

December 16, 2022

RE: Comments for the Draft Strategic Plan for Climate-Smart Natural and Working Lands

Dear Ms. Boag and Ms. Boysen,

Thank you for the opportunity to provide feedback on the draft Colorado’s Strategic Plan for Climate-Smart Natural and Working Lands (the Plan). We acknowledge the tremendous amount of work, outreach, and coordination that went into drafting the Plan, and we appreciate the ability to comment on its contents. This letter was drafted and submitted by interested members of the Colorado Healthy Headwaters Working Group (“HHWG”) and represents the views of those groups and individuals who signed onto this letter. HHWG is a statewide working group established in 2019 to help coordinate efforts to scale up and increase the pace of headwater restoration across Colorado. HHWG is composed of many different entities including federal and state agencies, nonprofits, restoration practitioners, funders, and academics. HHWG focuses on opportunities to improve policies and remove barriers to scaling up headwater restoration, in addition to supporting on the ground projects. The groups who signed are also working on agricultural strategies to improve resilience to climate change impacts, and thus we included comments on the Agricultural Lands section of the Plan.

Healthy headwaters are essential for Colorado’s water-resilience against climate change, and they support our way of life and enhance our statewide water security. Maintaining and restoring the health of Colorado’s natural water infrastructure (including wet meadows, riparian areas, and wetlands) in source watersheds is crucial as climate change continues to adversely affect water resources for people and nature. The science is clear that healthy, functioning watersheds provide multiple ecosystem services at higher levels than degraded watersheds – ecosystem services that benefit all water uses and users, including carbon sequestration, and thus our comments are centered on improving information and actions in the draft Plan to support large-scale watershed restoration.

Executive Summary

We appreciate the inclusion of the four strategies listed under Wetlands and Riparian Areas, including the protection and restoration of wetlands as an important climate strategy and tool to mitigate greenhouse gasses.

Agricultural Lands

We appreciate the identification of strategies and opportunities to improve climate mitigation on agricultural lands.

We recommend the addition of another priority strategy focused on research:

Research alternative crops and regenerative grazing practices that may be able to increase carbon sequestration while being more resilient to reduced and increasingly

variable water supplies. The identification and broad adoption of such crops and regenerative grazing practices would have multiple benefits, including increasing carbon sequestration while also keeping agricultural land in production despite reduced water availability.

Grasslands and Shrublands

Mesic areas, often created by springs or ephemeral drainages, are a very important component of grass and shrublands for both wildlife and livestock, especially Sage Grouse chicks.¹ Mesic areas often provide the only water and tender forage for miles around and thus should be a priority habitat type to preserve and restore if degraded. Healthy functioning mesic areas/wet meadows store more carbon than degraded mesic areas.²

We recommend including information about the importance of mesic areas on page 16 of the Plan.

We also recommend adding to the 2nd bullet under Priority Strategies, on page 17, the following: Support identifying and prioritizing the preservation of healthy mesic areas and the restoration of degraded mesic areas.

Wetland and Riparian Lands

We appreciate the inclusion of the protection and restoration of wetlands as an important climate strategy and tool to mitigate greenhouse gasses. The five Priority Strategies identified in the plan are an excellent step forward in acknowledging the importance of protecting and restoring wetlands to assist with climate mitigation in addition to other co-benefits.

The American Geophysical Union (AGU) recently released a series of reports highlighting carbon sequestration opportunities for restoring wetland and riparian ecosystems.³ The AGU studies found that wetland restoration may improve carbon storage by restoring the natural hydrological pattern that initially sustained the wetland and riparian ecosystem. The AGU report also found that the simplest approach to facilitating carbon sequestration within wetland ecosystems is to return degraded wetlands to their natural state by restoring marginal crop and pastureland back to the once existing historic functional wetlands. Additionally, a 2020 paper by Reed, et. al⁴ found that montane meadows contain high densities of soil carbon and can be large sinks of carbon. The restoration of meadows and wetlands can be designed to improve hydrologic function while also mitigating soil carbon losses.

We recommend adding the above information to the “Carbon Sequestration in Colorado Wetlands” section on page 24.

¹ [How Do We Find \(And Protect\) Precious Wet Places In The West? - Sage Grouse Initiative](#)

² Montane Meadows: A Soil Carbon Sink or Source? Reed, C., et. al., *Ecosystems*, 2020.

³ <https://eos.org/editors-vox/managing-wetlands-to-improve-carbon-sequestration>

⁴ Montane Meadows: A Soil Carbon Sink or Source? Reed, C., et. al., *Ecosystems*, 2020

Under the “Restore degraded headwaters” Priority Strategy on page 26, we are pleased to see the acknowledgment of the critical role of beavers in maintaining the health of Colorado’s wetlands and riparian systems. The Plan calls for collaboration amongst land managers and many other key stakeholders to implement the Plan’s strategies. Many HHWG members are directly involved and/or support projects that utilize process-based stream restoration methods to help facilitate the beaver being able to recolonize historic habitat. Thus, our members would be pleased to work with state and federal agencies to implement the Plan’s Priority Strategy to “support beaver activity in suitable, historically occupied wetland and riparian habitats.”

Under the Priority Strategy on page 26 “Continue to fund wetland and riparian restoration through new and existing grant programs,”

We recommend including a sentence about the opportunity to also leverage these programs to capture additional federal funds through IIJA and IRA to support restoration and protection of wetlands on private and public lands. These include funds from the US Forest Service, Bureau of Land Management, Bureau of Reclamation and the Natural Resource Conservation Service, among others.

Under the Priority Strategy on page 26, “Restore degraded headwater wetland and riparian areas,”

We recommend modifying the second to last sub-bullet about beaver activity to say: Support where suitable natural beaver recolonization of historically beaver-occupied wetland and riparian habitat, using low-tech process-based methods.

We also recommend adding a new priority strategy for wetlands to encourage research and monitoring associated with carbon sequestration and climate mitigation. The strategy could say:

Monitor and evaluate wetland restoration demonstration projects to further understand the carbon sequestration benefits of restored wetland systems, among other co-benefits.

Cross Cutting Strategies

Thank you for the thoughtful inclusion of cross-cutting strategies related to all natural working lands. We hope these cross-cutting strategies will not only improve the strategies of each individual sector, but also improve coordination and, where appropriate, encourage multiple carbon sequestration strategies working in tandem on our natural working lands.

We recommend adding two additional cross-cutting strategies to further support projects and ongoing research around climate mitigation benefits from our natural working lands.

Assess and address hydrologic factors affecting the carbon sequestration potential of rangelands, grass/ shrublands, and forests, as well as riparian areas. For example, have incised streams lowered the water table, affecting the ability of trees and other plants to

access groundwater? Are there opportunities for stream restoration that could reverse that trend?

Identify, develop, implement and monitor demonstration projects using climate-smart strategies on public and private lands to further understand and document their carbon and other co-benefits.

Moving Forward

We recommend adding another action item to Table 2:

Near-term Actions on pages 30-31 for Spring 2023 through 2024: Work with experts from state agencies such as CNHP and CPW, academics, nonprofits and other organizations to identify and prioritize, through mapping and other processes, wetlands and riparian areas with the least-altered hydrology, soils, and native plant communities that remain in relatively large blocks of connected habitats. This identification process can help facilitate coordination across agencies and land boundaries of protecting and restoring where needed high priority wetlands and riparian areas.

As voices working together to improve Colorado's resilience to climate change and and scale up headwater restoration, the following participants in the Healthy Headwaters Working Group appreciate the opportunity to provide feedback on the draft Colorado's Strategic Plan for Climate-Smart Natural and Working Lands. We appreciate you taking our suggestions and recommendations into consideration when finalizing the Plan. Please don't hesitate to reach out with any questions.

Thank you,

Fay Hartman, Conservation Director Southwest Regional Program, American Rivers

Abby Burk, Western Rivers Regional Program Manager, Audubon Rockies

Alex Funk, Senior Counsel and Director of Water Resources, Theodore Roosevelt Conservation Partnership

Jackie Corday, Corday Natural Resource Consulting