Accessing Colorado Water Plan Grants for Riverscape Restoration

Version 1.0

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National Audubon Society

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I. THIS MEMO — PURPOSE & USE

THE PURPOSE OF THIS MEMO IS TO ANALYZE THE COLORADO WATER PLAN (CWP) FOR

1. How riverscape restoration is addressed in the CWP
2. Which statewide water challenges & objectives can be addressed by riverscape restoration

This memo has been prepared as a resource for riverscape restoration project proponents applying for CWP grant funding. This memo will help watershed coalitions, municipalities, and other stakeholders engaged in riverscape restoration identify how proposed projects align with the CWP. This memo's appendices will also help grant writers cite relevant CWP excerpts in grant narratives and applications.

Six sections of the CWP are analyzed for

1. How four **riverscape restoration focus areas** are addressed; and
2. Key challenges or objectives that may be addressed through riverscape restoration.

CWP SECTIONS ANALYZED	RIVERSCAPE RESTORATION FOCUS AREAS ANALYZED
State Context	Stream & Watershed Restoration
Basin Context	Nature-based Solutions
High Impact Drivers	Climate, Drought & Wildfire Resilience
Tools for Implementation	Collaboration, Engagement & Planning (for riverscape restoration)
Partner Actions	

Existing Resources

Alignment with the CWP is only one factor to consider when seeking CWP grant funding. CWCB stresses that alignment with regional planning documents is prioritized when funding new projects. When applying for Water Plan grants, first consult:

- The Water Plan Grant Guidelines
- The Regional Grant Manager for your basin (see Section IV of this memo)
- Any stream, watershed, or forest planning documents for the project area (see Section IV of this memo)

USING THIS MEMO & APPENDICES

The Memo provides an overview of how the four **riverscape restoration focus areas** are addressed in five key sections of the CWP.

The Appendices are a separate document that catalogues specific excerpts from the CWP that intersect with the four **riverscape restoration focus areas**.

USE THE MEMO TO:

- Identify CWP priorities and objectives for riverscape restoration.
- Align project proposals with CWP priorities
- Scope grant proposals to align with the CWP.

USE THE APPENDICES TO:

- Cite sections of the CWP and quotes in grant narratives
- Gain a more detailed understanding of how riverscape restoration aligns with the CWP (beyond what is provided in the memo).

NAVIGATING THIS MEMO

Sections I-IV: Memo Overview & Background

Sections I & II: Overview

- Orientation on the memo

Section III: Background

- Stream Restoration
- Nature-based solutions
- The Water Plan

Section IV: Grants

- The CWP Grant Program

Sections V-IX: The Water Plan & Riverscape Restoration

Sections V-IV analyze how specific CWP chapters align with the four riverscape restoration focus areas.

Section V	Section VI	Section VII	Section VIII
State Context	Basin Context	High Impact Drivers	Partner Actions
CWP Ch. 3	CWP Ch. 4	CWP Ch. 2	CWP Ch. 6

NAVIGATING THE APPENDICES

Appendix A — State Context & Challenges
CWP excerpts on statewide water challenges, organized by riverscape restoration focus area.

Appendix B — Basin Summaries
Excerpts from CWP summaries of each basin's implementation plan (BIP).

Appendix C — Tools
Explanatory excerpts for each "tool" from CWP chapter 5 that addresses one of the riverscape restoration focus areas.

Appendix D — Partner Actions
Explanatory excerpts for 19 partner actions that address the four riverscape restoration focus areas.

Appendix E — Riverscape Restoration in BIPs
This appendix lists each basin's goals (directly from the BIP) that address riverscape restoration.

VIEW THE APPENDICES HERE Link

II. The Colorado Water Plan & Stream Restoration

The Colorado Water Conservation Board (CWCB) updated the Colorado Water Plan in 2023.[1] This statewide plan contextualizes the intersectional water issues facing the state's eight river basins and outlines a comprehensive approach for meeting water supply and demand gaps, maintaining water quality, and building a climate resilient economy. **The 2023 update expanded the previous 2015 CWP's discussion of riverscape restoration, and added specific reference to nature-based solutions (NbS).**

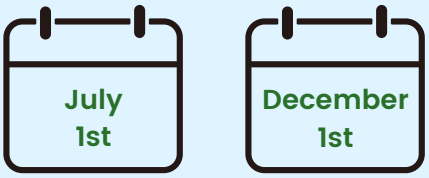
The CWP focused on implementing the state's vision for a sustainable water future across **four action areas.** The CWCB prioritizes funding multi-benefit projects intersect these action areas.

FOUR CWP ACTION AREAS

1) Vibrant Communities
2) Robust Agriculture
3) Thriving Watersheds
5) Resilient Planning

The CWP identifies 50 potential **partner actions** that represent the types of projects to be funded by CWP grants. The CWP also identifies **19 tools** to be used in implementing these actions. The CWP grant program is administered by the CWCB, and grants are awarded biannually:

CWP GRANT DEADLINES



OVERVIEW OF THE COLORADO WATER PLAN

Chapter 1 — An orientation to the CWP.

Chapter 2 — Summary of planning scenarios[2] used to analyze Colorado's water future; identifies nine high impact drivers that will influence the state's water future.

Chapters 3 & 4 — Chapter 3: State Context discusses the statewide challenges that the CWP addresses. Chapter 4: Basin Context summarizes each basin's implementation plan (BIP) including each basin roundtable's (BRT) unique goals.

Chapter 5 — Analysis of challenges and risks to the state's water future including water quality, watershed health, and ecosystem resilience concerns; introduces 19 tools for partners and agencies to prioritize.

Chapter 6 — Outlines Colorado's vision for addressing the scenarios and challenges laid out in the CWP; identifies 50 partner actions that are eligible for Water Plan grant funding and 50 agency actions that CWCB and other state agencies will complete.

Chapter 7 — Summarizes how CWCB will track progress and handle future updates to the CWP. The CWP was last updated in 2023. The next update will be completed in 2033. BIPs will be updated by 2031.

[1] The first Colorado Water Plan was compiled in 2015. The Colorado Water Plan, as referenced in this report, refers to the 2023 updated CWP.

[2] These five scenarios are A) Business as Usual B) Weak Economy C) Cooperative Growth D) Adaptive Innovation and E) Hot Growth. Colorado Water Plan (2023), p. 22.

HOW THE CWP ADDRESSES THE FOUR RIVERSCAPE RESTORATION FOCUS AREAS

Stream and Watershed Restoration

Stream and Watershed Restoration is one of the CWP's 19 'tools'.[3] Flow-improvements, floodplain restoration, stream habitat improvements, and recreational enhancements are all referenced as restoration goals that align with the Water Plan. Process-based and form-based restoration are both defined (see Section VII, p.12).

Nature-based Solutions

Nature-based Solutions[4] (NbS) are addressed in the CWP's section on 'tools' (Chapter 5), within the context of stream and watershed restoration. Restoration designed to benefit beaver populations and habitat is given as an example of a NbS. NbS are also referenced in certain partner actions.

Climate, Drought, and Wildfire Resilience

Climate, Drought, and Wildfire Resilience is included as a riverscape restoration focus area because of the potential for riverscape restoration to address these challenges statewide. Climate, drought, and wildfire challenges are discussed at length throughout the CWP. Stream corridors with connected floodplains and healthy wetland-riparian complexes can protect streams from the impacts of wildfire and reduce flood risk in burned areas. Process-based restoration methods can mitigate impacts of post-fire debris flows and excess sediment transport (such as rapid channel incision). Restoration interventions can help maintain or restore water tables.[5]

Collaboration, Engagement, and Planning

Collaboration, Engagement, and Planning projects that help scale riverscape restoration, shift social values, and engage stakeholders from multiple sectors are integral to the CWP's strategy for Resilient Planning. Collaboration for multi-benefit projects is a priority for Water Plan grant funding. Three of the CWP's tools for action (public outreach & education, collaboration groups, equity, and collaborative water sharing agreements) intersect with this focus area.

3 In the Water Plan, this tool is called "Stream/Watershed Restoration and Enhancement".

4 Nature-based solutions is an umbrella term for strategies to mitigate climate change and its impacts, including drought and wildfire, by enhancing naturally occurring processes. Headwaters restoration through PBR can mitigate drought impacts by elevating water tables, increasing late season flows, and improving wildfire resilience. Restored systems also sequester more carbon, improve water quality in stream systems, and promote plant and wildlife diversity.

5 Jacquelyn Corday, "Restoring Western Headwater Stream with Low-Tech Process-Based Methods: A Review of the Science and Case Study Results, Challenges, and Opportunities, version 2.0", American Rivers (2024).

III. Water Plan Grants

The Colorado Water Plan Grant Program funds projects that implement the partner actions and tools described in the CWP. Grants are awarded in five different funding categories (see Table 1).

Watershed Health & Recreation Grants are further divided into three grant types:
1) planning grants 2) design grants 3) project grants.

In addition to the 3 grant types, the guidelines list four eligible project types & activities.[6]

ELIGIBLE PROJECT TYPES & ACTIVITIES

1. Technical assistance for permitting, feasibility studies, and environmental compliance;
2. Studies or analysis of structural, programmatic, consumptive, and non-consumptive water projects or activities;
3. Design of structural projects or activities, and;
4. Activities that promote education, outreach, and innovation consistent with the Water Plan.

CWCB prioritizes applicants whose projects are multi-benefit, engage stakeholders from different water sectors, and align with regional planning documents. Projects that address a secondary funding category, implement multiple PARTNER ACTIONS or TOOLS, and target two or more of the CWP ACTION AREAS are most likely to be funded. **Applicants should contact their region's grant manager** in advance of submitting a grant application.

When applying for CWP grants:

- Follow the Water Plan Grant Guidelines
- Consult watershed, stream, and/or forest management plans for the project area
- Contact the Regional Grant Manager
- Use this memo to align a proposal with the CWP and to cite the CWP in grant applications

CWCB RESOURCES

CWCB'S LANDING PAGE - CLICK HERE
Key information on each CWP grant category.

WATER PLAN GRANT GUIDELINES - CLICK HERE
Overview of grant categories & requirements for grant applicants.

CWCB REGIONAL GRANT MANAGERS

Arkansas Basin:
Lauren Duncan - 720.788.2178

Colorado, Gunnison & YWG Basins:
Ashley Garrison - 719.466.9626

Metro, S. Platte & N. Platte Basins:
Jackie Carano - 720.846.1571

Rio Grande & SW Basins:
Laura Spann - 720.916.7723

WATERSHED PLANNING RESOURCES

CWCB prioritizes riverscape restoration projects that align with an applicable watershed, stream, and/or forest management plan. Applicants should align their application with the appropriate plan(s) in addition to the CWP & BIPs.

GIS Map of basin-specific watershed plans
- Access the GIS map-viewer here

View existing Stream Management Plans here:
- Access the map and links for current SMPs

[6] The Water Plan grant application asks applicants to select from seven project types and four water use types. The seven project types are: 1) planning 2) design/engineering 3) design & construction 4) construction/implementation 5) education 6) capacity building, and 7) study. The water use types are: 1) municipal 2) agricultural 3) environmental, and 4) educational.

TABLE 1: Funding categories for Water Plan grants; including sub-types and examples of relevant project types. **The most relevant Water Plan grant categories for project proponents are Watershed Health & Recreation, and Engagement & Innovation. The criteria for these two categories are listed in Table 2.**

Funding Categories	Grant Types	Relevant Project Types
Watershed Health & Recreation	Planning; Design; Project	Watershed/stream management plans & assessments; wildfire ready watersheds framework implementation; baseline data collection; modelling; engineering; permitting; on-the-ground projects that implement planning objectives.
Conservation & Land Use Planning	N/A	Drought management planning; comprehensive land use plans
Engagement & Innovation	N/A	Communication; outreach; education; innovation
Water Sharing Agreements	N/A	Collaborative water sharing agreements that involve instream flow restoration, or other restoration component.
Agricultural	N/A	Projects demonstrating innovative on-farm efficient/conservation projects, education & peer-to-peer learning; ditch-wide and regional planning efforts.
Water Storage & Supply	N/A	Engineering Design & Permitting (i.e. mitigation); multi-benefit projects; collaborative water sharing agreements

TABLE 2: Water Plan grant evaluation criteria for Watershed Health & Recreation grants and Engagement & Innovation Grants.[7] **Watershed Health & Recreation grant criteria is organized by grant sub-type.**

Watershed Health and Recreation	General	• Commitment to Collaborative Approaches. • Involve local / regionally based diverse interests. • Commitment to restoring, protecting ecological processes that connect land & water. • Broad-based involvement/support for grant application (local, state, and federal). • Plan, design, or project is financially and technically feasible. • Design or project has been informed through a planning effort.
	Planning Grants	• Advances the data, analysis, social requisites to explore restoration & protection alternatives. • Funded projects develop project concepts and guidelines that reflect the values, goals, and objectives of the watershed community. • Funded studies are performed at watershed, county, or stream reach scales to inform priorities. • Projects inform watershed & stream master plans, assessments, stream management plans, wildfire ready watersheds framework implementation, fluvial hazard zone mapping. • Planning will aid local stakeholders to conserve, develop, protect, and manage Colorado's water resources.

7 "Water Plan Grant Program: Grant Guidelines", Colorado Water Conservation Board (2024).

TABLE 2 (Continued): Water Plan grant evaluation criteria for Watershed Health & Recreation grants and Engagement & Innovation Grants. Watershed Health & Recreation grant criteria is organized by grant sub-type.

Watershed Health and Recreation	Design Grants	• Funded projects support analysis and design efforts to develop construction documents. • Designed projects can be performed at reach scale or individual sites. • Includes baseline data collection, modelling, engineering, and permitting. • Commitment to protect, manage, and restore river and floodplain ecosystems
	Project Grants	• Implements priorities identified through stakeholder led planning processes. • Demonstrate strong commitment to restoring, protecting, or enhancing ecological processes of riverine environment. • Supported project types - Stream channel & floodplain restoration. • Supported project types - Habitat development for aquatic and terrestrial species. • Supported project types - Re-vegetation of riparian areas, invasive species. removal, erosion mitigation. • Supported project types -Improving recreation; Fish and Boat passage. • Supported project types - Monitoring is eligible for project grants. • Criteria - Must demonstrate no adverse impact to ecological structure and function. • Supported project types - Stream restoration and riparian habitat improvement. • Supported project types - Removal of invasive species. • Criteria - Promote restoration, recovery, and sustainability of threatened and imperiled aquatic and riparian-dependent species and plants. • Supported project types - multi-objective flood mitigation projects. • Supported project types - Structural solutions; flow related projects. • Post-fire wildlife impact mitigation projects. • Recreational in channel projects.
Engagement & Innovation		• Is the project collaborative - does it engage diverse group of stakeholders; does it engage the community? • Does the project establish financial feasibility - demonstrate cost effectiveness - leverage other funding? • Contain a plan to measure and evaluate success & impact? • Supported by research, evidence, data -- apply best practices? • Strives to improve public awareness and engagement regarding water issues? • Enhance CO's water communication, outreach, education, and public engagement. • Advance education, outreach, and public engagement to 'significantly improve the level of public awareness and engagement regarding water issues statewide'. • Address any other Water Plan grant categories? • Advance education, outreach, public engagement goals set forth in applicable BIPs? • Advance outreach/education goals of the BRT coordinators? • Improve the use of existing state resources, including supporting efforts to improve coordination between state agencies on water outreach and education? • Apply an innovative solution to a water challenge in Colorado? • Engage Colorado's entrepreneurial business, or innovation community?

IV. Water Plan — State Context

Appendix A
CWP excerpts on statewide water challenges addressed by riverscape restoration.

The State Context chapter surveys Colorado's changing hydrology; identifies key challenges at the intersection of climate change, industrial growth, agricultural sustainability, and conservation; and summarizes the legal and administrative considerations for water management in Colorado. The chapter's section on Uncertainties Affecting Supply[8] discusses challenges and concerns facing Colorado's water future which can be addressed, in part, through riverscape restoration. Colorado's water challenges and its vision for meeting them are also addressed in other chapters of the Water Plan.

Climate, Drought, and Wildfire Resilience

The State Context chapter discusses changes to the state's hydrology as a result of climate change, including anticipated changes in the timing and quantity of snowpack runoff and aridification. Drought resilience is defined as "building strategies that reduce the impacts of drought shocks and ongoing climate stresses on communities, economies, and ecosystems, and allow them to rebound more quickly when drought occurs."[9] The CWP distinguishes between hydrologic drought, ecological drought, agricultural drought, and socioeconomic drought to highlight how drought impacts are intersectional. Increased wildfire risk, warmer water temperatures that impact aquatic life, and degraded water quality are all listed as negative impacts of climate-induced drought.

TYPES OF DROUGHT

Ecological Drought
refers to natural and anthropogenic impacts that cause irreversible changes to a systems ecology.

Socioeconomic Drought
"Weather related water supply deficits" that impact the supply of goods & services, including agricultural goods as well as recreational services such as rafting or recreational fishing.

Hydrologic drought
encompasses reduced streamflow, impacts to reservoir supply, and declining groundwater aquifer levels.

Agricultural Drought
encompasses conditions which lead to plant stress, and reduced yields.

Nature-based Solutions and Stream & Watershed Restoration

Nature-based solutions and riverscape restoration can mitigate many of the climate and drought impacts summarized in State Context. Implementing riverscape restoration projects that work within a watershed and landscape planning approach is a vital element of Colorado's vision for Thriving Watersheds.

The CWP stresses the role healthy headwater systems play in supporting climate, drought and wildfire resilience: "as our state's water source, the health of watersheds affects agriculture, downstream communities, recreation, tourism, and ecosystem function."[10]

Collaboration, Engagement, and Planning

The CWP prioritizes collaborative multi-purpose, multi-benefit projects: "collaborative partnerships among agriculture, environmental groups, and municipal water providers should be used to create multi-purpose projects that help keep irrigated lands in production and maintain ecosystem services".[11] State Context highlights how the diverse challenges facing Colorado's water future are intersectional and how healthy watersheds and streamflow, for example, can address agricultural and economic concerns.

[8] "Colorado Water Plan", Colorado Water Conservation Board (2023), 33.

[9] "Colorado Water Plan", Colorado Water Conservation Board (2023), 38.

[10] "Colorado Water Plan", Colorado Water Conservation Board (2023), 9.

[11] "Colorado Water Plan", Colorado Water Conservation Board (2023), 9.

V. Water Plan — Basin Context

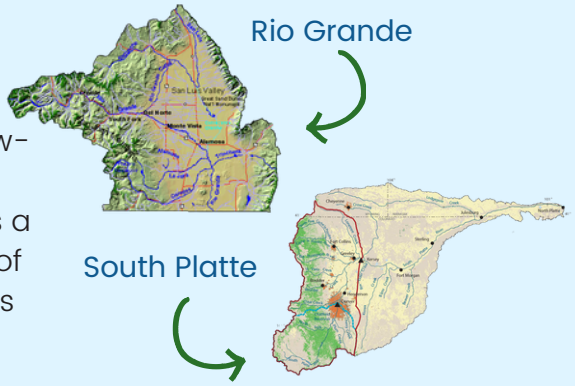
Appendix C | Appendix E
Excerpts on Basin-specific challenges & restoration opportunities
Basin goals specific to riverscape restoration

Chapter 4 of the CWP summarizes each basin's Basin Implementation Plan (BIP). These summaries outline each basin's unique water challenges and strategies for meeting those challenges.

In addition to the restoration goals identified in each BIP, make sure to reference the Watershed Management Plans and Stream Management Plans that encompass a project's geography.

Five of the eight basins – the Arkansas, North Platte, Rio Grande, South Platte, and Yampa-White-Green – identify maintaining or improving stream, watershed, and/or wetland health among their basin's goals. Drought, and wildfire resilience concerns are addressed for each basin, except for the North Platte basin. The Arkansas and Gunnisonbasins have specified goals for collaborative strategies that could include restoration projects. NbS are not explicitly referenced in the basin summaries, however NbS can be used to help achieve many of the basin goals related to stream and watershed restoration and climate, wildfire, and drought resilience.

Deeper analysis of each BIP reveals that the Rio Grande and the South Platte BIPs include the most comprehensive language addressing riverscape restoration. Both BIPs specifically identify low-tech and high-tech PBR as strategies, but the Rio Grande BIP most explicitly identifies how riverscape restoration can be leveraged as a strategy (see Appendix E). Both BIPs also discuss the importance of stream and wetland function, and how restoring these habitats has a multi-sector benefit.

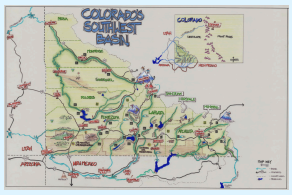


The Yampa-White-Green (YWG) BIP is the next most thorough in considering goals and strategies for implementing riverscape restoration. This BIP specifies the importance of floodplain reconnection, discusses the natural storage benefits of functioning riverscapes, and specifically mentions reconnecting floodplains and implementing restoration projects as basin goals.

The Gunnison BIP doesn't have any goals specific to restoring ecological function in watersheds. However, the basin's goal around collaboration specifically identify watershed restoration as a collaborative, multi-benefit strategy.


Arkansas

Southwest



The Southwest and the Arkansas BIPs both mention restoration, and functioning watersheds and riparian areas under their environmental and watershed goals. However, these BIPs lack the specificity that Rio Grande, South Platte, and YWG include.

The Colorado and North Platte BIPs contain the least detail on stream restoration. Both of these BIPs mention restoration or adjacent concepts in their big picture goals but lack detail on specific restoration strategies habitats to target.


Colorado

VI. Water Plan — High Impact Drivers

CWP chapter 2 reviews the state's methods for its technical analysis and its approach to scenario planning. The last section of this chapter identifies nine High Impact Drivers that "could greatly influence the direction of Colorado's water future."[12] These drivers guided the five planning scenarios[13] that the CWP analyzes. Movement in each driver can impact which water future Colorado faces. Riverscape restoration can be a strategy for impacting these drivers. Two of the identified drivers are most likely to be addressed or mitigated by riverscape restoration projects.

The nine high impact drivers listed in the CWP are:

1) Social/Environmental Values
2) Population/Economic Growth
3) Urban Land Use / Urban Growth Patterns
4) Availability of Water Efficiency Technologies
5) Climate Change / Water Supply Availability
6) Level of Regulatory Oversight/Constraint
7) Agricultural Economics / Water Demand
8) Energy Economics / Water Demand
9) Municipal and Industrial Water Demands

Two of these drivers are most relevant to riverscape restoration projects.

SOCIAL / ENVIRONMENTAL VALUES

Collaboration, Engagement & Planning projects that increase social acceptance of riverscape restoration through outreach, education, and stakeholder engagement can impact the scale at which riverscape restoration is implemented. Projects that address the social barriers and community environmental values that intersect with riverscape restoration projects impact this driver.

"Social/Environmental values reflect the public's perception of water use, support of water and energy conservation, and allocation of water supply toward environmental uses... development of new supplies may occur in ways that meet municipal and agricultural needs while preserving or enhancing the environment"[14]

CLIMATE CHANGE / WATER SUPPLY AVAILABILITY

Riverscape restoration projects encompass natural climate solutions that can shift mitigate the impacts of a warmer and drier future on the timing and predictability of water supply. NbS are explicitly identified as important strategies for addressing climate and drought risk in the Water Plan's sections on Thriving Watersheds.

"[Climate Change] results in a range of projected future conditions that include a warmer and potentially drier future... Climate change may decrease streamflows and/or shift yearly streamflow patterns which would...increase risks for environment and recreation attributes"[15]

[12] "Colorado Water Plan", Colorado Water Conservation Board (2023), 19.

[13] These five scenarios are A) Business as Usual B) Weak Economy C) Cooperative Growth D) Adaptive Innovation and E) Hot Growth. These scenarios represent different water planning futures, based on different assumptions regarding climate change, water supply and demand, agricultural, municipal, and industrial needs, and social values.

[14] "Colorado Water Plan", Colorado Water Conservation Board (2023), 19.

[15] "Colorado Water Plan", Colorado Water Conservation Board (2023), 20.

VII. Water Plan — Tools

Appendix D
Excerpts from CWP chapter 5 on tools that intersect with the four riverscape restoration focus areas.

Chapter 5 of the CWP identifies 19 institutional, planning, and implementation tools for partners to utilize. Projects that employ multiple tools are likely to be prioritized for CWP grant funding. Eight of these tools, including Stream and Watershed Restoration and Enhancement, are particularly relevant to the four riverscape restoration focus areas.[16] These eight tools are summarized below, organized by the riverscape restoration focus area that the tool most directly addresses.

Collaboation, Engagement, & Planning Tools

PUBLIC OUTREACH AND EDUCATION

This tool encompasses projects that include a public outreach and education component, such as developing communications materials, sharing project successes as a case-study, or hosting site visits.

LAND USE AND WATERSHED PLANNING INTEGRATION

Integrating riverscape restoration projects with existing stream management plans or integrated watershed management plans is a growing focus for CWCB. Projects should strive to integrate with existing planning efforts.

COLLABORATIVE WATER SHARING AGREEMENTS (CWSAS)

CWSAs encompass flexible water use arrangements among stakeholders, including agreements for environmental water users. In some cases, stream restoration can occur within a larger project that leverages CWSAs.

FLOW ENHANCEMENT AND MAINTENANCE

Restoration projects have the potential to benefit from collaborating with efforts to protect flow through instream flow water rights/leases, CWSAs, streamflow augmentation plans, or other streamflow protection agreements. Flow restoration can be an impactful process-based restoration technique on its own, in appropriate reaches.

Stream & Watershed Restoration / Nature-based Solutions Tools

STREAM AND WATERSHED RESTORATION AND ENHANCEMENT

The CWP directs restoration project proponents to "consider the effects of drought, climate change, and aridification".[17] Drought, flood, and wildfire resilience, benefits to wildlife, improvements to water quality and erosion/deposition, and floodplain connectivity are all identified as benefits of stream restoration. Process-based and form-based restoration, and nature-based solutions are specifically defined as approaches to implementing restoration work. Restoration projects that aim to "protect and support" beaver populations and their habitat are identified as an example of a nature-based solution that fits within this tool.

ENDANGERED AND THREATENED SPECIES RECOVERY PROGRAMS

Projects that have a nexus with the Upper Colorado River Endangered Fish Recovery Program, the San Juan River Basin Recovery Implementation Program, or the Platte River Recovery Implementation Program should align with the aims of these programs to increase the collaborative nature of the project.

CLIMATE ADAPTATION

This tool highlights the need to for the state to not only focus on mitigating the effects of climate change, but also adapting its communities and watersheds for a warmer and drier climate. "Colorado will need to focus on practical drought solutions, wildfire mitigation, flood preparedness, and water supply and demand strategies that are adaptable to changing hydrology."[18] Riverscape restoration projects, and nature-based solutions, can be leveraged as climate adaptation strategies in appropriate systems.

16 Many of these tools can integrate with multiple of the riverscape restoration focus areas, and are just organized in this way for the purposes of this report.

17 "Colorado Water Plan", Colorado Water Conservation Board (2023), 170.

18 "Colorado Water Plan", Colorado Water Conservation Board (2023), 159.

Climate, Drought, and Wildfire Resilience Tools

NATURAL HAZARD PLANNING

Colorado has developed a number of hazard planning frameworks that can directly support stream restoration projects, including Wildfire Ready Watersheds and the Colorado Fluvial Hazard Zone Mapping Program.

DEFINITIONS FROM THE CWP[19]

Process-Based Restoration:

"Process-based restoration aims to restore dynamic watershed and stream characteristics that reflect those in minimally impacted systems. This type of restoration project can improve water quality habitat, and stream resilience. Process-based restoration projects benefit streams and protect clean water supplies for municipalities and agriculture."

Form-based Restoration:

"When there is not room to restore the footprint that a river could occupy or influence in a wide variety of flow conditions due to development and infrastructure, a form-based restoration approach can be used to restore as much of the river's former footprint and functions as possible. Form-based restoration projects eek to restore or enhance water quality and fish habitat and abundance, and they also increase the stability of banks and stream channel beds."

Nature-based Solutions:

"Nature-based solutions are actions to protect, sustainably manage, or restore natural or modified ecosystems as solutions to societal challenges, like mitigating water insecurity and climate change risk. Examples of nature-based solutions include protection or conservation of natural areas, reforestation, restoration of wetlands or other habitats, or sustainable management of farms or forests... Nature based solution example: protecting and supporting existing beaver populations and their habitat."

19 "Colorado Water Plan", Colorado Water Conservation Board (2023), 170.

VIII. Water Plan — Partner Actions

Appendix E
Explanatory excerpts for each partner action relevant to riverscape restoration.

The CWP suggests fifty partner actions to prioritize for Water Plan grant funding. The CWP's partner actions fall within four partner action categories: 1) thoughtful storage, 2) meeting future water needs, 3) wise water use, and 4) healthy lands. Specific actions are identified for each of the four Water Plan action areas. Strategies for effective engagement & education and integration with other water sectors are also discussed for each action area.

TABLE 3: The 19 CWP partner actions that most closely intersect with the four riverscape restoration focus areas.

ACTION AREA	RIVERSCAPE RESTORATION FOCUS AREA	PARTNER ACTION	PARTNER ACTION CATEGORY
Thriving Watersheds	Nature-based Solutions	**Reconnecting floodplains & nature-based solutions**	Healthy Lands
Thriving Watersheds	Nature-based Solutions	**Nature-based solutions**	Thoughtful Storage
Thriving Watersheds	Stream & Watershed Restoration	**Improving riparian and aquatic habitat**	Healthy Lands
Thriving Watersheds	Stream & Watershed Restoration	**Rehabilitate streams to improve habitat, reduce erosion, and meet needs**	Meeting Future Water Needs
Thriving Watersheds	Stream & Watershed Restoration	**Forest health improvements**	Healthy Lands
Thriving Watersheds	Stream & Watershed Restoration	**Streamflow enhancement (retiming & release)**	Thoughtful Storage
Thriving Watersheds	Stream & Watershed Restoration	**Invasive phreatophyte and species removal**	Thoughtful Storage
Thriving Watersheds	Stream & Watershed Restoration	**Streamflow and lake protections for environmental needs**	Wise Water Use
Thriving Watersheds	Climate, Drought & Wildfire Resilience	**Create greater drought, fire, and flood resilience**	Wise Water Use
Thriving Watersheds	Collaboration, Engagement & Planning	**Increase access to recreational opportunities**	Meeting Future Water Needs
Resilient Planning	Climate, Drought & Wildfire Resilience	**Pre- and post-hazard planning for critical infrastructure**	Healthy Lands
Resilient Planning	Climate, Drought & Wildfire Resilience	**Protecting storage from effects of wildfire debris**	Thoughtful Storage
Resilient Planning	Collaboration, Engagement & Planning	**Multi-purpose projects for building resiliency**	Meeting Future Water Needs
Resilient Planning	Collaboration, Engagement & Planning	**Coordinating on forest health and understanding forest hydrology**	Healthy Lands
Resilient Planning	Collaboration, Engagement & Planning	**Support for natural and working lands**	Healthy Lands
Vibrant Communities	Collaboration, Engagement & Planning	**Holistic planning for urban landscapes that improve quality of life**	Healthy Lands
Robust Agriculture	Stream & Watershed Restoration	**Reducing erosion and improving water quality**	Healthy Lands
All Action Areas	Collaboration, Engagement & Planning	**Effective Engagement and Education**	Engaged Partners
All Action Areas	Collaboration, Engagement & Planning	**Integration with Other Sectors**	Integration with Other Sectors