

# STREAM RESTORATION VOLUNTEER MONITORING INTERNSHIP

## SUMMIT COUNTY, COLORADO

INTERNSHIP FUNDED BY THE GARRETT COLLOPY FOUNDATION

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### PROJECT INTRODUCTION

Beavers are vital in enhancing Colorado's wetlands as they support healthy riparian ecosystems, promote downstream water availability, and elevate drought resilience.

Friends of the Lower Blue River (FOLBR) has partnered with Colorado Parks and Wildlife (CPW) to develop the Wetlands for Wildlife project, which focuses on identifying priority stream sites throughout Summit County suitable for ecological uplift.

Uplift projects will utilize Beaver Dam Analogs (BDA) as a tool to help streams return to their historical flow patterns. BDAs are essentially manmade beaver dams designed to mimic beaver activity by helping streams return to their historical flow patterns.

Community members monitor streams based established criteria which include specific characteristics of the stream, valley, and vegetation. They report their observations to CitSci.org.

### INTERNSHIP GOALS

Identify stream sites suitable for ecological uplift and BDA implementation and report to CPW.

Engage the community in this participatory science opportunity. Educate them on the value of restoring Colorado's wetlands.

### HOW DOES THIS APPLY TO YOUR EDUCATION

I am an Ecosystem Science and Sustainability major with a minor in Ecological Restoration. The development of knowledge in the subject of wetland ecology, in addition to growing my project management, community engagement, and Geographic Information System (GIS) skills, I can prepare for a future career as a Restoration Ecologist.

### WHAT YOU DID

Established the criteria for what makes beaver suitable habitat. This includes a low-gradient and slow-flowing perennial stream, a wide valley, and an abundance of food and building materials such as willow, aspen, and cottonwood.

Utilized maps created by the Colorado National Heritage Program and Colorado State University along with the Beaver Restoration Assessment Tool (BRAT) to identify beaver-suitable sites within the lower Blue River watershed.

Verified mapping by observing streams throughout the lower and middle Blue River Valley watershed.

Documented findings in a datasheet developed on CitSci.org and a report to be shared with CPW.

Recruited volunteers to join on educational hikes along some of our priority sites for uplift. I coordinated and led these outings, which encompassed learning the value of preserving wetlands, the benefits of beaver, and how to record stream observations on CitSci.org.

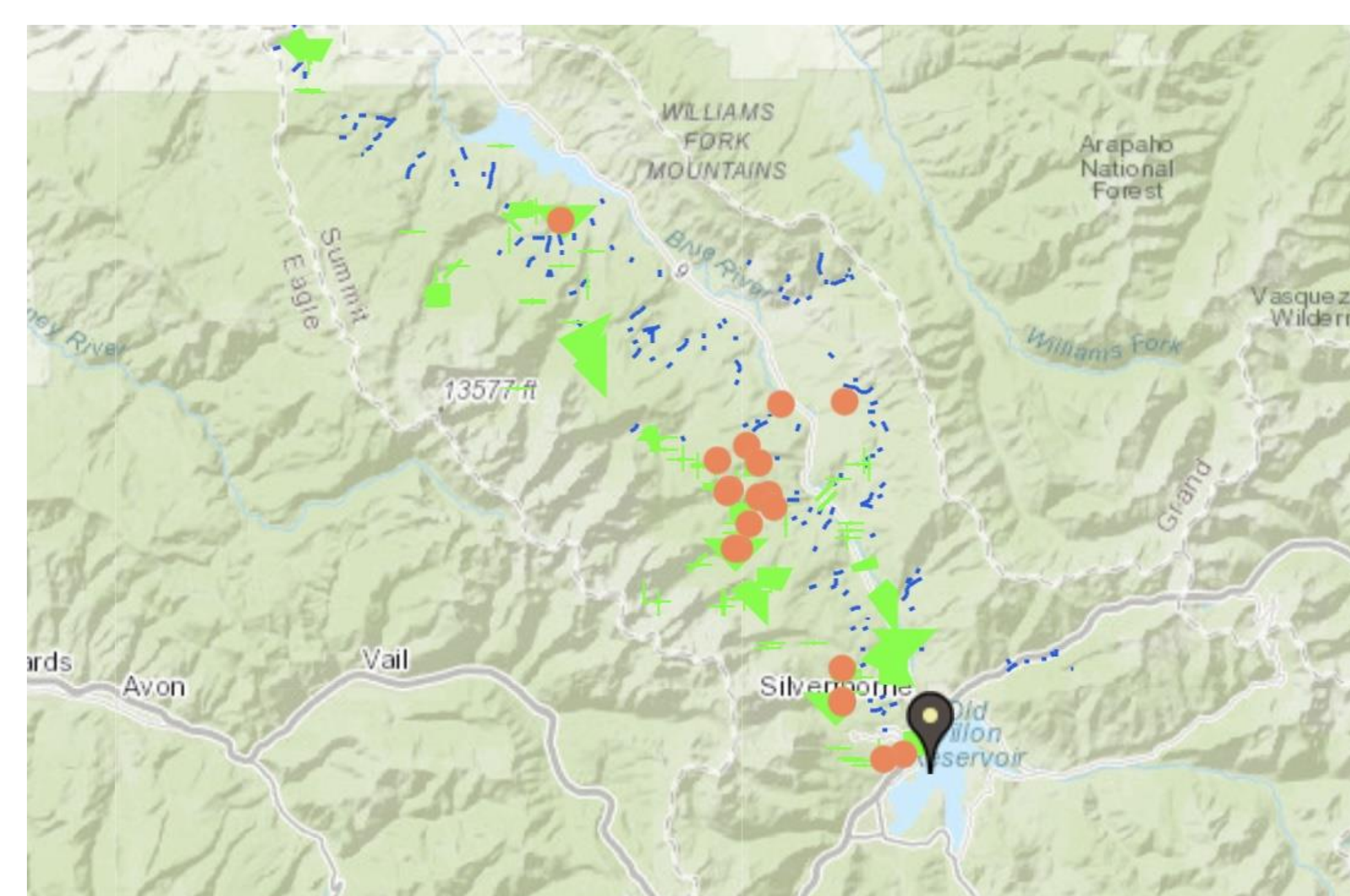


Figure 1.

Map derived from CitSci.org that demonstrates sites monitored throughout the project watershed. Red dots represent locations that have been observed either by project managers or volunteers. The blue lines are adapted from the BRAT and represent high beaver dam building capacity. The green areas represent potential uplift sites in need of verification.

### WHAT YOU LEARNED

Beavers are nature's engineers. Their work helps create biodiverse wetlands, wildfire resistance, increased water quality, and increased water availability.

Project management, volunteer coordination, and organizational skills through the development of the Wetlands for Wildlife project.

Processes of being granted permission to conduct stream observations on private land.

Strategies to help humans coexist with beaver. This includes low-tech, low-cost, and low-maintenance devices like the beaver deceiver and pond levelers.

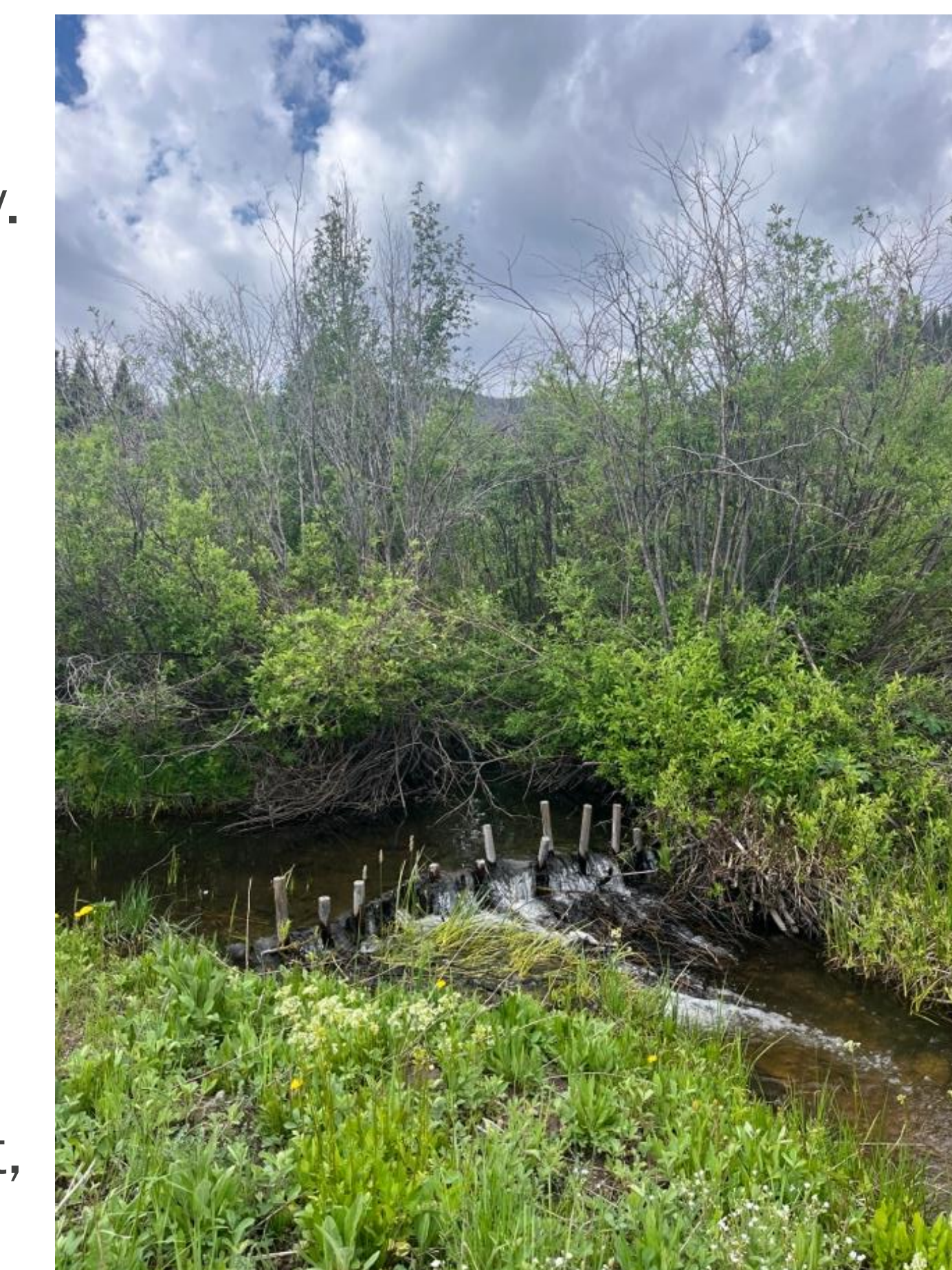


Figure 2.

This is an example of a completed BDA project along Spruce Creek. These devices are constructed by installing posts vertically into the streambed. The space between the posts is filled with materials that beavers typically use to make dams. The idea is to entice beavers to the area where they will continue working on the dam that has been assembled.

### NEXT STEPS

Continue working alongside organizations like CPW, USFS, Ecometrics, and Summit County Open Space and Trails to develop a BDA project design.

Community education and involvement is key to preserving wetlands and beaver habitat. The Friends of the Lower Blue River will continue hosting events for Summit County members and visitors to attend.