



## Exhibit A.1 Scope of Work

**Date:** February 1, 2023  
**Awardee:** White River Conservation District  
**Project Name:** White River Water Supply Study – Return Flows

### Project Summary:

The White River Water Supply Study (Project) is a priority for the White River Integrated Water Initiative (Initiative) to help identify the effects of flood irrigation to the river, aquifers, and local communities. Quality data will be collected in the middle reach (as defined by the Initiative) of the White River to facilitate the development and application of a hydrologic model for the White River. This data will be collected through measuring the stream flow at the upper end of the middle reach, the tributary contributions, the ditch diversions, the groundwater head at wells, and the stream flow at the lower end of the study area. These measurements will be used to determine the location and timing of return flows to the White River and the overall effects of existing irrigation practices to the health of the river.

### Project Success and Deliverable:

The final deliverable of this project is a user-friendly return flow model for the middle reach of the White River. The Project deliverables for this specific funding will include the delivery of quality water measurement data to the CSU Dept. of Civil and Environmental Engineering for the development of the White River Middle Reach Return Flow Model. CSU Professor, Dr. Ryan Baily, is applying for grant funding through the Colorado Water Center to develop the model and to make the final model user friendly for decision makers.

Project success is three-fold:

1. The Initiative will utilize this information in the development of a future drought contingency planning effort.
2. Agriculture producers will use this model to make decisions regarding their irrigation practices and individual drought contingency planning efforts including if they could/should participate in any demand management program.
3. Determine how existing irrigation practice are supporting a healthy river and supporting base flows for downstream uses.

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### **Task 1 Description: Well Loggers**

Ten well loggers will be purchased for installation and monitoring in this project.

### **Task 2 Description: Logger installation and monitoring**

The ten well loggers will be installed in current wells for the purpose of monitoring water levels. The water depth will be monitored throughout the year with the information being submitted to Dr. Bailey for use in verifying the accuracy of the model. Protocols will be identified and documented.

### **Task 3 Description: Tributary Measurement Installation and Monitoring**

The specific stream gauging method will be determined through conversations between the Initiative, CSU, USGS, and CRD staff. The tributaries will be measured to account for “new” water into the system, giving a better understanding of the return flows from irrigated fields. Protocols will be identified and documented.

### **Task 5 Description: Planning & Coordinating (Diversion Measurements)**

Facilitation of the Planning Advisory Committee (PAC) will continue, keeping all the members involved in the process. A smaller water work group will convene on a regular basis, helping to ensure the process is well planned and executed. The Coordinator will stay in close contact and facilitate any necessary meetings with CSU and other partners to ensure the necessary communications for the development of protocols and evaluation of a successful model.