with such low numbers in many of the categories.

Table A2.13: West vs. East, Cluster Membership by County of Residence for All Respondents*

	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5
	Protecting Consumptive Needs	Agriculture	Balancing Needs	Protecting Non-Consumptive Needs	Current System Broken
	(n = 35)	(n = 19)	(n = 50)	(n = 47)	(n = 9)
Adams (n = 1)			1		
Arapahoe (n = 5)	3		2		
Archuleta (n = 1)				1	
Boulder (n = 5)			4	1	
Broomfield (n = 1)			1		
Chaffee (n = 1)	1				
Conejos (n = 1)		1			
Delta (n = 2)	1	1			
Denver (n = 14)	7	1	2	2	2
Douglas (n = 3)	1		1	1	
Eagle (n = 8)	1		3	4	
El Paso (n = 3)	2		1		
Garfield (n = 19)	3	2	5	7	2
Grand (n = 10)		1		7	2
Gunnison (n = 7)	1		1	4	1
Jackson (n = 1)			1		
Jefferson (n = 5)		1	2	2	
LaPlata (n = 3)			3		
Larimer (n = 6)	2		4		
Lincoln (n = 1)				1	
Mesa (n = 26)	5	6	9	6	
Montezuma (n=2)	1		1		
Montrose (n = 4)	1	2		1	
Pitkin (n = 6)				5	1
Pueblo (n = 4)		2	2		
Rio Grande (n=1)			1		
Routt (n = 3)		1	1	1	
Summit (n = 6)			4	2	
Washington (n=1)	1				
Weld (n = 3)	2	1			
None (n = 1)					1

* Significance is not reported for this data as the chi-square is not an accurate measure with such low numbers in many of the categories.

Section Three: Success in the Roundtable and HB1177 Process

Table A3.1: Colorado Basin Roundtable Members' Mean Perceptions of their Roundtable's Success at Meeting their Goals and Undertaking Specific Activities

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
Achieving your desired outcomes (n = 45)	2.2 %	8.9 %	68.9 %	13.3 %	6.7 %
Achieving outcomes important for the CO Basin Roundtable (n = 43)	0.0 %	20.9 %	58.1 %	14.0 %	7.0 %
Achieving outcomes important to the HB1177 process (n = 44)	0.0 %	18.2 %	47.7 %	27.3 %	6.8 %
Prioritizing key issues to address (n = 46)	2.2 %	28.3 %	41.3 %	21.7 %	6.5 %
Developing a grants process (n = 46)	15.2 %	45.7 %	28.3 %	10.9 %	0.0 %
Educating its members (n = 46)	15.2 %	56.5 %	28.3 %	0.0 %	0.0 %
Developing needs assessment plans (n = 46)	0.0 %	8.7 %	56.5 %	32.6 %	2.2 %
Fostering collaboration within the basin (n = 45)	24.4 %	35.6 %	33.3 %	6.7 %	0.0 %
Fostering collaboration across basins (n = 45)	4.4 %	11.1 %	46.7 %	33.3 %	4.4 %
Outreach outside of the Roundtables (n = 43)	0.0 %	11.6 %	39.5 %	44.2 %	4.7 %

Table A3.2: Mean Responses to Each Success Question on the Colorado Basin Roundtable by Affiliations of Colorado Roundtable Basin Members

	Elected Official	Government	Agriculture	Special District	Environmental / Recreation	Water Industry	Other
Achieving your desired outcomes (n = 45)	2.75	3.17**	2.33*	2.59*	3.00	3.00	3.00
Achieving outcomes important for the CO Basin Roundtable (n = 43)	3.00	3.13	2.67	2.71	3.30*	2.69	3.00
Achieving outcomes important to the HB1177 process (n=44)	2.75	2.88	2.67	2.47*	2.82	2.79	3.20
Prioritizing key issues to address (n = 46)	2.88	3.11	3.00	2.89	3.27	3.07	2.60
Developing a grants process (n = 46)	3.63	3.78	3.33	3.56	3.91	3.71	3.40
Educating its members (n = 46)	4.00	3.78	3.67	3.89	3.91	3.86	3.60

	Elected Official	Government	Agriculture	Special District	Environmental / Recreation	Water Industry	Other
Developing needs assessment plans (n = 46)	2.63	2.78	2.50	2.56	2.82	2.71	2.60
Fostering collaboration within the basin (n=45)	4.13	3.88	3.17*	3.61	4.36**	4.00	3.20
Fostering collaboration across basins (n = 45)	3.63**	2.83	2.50	2.71	2.80	2.57	2.60
Outreach outside of the Roundtables (n = 43)	3.00	2.44	2.17	2.75	3.00**	2.57	2.60

Table A3.3: Mean Responses to Each Success Question on the Colorado Basin Roundtable by Clusters of Colorado Roundtable Basin Members

	Cluster 1 Protecting Consumptive Needs	Cluster 2 Agriculture	Cluster 3 Balancing Needs	Cluster 4 Protecting Non-Consumptive Needs	Cluster 5 Current System Broken
Achieving your desired outcomes (n = 44)**	2.44	3.00	2.82	3.06	3.00
Achieving outcomes important for the CO Basin Roundtable(n=42)**	2.44	3.00	3.27	3.00	3.00
Achieving outcomes important to the HB1177 process (n = 43) **	2.78	2.60	2.73	2.75	3.50
Prioritizing key issues to address (n = 45) **	2.22	3.17	3.17	3.13	3.50
Developing a grants process (n = 45) **	3.44	4.00	3.25	3.94	3.50
Educating its members (n = 45) **	3.56	4.17	4.00	3.88	4.00
Developing needs assessment plans (n = 45)	2.44	2.83	2.92	2.69	2.50
Fostering collaboration within the basin (n = 44)	3.22	3.40	4.00	4.06	3.50
Fostering collaboration across basins (n = 44)	2.33	3.00	2.83	2.80	3.50
Outreach outside of the Roundtables (n = 42) **	2.33	2.67	2.36	2.80	3.00

** Significant difference between the means of the five clusters on the statement, using an ANOVA.

Table A3.4: Mean Perceptions of HB1177 Process Success (Table 3.3 in Report)

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
Achieving your desired outcomes (n = 88)	4.5 %	13.6 %	46.6 %	23.9 %	11.4 %
Achieving outcomes important to the HB 1177 Process (n = 102)	4.9 %	9.8 %	51.0 %	23.5 %	10.8 %
Prioritizing key issues to address (n = 98)	4.1 %	17.3 %	46.9 %	24.5 %	7.1 %
Developing a grants process (n = 94)	8.5 %	45.7 %	36.2 %	9.6 %	0.0 %
Educating its members (n = 102)	9.8 %	45.1 %	33.3 %	10.8 %	1.0 %
Developing needs assessment plans (n = 95)	3.2 %	13.7 %	52.6 %	27.4 %	3.2 %
Fostering collaboration within the basin (n = 102)	20.6 %	41.2 %	31.4%	6.9 %	0.0 %
Fostering collaboration across basins (n = 95)	1.1 %	13.7 %	43.2 %	27.4 %	14.7 %
Outreach outside of the Roundtables (n = 98)	1.0 %	6.1 %	36.7 %	40.8 %	15.3 %

Table A3.5: Water Rights Ownership by Mean Rating of Success on All HB1177 Activities

	No Individual Water Right	Yes, Individual Water Right	No Organization Water Right	Yes, Organization Water Right
Achieving your desired outcomes	2.82	2.67	2.86	2.73
Achieving outcomes important to the HB 1177 Process	2.82	2.59	2.86	2.69
Prioritizing key issues to address	3.04**	2.33**	2.98	2.80
Developing a grants process	3.57	3.50	3.50	3.60
Educating its members	3.58	3.47	3.47	3.64
Developing needs assessment plans	2.92	2.76	2.93	2.84
Fostering collaboration within the basin	3.84	3.50	3.73	3.80
Fostering collaboration across basins	2.63	2.52	2.61	2.60
Outreach outside of the Roundtables	2.42	2.20	2.31	2.43

Table A3.6: Mean Responses to Each Success Question on the HB1177 Process by Affiliations of External Survey Respondents.

	Elected Official	Government	Agriculture	Special District	Environmental / Recreation	Water Industry	Other
Achieving your desired outcomes (<i>n</i> = 88)	2.63	2.96	2.78	2.89	2.52	2.94	2.36*
Achieving outcomes important to the HB 1177 Process (<i>n</i> = 102)	2.63	2.89	3.00	2.83	2.58	2.74	2.47
Prioritizing key issues to address (<i>n</i> = 98)	2.43	3.03	2.60	2.59*	2.95	2.85	2.71
Developing a grants process (<i>n</i> = 94)	3.67	3.55	3.22	3.89**	3.22**	3.64	3.38
Educating its members (<i>n</i> = 102)	3.63	3.77**	3.40	3.80**	3.19**	3.53	3.11*
Developing needs assessment plans (<i>n</i> = 95)	2.75	3.00	3.22	2.90	2.52**	2.94	2.79
Fostering collaboration within the basin(<i>n</i> =102)	3.63	3.94	3.60	3.97*	3.50	3.86	3.47
Fostering collaboration across basins (<i>n</i> = 95)	2.38	2.69	3.00	2.74	2.26*	2.74	2.29
Outreach outside of the Roundtables (<i>n</i> = 98)	2.44	2.50	2.22	2.48	2.10**	2.40	2.17

Table A3.7: Mean Responses to Each Success Question on the HB1177 Process by Clusters of External Survey Participants.

	Cluster 1 Protecting Consumptive Needs	Cluster 2 Agriculture	Cluster 3 Balancing Needs	Cluster 4 Protecting Non-Consumptive Needs	Cluster 5 Current System Broken
Achieving your desired outcomes (<i>n</i> = 85)**	2.13	2.44	3.25	2.84	2.14
Achieving outcomes important to the HB 1177 Process (<i>n</i> = 99)**	2.26	2.83	3.12	2.67	2.00
Prioritizing key issues to address (<i>n</i> = 95)**	2.35	2.70	3.23	2.93	2.40
Developing a grants process (<i>n</i> = 91)**	3.44	3.20	3.84	3.28	3.43
Educating its members (<i>n</i> = 99)**	3.32	3.64	3.89	3.27	3.25
Developing needs assessment plans (<i>n</i> = 92)	2.89	2.89	3.00	2.77	2.17
Fostering collaboration within the basin (<i>n</i> =99)	3.62	3.75	3.94	3.69	3.00

	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Cluster 5
Fostering collaboration across basins (<i>n</i> = 92)	2.10	2.82	2.59	2.63	2.80
Outreach outside of the Roundtables (<i>n</i> = 95)**	1.89	2.20	2.61	2.61	2.00

** Significant difference between the means of the five clusters on the statement, using an ANOVA.

Section 4: Roles and Relationships within the Water Community

The findings from Section 4 are based on the network questions in the survey. Respondents were asked who in the water community they:

- Consider the most influential statewide;
- Exchange information with;
- Receive important information from;
- Believe most share their goals;
- Trust the most to keep their interests in mind, regardless of whether they share their goals; and
- Can depend on to follow through on a commitment.

For the Colorado Basin Roundtable respondents, they were asked to answer the extent to which they agreed with each question for all other members of the roundtable.

24. On a scale of 1 – 5 (daily to never), please indicate how often in the last year you have exchanged information related to water policy and management issues with other members of the roundtable.

Roundtable Members	Frequency				
	Daily	Weekly	Monthly	Less than monthly	Never
1 RT member 1	1	2	3	4	5
2 RT member 2	1	2	3	4	5
3 RT member 3	1	2	3	4	5
4 RT member 4	1	2	3	4	5
5 RT member 5	1	2	3	4	5
6 RT member 6	1	2	3	4	5
7 RT member 7	1	2	3	4	5
8 RT member 8	1	2	3	4	5
9 RT member 9	1	2	3	4	5
10 RT member 10	1	2	3	4	5
11 RT member 11	1	2	3	4	5
12 RT member 12	1	2	3	4	5
13 RT member 13	1	2	3	4	5
14 RT member 14	1	2	3	4	5
15 RT member 15	1	2	3	4	5
16 RT member 16	1	2	3	4	5
17 RT member 17	1	2	3	4	5
18 RT member 18	1	2	3	4	5

They were also asked to identify one or more stakeholders outside the Colorado Basin Roundtable for each question. External respondents, those who were invited to take the survey because they were identified on one of the six questions by a Colorado Basin Roundtable member, were only asked to identify one or more stakeholders for each question. They were not given a roster of stakeholders, as had been done within the Colorado Basin Roundtable.

To analyze the information, a total count score was created for each of the six measures for each individual survey participant. For example, the influence score for an individual survey respondent was created by adding up each and every time that someone mentioned that respondent as influential, including weighting “highly influential” as one point higher than “influential,” and on down the scale. Because of the “roster,” roundtable members had far more

people reporting on their influence, so their scores all ended up automatically higher. For roundtable members, the highest score was identified within the roundtable alone and that person's score and everyone else's scores were divided by the highest influence score. A second measure was developed for each roundtable member, gathering their score from external reports only. The results for all roundtable and non-roundtable members are proportional scores of influence, where everyone's influence can be reported as somewhere between zero and one. The same process was followed for all of the network questions listed above, resulting in proportional measures of influence, trust, dependability, information exchange, information importance, and shared goals.

Table A4.1: Proportional Means for Elected and Non-elected Officers in the Colorado Basin Roundtable as of May 2007.

	Elected (n = 7)	Non-Elected (n = 37)		Elected (n = 7)	Non-Elected (n = 37)
Influence	0.55**	0.36**	Shared goals	0.59**	0.32**
Information exchange	0.64**	0.48**	Trust	0.66**	0.50**
Information importance	0.62**	0.45**	Dependability	0.64**	0.47**

Table A4.2: Within the Colorado Roundtable, Mean Differences Between How Members of the Protecting Non-Consumptive Uses Cluster View Those Within their Cluster and Outside their Cluster

	Within (n = 16)	Outside (n = 20)		Within (n = 16)	Outside (n = 20)
Influence	0.27	0.21	Shared goals	0.18	0.11
Information exchange	0.23	0.19	Trust	0.27	0.19
Information importance	0.33	0.27	Dependability	0.33	0.29

Table A4.3: Within the Colorado Roundtable, Mean Differences Between How Members of the Agriculture Cluster View Those Within their Cluster and Outside their Cluster

	Within (n = 6)	Outside (n = 40)		Within (n = 6)	Outside (n = 40)
Influence	0.44	0.35	Shared goals	0.18	0.09
Information exchange	0.26	0.27	Trust	0.56	0.49
Information importance	0.32	0.34	Dependability	0.51	0.44

Table A4.4: Within the Colorado Roundtable, Mean Differences Between How Members of the Balancing Needs Cluster View Those Within their Cluster and Outside their Cluster

	Within (n = 12)	Outside (n = 34)		Within (n = 12)	Outside (n = 34)
Influence	0.34	0.32	Shared goals	0.17	0.15
Information exchange	0.35	0.36	Trust	0.40	0.38
Information importance	0.39	0.39	Dependability	0.38	0.34

Table A4.5: Within the Colorado Roundtable, Mean Differences Between How Members of the Protecting Consumptive Needs Cluster View Those Within their Cluster and Outside their Cluster

	Within (n = 9)	Outside (n = 37)		Within (n = 9)	Outside (n = 37)
Influence	0.42	0.31	Shared goals	0.47	0.11
Information exchange	0.45	0.30	Trust	0.65	0.37
Information importance	0.53	0.32	Dependability	0.61	0.32

Table A4.6: Within the Colorado Roundtable, Mean Differences Between How Members of the Current System Broken Cluster View Those Within their Cluster and Outside their Cluster

	Within (n = 2)	Outside (n = 44)		Within (n = 2)	Outside (n = 44)
Influence	0.00	0.09	Shared goals	0.00	0.05
Information exchange	0.00	0.03	Trust	0.15	0.20
Information importance	0.15	0.32	Dependability	0.34	0.43

Section 5: Overlapping Roundtable Membership

Table A5.1: Self-Reported Participation on All Roundtables and the IBCC for Colorado Basin Roundtable Survey Participants

	Voting Member	Non-Voting Member	Liaison	Observer	Other	Total
Arkansas Roundtable	1	2	2			5
Colorado Roundtable	29	7	8	2		46
Gunnison Roundtable			3	1		4
North Platte Roundtable			2			2
Metro Roundtable	1		1			2
Dolores / San Juan / San Miguel Roundtable			2			2
Yampa / White / Green Roundtable			2			2
South Platte Roundtable	1	1	1			3
Rio Grande			1			1
IBCC	4			1		5
Total	36	10	22	4	0	--

Table A5.2: Total Number of Overlapping Members Among the Nine Roundtables, Based on Colorado Department of Natural Resources 2007 Membership List

	Arkansas	Colorado	Gunnison	Metro	North Platte	Rio Grande	South Platte	Southwest	Yampa /White /Green
Arkansas		7	4	6	2	5	4	3	3
Colorado	7		7	3	7	4	4	5	7
Gunnison	4	7		3	3	4	2	8	6
Metro	6	3	3		2	3	5	3	3
North Platte	2	7	3	2		3	5	3	4
Rio Grande	5	4	4	3	3		2	4	4
South Platte	4	4	2	5	5	2		2	2
Southwest	3	5	8	3	3	4	2		5
Yampa/White /Green	3	7	6	3	4	4	2	5	

Table A5.3: Proportional Means for Respondents Identifying as Liaisons to One or More Roundtables Compared to All Other Proportional Means Among Respondents

For Externals:

	Influence	Trust	Dependable	Info Exchange	Info Importance	Shared Goals
Liaison	.04	.07	.06	.10	.07	.10
Non-Liaison (all others)	.02	.11	.10	.15	.10	.16

For Roundtable Members:

	Influence	Trust	Dependable	Info Exchange	Info Importance	Shared Goals
Liaison	.29	.39	.36	.46	.32	.27
Non-Liaison (all others)	.41	.49	.46	.52	.41	.39

Table A5.4: Proportional Means for the 16 Respondents Most Central in the Information Exchange Network as Compared to Proportional Means Among All Other Respondents

	Influence	Trust	Dependable	Info Importance	Shared Goals
16 most central respondents	0.10	0.28	0.27	0.28	0.42
All other respondents	0.01	0.08	0.07	0.07	0.12

Appendix B: References

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The Colorado Institute of Public Policy (CIPP) at Colorado State University was created to provide information for effective public problem solving. It brings together local practitioners and academic researchers to contribute to public policy discourse involving interactions among the environment, agriculture, and people in the Rocky Mountain West. More information is available online at www.cipp.colostate.edu.

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- ✓ Communication of policy opportunities and options, including writing and dissemination to key stakeholders prior to important decisions.

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