

# White River Basin Public Input on Integrated Water Management Planning

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*April 2, 2020*

## OVERVIEW

On January 22 and January 29, 2020, The White River and Douglas Creek Conservation Districts hosted a series of four public meetings in different corners of the White River Basin in order to help determine whether there was sufficient support to pursue an Integrated Water Management Plan for the basin, as well as what issues such a plan could address and who should lead the effort, if it were to go forward. The meetings were organized and publicized by the Conservation Districts and facilitated by Hannah Holm, author of this report.

### Process

The meetings were structured to have participants address the same questions previously posed to stakeholders in a series of interviews and focus groups conducted by Conservation District staff, and the meeting participants were provided with a summary of the results of those interviews and focus groups. This was done both in the interest of transparency about the consultation process and to provide meeting participants the opportunity to respond to perspectives already offered. Each meeting also included a brief presentation by the facilitator on the basics of Stream Management Planning and Integrated Water Management Planning. The entire meeting packet provided to participants is included in this report as Appendix A.

Subsequent to these meetings, a draft version of this report was posted on the Conservation Districts' website, with a form for providing additional comments. One set of comments was received by email from a meeting participant, and six web forms were submitted, three from the Rangely area and three from the Meeker area.

### Comparison of Interviews/ Focus Groups with Input from Meetings and via Internet

The input from the public meetings was largely consistent with the input from the interviews and focus groups, although each contain some details missing from the others. Six comments were subsequently received via email and the web form, with respondents from Meeker and Rangely. These comments were also largely consistent with earlier input, although additional concerns were raised about water quality (particularly under low-flow conditions), over-use of springs and tributaries, and a lack of coordination between different state agencies involved in water management.

### Common Themes across the White River Basin

There was significant support across the basin for doing an Integrated Water Management Plan for the White River Basin, and for having that effort led by the White River and Douglas Creek Conservation Districts. This support did come with some cautions, however: there was some concern that such a plan could be used against current water users, and while several groups indicated a desire for better data on water resources, concern was voiced that data can be unreliable or skewed. This points to a need for strong communication and a high level of transparency around data collection efforts for any planning effort.

Protecting existing water rights and uses, mostly for agriculture, was a strong theme that came up in each of the meetings. Even along the main stem of the White River, where calls on the river have been avoided, there is concern that decreasing supplies, increasing competition and downstream demands could bring shortages and calls on the river in the future.

The desire for more storage was expressed in each of the public meetings, both to ensure adequate supplies for water users and for fisheries. Enhancing the capacity of existing reservoirs, building new reservoirs, and in-ground storage were all mentioned as potential solutions. Some comments received via the web form specifically mentioned a desire to have the proposed Wolf Creek Reservoir built.

Although issues related to water quantity were most highly prioritized in all of the meetings, significant interest in water quality was also expressed, with algae, sediment and temperature issues frequently mentioned. The desire to improve irrigation infrastructure and public access for fishing and other recreation were also commonly mentioned. On riparian issues, participants expressed mixed feelings about invasive plant removal, expressing concerns about erosion issues even as they expressed a desire for better habitat and more native vegetation.

### Sub-regional differences

In each subregion, different issues emerged as dominant concerns. While each meeting is described in more detail later in this report, these are some of the most notable particularities that emerged in each discussion:

- Piceance Creek: In this sub-basin, unlike the others, irrigators report that they uniformly deal with shortages, every year. Unlike elsewhere in the White River Basin, all water users already have measuring devices on their diversions and regularly experience calls on the stream. Energy companies are also a prominent presence in this sub-basin, and may be in a position to help with some of the supply issues.
- Meeker: Participants in this meeting were concerned about a wide range of issues, from the prospect of future calls on the river to recreational access, water quality and stream health.
- Buford – Upper Basin: Participants here were very concerned about a shift they had observed in land and water rights ownership away from people who farm and ranch for a living to owners who are primarily interested in fishing and ponds for private recreation. Some believe that this is changing irrigation patterns and has led to the construction of a number of structures in the channel, with ramifications for water quality, flows and fisheries.
- Rangely: Sedimentation impacts on Kenney Reservoir and the impact of algae to water intake structures were prominent in participant comments at this meeting. Participants also frequently commented on recreational and educational uses of the river as well as use for irrigation and drinking water.

### Recommendations

The input received from stakeholders indicates that there is substantial support for the White River and Douglas Creek Conservation Districts to pursue conducting an Integrated Water Management Plan for the White River Basin, under the following conditions:

- There should be a high level of transparency and communication regarding all studies conducted as part of the planning effort. Stakeholders in the basin have a high level of knowledge about the stream conditions and hydrology in their portions of the basin, and those conducting further studies should

engage with these stakeholders to access this knowledge and discuss their ideas, both to enhance the quality of the studies and to enhance the credibility of the studies with the stakeholders.

- The entire White River Basin should be included in the planning effort, but it should be broken down into sub-regions and sub-basins to adequately address the particular concerns and opportunities in each area.
- The results of previous and ongoing studies and related planning efforts should be utilized in the Integrated Water Management Planning effort, and key findings should be reported in a succinct way to basin stakeholders through Conservation District newsletters and other means.

## DETAILED MEETING REPORTS

### Piceance Creek Basin Meeting January 22, 2020

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In the Piceance Creek Basin, the meeting was attended by fourteen members of the public: ranchers, anglers, outfitters, and energy company personnel, some of whom fell into more than one category. They reported that this sub-basin is over-appropriated, and irrigators often experience shortages in late summer. Sections of stream also periodically dry up.

Participants reported that energy companies own significant water rights, and would need to be included in any planning efforts. The energy companies apparently own more water rights than they need, including water held in Ruedi Reservoir, which could potentially be brought into the sub-basin through a transbasin diversion.

Participants expressed a desire for a planning effort that is fair and equitable to all, and that relies on good data. Concern was voiced that data can be skewed, and that the data needs to be accurate.

#### *Water issues that directly affect meeting participants*

Meeting participants reported that the following water issues directly affect them and others in the Piceance Basin:

- **Water shortages:** Irrigation and livestock watering are the primary ways meeting participants use water, and they reported experiencing shortages in most years, beginning in June or even earlier. They reported that these shortages affect everyone in the entire sub-basin, from top to bottom, every year. Drought years are particularly difficult.
- **Drinking water access:** Some are currently hauling drinking water, due to problems obtaining well permits. Drinking water treatment requirements for an administrative office for an energy company is also a concern.
- **Riparian health:** Sedimentation and erosion problems related to wild horse populations were reported.
- **Water use records:** Participants reported some conflict and communication challenges with the CO Division of Water Resources over water use records. In this sub-basin, unlike in other parts of the White River Basin, water users uniformly have measuring devices on their diversions.
- **Infrastructure:** Headgate erosion and dam washouts were reported, as well as problems related to squirrel holes.

#### *Concerns related to water management and planning*

In addition to discussing water issues directly affecting them, participants mentioned the following concerns related to existing and potential water management studies, plans and practices:

- In studies, there is the potential for data to be skewed or inaccurate.
- In-stream flow rights may affect existing uses.
- Endangered Species Act (ESA) protections for endangered fish could affect existing uses. If better flows could be maintained in the stream, it would help existing water users stay out of trouble in relation to the ESA.

- A compact curtailment on the Colorado River could affect all water uses, including energy extraction, irrigation and livestock wells.
- Return flows are currently ok on the Piceance, but they could be diminished if there is more widespread adoption of sprinklers for irrigation.

*Potential Solutions*

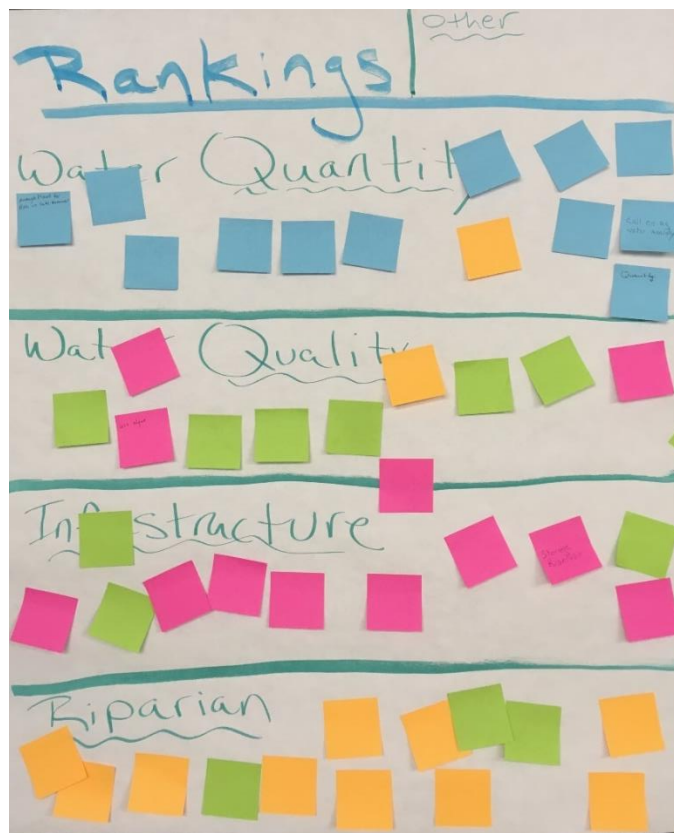
Participants indicated a desire to address water shortages in the Piceance Creek Basin. Ideas raised included a transbasin diversion from the Colorado Basin to move water held by energy companies in Ruedi Reservoir; new reservoirs, and storage generally.

*Water Issue Priorities*

When asked to rank their priorities among Water Quantity, Water Quality, Infrastructure and Riparian issues, participants almost uniformly ranked Water Quantity first, mentioning both water for irrigation and flows for fish.

Most participants ranked Infrastructure second, explaining that they meant infrastructure for water storage. Riparian issues were ranked third by most participants, with Water Quality ranked fourth by most, although some ranked it as high as second, citing algae concerns.

The following picture depicts the chart where participants were asked to rank their priorities, with blue indicating first priority, pink second priority, yellow third priority, and green fourth priority. Each participant got one sticky note of each color and was encouraged to write explanatory details on the notes before placing it in their chosen priority issue area.



### *Changes observed in recent decades*

Participants reported seeing the following changes in recent decades:

- Less water.
- More cedars and brush in the upper county.
- Eagle predation on fish.
- Increased erosion from the removal of Russian olive and tamarisk.

### *Priority areas for planning*

Participants indicated strong support for including the entire Piceance Creek Basin in a planning effort.

### *Anticipated changes*

Meeting participants said that the coming decades are likely to bring:

- Increasing conflict over water, including between environmental and agricultural interests.
- Risks to water rights
- Growth
- Challenges related to the Colorado River Compact
- Negative economic impacts from the issues listed above.

### *Conservation Measures Observed*

Examples of conservation measures participants had observed include:

- Groundwater encountered by energy companies being used in lieu of stream depletions for energy developments.
- The installation of flow measurement devices.

### *Desired Conservation Measures*

Meeting participants expressed desires for the following conservation and water management measures:

- Removing brush high in the watershed, because it:
  - Consumes water.
  - Increases fire risks.
  - Is detrimental to wildlife.
- More storage
- An end to a requirement for county permits to conduct ditch work.

Mixed feelings were expressed about Russian olive and tamarisk removal, which participants said is not widespread in the Piceance Creek sub-basin.

### *Use and communication on existing/ ongoing studies and plans*

Participants expressed a desire to see the results of current and existing studies prior to conducting a new plan. Their preferences for receiving information about studies and plans include meetings, the newspaper, newsletters and information posted on the internet.

### *Thoughts on doing an Integrated Water Management Plan for the White River Basin*

Meeting participants expressed mixed feelings about whether a plan should be done for the White River Basin, with some concern that such a plan could be used against current water users. Some commented that the land use plan had helped, because it had some regulatory teeth. Comments in favor of a planning effort included the opportunity to get on the same page about water data and the improved access to funding for projects that a plan could bring. If a planning effort is initiated, participants thought the Conservation District should lead the effort and 1/2 to 2/3 said they would be willing to be involved.

## **Meeker Meeting January 22, 2020**

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In Meeker, sixteen participants represented a wide range of interests and water uses.

### *Water issues that directly affect meeting participants*

Participants in the Meeker meeting expressed concern about preserving irrigation rights and late summer flows for fish, as well as the need to let releases from reservoirs for fish pass by without diverting them. They also mentioned declining flows and precipitation in the headwaters.

In regard to water quality, they noted problems with high temperatures and algae, including algae clogging municipal water intakes in Rangely.

In regard to water access, participants reported that voluntary releases had been made during drought conditions, and a participant later clarified that an in-stream flow right was short nearly every July – August period. Participants also noted a loss of fishing access.

### *Concerns related to water management and planning*

Participants voiced several concerns related to water management and planning:

- Concern that a compact curtailment could affect wells.
- A desire to preserve irrigation rights.
- There is a need to prepare for the possibility of a Demand Management program.
- Instream Flow rights could take priority over existing uses.

### *Potential Solutions*

Participants expressed a desire for more upper basin storage for multi-benefit releases.

### *Water Issue Priorities*

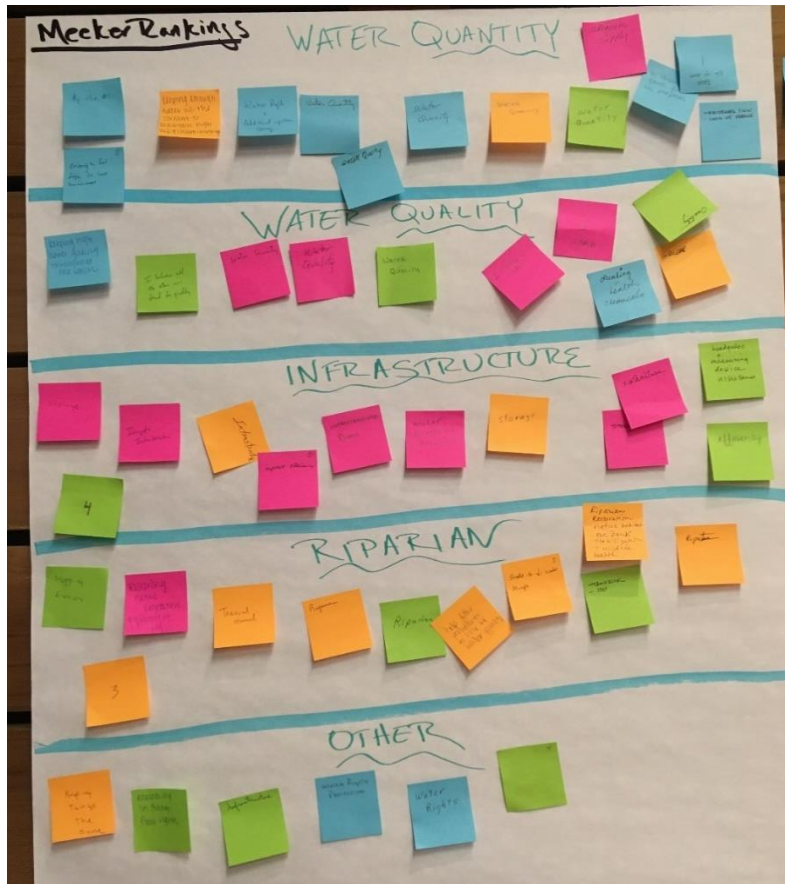
When asked to rank their priorities between Water Quantity, Water Quality, Infrastructure, Riparian and Other issues, the highest number of top priorities indicated were for Water Quantity, with explanations including supplies for agriculture, fish flows, water rights, and upstream storage. Some of the top priority “Other” responses also provided “water rights” as an explanation.

A majority of the second priority votes landed in the infrastructure category, with explanations including improvements to efficiency, storage and improvements to diversion structures.

Water Quality also collected some first and second priorities, with explanations including drinking water quality and algae. It was also noted that sufficient water quantity is one factor for ensuring sufficient water quality.

Riparian collected the majority of the third priority votes, with explanatory comments mentioning tamarisk removal, native habitat, bank stabilization, shade to cool water temperatures, and benefits to water quality.

The following picture shows how participants ranked their priorities with one sticky note of each color, with blue indicating their top priority, pink their second priority, yellow their third priority, and green their fourth priority.



### Changes observed

Participants reported observing the following changes in recent decades:

- A number of water rights in the upper part of the basin have been changed from agricultural rights to recreational and piscatorial rights for streams and ponds, and that this was:
  - Resulting in less irrigation up river (although this varies by location and may become a bigger issue in the future).
  - Impacts to water quality.
- There has been some transition to sprinkler irrigation beginning approximately 10-15 years ago, mostly far from streams and resulting from both labor and water limitations. This resulted in less erosion but some return flow issues.
- Changes in ownership of water rights resulting in less livestock production.
- Some springs appeared with the advent of mesa-top irrigation, but these could go away.
- Participants reported seeing changes to the channel from both from intentional habitat work upstream and from high flows.



### *Priority areas for planning*

Participants thought water issues needed attention along the whole river.

### *Anticipated changes*

Participants said they anticipated significant changes to the basin. Comments included the following points:

- There has never been a call on the White River, due to cooperation among water users, but that with new influences, more conflict is likely.
- Increasing conflict in general is likely.
- Partial or full year water use changes could occur, which would change the river.
- Water rights might be sold to Denver.
- A transmountain diversion could occur from Trappers Lake.
- More measuring devices will identify unused water for other uses.
- A Demand Management program or water leases could have unintended consequences.
- If wealthy people keep buying land and water in the Upper White above Meeker, they will be less interested in agriculture to make a living, resulting in:
  - Less access for citizens.
  - Less flood irrigation, leading to less return flow.

### *Conservation measures observed*

Participants mentioned the following conservation measures they had observed:

- Catch ponds for sediment, which were effective but got silted in.
- Tamarisk and Russian olive removal to reduce water consumption.
- Forest health/ fire risk mitigation activities upriver – participants would like to see more of this.
- Small-scale restoration activities.
- The algae study.

### *Desired conservation measures*

Participants said they would like to see:

- Up-river storage.
- Riparian habitat improvement activities.
- Headgate fixes with streambed re-engineering.
- Multi-purpose infrastructure improvements.
- The investigation of opportunities for underground storage – there already effectively is some aquifer storage, as flood irrigation puts water into the ground that returns to the river later.

### *Use and communication on existing/ ongoing studies and plans*

Participants expressed a desire to see the results of previous plans and studies before doing a new plan to avoid duplication and save money.

In order to learn about the results, and updates on any new planning effort, participants said they would like to get information through the Conservation District's website, with abstracts of the studies posted. Podcasts were also mentioned as a potential communication tool.

### *Thoughts on doing an Integrated Water Management Plan for the White River Basin*

Participants voiced strong support for doing an Integrated Water Management Plan for the basin, expressing desires to see such a plan:

- Be transparent and locally-driven.
- Preserve their way of life.
- Promote cooperation.
- Use voluntary measures.
- Involve shared sacrifices.
- Work like the land-use plan.
- See what can be done without hurting water rights.

Participants expressed a high level of willingness to be involved and recommended the Conservation District as the entity to lead the effort.

### **Buford (Upper Basin) Meeting, January 29, 2020**

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The thirteen participants at the Buford meeting reported that the majority of the water use in their area was for agriculture: flood irrigation for hay, as well a grazing in the late season after the hay harvest. Fishing was reported as another use, with some boating: dories and kayaks on the river, as well as boating on Lake Avery and Trappers Lake.

#### *Water issues affecting participants*

Meeting participants mentioned the following water issues that affect them:

- Water rights in the area are transitioning from agriculture to recreation as a priority, and some believe water rights being dedicated to ponds for fishing are causing problems with temperature, disease, nutrients and flows in the river.
- Water quality and the health of the river are concerns, for both practical and recreational purposes.
- There is a lack of water storage in the Upper White. Participants noted current efforts to expand Lake Avery, and said additional reservoirs were also needed. They noted that releases from Lake Avery helped keep a call off the river the previous year.
- Whirling disease.
- A lack of data on disease and algae.
- Recreational access points lack sufficient services (bathrooms, etc).
- Camping along tributaries during hunting season leads to problems with trash being left behind.

#### *Potential solutions*

Storage to protect and enhance flows was of major interest to the group.

- Participants suggested that upriver groundwater storage possibilities could be helpful, making use of porous soils.
- There was strong support for enlarging Lake Avery.

- Yellowjacket Water Conservancy District was reported to be working on securing water for the future, which will need funding.

### Issue rankings

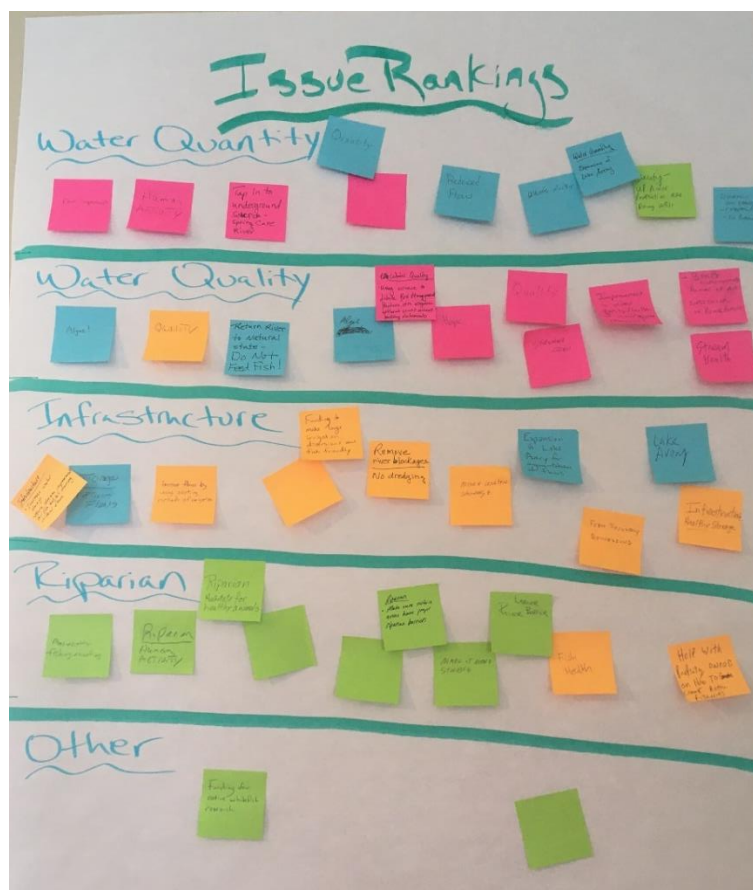
When participants were asked to rank their priorities between Water Quantity, Water Quality, Infrastructure, Riparian and Other categories, Water Quantity received the top number of votes, with Water Quality and Infrastructure close behind. The top Infrastructure priorities listed storage-related issues, like the expansion of Lake Avery.

Water Quality received the highest number of second priority votes. Both those putting it as a first and a second priority mentioned algae prominently, with comments also including a desire to return the river to its natural state, an end to feeding fish, and the need for more science to direct best management practices.

For infrastructure, those who listed it as a third priority, explanatory notes indicated a desire to make irrigation infrastructure more fish-friendly and to remove river blockages and not have dredging.

The riparian category got entirely third and fourth priority votes, with a desire indicated for more buffers and improved habitat and better conditions for fish health. In the “other” category, more funding for native whitefish research was mentioned.

The following picture shows how participants ranked their priorities with one sticky note of each color, with blue indicating their top priority, pink their second priority, yellow their third priority, and green their fourth priority.



### *Changes observed*

Some of the changes participants reported seeing along the river include:

- Illegal blocking of the river for “fish habitat structures,” which some believe actually cause problems with sediment and block fish passage, although some new projects appear to be better. One participant later mentioned that the structures may have been installed to block rafting, as a security measure.
- Reduced flows, especially in the late season.
- Erosion, as described in this US Geological Survey report cited by a participant: *Sediment transport and water-quality characteristics and loads, White River, northwestern Colorado, water years 1975-88*, Water-Resources Investigations Report 92-4031, By: R.L. Tobin  
<https://pubs.er.usgs.gov/publication/wri924031>

### *Priority areas*

Areas mentioned by participants as deserving of particular attention include:

- Lost Creek, where lots of sediment is produced.
- Tributaries, to investigate how ponds and other modifications impact the river.

### *Shortages/ Access issues*

In relation to water shortages and access issues, participants noted the following:

- Meeting participants reported that the situation for irrigation water was ok, except that algae could impede access by clogging pumps and screens.
- Flows are too low for recreation:
  - Warm temperatures are stressing fish.
  - There’s a shortage for fisheries.
- Access is legal but not accessible, lacking services.
- Investigating storing water on Flat-top Dome as a possible back-up water resource for the White River may be worthwhile.

### *Anticipated changes*

Meeting participants expressed concern about the following issues they see potentially coming in the future:

- Colorado River Compact obligations could affect junior water rights holders.
- Cloud seeding could have both impacts and benefits.
- There isn’t much room for increased consumptive use.
- There is vulnerability for existing uses.

### *Conservation measures observed and desired*

Participants discussed the following conservation measures they had observed and their opinions about them:

- The new owners of Westlands are potentially going to modify a V structure in the river and need to be educated.
- Structures have been placed in the river that need to be improved or removed.
- People need to be educated on best management practices (BMP’s)
  - Banks are getting de-vegetated.

- Diversion structures and leaky ditches should be addressed:
  - For the health of the river.
  - To address maintenance problems.
  - Highland Ditch is one example.

*Use and communication on existing/ ongoing studies and plans*

The group expressed that education is very important:

- To generate community support for storage.
- Keep it simple, not too technical.

The group suggested the following as good channels of communication:

- Newsletters, with links to on-line information.
- Community meetings.
- A diversity of outlets.
- Clinics with tv's.

*Thoughts on doing an Integrated Water Management Plan for the White River Basin*

The group expressed strong support for doing a plan for the White River Basin, with about 50% willing to be involved. They supported doing the planning section by section to ensure adequate attention to the particular issues in each area. They said the Conservation Districts should lead the process.

Participants expressed concerns about how a plan would be enforced or implemented, and reiterated that livestock in the area was mostly gone.

## Rangely Meeting, January 29, 2020

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When asked how they used the river, the eighteen participants in the Rangely meeting listed the following:

- Education and recreation (boating)
- Agriculture: hay and livestock
- Drinking water
- Industrial: oil and gas, for fresh water and dust control
- Fishing

*Water issues that affect meeting participants and solutions*

When asked about the water issues that affected them, meeting participants listed the following issues, concerns, and potential solutions:

- Water rights and abandonment concerns
- Irrigation
- Riparian
- Mid-August low flows and algae
- Late season tight irrigation

- Sediment in the lake
- Mosquito spraying (concerns about effectiveness, pollution, and the existence of alternatives)
- Livestock watering
- Wild horse impacts
- Water quality for drinking
  - Sediment during high runoff
  - E-coli in late summer in 2017 and 2018
- There's a need for better water take-outs, for trucks getting water, diversions, and for public access.
 

Better takeouts would:

  - Protect water quality
  - Be more functional

### *Issue rankings*

When asked to rank issue areas between Water Quantity, Water Quality, Infrastructure, Riparian and Other categories, Water Quantity got the majority of the top priority (blue) votes, and several second priority votes. Explanatory notes indicated that those listing this as a top priority want sufficient water for irrigation, to protect water rights and for the health of the river. One person voiced support for Wolf Creek Dam. Those indicating water quantity as a second priority also mentioned irrigation and aquatic habitat. The comment was made that sufficient water quantity would help all the other issues.

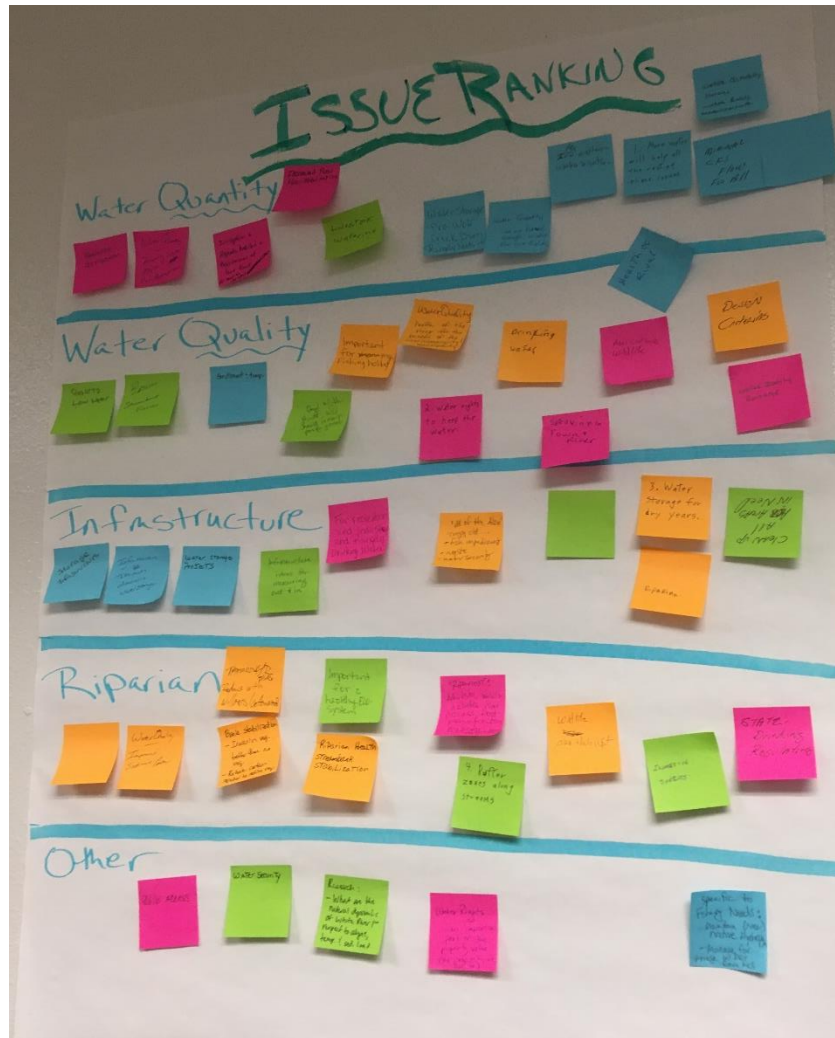
The next largest number of top priority votes were given to Infrastructure, with explanatory notes mentioning both storage and infrastructure improvements for take-outs and diversions. Lower priority votes for Infrastructure mentioned recreation, industry, drinking water, fish impediments, and storage.

Water Quality received a couple of top priority votes, with explanations mentioning sediment, temperature and the health of the river. Second priority votes in this category mentioned agriculture, wildlife and spraying. Lower priority votes specified water quality for drinking water, fishing, health of the river, riparian and streambank erosion issues. One comment noted that if other issues are dealt with, water quality should be fine.

Riparian issues collected a few second priority votes, more third priority votes, and a few fourth priority votes. The second priority votes included mention of a holistic view of river processes. Third priority votes mentioned tamarisk and Russian olive control, but also included the comment that invasive vegetation was better than no vegetation for bank stabilization. Improved sediment control and wildlife were also mentioned. Fourth priority comments mentioned buffer zones, ecosystem health and invasive species.

The "Other" category collected votes from the top to the bottom level of priority. The top priority note said that for fishery needs, there was a need to maintain near native hydrology and manage for triage on dry reaches. Public access and water rights were specified on second priority votes, and water security and research on the natural dynamics of the White river with respect to algae, temperatures and sediment load were mentioned on fourth priority votes.

The following picture shows how participants ranked their priorities with one sticky note of each color, with blue indicating their top priority, pink their second priority, yellow their third priority, and green their fourth priority.



### Changes observed

Changes participants had observed in recent years include:

- Changes to the river in high flow years.
- Improvements in recreational use, due to more maps, signage, and more launch sites.
- Increases in water temperatures, at least on Douglas Creek.
- Tamarisk and Russian olive
- Kenney Reservoir
- Sediment ponds and erosion control structures installed by BLM to reduce sediment inflow to Kenney Reservoir were effective and also had benefits for wildlife and stock watering, but these are no longer maintained.

### *Priority areas*

When asked if particular areas in the basin needed particular attention for specific issues, participants noted the following:

- Sedimentation in Kenney Reservoir
- The whole basin should be included, but split by region into segments, such as:
  - Coldwater fisheries up-river
  - Protected warmwater fisheries downstream (below the reservoir there are critical flow issues)
  - Safety issues below the dam (64 bridge)
  - Tributaries: Douglas and Yellow
- Invasive removal and sediment control

### *Access issues and shortages*

The following access issues were discussed:

- Participants reported that in drought years, pumps get burned up with algae problems, and that communication about dropping flows below the reservoir is important.
- Algae is a long-term issue for intakes.
- Recreational access could improve, with better infrastructure, and issues related to private land.
- Late season low flows limit boating.
- There's a water park possibility, which is perceived positively.

### *Anticipated changes*

When asked about what they anticipate for the future, participants brought up the following:

- Endangered species
- Competition from downstream states as water demands rise in the Southwest.
- Sediment in the lake (with the comment that it's a natural thing).
- Need more storage to:
  - Meet higher demands
  - Address sedimentation
  - Provide more consistent streamflows for fish and flows in the river.
- Calls could start coming on the river
  - There is an in-stream flow right above the reservoir, which they have held off calling for when it's short.
- Water users need measuring devices for their own protection.
- Measuring tailwater could be required.

### *Conservation measures observed and desired*

Participants made the following comments when they were asked about conservation measures they had observed, what they thought about them, and measures they would like to see:

- More measuring devices are needed.
- Sprinklers have pros and cons and potential hydrologic impacts.
- Evaporation from reservoirs is more than if we had in-ground storage.



- Operations out of Lake Avery are cooperative and beneficial for fisheries.
- Habitat work could be done to adjust to lower flows.
- Infrastructure improvements are needed at water take-outs.
- Boat launches could be improved.
- Sediment ponds should be restarted, which could help support late-season flows.
- Water detained for stormwater control by industry could be applied elsewhere.

#### *Use and communication on existing/ ongoing studies and plans*

When asked about the importance of learning about other plans and studies before embarking on a new one, participants noted that the information was important, and they might be missing out on opportunities for partnerships by not knowing about all that's going on.

When asked about what means of communication would be effective for getting information out about studies and plans, participants offered the following ideas:

- Podcasts
- Mailings
- Short summaries
- Conservation District newsletters with links
- Emails
- Feed store and clinic posters and televisions
- Chamber and town signs
- Social media
- Radio (55 Country AM)

#### *Thoughts on doing an Integrated Water Management Plan for the White River Basin*

When asked if they thought doing an Integrated Water Management Plan for the White River Basin was a good idea, participants made the following comments:

- We need to plan, manage and protect our water before someone else does.
- Strong support was voiced, with some agreeing to participate if the effort goes forward.
- We need a living document that can evolve.
- All partners need to be involved – we have tools now to get involvement
  - Get younger kids educated and involved.
  - Riverwatch should be restarted for High School and NWCCC
- There aren't any negatives to planning.
- We should use the CO Water Plan and the Yampa/ White Basin Implementation Plan.
- The planning should be done section by section, with key tributaries included, as noted in the "priority areas" section of this report.

When asked who should lead the effort, participants said the Conservation Districts, which can also help the NRCS put money on private land for projects.

# APPENDIX A: Stakeholder Meeting Packet

## White River Planning Stakeholder Meetings

### Meeting Goals

Answer the following questions:

- What are integrated water management plans?
- What do you want to improve or protect about the river and water access/ water management? Which are most important?
- Could an integrated water management plan be a way to achieve those goals?

### Agenda

I – Welcome/ Purpose of meeting (5 minutes)

II – How do you use streams and rivers? Ranching? Angling? Boating? Drinking? Other? (5 min)

III – Presentation on Stream Management Plans/ Integrated Water Management Plans (15 min)

V – Water Issues & Priorities: Review & add to information collected from previous interviews

- Overview of interview process (5 min)
- Review key questions/ responses to questionnaire: (30 min)
  - What water-based issues most affect your way of life, livelihood, or quality of life?
  - What changes have you seen on the White River or its tributaries?
  - Priority reach or tributary?
  - Has there been any time recently that you were unable to access water? Solution?
- Issue rankings: place sticky notes on pages for issue areas that are most important, with notes about why (10 min)
- Thinking ahead: How do you see these water issues changing over the next 20-30 years? (10 min)
- Conservation Measures (10 min)
  - What conservation measures do you currently see being taken in the White River Basin?
  - Any concerns with these efforts?
  - What conservation measures would you like to see happening in the White River Basin?
- There are numerous studies that have been completed or are in the process of being completed regarding the White River Basin. (10 min)
  - What is the best way for you to learn more about the various programs, plans, and studies available for the White River Basin community and how they may be put to beneficial use by you, a local agency, organization, or group?
- Given what you have heard what do you think of developing a water management plan for the White River Basin? (10 min)
  - If you like the idea, which kind? Stream, Integrated, Watershed?
  - If you like the idea, would you want to be involved?
  - If you like the idea, who should coordinate it?

VIII – Wrap up (10 min)

- Summary of information gathered
- How to contribute more information and ideas
- Next steps

# INTEGRATED WATER MANAGEMENT PLANS

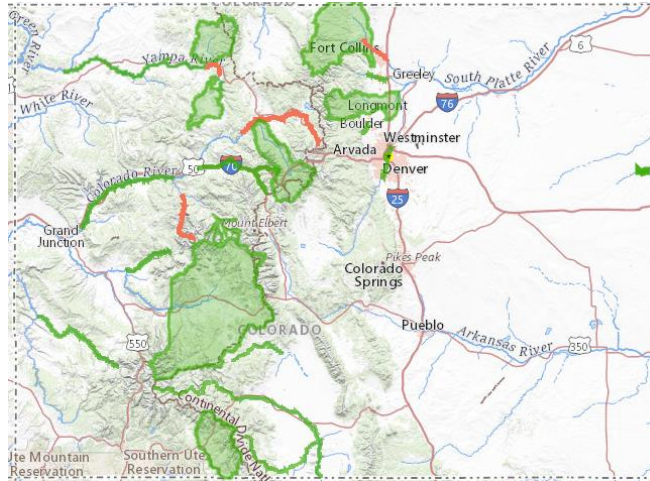
Presentation for the White River Planning Stakeholder Meetings  
January 2020

Hannah Holm, Project Consultant

## Definitions

- Flow/ quantity- focused
  - **Stream Management Plan:** data-driven assessments of river health to help communities prioritize how to protect or enhance environmental and recreational assets in their watershed.
    - > Assess biological, hydrological and geomorphological conditions.
    - > Identify flows & physical conditions needed to support environmental & recreational uses.
    - > Identify & prioritize actions to maintain or improve flows & physical conditions.
  - **Integrated Water Management Plan:**
    - > Stream Management Plan +
    - > Identify ways to meet the water needs of agricultural, municipal, industrial and residential water users.
    - > Goal: multi-benefit projects.
- Quality - focused
  - **Nonpoint Source Watershed Plans:**
    - > Focused on identifying and limiting sources of polluted runoff to streams.
  - **All:** Stakeholder-driven

## SMPs + IWMPs in Colorado



## Why plan?

- **Anticipating** and preparing for trouble:
  - Eagle River: potential impacts of new water development
  - Upper Gunnison Basin: population growth and lower water supplies
- **Reacting** to trouble:
  - Crystal River: stream dry-ups during drought
  - Yampa through Steamboat: temperature problems
- **Exploring** conditions and options:
  - St Vrain and Left Hand Creeks: explore opportunities to enhance resilience
  - Middle Colorado: improve security for all water uses

# Different approaches

- **Geographic scope:**
  - >12.5 mile reach of river –Yampa through Steamboat
  - Entire Upper Gunnison Basin, with six primary sub-basin
- **Goals:**
  - Fix dry-up points – Crystal River
  - Protect existing uses – Upper Gunnison, Middle Colorado
- **Activities:**
  - Flow modeling – Crystal River, Upper Gunnison
  - Infrastructure assessments –Yampa, North Fork of the Gunnison, Middle Colorado
  - Interviews, stakeholder meetings - everyone
- **Projects:**
  - Improve diversion infrastructure –Yampa, North Fork of the Gunnison
  - Temporary water leases - Crystal

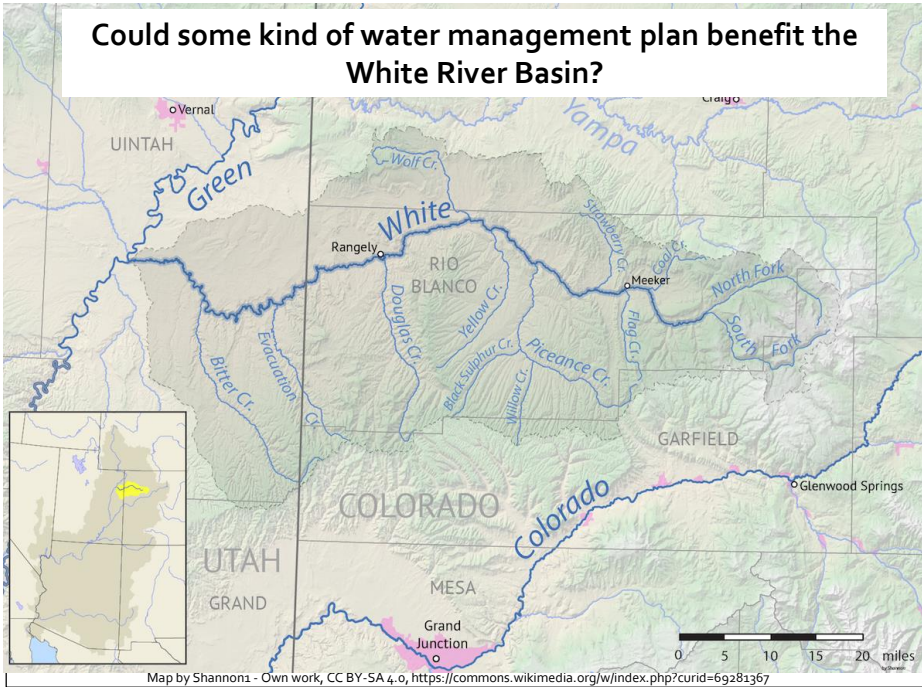
## Basics: How are rivers and streams working, and can we make them work better?

SMIRF ID	Ecosystem Condition										Benefits to Local Communities																
	Ecological Integrity	Flow Regime	Sediment Regime	Water Quality	Network Connectivity	Floodplain Hydrology	Riparian Vegetation	Stream Corridor Dynamics	Structural Complexity	Aquatic Biota	Provisioning	Agricultural Production	Drinking Water Supply	Industrial Processing	Hydropower Production	Regulating and Maintenance	Flood Regulation	Groundwater Recharge	Erosion Control	Pest Regulation	Regulatory Compliance	Cultural	Aesthetics and Intrinsic Values	Symbolic/Emblematic Species	Boating/Recreation	Angling/Recreation	
1.1	1	2	1	0	0	2	3	2	1	1	4	0	1	1	2	3	2	1	1	2	3	2	1	1	1	1	2
1.2	2	3	2	2	3	3	4	1	1	2	2	3	2	2	3	4	1	1	2	2	2	4	2	2	2	4	
1.3	4	3	3	3	1	3	5	3	2	3	3	1	4	4	3	5	3	2	4	2	4	4	2	4	4	5	
2	4	2	4	2	3	2	2	2	2	4	5	3	4	4	2	2	2	2	4	2	4	4	2	4	5	5	
3.1	4	4	4	3	5	4	3	5	3	4	1	5	3	4	4	3	5	3	3	2	3	2	3	1	1	1	
3.2	1	1	1	0	0	1	1	2	1	1	4	0	1	1	1	1	1	2	1	1	1	2	1	1	0	1	2
4	3	2	3	4	2	2	1	5	4	3	4	2	3	3	2	1	5	4	3	2	3	2	3	2	3	2	

FIGURE ES-1. EXAMPLE MATRIX FOR ORGANIZING AND PRESENTATION OF ASSESSMENT RESULTS. RESULTS ARE ORGANIZED AROUND GEOGRAPHIC PLANNING UNITS, ECOSYSTEM CONDITION, AND THE SERVICES RIVERS PROVIDE TO LOCAL COMMUNITIES. THE SMIRF ID DELINEATES A PARTICULAR STREAM SEGMENT AND THE COLOR-CODED NUMBERS REPRESENT THE RELATIVE CONDITION (FROM "POOR" TO "GOOD"), OF EACH COLUMN HEADER .

Explore more at <https://www.coloradosmp.org/>

### Could some kind of water management plan benefit the White River Basin?



## Information Gathering Interview Summary

The White River and Douglas Creek Conservation Districts are leading an effort to determine if the Rio Blanco Community is interested in developing a plan regarding the White River. This may be an integrated water management plan, stream management plan, or any other form of a plan that the community would like. To do this, the Districts developed a Planning Advisory Committee (PAC) to help guide the process. The PAC is made up of individuals with diverse interests and geographically represent the County.

The PAC developed the below questions and a list of 30 individuals across the County to interview as a starting point for discussions about the development of a plan. District staff were able to interview 25 of those individuals and compiled the below information for you to consider and provide much more input into this process. Respondents often gave multiple answers which have all been captured below.

- **What are the water-based issues that most affect your way of life, livelihood, or quality of life as a resident of the White River Basin?**

- **Water Quantity = 54%**

- Water Rights
- Irrigation
- Livestock watering
- Opportunities to lease water
- Abandonment Concerns
- Lack of irrigation Up-river dep-percolation
- Ability to use water right and develop water
- Economics
- Restrictions and Regulations re: wetlands

- **Water Quality = 38%**

- Riparian areas
- Water Quality
- Well water quality
- Fisheries
- Drinking water
- Health of the River
- Spraying of mosquitos in town and upriver
- Cost of domestic water

- **General (or could be considered both quality and quantity) = 8%**

- Recreation: Hunting/fishing/kayaking
- Safety
- Education
- Cost and availability
- Climate Change

- **What changes have you seen on the White River or its tributaries?**

- 14% - Algae
- 7% - Housing developments & Tamarisk and Russian Olive
- 5% - Low streams, Less public access, Noxious weeds, Bank erosion, and Building of Kenny Reservoir stopping ice jams and flooding and improved water quality for town of Rangely
- 4% - Increase populations, More fish structures
- 3% - Changes in use of water (away from ag), changes in hydrology
- 2% - Diseased fish, more fishing, and less livestock, more fenced off riparian areas
- Single Responses - Increased fertilization and livestock manure, Less insects, Change of trout species, Reduced buffer zones, Ponds up-river, More stocking and feeding of fish, More runoff - septic and insecticides, Near or on-stem gravel pits, Lower quality of cottonwood galleries, River and tributaries cutting deeper, Ag reduced Irrigation for fish, Miller Creek Ditch leaking, Energy using more/less water over the years, Decreased quality of river, Higher water temperatures / longer algae growing season, Channel changes, Minimal changes, Domestic wells and/or fish ponds reducing irrigation below them on Little Beaver side, More diverse use of river

- **If there is a section of the river or tributaries that you think needs more attention than others, what would that section be and why?**
  - 42% - Whole River
  - 14% - Additional Storage
  - 6% - Kenny Reservoir and upstream
  - 18% - Issue based rather than river segments
    - Diversions, bank stabilization/riparian, fencing around riparian areas, tamarisk, ESA
  - Single Responses: Meeker to Miller Creek, Include perennial tributaries, Town of Meeker, CR 10 – CR 54, Below Meeker, Up River, Start with tributaries that flow year-round, instream flow rights

- **Has there been any time in recent years that you were unable to access water (consumptive or non-consumptive) from the White River?**
  - 76% - Unable to access water
  - 24% - Able to access water

**If so, what could be a solution to improve that access?**

- 19% each - Water Diversion Structures & Water Storage
- 9% each - Measuring Devices & CPW arrange public access with landowners
- 6% each - Infrastructure, use less water, town watering restrictions
- Single responses: Changes in "shape" of river, Pooling of water in river for pumping, Ground water wells pulling from irrigation, Collaborative water saving projects, Irrigation system efficiency improvements, Ditch cleaning, Increase water and water law knowledge baseline (caution), Remove fences across river
- **Please rank the following by importance to you in regard to the White River Basin.**  
Note: Rankings were 1 - 4 with 1 being most important. Therefore, the smaller the number, the higher it ranked overall. "Other" was optional and only a few were added.
  - 1 - Water Quantity (43 points)
  - 2 - Water Quality (51 points)
  - 3 - Infrastructure (78 points)
  - 4 - Riparian (88 points)
  - Other: Water Rights Protection (1 pt), Water Security (4 pts), Recreation (5 pts)

- **How do you see any of these water issues evolving or changing over the next 20-30 years assuming climate and runoff projections that, in general, suggest less runoff and higher temperatures hold true?**
  - 29% - More Competition / Higher Demand / More Conflict
  - 13% - Quality will be impacted
  - 11% - Water rights will be at risk
  - 7% - Water use will change & Riparian areas will dry up
  - 4% - Runoff timing will change, More variability and variation within the year, Worse conditions
  - Single responses - Adjustments allowing Landowners to continue livelihood, Irrigation practices and storage will have to evolve, Baseline of water use, More moss & algae, Diversion improvements will be important, Longer periods of low-flows



- **What conservation measures do you currently see being taken in the White River Basin? Any concerns with these efforts?**
  - 34% - Irrigation practices (some notes of concern for aquifer with more sprinkler type conservation measures)
  - 21% - Tamarisk and Russian Olive removal (some note concern of lack of follow-up to keep them removed)
  - 10% - White River Algae TAG efforts regarding Algae
  - 7% - No conservation measures happening & some fencing of riparian areas
  - 5% - Kenny Reservoir and catch ponds
  - Single Responses - Diverting full decree to show they are using it but may not really be, Poor storage, Education on water right uses needed, Improvement of ponds to prevent warmer waters from entering river, Improving native species populations / habitat improvements, Expensive town water, Reduced insecticide use
- **What conservation measures would you like to see happening in the White River Basin?**
  - 19% - More reservoir storage
  - 9% - Remove Tamarisk and Russian Olive and replace with natives
  - 4% each - Improve BMP of riparian areas, Water monitoring stations, Rate changes in town, Water efficiency, Collaborative projects to benefit multiple users, Inventory structures, Record keeping (measure flows above and below meeker), more measuring devices, lining of ditches, more sediment ponds in tributaries, monitoring of water usage and right changes
  - Single responses – Increase irr up river to ensure more return flows, Be conscious of evaporative loss, Reduce fish stocking, Reduce bank erosion, Ag use should be priority, Restrict negative human impacts, Big landowners do more, Stop modifying the channel, Reduce and change insecticides being used, Integrate pest management plans with monitoring and application, Remove barriers and catchments, Increase water conserve education in schools, Letters to fishermen asking to clean equipment, Education, Reduce mosquito spraying, I don't see much waste.
- **How important is it that the local communities learn more about programs, plans, and studies that are already developed before developing additional plans such as a stream management plan, integrated water management plan, or watershed plan?**
  - 95% - Very important
  - 5% - Not very
- **What is the best way for you to learn more about the various programs, plans, and studies available for the White River Basin community and how they may be put to beneficial use by you, a local agency, organization, or group?**
  - 11% - Podcasts/webinar/social media
  - 11% - News articles
  - 9% - Community networking meetings
  - 8% each - Help people understand why information is important to them, Spreadsheets and summaries, on-line database and links
  - 6% each - Someone with understanding of all so they can address issues as questions come up, Letting people know where they can go to get answers to questions, Use County TV network between Meeker and Rangely when having meetings/workshops, Advertise podcasts in paper, Div Engineer podcast rules, processes, etc., Phone and email, Word of mouth.
  - Single Responses - Use multiple organizations to drive same message, Local person review information, One-page fact sheets, 2-3 min videos to show at exhibits, individuals are responsible to be informed.

- **Do you believe there is a need for a water management plan on the White River?**
  - 87% - yes
  - 9% - mixed feelings
  - 4% - no
  
- **What is your greatest concern about developing a "plan"?**
  - 22% - It will be put on a shelf and not used
  - 9% each – Outsiders that are unfriendly to local culture are driving this, Make it understandable like the LUP, If it will be used responsibly, Ag needs to be a priority,
  - 6% each - Can we get landowner buy-in, Do we have enough \$ to do it, Include well educated and experience people
  - Single Responses - Where additional water will come from for storage, State's intentions, Be sure it include recreational uses, What is the end goal, Cost and time, Lack of planning will hurt us, Make it project based so on-the-ground projects will get done
  
- **Are you willing to commit time to being involved in the development of that plan?**
  - 87% - Yes
  - 9% - Somewhat
  - 4% - No
  
- **If there is a process to develop a plan, what entity would you prefer to coordinate that effort?**
  - 50% - Conservation Districts
  - 15% - Involve other entities
  - 12% - County
  - 12% - Rio Blanco Water Conservancy District
  - 8% - No agencies, someone with basic knowledge of issues
  - 4% - Colorado Parks and Wildlife
  
- **Any final comments you would like to provide regarding the White River Basin and/or the development of a water plan in Rio Blanco County?**
  - Always consider Ag as priority
  - Consultants are necessary but be sure to get quality
  - Help provide information about the benefits of flood irrigation
  - Involve Ute Tribe
  - Get strong handle on administration of water
  - Look at what hasn't been looked at already
  - Consider County Trust funds for financial support
  - FEMA Flood maps need updated
  - Going about the project in the right way