

**Grand County Stream Management Plan (GCSMP) Update  
 Second Stakeholder Outreach Meeting  
 Tuesday, July 18, from 5:30 to 8:00 PM  
 Granby Public Library, 55 Zero Street, Granby, CO 80446 and Zoom  
 Meeting Summary – FINAL**

**ATTENDANCE**

*Meeting Participants:* Paula Belcher, Andrew Breibart, Larry Burks, Jesse Dickinson, John Ewert, Ben Felt, Kayli Foulk, Tiffany Gatesman, Pierre Glynn, Kirsten Heckendorf, Tim Hileman, Ingrid Karlstrom, Russ Knight, Doug Laraby, Kyle Masterson, Katlin Miller, Katherine Morris, Katie Nichols, Mary Price, Nick Rardin, Becca Rugg, Chris Sammons, Banning Starr, Jen Stephenson, Kent Whitmer

*Facilitation:* Samuel Wallace and Seth Greer

**ACTION ITEMS**

<b>Peak Facilitation</b>	<ul style="list-style-type: none"> <li>• Distribute copies of the presentations given during this meeting to partners.</li> <li>• Reopen the stakeholder survey to elicit further responses from the community.</li> <li>• Compile individual headline exercises into a comprehensive stakeholder vision statement.</li> </ul>
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**WELCOME AND INTRODUCTIONS**

Samuel Wallace, Peak Facilitation (Peak), introduced the agenda and provided stakeholders with a brief background on the GCSMP update and the stakeholder outreach process. Below are key points from the introductory presentation.

- The purpose of the GCSMP update project is to evaluate and improve stream and river health in the Fraser River watershed, Williams Fork watershed, and the main stem of the Colorado River watershed to its confluence with the Blue River in Grand County, collectively known as the Collaborative Effort Area (CEA). This will be accomplished by utilizing results from the technical analysis, known as the Comprehensive Watershed Assessment (CWA), and community input to improve upon the framework established in the original 2010 GCSMP.
- Learning by Doing (LBD), the organization responsible for managing the update process, is a collaborative effort that includes partners from government bodies, water managers, and nonprofits. The LBD focuses on stream and river health in the CEA.
- The GCSMP update focuses on assessing and managing river ecosystems and updating the existing GCSMP within the framework of existing water rights agreements and developments within the County. The stakeholder process seeks to garner input from all interested parties rather than prioritize certain interests and is focused on finding solutions to problems facing rivers and streams within the CEA rather than identifying culprits for these problems. A table that outlines the expectations for what the GCSMP update will and will not accomplish is available in Appendix A of the summary.
- The stakeholder engagement process will operate on certain ground rules of respect for other partners' time and perspectives. Partners who engage in the process are expected to uphold these ground rules.

## **Clarifying Questions**

Meeting participants asked clarifying questions about the process of the meeting and the larger update process. Questions are below in italics, and corresponding answers are in plain text.

*Will the slides presented at today's meeting and the notes being taken be shared with participants?*

Yes, the presentations given during this meeting will be sent out to the entire GCSMP update contact list, along with a detailed meeting summary created based on the notes taken during this meeting.

## **CWA BACKGROUND CHAPTER PRESENTATION**

Seth Mason, Lotic Hydrological (Lotic), introduced the CWA to participants, reviewing the analyses performed in the background chapter and giving an overview of monitoring efforts and the objectives of the assessment. Below are key themes from the presentation and the following discussion.

### ***Lotic and CWA Overview***

- Lotic is a small consulting company based in Carbondale, Colorado, with experience working on other Stream Management Plans (SMPs) on the West Slope. Lotic, along with a team of scientists and engineers, is responsible for providing the technical analysis included in the GCSMP update in the form of the CWA.
- The CWA is divided into four tasks. The first is generating the background chapter. The second is the comprehensive analysis of relevant data in the CEA. The third is drafting a comprehensive report on the findings from the analysis. The fourth is generating interactive visualizations of the data.

### ***Overview of Findings from 2010 GCSMP***

The 2010 GCSMP studied several key indicators of stream and river health within the CEA, including environmental streamflows, water temperature, water uses, geomorphic conditions, water quality, and ecosystem health. Below are the key findings in each of these areas from the 2010 GCSMP.

- Environmental stream flow was significantly altered throughout the CEA, likely due in part to water infrastructure, including reservoirs, diversion pipelines, and canals, and water use on both the Eastern and Western slopes. The 2010 GCSMP identified environmental flow targets. The meeting of identified flow targets varied by season. Environmental flow targets were generally met from April through July during high flow periods, while environmental flow targets were met less often in late summer through fall during low flow periods. Additionally, rapid changes in flow in areas below reservoirs were identified as an area of concern. Streamflows are important metrics to measure because they are a precursor for biological activity in streams.
- Water temperature levels are a common concern among Grand County residents during certain times of the year. Certain areas within the CEA were found to exceed State standards for water temperature in the summer, including the lower Fraser, lower Ranch Creek, the North Fork of the Colorado River, and the area between Windy Gap Reservoir and Williams Fork.
- Water quality metrics were generally positive in the CEA. Several concerns of note were identified, including nutrients on the Colorado River above Windy Gap, algal blooms, and discharges of water with metals at Moffat Tunnel.
- Geomorphology refers to the physical dimensions and behavior of stream channels. The results of the geomorphology portion of the original 2010 GCSMP were varied. Generally, headwater reaches showed healthy geomorphological conditions, while areas adjacent to or downstream from intensive land uses showed poorer results. The most common impacts on

geomorphology were excessive stream bank erosion and fine sediment deposition in meandering streams located in valley bottoms in close proximity to development.

- The ecosystem health portion of the original GCSMP study mostly focused on fisheries and found that degradation of habitat and water quality were the biggest stressors on fisheries within the CEA. Other stressors included angling, inter-annual streamflow variability, inter-species competition, and disease. Two specific topics of concern were the drastic decrease in rainbow trout populations due to whirling disease and the reduction in the ranges of cutthroat trout in the upper Colorado River.

### ***Changes in the CEA since 2010***

Many factors affecting stream health in the CEA have changed in the 13 years since the first GCSMP was published. Below is an overview of major trends and events that have occurred across the landscape and how they will impact future management.

- As of 2019, evergreen forests accounted for the largest amount of land cover within the CEA at 55% of the area, followed by shrubland at 26.9%, wetlands at 4.7%, agriculture at 3.2%, developed lands at 1.6%, and open water at 1.4%.
- Between 2003 and 2012, 95% of the evergreen forests were impacted by pine beetle. Between 2018 and 2020, 31.4% of the evergreen forests have been burned in wildfires.
- The analysis found a 3,000-acre decrease in active agricultural lands between 1993 and 2020. Almost all crops in the area have shown a decrease in acreage in this timeframe, with the exception of bluegrass, which indicates a transition in many former agricultural zones to residential land uses.
- Developed lands in the CEA have undergone several changes since the publication of the original GCSMP. Developed land cover has increased by around 10% since 2004. Patterns of development showed wildland being converted to open space from 2004 to 2011 and then open space transitioning to low- or medium-intensity land uses between 2011 and 2019.
- Population growth in the County was highest between 1990 and 2000. Between 2000 and 2010, the population continued to grow but at a slower rate. From 2010 to 2020, the population has remained relatively steady. The areas that displayed significant growth since the publication of the original GCSMP were Granby and the Fraser River Valley.
- Even low rates of urban development can have outsized impacts on stream health, as urban areas are often sited near rivers. The Fraser River Valley and Granby areas showed the highest rate of impervious ground coverage increase. Impervious ground can lead to urban runoff impacting nearby waterways.
- Streamflow trends show varying directions, magnitude, and predictability. Peak spring flow has shown upward trends in volume in some areas and downward trends in others. Some areas have displayed earlier peak flows and some later. Similarly, low flow measurements have shown conflicting trends in volume and timing throughout the County. While clear trends have not shown themselves in streamflow changes, it is certain that they are changing.
- While the causes for changing stream flows are uncertain, there are several phenomena that are likely related, including development, water usage, and climate change.
- Grand County has robust water infrastructure, including dams, reservoirs, pipelines, and water collection systems. Water diversions from the County to the Front Range include Windy Gap Reservoir, Adams Tunnel, and the Moffat Collection System, which, combined, account for about 313,000 acre-feet of water diverted per year. Diversion rates have shown downward trends in recent years.
- Climate is another important driver of hydrology. Increased trends toward hotter weather will have effects on snowpack in the Rocky Mountains, which is the main source of water in

the CEA. One study has found that with every half degree of temperature increase, a decrease of half an inch to one inch can be expected in snow water equivalent (SWE). Additionally, wildfire effects can confound the effects of climate change by reducing forest canopy and affecting radiation, which in turn impacts snowmelt and runoff. Preliminary studies in Grand County have found that burned areas have earlier runoff periods.

- In the time since the first GCSMP, LBD has been involved in extensive monitoring across the County and has overseen several significant stream health projects on private and public lands.
- The final deliverables of the CWA will include an integrated assessment that clarifies some of the complex relationships between the drivers and effects of stream health that were discussed in this presentation.

### **Clarifying Questions**

Meeting participants asked clarifying questions about the CWA background chapter presentation. Questions are below in italics, and corresponding answers are in plain text.

*Will the CWA integrate data from the weekly collaborative historic user calls?*

The weekly calls present an opportunity to learn about community priorities and management recommendations. They will be considered in the CWA. Further detail about their utilization will follow.

*Regarding the results of the impervious ground cover study, why are the rocky areas near the continental divide not shown as having high imperviousness?*

In this context, the term “impervious” applies specifically to paved impervious areas, not geology.

*What is the time frame for the studies of stream flow trends?*

The timeframe is 2003 to 2021.

*It appears that there is a downward trend in diversions from Denver Water. Is it not the case that more water is being diverted to the Front Range?*

Since the 2001-2002 drought, the quantitative data appears to show that there has been a downward trend in the amount of water diverted from Moffat Tunnel, managed by Denver Water. The reason for this trend may be that Denver Water has been able to reduce water consumption and that they have not returned to pre-drought consumption levels. No representatives from Denver Water are present at this meeting, so this topic can be revisited at a future meeting with them present.

*Is the Grand Ditch included in diversion trends?*

The Grand Ditch is not part of Northern or Denver Water’s infrastructure systems, so it is not included in the figures. The scope of projects within Lotic’s analysis effort will be detailed in the full background chapter.

*Regarding the effects of climate and wildfire on runoff and snowmelt, has Lotic considered the impact of dust on snow?*

There is a lack of specific data on this phenomenon in Grand County. However, other studies in southern Colorado have found that dust cover on snow accelerated the rate of snowmelt this year.

*Has LBD performed monitoring on Williams Fork?*

Yes.

*Is the data that has been collected by LBD available to the public?*

Yes. Most of the data can be found on the Grand County Water Information Network (GCWIN) website. Additional data can be accessed on the Denver Water website by request and on the Northern Water website via search query.

*How will the CWA include studies of wetlands, which store a significant amount of water within the County?*

The CWA focuses on flowing bodies of water, not reservoirs. Studies of streams include riparian wetlands but not all wet meadows and other standing wetlands are included. The SMP update has access to a limited number of resources which constrains the areas of study.

*Do monitoring efforts include the study of beavers and beaver dams?*

Beavers and dams have not been a specific area of study yet. However, an objective of the stakeholder outreach process is to identify project ideas that partners are interested in. Partners are encouraged to present these ideas and recommendations later in the stakeholder outreach process when they begin to identify potential projects to improve river and stream health. Additionally, the Colorado State University (CSU) National Heritage Program has published a comprehensive map of beaver dams along the Colorado River.

*How does the stakeholder group involved in the GCSMP update process compare to other SMP efforts on the West Slope?*

It is difficult to assess this group of partners based on this meeting, but a unique aspect of this stakeholder process is the inclusion of LBD, a collaborative group of stakeholders that is not volunteer based, managing the project. Stakeholder groups that are successful generally involve partners with diverse interests that are committed to the process. A challenge of these processes can be a lack of consistent attendance and participation from partners. LBD and Peak will work to make sure meeting materials like summaries and slide decks are distributed to all interested parties to keep them informed and design meetings that encourage partner involvement and contribution.

*To what extent will the SMP update process involve consideration of future conditions and conceptual modeling?*

Due to the number of possible scenarios for the future and the often unreliable nature of predictive modeling, Lotic is not monitoring for future conditions. LBD is collecting data to provide a baseline understanding of stream and river health, with the objective of using the information to formulate adaptive management strategies and respond to future changes. Monitoring plans regularly include a gap analysis to plan for changing data. Additionally, LBD was created through Inter-Governmental Agreements (IGAs) to ensure continued monitoring and commitment to stream health. Regardless of membership, LBD will remain in operation in the future.

*Are there current gaps in data due to a lack of participation by private property owners, and is landowner outreach necessary?*

The CWA will include a section on data gaps. One of the important roles of partners in the community is addressing how to fill these gaps. LBD does not possess the on-the-ground knowledge related to potential absentee landowners that some partners may have, so it is important to share and address these issues as part of the stakeholder process. Partners are encouraged to contact other community members who may be interested in participating in this process to communicate how participation will benefit them and the larger community.

*Has there been monitoring by other parties on private lands?*

Tiffany Gatesman, Gatesman Environmental, has received permission from certain landowners on the North Fork of the Colorado River to access their lands and has been performing data collection.

## **OVERVIEW OF STAKEHOLDER SURVEY**

Samuel presented the results of the stakeholder survey that was sent out prior to the start of the stakeholder engagement process. Below are key themes from the presentation and the ensuing discussion.

- The survey was circulated to elicit responses from the broader community, including community members who may not attend stakeholder meetings. The survey was posted on Grand County social media platforms and circulated to several contact lists, including the full contact list for the GCSMP update process. In total, the survey received 132 responses.
- The goal of the survey was to collect data on community values, concerns, priorities, and perceptions, which will be utilized in combination with the CWA to make decisions and guide future efforts.
- The first question asked what the streams and rivers of Grand County meant to respondents. The most common theme in the responses identified streams and rivers as the lifeblood of the community, improving quality of life and providing an identity for the County. Other common answers included the dependence of Grand County residents' livelihoods on rivers and streams, the recreational benefits of rivers and streams, and the ecosystem services rivers and streams provide, including wildfire risk mitigation and drinking water.
- The second question asked respondents to describe in three words the aquatic habitat of Grand County. The four most common words were threatened, endangered, stressed, and beautiful.
- The third question asked respondents to characterize the health of aquatic habitats in Grand County on a five-point scale ranging from very poor to very good. The most common answer was that streams and river health is average, followed by poor, good, very poor, and unsure, respectively. No respondents selected "very good" as an option.
- The fourth question asked respondents to rank their concerns about the following risks to aquatic health on a scale of one to five. The answer that garnered the most concern was increasing water temperatures, followed closely by sediment impacting fish habitat, changes to river and stream flows, and water quality of rivers and streams, respectively. There was a more significant gap between the other answers and the answer of least concern, physical barriers to fish movement.
- The fifth question asked respondents to indicate the three highest risks that they perceived to streams and rivers in the County out of 14 options. The top two risks identified were low flows/high temperature and increased diversions out of rivers and streams, respectively, which were selected significantly more than the third-place option, climate change impacts on water availability.
- The sixth question asked respondents to rank the following seven goals in terms of priority. The most highly ranked answer by far was maintaining target flows to support river and stream health, followed by maintaining water temperatures; protecting and restoring wetlands and riparian habitats; and improving and enhancing streambed conditions, respectively. After another relatively large drop in priority, the fifth most prioritized option was addressing specific water quality needs, followed by another steep drop before the two least prioritized options, increasing channel stability and improving existing water diversion structures, respectively.
- The seventh question involved providing contact information and was not included in the presentation.

- The eighth question asked respondents to list topics that they would be interested in learning more about related to the GCSMP update process. Common themes included wildfire restoration, Front Range water diversions, maintaining healthy flows and water temperature, watershed accounting, wildlife and habitat, and opportunities for community involvement.
- The ninth question elicited additional feedback or comments from respondents. Common questions included clarifying the objectives of the SMP and the roles of different organizations in the process. Respondents also provided recommendations for projects, which will be discussed later.
- The next several questions were meant to gather demographic information about survey participation. The tenth question asked respondents about where they lived. The most common response was the other category, of which most answers were located in the Front Range. The most common locations within Grand County for respondents were Granby, Fraser, and Tabernash.
- The eleventh question asked respondents about their residency status in Grand County. Most were full-time residents, with some people indicating part-time status and a few selecting visitor status.
- The eleventh question collected information about respondents' careers. The majority of respondents indicated that they were retired, followed by careers in environmental and nonprofit organizations, small businesses, and careers in outdoor recreation.
- Some key takeaways from the survey results were that waterways are the foundation of the Grand County community and that most respondents perceived them as being threatened. Participants appeared to be particularly concerned about high temperatures and low flows in waterways and were interested in finding opportunities for collaboration.

### **Clarifying Questions**

Meeting participants asked clarifying questions about the survey presentation. Questions are below in italics, and corresponding answers are plain text.

*Would you consider respondents to the survey to be well-educated?*

Most of the people who responded had some sort of relationship with water, especially regarding livelihood. It is important to consider whether there are important voices and perceptions within the County that are missing.

*How do these results compare to the 2010 GCSMP?*

The original GCSMP process did not include a stakeholder outreach process, so there is no basis to compare these results. However, the results from this survey will prove useful to compare to future surveys and outreach efforts.

*Is the number of respondents (132) considered a good response rate?*

A more important metric to consider than the number of respondents is the representation included in the pool of respondents. Demographic questions can help evaluate the representativeness of the survey. Partners should consider ways to engage communities that are less represented in the responses.

*Is the survey still open? Should we continue to circulate it within the County?*

Currently, the survey is closed, but LBD will discuss reopening and recirculating it.

### **VISIONING EXERCISE**

Partners participated in an exercise called the headline activity, in which they provided a fictional headline, subheading body text, quotes, and optional picture describing a newspaper article that details their vision for the results of a successful GCSMP and its effect on stream and river health in the CEA in ten years' time. There was no time during the meeting to present and discuss the results. Peak will synthesize key themes from individual exercises into a comprehensive stakeholder vision statement, which will be presented at the next stakeholder outreach meeting to receive feedback.

### **NEXT STEPS**

- Peak will circulate the summary from this meeting and copies of the slide decks that were presented to the stakeholder contact list and will compile the headline exercises into a stakeholder vision statement to present to stakeholders at the next outreach meeting.
- The next stakeholder outreach meeting will take place in September in person at a location in Grand County. Further details will be released closer to the date.



**APPENDIX A – GCSMP UPDATE IS/IS NOT TABLE**

<b>The GCSMP:</b>	
<b><u>IS</u></b>	<b><u>IS NOT</u></b>
A Stream Management Plan - Data driven assessments on holistic river health to determine where and how our rivers are impaired.	An Integrated Water Management Plan - Consumptive water use planning (ex. drinking water, irrigation, and industrial).
The development of strategies for effective communication and use of environmental flows within the confines of the existing legal framework and water rights allocations.	An attempt to reverse water development projects that are operating or have been approved.
A way to identify and prioritize management actions that maintain or improve river conditions.	A way to address consumptive water needs.
An update of an existing SMP.	A watershed plan or other new and broader planning effort.
A community effort focused on the needs of the river and aquatic habitat with opportunities for stakeholder feedback and input.	Focus on specific individual stakeholder water needs.
Focus on collaboration and solutions for changes in river conditions.	Finding a culprit for changes in river conditions.
Focus on rivers and streams.	Focus on lakes or reservoirs.
Geographic scope: LBD’s Cooperative Effort Area.	Grand County watersheds in their entirety.
Address environmental water needs (ex. target flushing flows).	Address agricultural, municipal, industrial, and recreational water needs.