

# Stream Management Plan Grantee Project Summary

## River Health Assessment Framework for the Upper Poudre Watershed

**Geographic Description:**  
South Platte Basin:  
Upper Poudre Watershed

**Size:**  
1076 square miles

**Project Homepage:**  
[www.poudrewatershed.org](http://www.poudrewatershed.org)

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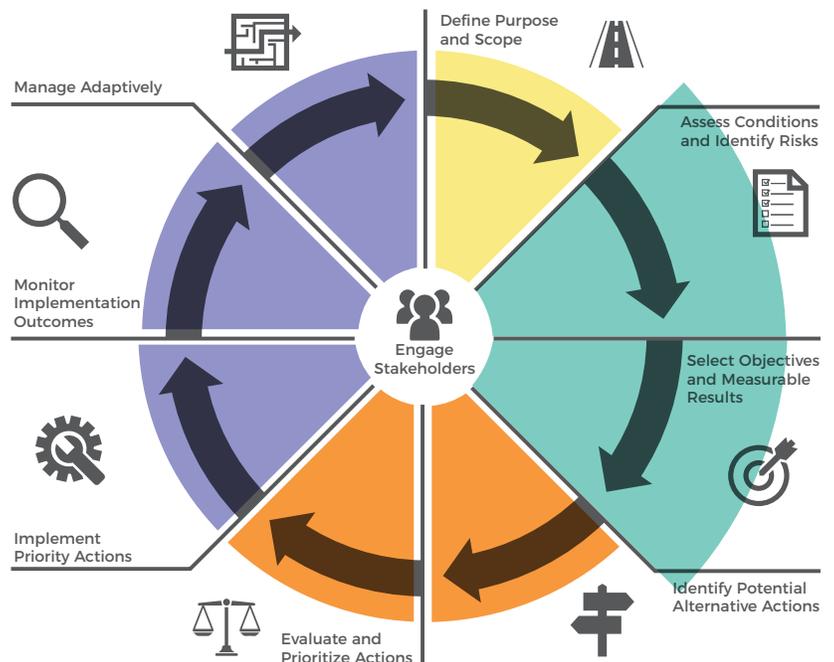
### Project Timeline



### Stakeholder Groups Involved in Planning Process

●	Agricultural producers
●	Riparian landowners
●	Aquatic and riparian science
●	Environmental advocacy
●	Utilities or other water management
●	Recreation & tourism
●	Local government & land use planners
●	State and federal agencies

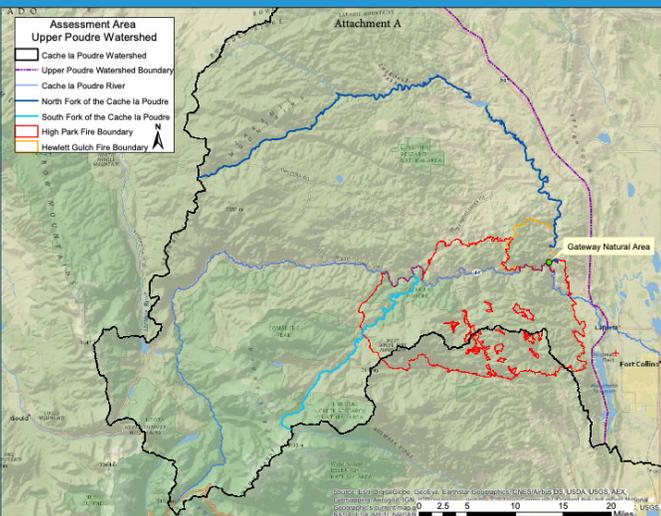
### Current Planning Phase



## Project Goals

- Develop stakeholder-driven goals and metrics for a baseline assessment of riparian and river conditions in the Upper Poudre watershed.
- Assess current conditions in the Upper Poudre that, when paired with lower basin assessments, is the precursor for a Poudre-watershed-wide stream management plan.
- Address the shortcomings of the Upper Poudre Resiliency Plan by filling in spatial data gaps to prioritize stream restoration resiliency needs.
- Create a functioning citizen science program to support assessment data gathering in the watershed and maintain temporal baseline watershed data.

## Overview



### Geography:

The River Health Assessment Framework for the Upper Poudre Watershed focuses on the river corridor of the Upper Cache La Poudre watershed, extending from the headwaters of the North Fork and mainstem down to the Gateway Natural Area just west of Fort Collins. The project area includes Colorado's only official Wild and Scenic river sections. 30 miles of the Cache La Poudre are classified as Wild and 45 miles are classified as Recreational.

### Users:

The Upper Poudre Watershed is sparsely populated, with approximately 7,000 people estimated to reside in the project area. Along the North Fork of

the Cache La Poudre, land ownership is characterized by a checkerboard of US Forest Service (about half the land), state, and private land parcels. Some of the important services provided by the Cache la Poudre include; clean drinking water for lower basin municipalities, source water for agricultural and industrial users, mitigation of natural hazards (such as flooding), recreational opportunities, and cultural and aesthetic values.

### Need for planning:

The River Health Assessment Framework for the Upper Poudre Watershed acts as a follow-up to the 2017 Upper Poudre Resiliency Plan, which sought to prioritize projects in areas that would have the greatest negative impacts from future stressors (specifically wildfires and flooding). The plan provided useful management objectives for upland and riparian management but lacked sufficient data to adequately prioritize stream restoration needs and opportunities. The stakeholder group decided to develop a baseline assessment of the Upper Poudre watershed that would allow partners to see how conditions in the watershed change over time and make management recommendations.

## Approach

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The Coalition for the Poudre River Watershed leads an active stakeholder group that formed in response to the 2012 wildfires and remained engaged through the development of the 2017 Watershed Resiliency Plan. The Stakeholder Group includes a number of key agencies, municipalities, citizens and other organizations.



The River Health Assessment Framework for the Upper Poudre Watershed will employ the River Health Assessment Framework developed by the City of Fort Collins in 2016. This methodology was first used to evaluate the Poudre River from Gateway Natural Area in the canyon through Fort Collins to where the Poudre meets I-25. In 2017, the Coalition for the Poudre River Watershed and their project team also used a partial version of the methodology to assess the Poudre River east of I-25 to its confluence with the South Platte River just east of Greeley. This methodology assesses 11 indicators that reflect the physical, chemical, and biological elements of the river. Coalition for the Poudre River Watershed is working with Otak to modify the methodologies to better suit the geomorphology of the upper watershed. Once adjusted, Otak will review existing data sets and

work with citizen science teams to conduct field assessments on critical reaches to create a baseline data set off of which resiliency will be measured in the future and make recommendations to improve or protect conditions.

It is the intention of this assessment to fill in river health data gaps in the upper Poudre watershed that can be combined with the two lower watershed River Health Assessment Framework reports to complete a stream management plan that can be applied to the entire Poudre River watershed from its headwaters in the Upper Poudre to the confluence with the South Platte in Greeley.

## Variables and Inventory Assessment Level

Depending on the purpose and scope determined by local stakeholders, assessments employ different methodologies to evaluate a suite of specific parameters related to stream health and ecosystem goods and services. The comprehensiveness of the data is will vary depending on what is needed to answer core questions addressed by the SMP, ranging from less precise (general, often anecdotal or third-party information) to more precise (data-driven, quantitative metrics). The River Health Assessment Framework for the Upper Poudre Watershed is assessing the following variables to evaluate watershed health and delivery of ecosystem services.

	Variable	Assessment Level
Ecological Integrity:		
●	Existing Flow Regime	Less Precise
●	Future Flow Regime	Moderate
●	Sediment Regime	Less Precise
●	Water Quality	More Precise
●	Network Connectivity	Moderate
●	Floodplain Hydrology	Less Precise
●	Riparian Vegetation	Moderate
●	Stream Corridor Dynamics	Moderate
●	Structural Complexity	Moderate
●	Aquatic Biota	Moderate
Regulating and Maintenance:		
	Flood Regulation	
	Groundwater Recharge	
	Erosion Control	
	Pest Regulation	
	Regulatory Compliance	
Provisioning:		
	Agricultural Production	
	Drinking Water Supply	
	Industrial Processing	
	Hydropower Production	
Cultural:		
	Aesthetics and Intrinsic Values	
	Symbolic/Emblematic Species	
	Boating Recreation	
	Angling Recreation	

## Budget

Contributing Entity	Amount and Form of Match
CWCB Watershed Restoration Fund	\$99,865 cash
Rocky Mountain Research Station National Fire Program grant	\$33,000 cash
Coalition for the Poudre River Watershed internal funds	\$17,292 cash
City of Greeley & Fort Collins Utilities Upper Poudre Water Quality Monitoring Program	\$74,000 in kind
Volunteers and other in-kind	\$9,055 in kind
<b>Total</b>	<b>\$233,212</b>

Photo credit by page: (1) Conservation Kate, (3) Jennifer Kovceses



**COLORADO**  
Colorado Water  
Conservation Board  
Department of Natural Resources