Go Code Colorado 2020 Idea Submission

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Idea Title: Instream Flow Dataset Integration and Visualization

Issue Identification
Instream flows are flows required to sustain fish and other aquatic uses. The Colorado Information Marketplace provides access to "Instream Flow Reaches" and "Instream Flow Termini" datasets and other datasets related to instream flows, in some cases as links to Colorado's Decision Support System (CDSS). These datasets are not integrated as much as they could be to provide a useful tool. There is a need to perform a number of CIM and CDSS web service queries in order to relate the data and provide integrated data access and visualization, in order to more efficiently understand environmental flows for fish and ecosystem habitat.

Data
Several datasets available in CIM and external CDSS related to instream flows will be used.

Potential Impact
The project would benefit environmentally-focused entities such as nonprofits, government departments such as natural areas and open space, educators, and the public. Streamlined access to integrated data and information will allow those organizations to focus on their work, not solving data access and integration issues.

Innovation
This project would demonstrate better use of integrated CIM and CDSS datasets. CDSS datasets are often not published in general forms and require download and processing (e.g., shapefiles) whereas CIM provides online access in multiple formats. The project could nudge agencies to do a better job in publishing the datasets.

Presentation
See the video of a recorded PowerPoint presentation: https://youtu.be/llKNnevv1h0

Summary

The idea is to enhance the Open Water Foundation's InfoMapper software and Poudre Basin Information Website (see: http://poudre.openwaterfoundation.org/latest/#/map/entities-instream) to improve access to integrated instream flow data. The website would utilize the multiple instream flow datasets on CIM and Colorado's Decision Support Systems (CDSS) websites, cross-link the datasets, and provide maps and other information products. This will allow environmental entities to better understand available data and integrate into their decision processes.