Grand County Stream Management Plan (GCSMP) Update
Full Stakeholder Group Meeting
January 20, 2026, from 5:30 PM to 8:30 PM
Meeting Summary – FINAL

ATTENDANCE

In-person participants: Maura Bishop, Travis Bray, Tom Caldwell, Mark Coleman, Brian Craig, Adam Cwiklin, Anna Drexler-Dreis, Tony Eason, Steve Fitzgerald, Ashley Garrison, Tiffany Gatesman, Randy George, Daniela Gosselova, Kristin Green, Evie Guay, Miguel Hamarat, Becca Johnswold, Ingrid Karlstrom, Stephen Klobucar, Russ Knight, Rob Kruger, Steve Kudron, Newton Logan, Katherine Morris, Katie Nicholls, Conor Peters, Jen Stephenson, and Tracy Weddle

Virtual participants: Courtney Bennett, Neal Misbach, Elizabeth Newsom, Rich Newton, John Reddan, and John Tilstra

Technical consultants: Johannes Beeby, Kayli Foulk, Brad Johnson, Erin Stewart, John Yager

Facilitation team: Samuel Wallace and Lauren Cortez French

GCSMP UPDATE OVERVIEW

The facilitator, Samuel Wallace from Peak Facilitation Group, provided a brief overview of the GCSMP update's purpose and the process for updating the plan. His remarks are summarized below.

- At the highest level, the purpose of the GCSMP is to provide a roadmap for maintaining a healthy and resilient stream system within the Cooperative Effort Area (CEA) in Grand County by protecting, monitoring, and restoring aquatic habitat while supporting local water uses and retaining flexibility for future water operations.
- The GCSMP update process aims to do this by combining technical information with stakeholder input to identify objectives, priority areas, and, ultimately, cooperative restoration projects for implementation in the CEA.
- The GCSMP is a data-driven assessment of holistic river health intended to determine where and how rivers within the CEA are impaired. Furthermore, the plan aims to identify and prioritize management actions to maintain or improve river conditions.
- The plan exists within the confines of existing legal frameworks and water rights allocations. The scope of this update does not include consumptive water-use planning, lakes and reservoirs outside the CEA, or attempts to reverse water development projects that are in operation or have been approved.
- Meeting participants are asked to respect the following ground rules:
    - Listening to understand, not respond.
    - Allow every voice to be heard.
    - Participate in the discussion.
    - Treat everyone with respect.
    - Discuss ideas, not people.
    - Focus on the topic at hand.
    - Respect everyone's time.
    - Talk about what you think and know; let others do the same.
- Phase 1 of the GCSMP update was conducted in 2023 and included a comprehensive watershed assessment and a stakeholder engagement process, both of which informed components of Phase 2.
- Phase 2 began in early 2025 and was completed in late 2025. Phase 2 included (1) grading the condition of stream reaches within the CEA, (2) prioritizing stream reaches based on grades and goals, and (3) developing communication tools for the GCSMP update.

- The goal of Phase 3, the final phase, is to identify, evaluate, and prioritize potential habitat improvement projects within the CEA, and to develop an implementation plan outlining the highest-priority projects.
- The Stakeholder Advisory Committee (SHAC) is a smaller group of stakeholders that reviewed and provided feedback on each stage of Phase 2. The SHAC will continue to provide input and direction to the technical consultants and Grand County Learning By Doing (LBD) in Phase 3.
- The objectives of this meeting are to:
    - Learn about the results of the stream reach grading and prioritization assessments.
    - Hear about the upcoming GCSMP website and new data tools.
    - Stay up to date on the next phase of the planning process.
    - Celebrate the completion of Phase 2!

PRESENTATION ON STREAM REACH GRADING AND PRIORITIZATION RESULTS

The Phase 2 technical consultants, Erin Stewart and Kayli Foulk from LRE Water and John Yager from Muller Engineering, presented the process and outcomes of the stream reach grading and prioritization assessment. Their presentation is summarized in the sections below.

River Health Assessment Framework Structure

- The stream health assessment framework designed for this process comprises seven stream health variables organized into three categories: watershed, riverscape, and channel. Each variable is associated with two or more metrics. There are twenty-four metrics total.
- All the stream health variables are interrelated. Many of the variables, such as aquatic ecosystems, are influenced in some way by all the other variables. Those variables, in turn, influence many, or even all, of the other variables.
- This framework was carefully designed to ensure it is representative of the available data and the goals of the GCSMP. The framework used over 9 million lines of data collected across Grand County, along with several new datasets to fill data gaps.

River Health Assessment Framework Variables

- **Flow regime:**
    - Flow regimes drive stream function, shape aquatic habitats, and maintain channel form by driving sediment movement and providing steady water for aquatic and plant life.
    - The metrics that informed flow regime grades were annual 3-day peak flows, summer base flows, and winter base flows. Grades were assigned based on how often the flows met reach-specific flow targets.
    - Flow regimes are influenced by weather patterns and water management, rather than stream restoration efforts. However, flow dynamics can be impacted by flow regime and improved through stream restoration efforts.
- **Sediment regime:**
    - Sediment regimes shape aquatic habitats by forming pools, riffles, and bars, and support natural processes, such as floodplain connectivity and nutrient cycling.
    - Sediment regimes can become imbalanced by dams, diversions, post-wildfire runoff, heavy development, and other local channel conditions.
    - The metrics that informed sediment regime grades included indicators of watershed sediment supply (from development and wildfires), local sediment supply (from nearby sources like stream banks), and sediment continuity and transport (as affected by dams and diversion structures).

    - Stream restoration projects can encourage more balanced sediment regimes by stabilizing sources of watershed and local sediment supply and enhancing channel geometry to improve sediment transport and continuity.
- **Water quality:**
    - Water quality supports aquatic life, as well as recreation, agriculture, and community health.
    - Because it is responsive to runoff, erosion, pollution, and other upstream changes, water quality reflects watershed and land-use conditions and can provide early warning signs of disturbances or imbalances in stream health.
    - The metrics that informed water quality grades were total nitrogen, total phosphorus, pH, dissolved oxygen, and total iron. Grades were assigned based on comparisons of water quality data against state standards or benchmarks, with refined thresholds to distinguish relative conditions among high-quality streams.
    - There are many types of stream restoration projects that can improve water quality, including bank stabilization, riparian vegetation enhancements, and floodplain reconnection.
- **Stream temperature:**
    - Stream temperature determines which aquatic species survive and thrive. Temperature affects oxygen levels and influences fish metabolism.
    - Stream temperature is closely linked to flows, riparian shading, and groundwater interaction and can be affected by land-use changes.
    - Stream temperature grades were assigned based on exceedances of chronic (weekly average) and acute (daily maximum) temperature thresholds.
    - Stream restoration projects, such as riparian shading enhancements, floodplain reconnection, and channel reshaping, can help reduce stream temperatures.
- **Riparian:**
    - Riparian zones serve as ecological buffers between land and water systems, filtering pollutants, regulating water temperature, and providing essential habitat and migration corridors for wildlife.
    - Riparian grades were assigned based on measures of floodplain confinement, floodplain fragmentation, and riparian condition.
    - Riparian conditions can be improved through stream restoration projects that increase plant diversity and density and reconnect lower-functioning riparian areas to the adjacent channel.
    - Floodplain confinement and fragmentation are often driven by development and natural geologic features and are not as easily influenced by stream restoration efforts.
- **Geomorphology:**
    - River dynamics, such as channel form and stability, control habitat diversity, sediment balance, and long-term stream function.
    - Healthy rivers are dynamic, adjusting naturally to changes in flow, sediment loads, and vegetation.
    - Geomorphology grades were assigned based on indicators of planform dynamics (horizontal/lateral features, such as meanders) and profile dynamics (vertical/longitudinal features, such as slope and channel depth).
    - Stream restoration projects that can improve geomorphology include channel reshaping in areas affected by development or other stressors.

- **Aquatic ecosystems:**
    - The condition of aquatic ecosystems is closely tied to overall stream health. The presence and community composition of fish, macroinvertebrates, and other biological life reflect long-term and cumulative conditions.
    - The metrics that informed aquatic ecosystem grades were macroinvertebrate habitat, trout spawning habitat, macroinvertebrate communities, and fish communities.
    - Stream restoration projects that enhance habitats, stabilize flows, and improve water quality can positively influence aquatic ecosystems.

Grading Criteria, Weighting, and Results

- Each stream reach was assigned a grade for every stream health variable, unless there was insufficient data or no set target available to inform the metric grades.
- The variable grades were combined into an overall stream health grade for each reach using a weighting framework that assigns weights to stream health variables based on community values and potential project influence.
- Each grade, 'A' through 'F,' is associated with a specific impairment level and management needs.
- The original grading criteria were significantly revised based on SHAC feedback to ensure that an 'A' grade truly represents pristine, self-sustaining stream conditions. These changes reflect a more conservative approach that sets a higher, more realistic standard for stream health.
- Key takeaways from the final stream reach grading results include:
    - Temperature and sediment stress are basin-wide issues, as indicated by the widespread C and D grades.
    - Water quality and aquatic ecosystem grades were mostly within the B and C ranges, with some isolated D and F grades indicating concerning hotspots.
    - Headwater streams are highly resilient, with overall grades mainly within the A and B ranges.
    - Most overall reach grades fall within the B and C ranges, indicating functional but impaired conditions; neither pristine nor severely degraded. In general, these streams will benefit from moderate, not extreme, intervention.

Stream Reach Prioritization Process and Results

- The next step in Phase 2 was to prioritize stream reaches ahead of Phase 3's stream restoration planning efforts.
- The technical consultants developed a set of 'prioritization elements' to ensure that reach prioritization accounted for the stream reach grading results, stakeholder management goals, and the extent to which a reach would benefit from stream restoration activities.
- First, the technical consultants worked with LBD and the SHAC to identify five GCSMP themes and associated goals:
    - **Community engagement:** Collaboration and communication among landowners, agencies, and residents to build awareness, increase participation, and create shared stewardship of Grand County's rivers and streams.
    - **Water management and stream flow:** Maintain and enhance streamflows that support ecosystems, recreation, and local economies while increasing flexibility and resilience in water management.

- **Aquatic habitat:** Protect and restore fish and macroinvertebrate habitats by improving in-stream and riparian conditions, supporting biodiversity and watershed resilience.
- **River form:** Maintain river stability, connectivity, and sedimentation balance through post-fire recovery, channel and floodplain restoration, and healthy riparian systems.
- **Water quality:** Improve and maintain clean, cool, and healthy water by addressing high temperatures, sediment, and nutrients through shading, monitoring, and adaptive management.

- The technical consultants examined the GCSMP goals and identified 10 'prioritization elements' that reflect river functions, stressors, and resource needs that can be measured using the data gathered during the stream reach health assessment. For each prioritization element, the associated metric and quantification method are listed in the table below.

Prioritization Elements	Metric	Quantification
Thermal stress	Stream temperature	Minimum grade
Fire impact	Wildfire burned area	1-5 (A-F)
Sedimentation	Local supply	1-5 (A-F)
Nutrient condition	Nitrogen and phosphorus	Minimum grade
Floodplain connectivity	Riparian fragmentation	1-5 (A-F)
Riparian potential	Riparian condition	1-5 (A-F)
River form	Planform dynamics	1-5 (A-F)
Ecological value	Aquatic ecosystem metrics	Minimum grade
Reach length	-	Percentile of maximum
Public access	-	Percentage of reach that is publicly accessible

- Linking the prioritization elements to established grading metrics allows stakeholders to objectively compare reaches and align restoration priorities with measurable indicators of river health.
- Each prioritization element was assigned an "alignment score" reflecting how closely it aligns with the five management themes and associated goals. Mapping prioritization elements to goals shows how restoration actions connect to desired outcomes.
- The table below shows where the themes (listed across the top row) and prioritization elements (listed in the first column) intersect, suggesting where restoration actions provide the greatest overall benefit across multiple themes.

Prioritization Element	Water Management & Flow	Community Engagement	Water Quality	River Function	Aquatic Habitat	Alignment Score
Reach Length	✓	✓	✓	✓	✓	**5**
Public Access	✓	✓	✓	✓	✓	**5**
Thermal Stress	✓		✓	✓		**3**
Fire Impact			✓	✓		**2**
Sedimentation	✓		✓	✓		**3**
Nutrient Condition			✓			**1**
Floodplain Connectivity			✓	✓		**2**

Prioritization Element	Water Management & Flow	Community Engagement	Water Quality	River Function	Aquatic Habitat	Alignment Score
Riparian Potential	✓	✓	✓	✓	✓	**5**
River Form	✓	✓		✓	✓	**4**
Ecological Value	✓	✓	✓	✓	✓	**5**

- All metrics, prioritization elements, and alignment scores were combined into a single tool that provides an objective, data-driven prioritization framework for stream reaches.
- The tool scored each of the 42 stream reaches based on physical, chemical, and biological conditions, as well as alignment with management themes.
- Using the numerical scores generated by the tool, reaches were categorized into 'high,' 'medium,' and 'low' priority tiers, with each tier linked to its corresponding numeric value.
- Key takeaways from the stream reach prioritization results include:
    - The top three priority reaches are 'Willow Creek 2,' 'Colorado River 4,' and 'Colorado River 2.' These reaches score the highest overall because of their significant impairment combined with their strong alignment to management themes.
    - High-priority reaches tend to have multiple overlapping stressors, including high thermal stress, high sedimentation, nutrient enrichment, and limited floodplain connectivity.
    - Many high-priority reaches have moderate-to-high public land percentages or good public access, making them logistically feasible for on-the-ground restoration and monitoring.

Clarifying Questions on the Phase 2 Process and Deliverables

Meeting participants asked the technical consultants questions about Phase 2. Questions are indicated below in italics, followed by the corresponding responses in plain text.

Where is Church Creek (Reach 'C-CH'), and can it be seen from a public road?

The portion of Church Creek included in the assessment spans south from County Road (CR) 40 until it intersects with Willow Creek. It receives effluent from the Three Lakes Water and Sanitation District. It is visible on either side of CR-40 where it crosses under the road.

Ten reaches were assigned a prioritization score of 2.5, with five of them being "high priority" and the other five being "medium priority." Why were five of those assigned 'high-priority' status, while the other five were assigned 'medium-priority' status?

Before calculating scores, the technical team decided to cap the number of 'high-priority' reaches at 10 to ensure the prioritized list was useful and informative for guiding Phase 3 work. While the scores on the handout are rounded to one decimal place, the reaches were ranked and assigned 'high' and 'medium' priorities using the raw numbers, which include more decimal places.

Is there public access for the highest priority reach, 'Willow Creek 2'?

Yes. As part of LBD's Willow Creek restoration project, a portion of land was leased to Colorado Parks and Wildlife (CPW) to designate a State Wildlife Area (SWA). The SWA is a publicly accessible area with a parking lot.

Will any beavers or muskrats, or beaver dams, be removed during stream restoration projects?

The goal is to prioritize working with beavers and muskrats during stream restoration, using their existing habitats in project design whenever possible rather than removing them.

Comments on the Phase 2 Process and Deliverables

Meeting participants provided comments on the Phase 2 process and deliverables. Comments are summarized below.

- Beavers affect all of the metrics in the 'aquatic ecosystem' variable, as well as nearly all of the other stream health variables. Hopefully, beaver health and the beneficial effects of beavers will be considered more explicitly in the next phase of the GCSMP update.
- The small differences in decimal points between all the reaches with a prioritization score of 2.5 may not represent a tangible difference. Partners should examine these reaches more closely when developing restoration projects in Phase 3.
- It would be helpful to have photos of each reach on the web map, which will eventually be located on the GCSMP website.
- It would be helpful to have three maps of the stream reaches: one for high-priority, one for medium-priority, and one for low-priority.

GCSMP UPDATE COMMUNICATIONS OVERVIEW

Becca Jonswold, Grand County LBD, presented the data visualization and communication materials developed and under development for the GCSMP update. Her presentation is summarized below.

- Once completed, the updated GCSMP will live on a website where it can be updated and interacted with as a living document, rather than a one-time publication.
- The GCSMP website will host an interactive mapping platform where users can view stream reach locations, general details, reach grades, priority rankings, and the data and methodology used to assign those grades and rankings.
- The website will also maintain 'project pages' for each active GCSMP stream restoration project. These pages will communicate project objectives and implementation updates, demonstrate success through key data points, and highlight lessons learned and areas for improvement.
- Much of the data used in the stream reach grading and prioritization framework was accessed through the Grand County Water Information Network (GCWIN). GCWIN is a non-profit organization focused on water quality monitoring, data storage, and data sharing. GCWIN has been developing a publicly accessible centralized data platform where users can explore, query, visualize, and download over 9 million lines of data.
- The GCWIN data platform will feed into the GCSMP interactive mapping tool. With this integration, stream reach grades will be automatically updated as new data becomes available.
- To ensure the GCSMP website is user-friendly, accessible, and consistent in its look and feel, LBD hired Virga Labs to develop a suite of GCSMP logos, icons, fonts, and a custom color palette. These features will be used throughout the website, including in the web mapping and data visualization tools.
- Once the GCSMP website is built, a group of interested stakeholders will be asked to conduct beta testing and provide feedback on the user experience. Stakeholders interested in participating in beta testing can contact Becca.
- The last step of the GCSMP update will be launching a public outreach strategy to communicate the plan to a broader range of stakeholders and the general public.

PHASE 3 INTRODUCTION AND NEXT STEPS

The technical consultants for Phase 3 of the GCSMP Update, Brad Johnson from Johnson Environmental Consulting and Johannes Beeby from Stillwater Sciences, introduced themselves and provided a brief preview of Phase 3. Their remarks are summarized below.

- Brad Johnson, Johnson Environmental Consulting, is a wetland and riparian ecologist. Brad developed the original River Health Assessment Framework, which served as the basis for the GCSMP update's stream reach grading methodology.
- Johannes Beeby is a river scientist and designer with Stillwater Sciences. He has 15 years of experience in river restoration and watershed assessments, with a focus on geomorphology.
- Johannes and Brad have collaborated on project prioritization, design, and implementation for similar processes in Colorado, including other projects in the Grand County area.
- In Phase 3, Johannes and Brad will use the outcomes of LRE Water and Muller Engineering's stream reach grading and reach prioritization to develop projects that improve river health and meet stakeholder goals. In addition to the Phase 2 deliverables, they will consider factors including ecological uplift capacity, land ownership, feasibility, costs, and alignment with stakeholder goals.
- The end goal for Phase 3 is to produce a prioritized list of stream restoration projects to guide future work in Grand County and to develop concept designs for the five highest-priority projects that LBD and its partners can implement over the next 5 to 10 years.
- Types of stream restoration projects that Brad and Johannes may propose range from smaller-scale approaches, such as process-based restoration or cattle-grazing buffers, to larger-scale approaches, such as gravel augmentation or channel reshaping.
- Like in Phase 2, Johannes and Brad will seek input from the SHAC on project-level goals and project prioritization throughout Phase 3.

Clarifying Questions on Phase 3
Meeting participants asked Brad and Johannes clarifying questions about Phase 3. Questions are indicated below in italics, followed by the corresponding responses in plain text.

Will Phase 3 involve coordination with other local planning efforts, such as the Grand County Wildfire Ready Action Plan (WRAP) or the Town of Fraser's stream improvement planning?
Yes. The technical consultants and LBD plan to communicate with other local planning efforts to identify opportunities for collaboration on multi-benefit projects.

The 'Colorado River 4' reach is 14 miles long. Could that reach be divided and the sections regraded to identify local-scale conditions that might warrant more site-specific projects?
Phase 3 will consider site-specific conditions across the reaches when developing projects, rather than relying solely on overall reach grades. There might be multiple proposed projects within a reach, even though the reach was graded as a single entity.

OPEN HOUSE SESSION
Meeting participants had the opportunity to learn more about the GCWIN data platform, the stream reach prioritization results, and/or the stream reach grading framework by visiting various interactive stations following the presentation portion of the meeting.