

Creating an Outstanding Waters Story Map for Wild Connections

by Eric Dec

ArcGIS StoryMaps are a great way to tell a place-based story, and since we were using StoryMaps in our master's program GIS class, they were an obvious choice to report on the Wild Connections' Outstanding Waters (OW) project. Wild Connections' project goal is to earn OW designations for streams in the Upper Arkansas River Basin and Pike San Isabel National Forest.

Telling this story started by examining the Mountain Studies Institute (MSI) OW project map, reading the OW fact sheet provided by John Sztukowski, and reviewing the requirements for designation, including water quality and ecological and recreational characteristics. Since the MSI project map included streams in the Rio Grande Basin, we decided to create our own map that filtered data to the intersection of the Upper Arkansas River Basin and the Pike San Isabel National Forest, which is Wild Connections' area of interest. Then, we looked at all existing streams in this area, which included streams that already have OW designations, and the candidate OW streams.

We were curious why some streams in wilderness areas weren't candidates. Our analysis determined that many streams in the Holy Cross, Mount Massive, and Collegiate Peaks Wilderness Areas had already been designated as OW. Additionally, the streams in the Buffalo Peaks Wilderness not on the candidate list had a CDPHE category 5 quality attainment rating (which signifies the water body is not meeting state water quality standards), which is likely why they were left off the list.

We also looked for risks impacting each candidate stream's OW qualities. This included an analysis of human and climate risks like logging, grazing, mining, drought, fire, and existing discharge permits. This risk data was compared to existing sampling locations, and a few recommendations were made for new sampling sites.

Next, we located each stream on our map and reviewed images of the streams taken during Wild Connections' water quality sampling trips. It was important to look at the images to create a connection to the streams and their locations. For presentation purposes, the streams were geographically grouped. The southern group includes streams in the Sangre de Cristo, Spanish Peaks, and Greenhorn Mountain Wilderness Areas. The streams in the northern group are in the Pike San Isabel National Forest, but not in wilderness areas.

Our final analysis was a preliminary screening of future Wild Connections OW work in the South Platte River Basin. This included creating a map of all streams in the South Platte River Basin and in the Buffalo Peaks, Lost Creek, and Mt. Evans Wilderness Areas that do not currently have OW designations.

Eric has been a long-time volunteer for Wild Connections. His Outstanding Waters story map was recently finalized for Wild Connections and can be found at wildconnections.org/conservation/outstanding-waters.