

**South Platte River Urban Waters Partnership (SPRUWP)**  
**Full Partners Meeting**  
**November 15, 2022, 1:00PM to 3:00PM**  
**Meeting Summary – FINAL**

**ATTENDANCE**

*Participants:* Ryan Banta, Lauren Berent, Maddy Castro, John Covert, John Davenport, Stacey Eriksen, Skip Feeney, Ashley Grace, Nolan Hahn, Guadalupe Herrera, Peter Ismert, Juan Madrid, Greg McGrath, Michael McHugh, Audrey Miles-Cherney, Jon Novick, Jordan Parman, Donny Roush, Andrew Todd, Alison Witheridge, Boyd Wright

*Facilitation:* Samuel Wallace and Emily Frederick

**ACTION ITEMS**

<b>Maddy Castro</b>	Email the South Platte River Sun Valley Trash Assessment project results to Stacey Eriksen to post on the SPRUWP website.
<b>Stacey Eriksen</b>	Publish the South Platte River Sun Valley Trash Assessment project results to the SPRUWP website.
<b>Peter Ismert</b>	Send the agenda and event page link for the December 8 South Platte River Forum to Samuel Wallace for distribution.
<b>Boyd Wright</b>	Email the Greenback Cutthroat Trout presentation slide deck to Samuel Wallace for distribution to SPRUWP partners.

**PARTNER UPDATES**

Meeting participants provided updates. The updates are summarized below.

***US Geological Survey (USGS)***

The USGS, the Denver Department of Public Health and Environment (DDPHE), the US Forest Service (USFS), and other stakeholders are assessing the geomorphology of the South Platte River before, during, and after the implementation of the US Army Corps of Engineers (USACE) restoration project. They will assess the geomorphology upstream, within, and downstream of the restoration projects. The fieldwork is currently progressing according to plan.

***City and County of Denver Public Works***

- City and County of Denver Public Works is preparing for a drain marking effort beginning in January 2023 through April 2023. Over five thousand drain locations have been identified for the project.
- City and County of Denver Public Works, Denver Water, and Water Education Colorado will be organizing a professional development unit (PDU) on water resources and sustainability for Denver Public School teachers. The purpose of the PDU is to educate teachers on water resources so that they can teach about it in their classrooms.
- The Colorado State University (CSU) Spur campus Hydro building ribbon cutting ceremony and open house will be held on Friday, January 6, 2023.

***Trout Unlimited***

John Davenport has been promoted to Classroom Coordinator for the whole state of Colorado. The Trout-in-the-Classroom program led by Trout Unlimited has expanded from 28 to 54 schools, including a future program at the CSU Spur Hydro building. Recently, students studied environmental DNA (eDNA) taken from the tanks maintained in their school program. The results found eDNA from tropical and foreign fish. They concluded the genetic material came from common

flaked fish food. The students were able to gain an understanding of the commercial fishing industry.

### ***Metro Water Recovery***

Metro Water has completed fish survey fieldwork for the season and will finish their efforts at the end of 2022.

### ***Environmental Protection Agency Region 8 (EPA)***

The South Platte Forum will occur at the Lionsgate Event Center in Lafayette on December 8. The meeting will feature keynote speaker Phil Wisner and several other panels of speakers discussing a variety of topics.

### ***Denver Water***

Denver Water is coordinating source water protection programs and holistic watershed plans. They are currently focusing on researching risks to the water supply in their north system and developing projects to address sedimentation to Strontia Springs Reservoir.

### ***US Army Corp of Engineers (USACE)***

The USACE has been contracted to manage flood protection and habitat restoration along the South Platte River.

## **GREENBACK CUTTHROAT TROUT RESTORATION EFFORT PRESENTATION**

Boyd Wright, Colorado Parks and Wildlife (CPW), presented on Colorado's Greenback Cutthroat Trout and the history of fish repopulation efforts. His presentation is summarized below.

- Colorado has over 28 species of native fish including the state fish, the Greenback Cutthroat. There are ten species of trout that are designated to be of greatest conservation need, most are small-bodied and non-game species. The South Platte River basin has the largest diversity compared to other river basins in Colorado.
- The Greenback Cutthroat Trout is currently listed as threatened under the Endangered Species Act (ESA).
- The Boreal toad is a federally endangered species, and the Northern Leopard frog is a species of special concern in Colorado. The South Platte Basin has experienced a loss of habitat due to development, which has led to competition for native amphibians.
- The Greenback Cutthroat Trout was thought to be extinct in the 1930's from mining pollution, overharvest, and the introduction of non-native trout.
- Colorado has previously made efforts to restore the populations of Greenback Cutthroat Trout. In 1957, a population was found in the Rocky Mountain National Park. There were two additional populations discovered in 1965 and in 1970.
- The creation of the ESA in 1973 allowed the Greenback Cutthroat Trout to be declared an endangered species due to its limited population. A population recovery plan was ordered in 1977, which allowed the Greenback Cutthroat Trout to be down listed as a threatened species. By 1999, there were 44 attempts to reintroduce the Greenback Cutthroat Trout.
- Colorado adopted the Greenback Cutthroat Trout as the new state fish in 1994 replacing the unofficial state fish, the Rainbow Trout.
- A 2007 paper in the Journal of Molecular Ecology studied DNA samples across the state. The samples east of the Rocky Mountains indicated the presence of Cutthroat Trout, while the samples from the Western Slope indicated the presence of Greenback Cutthroat Trout.
- Isolated DNA was taken from historic museum collections in 2012. These samples were collected from 1857 to 1889. The untainted DNA distinguished six different lineages

originating from the major river basins. At the time, two subspecies were thought to be extinct, however, the San Juan Cutthroats have since been rediscovered.

- The present distribution explains the historic stocking effort. From 1899 to 1909, over 29 million trout were introduced from the Grand Mesa Lakes. From 1914 to 1917, over 26 million trout were introduced from Trapper's Lake. The fish found outside of their typical range in Bear Creek were thought to be relocated for recreational use.
- The effort was jumpstarted in 2014 to repopulate the South Platte Basin. There are ten projects happening now and projected through 2030.
- The Leadville fish hatchery gets wild gametes from Bear Creek to bolster genetic diversity. The brood stock is maintained, as well as a wild brood stock that spawns in the wild. The population is separated from non-native trout to reduce hybridization.
- The projects to reintroduce Greenback Cutthroat Trout involve constructing a barrier in a waterway to prevent migration of invasive trout into Greenback Cutthroat Trout habitat. CPW and partners then use the piscicide chemical, rotenone, to eradicate non-native species to ensure a stream is devoid of non-native trout before reintroducing native species. A small volume of rotenone is diluted as it drips into targeted waterways. The following projects are waterways that have been treated with rotenone in preparation for Greenback Cutthroat Trout reintroduction:
  - George Creek and Cornelius Creek
    - Phase 1: Upper George Creek, 2.8 miles – treated in 2018 and 2019
    - Phase 2: Cornelius Creek, 4 miles – treated in 2020 and 2021
    - Phase 3: Lower George, 7 miles – treated in 2022 and 2023
  - Rock Creek and Black Canyon Creek
    - Phase 1: 0.8 miles – treated in 2015
    - Phase 2: 2.0 miles – treated in 2017 and 2018
  - Poudre Headwater Project
    - The project is focused on 37 miles of waterway and 242 acres of lake and reservoir.
    - The NEPA mitigation is isolated into 6 phases. The project is currently concentrated on stakeholders and the initial planning stages.
  - Herman Gulch and Dry Gulch
    - The earlier projects were smaller scale and could be treated only once. There were already fish barriers from the existing culverts.
    - The stocking efforts from 2016 to 2019 followed treatment in 2015. There were 997 yearlings who received a tracker tag. Greenback Cutthroat Trout population estimates are surveyed every year and applied to the rest of the gulch.
    - Herman Gulch is estimated to have 500 adult Greenback Cutthroat Trout. There was an expanding population from stocking in 2019, but after halting stocking efforts, there was a great population loss. However, natural reproduction from past reintroduced populations has been made evident with the discovery newly recruited yearlings. Herman Gulch temperatures in 2021 and 2022 supported recruitment. Dry Creek relies on drought years and supports recruitment every three to four years.

### ***Clarifying Questions***

Meeting participants asked clarifying questions about the history of Colorado Greenback Cutthroat Trout reintroduction. Their questions are indicated below in italics, with the corresponding responses in plain text.

*Can you talk about how CPW balances the eradication of non-native trout with the stocking of non-native trout that CPW also does?*

The funding from hunting and fishing licenses supports recreation; stocking rainbow trout is economical but needs to align with long-term objectives. Brook and Brown trout are self-sustaining species, and CPW needs to manage around them to focus on top-priority species that need support.

*Do water quality issues impact the reintroduction of the Greenback Cutthroat Trout?*

There have not been issues with water quality, primarily because Greenback Cutthroat Trout reintroduction projects tend to occur at high elevations. At one point, there were locations without fish, and the water quality showed traces of heavy metals. For example, Clear Creek was a designated clean-up site, and 20 years ago it would not have support fish, but now, it can. There are now trout in Clear Creek stretching to Bakerville.

*How does turbidity or dissolved oxygen affect recruitment? What monitoring is in place to identify areas of concern?*

Most water quality monitoring is focused on temperature. They have generally not found issues with dissolved oxygen or turbidity, so CPW does not monitor those metrics. Trout Unlimited volunteer help log temperatures and are a major reason for the successful reintroduction.

## **ENVIRONMENTAL PROTECTION AGENCY (EPA) SOUTH PLATTE RIVER SUN VALLEY TRASH ASSESSMENT PRESENTATION**

- The goal of the project is to reduce the amount of garbage in our waterways. The project focuses on investigating the introduction of litter and removal of trash from waterways to decrease the negative impact on the environment and wildlife.
- EPA Region 8 manages Colorado, Montana, Utah, North Dakota, South Dakota, and Wyoming. Their programs include tribal outreach and urban location projects, including events at Denver Aquarium for microplastic research in the Rocky Mountains.
- Rain and wind will carry trash to storm water drains, emptying to streams or larger bodies of water, sometimes even to the ocean. Marine litter has a large public focus, but trash can travel very far downstream in a waterway. Over 80% of aquatic trash originates from inland sources.
- Plastic decomposition takes years or decades. The EPA encourages members to look around them to see how much plastic they use in their daily lives.
- The EPA headquarters developed a trash assessment protocol in 2021 to develop a resource standard for trash cleanup, classification, and assessment. This includes a condition reference sheet and explanations for how to properly clean waterways.
- How is data collected from a trash cleanup?
  - Region 8 wanted to use the standardized protocol manual to develop a project to apply in the field.
  - They establish criteria for a possible assessment location. The chosen location must be near a body of water, have high recreational use, and have easy access for volunteers. The Sun Valley neighborhood fit these criteria.
  - The Region 8 team used the EPA EJScreen program to find socioeconomic facts on neighborhoods. The Sun Valley neighborhood population consists of 90% low-income individuals.
  - The Sun Valley neighborhood has walking paths along three bodies of water: Lakewood Gulch, South Platte River, and Weir Gulch. The volunteers surveyed 1.3 miles of trails.
- The EPA Region 8 team organized the Sun Valley Trash Assessment effort into two days:

- Day 1: The volunteers met at Rude Recreation Center. Twelve volunteers were divided into three teams to collect litter along the three different bodies of water. All the volunteers were given safety equipment, including two 13-gallon bags and a standardized field site summary sheet from the EPA. The volunteers were asked to stay on the path and avoid homeless encampments and any dangerous waste (e.g., needles, broken glass, etc.).
  - Volunteers received reference pictures to assess the condition of the waterways. They also took notes including on any major concerns and trends in the location of trash.
  - Volunteers reported trash hotspots and dump sites with large objects like carpets and fridges.
- Day 2: Volunteers took the trash to Denver Federal Center at the EPA location. The collected garbage was sorted by body of water and assessed.
  - The trash was categorized by paper, plastic, cardboard, glass, metal, fishing, car parts, and other miscellaneous items.
  - Each category of trash was weighed, and the total volume was estimated.
  - A total of 86 pounds of trash was collected and disposed of. Weir Gulch produced the most trash, followed by Lakewood Gulch then the South Platte River.
  - Volunteers found plenty of bottles, cups, food containers, and tissue paper.
  - Miscellaneous items included straws, utensils, cigarette butts, vapes, e-cigs, and plastic cannabis tags.
- Status of Sun Valley Trash Assessment target locations:
  - South Platte – slightly littered, some construction, mainly recreational, no trash cans present
  - Lakewood Gulch – slightly littered with hotspots near bridges and overpasses, mainly recreational, one trash can present
  - Weir Gulch – slightly littered with hotspots, dumpsites, no trash cans present, larger dumped items
- Volunteers observed numerous hotspots under bridges and hotspots at the train station across from Lakewood Gulch.

### ***Clarifying Questions***

Meeting participants asked clarifying questions about the Sun Valley South Platte River trash assessment. Their questions are indicated below in italics, with the corresponding responses in plain text.

*Were there any trends between the location of homeless encampments and the amount of litter?*

Only one encampment was reported along Lakewood Gulch, and there was not a significant amount of garbage in the area. Weir Gulch looked like a dump site of personal belongings and likely had someone living there at one point.

*Would you consider the trash data tool to be K-12 student-friendly?*

Currently, the EPA is working with mentees in high school. It could be adjusted to fit this age group. For example, younger students could use a simplified spreadsheet to categorize trash.

### ***Group Discussion***

- The Colorado Department of Public Health and Environment (CDPHE) supported a project in the same area ten years ago, categorizing the litter collected. CDPHE gave a grant to the Greenway Foundation to clear three locations on three different days. The collected trash

had an estimated count that could be compared to the results from the recent trash assessment. A map of the area should be provided for volunteers to check off the trash location on the map for reference.

- The South Platte River location likely had less trash because there are fewer people using it as a recreational area due to construction, which will likely change once housing is rebuilt. The bag ordinance reduced the number of bags in trees. Tires are still a significant problem in the river.

### **SPRUWP UPDATES**

Samuel Wallace, Peak Facilitation Group and SPRUWP ambassador, provided updates on SPRUWP. His comments are summarized below.

- The SPRUWP Education and Outreach meeting has been postponed to Thursday, December 15 from 10:30 AM to 12 PM.
- Samuel Wallace is organizing a funding workshop for partners to make connections and learn about upcoming funding opportunities.

### **NEXT STEPS**

The next meeting of the Full Partners will take place on Tuesday, February 21.