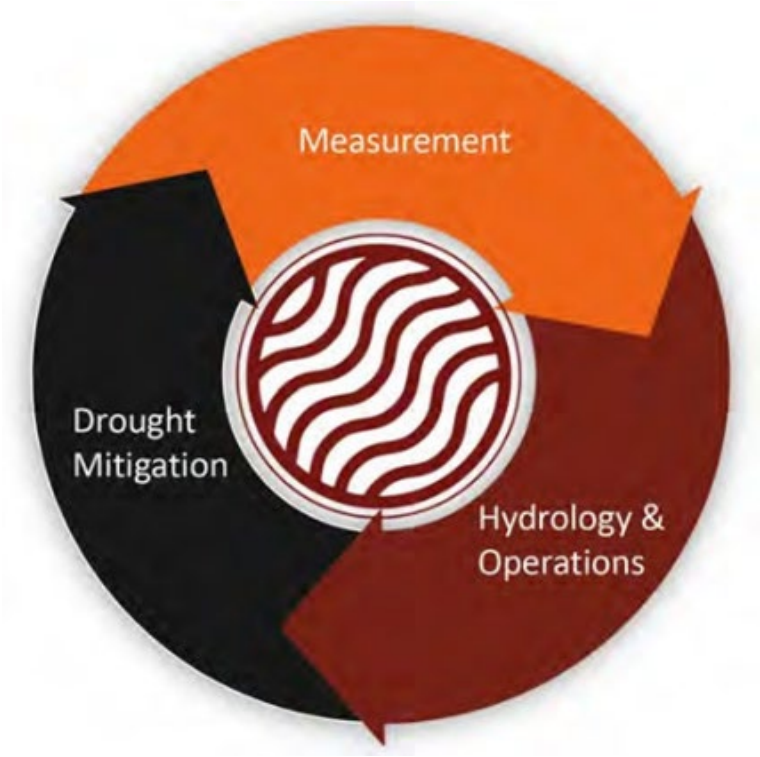
# Colorado River Management Plan Implementation

**Colorado River Authority of Utah Board Meeting**
**Lily Bosworth, Staff Engineer**
**Betsy Morgan, Staff Engineer**

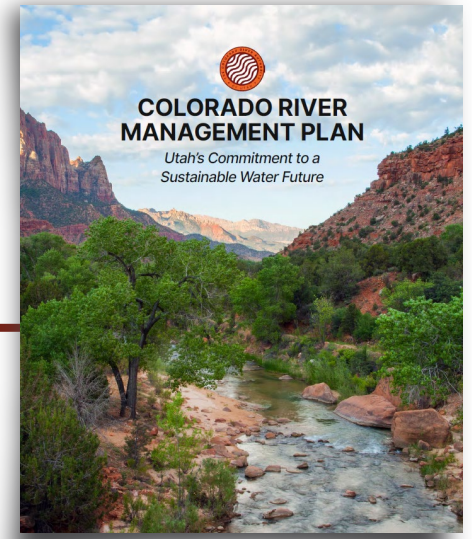
FEBRUARY 16, 2023
SALT LAKE CITY, UTAH

# Three Priority Areas




## Five-year Management Plan

**April 2022**




## FY 2023 Work Plan

**June 2022**

# Metering & Gaging Gap Analysis

**To inform next steps in improving the metering and gaging system within the Colorado River Basin of Utah**

November 2022

## Kick-Off

**Bowen, Collins, & Associates**
**Jones & DeMille**

- Coordination meetings
- Define project scope

December 2022 - January 2023

## Collect/ Organize Existing Data

- Map existing and known gages, canals, etc.

## Prepare for Stakeholder Interviews

- Informational letter and handout to Interviewees
- Prepare interview materials

January - March 2023

## Schedule and Conduct Interviews

- Regional engineers, distribution engineers, river commissioners

## Synthesize and Prepare Gap Analysis

Spring 2023

**June 2023**

# Metering & Gaging Gap Analysis

## Interview Approach

### Send Prep Materials

- Regional map series
- Questionnaire
- A list of gages with unknown location

### Conduct Interviews

- Review interactive maps
  - Verify **existing** gages
  - Add **missing** gages
  - Add **proposed** gages

ArcGIS Survey123

- General System Questionnaire

### Follow-Up

- Follow-up to collect additional attributes for **large** (>50 cfs) or **important** gages

# Metering & Gaging Gap Analysis

## Interview Progress

**Completed**
**2 interviews each**

- Ashley Creek
- Green River

**Next 2 weeks**
**Scheduled/ Completed**

- North Slope of Uintas
- Brush Creek
- Duchesne River

**Next 3-4 Weeks**
**Scheduled/ Completed**

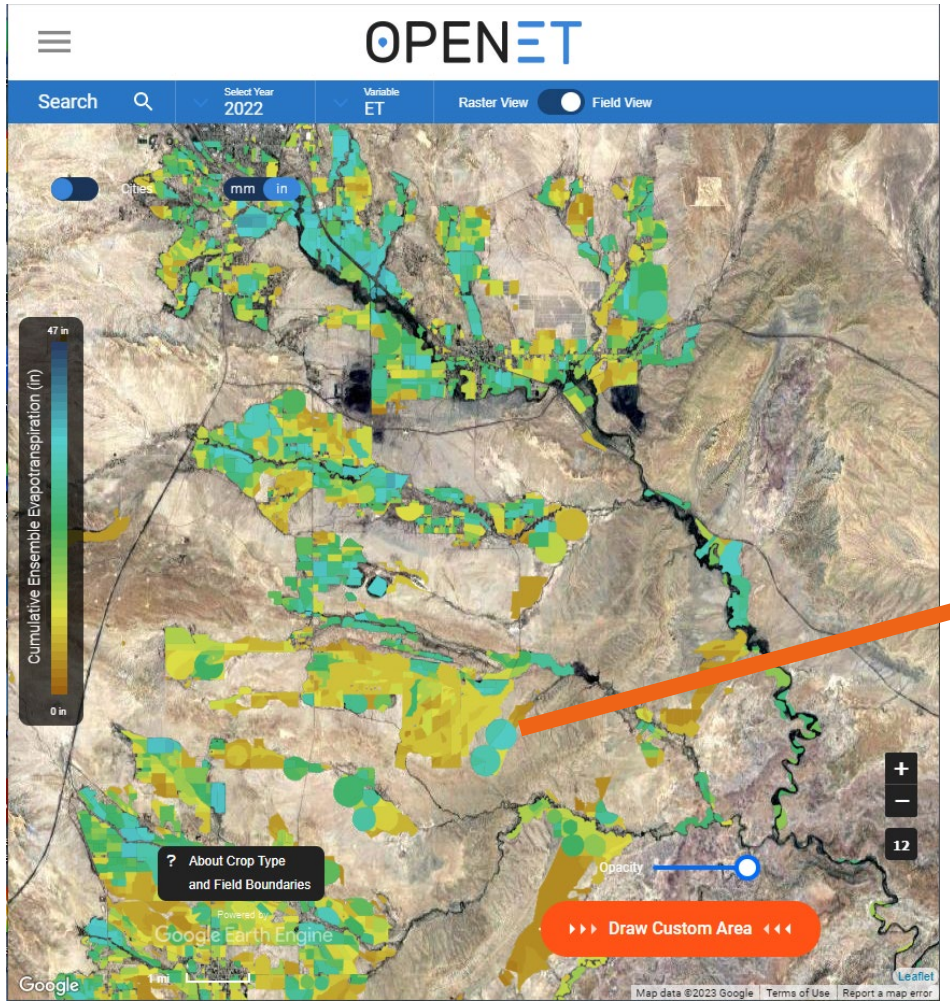
- Price River Area
- Emery County Area
- Escalante Area
- Moab/ Monticello/ Blanding

**Interviews finished second week of March**

**Positive response to interviews and process**

# OpenET

## Measuring consumptive water use from field to basin scale within the Colorado River Basin of Utah




# OpenET

**Measuring consumptive water use from field to basin scale within the Colorado River Basin of Utah**

**Contract Execution 1/31** — **Kickoff Meeting 2/10** — **7 Tasks:**

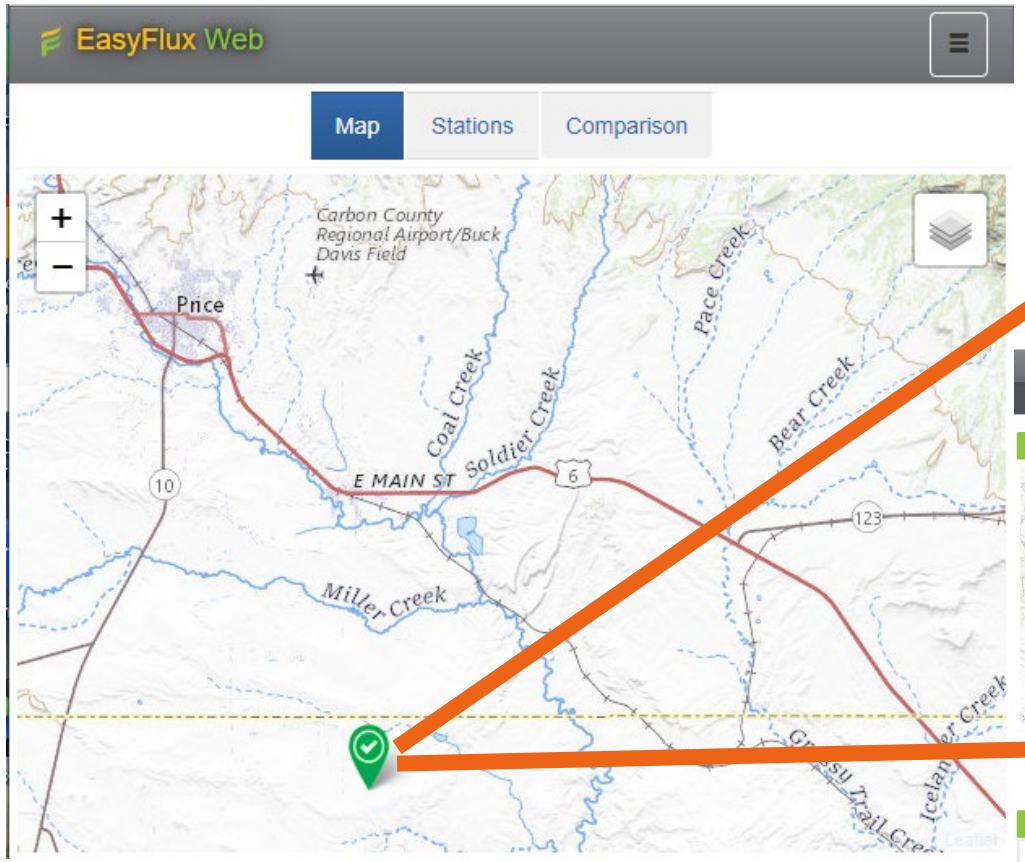
**Admin**
1. Training and basic support
2. Data services, updates, and access

**Data Improvement**
3. Historic data production
4. Crop type and land use updates
5. Effective precipitation and consumptive use

**Data Comparison**
6. Correlation of OpenET historic data to crop coefficient methods for determining consumptive use
7. Intercomparison of data and ensemble refinement for Utah's Colorado River Basin

# Utah Flux Network

## Measuring consumptive water use from field to basin scale within the Colorado River Basin of Utah

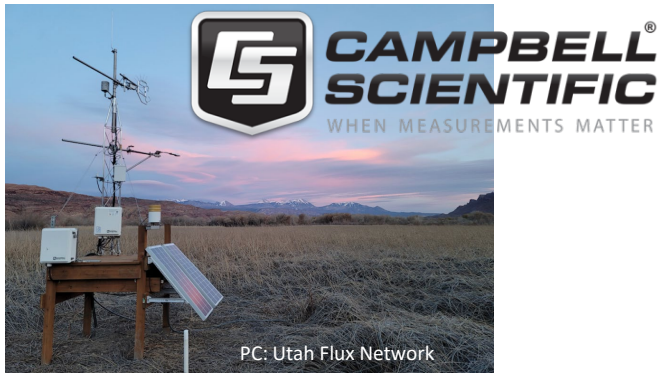




# Utah Flux Network

**Measuring consumptive water use from field to basin scale within the Colorado River Basin of Utah**

## Station Sighting & Instrument Purchasing




## Campbell Scientific Training

## Data Analysis Workflow Development

## Installation & Network Connection

AMERIFLUX

## Data Intercomparison & Refinement

OPENET

# Utah Colorado River Accounting and Forecasting Model (Duchesne River Basin Pilot)

## PHASE 1

**Through May 2024**

**Develop** the components of the model and **assess water supply, rights, and losses** within the Duchesne River Basin

## PHASE 2

**October 2023- June 2025**

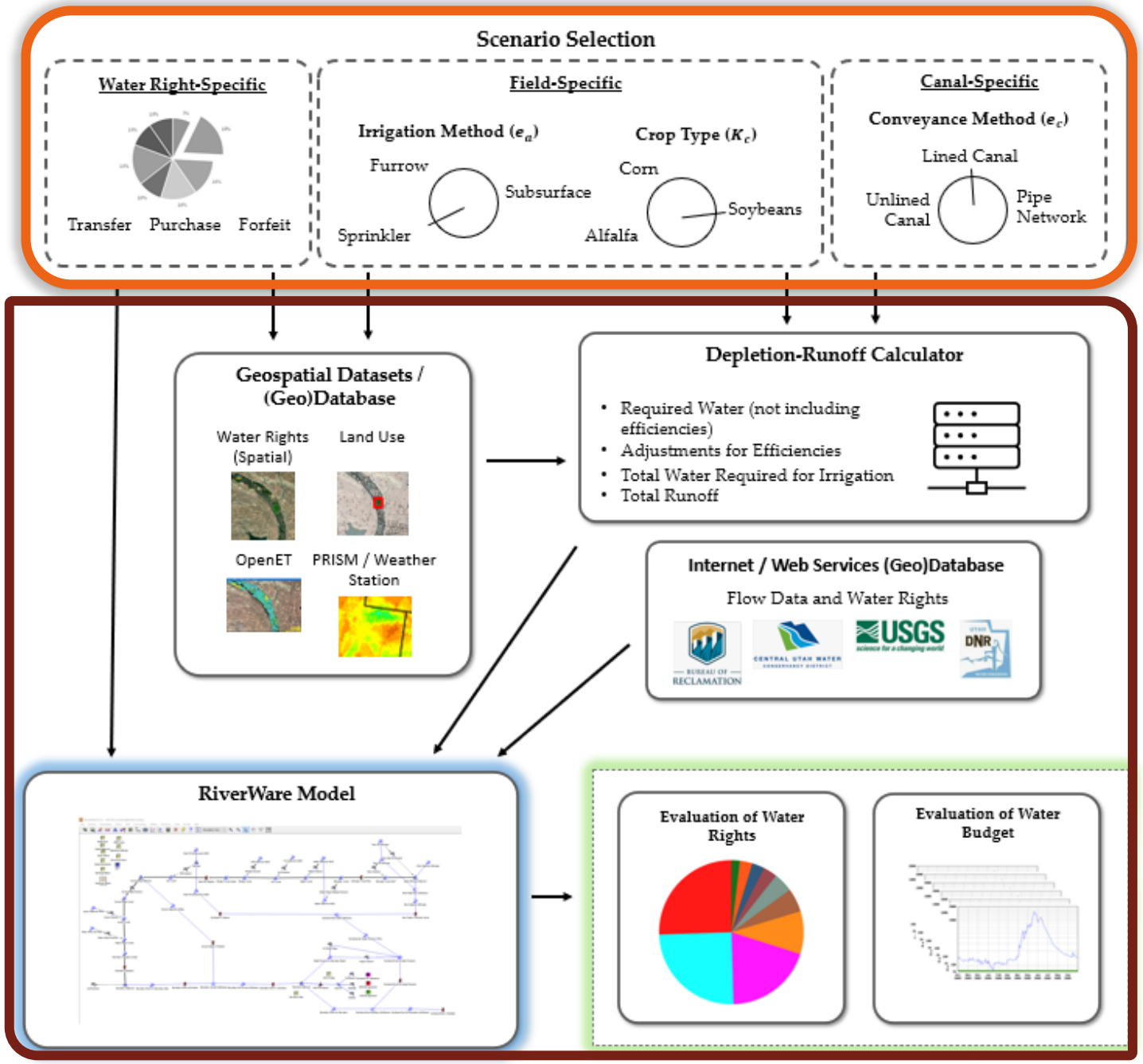
Use UCRAF to **assess the impact of system changes** to the water budget and water rights within the Duchesne River Basin

- Irrigation practices, crops
- Conveyance systems
- Demand Management

# UCRAF Overview

PHASE 2

PHASE 1

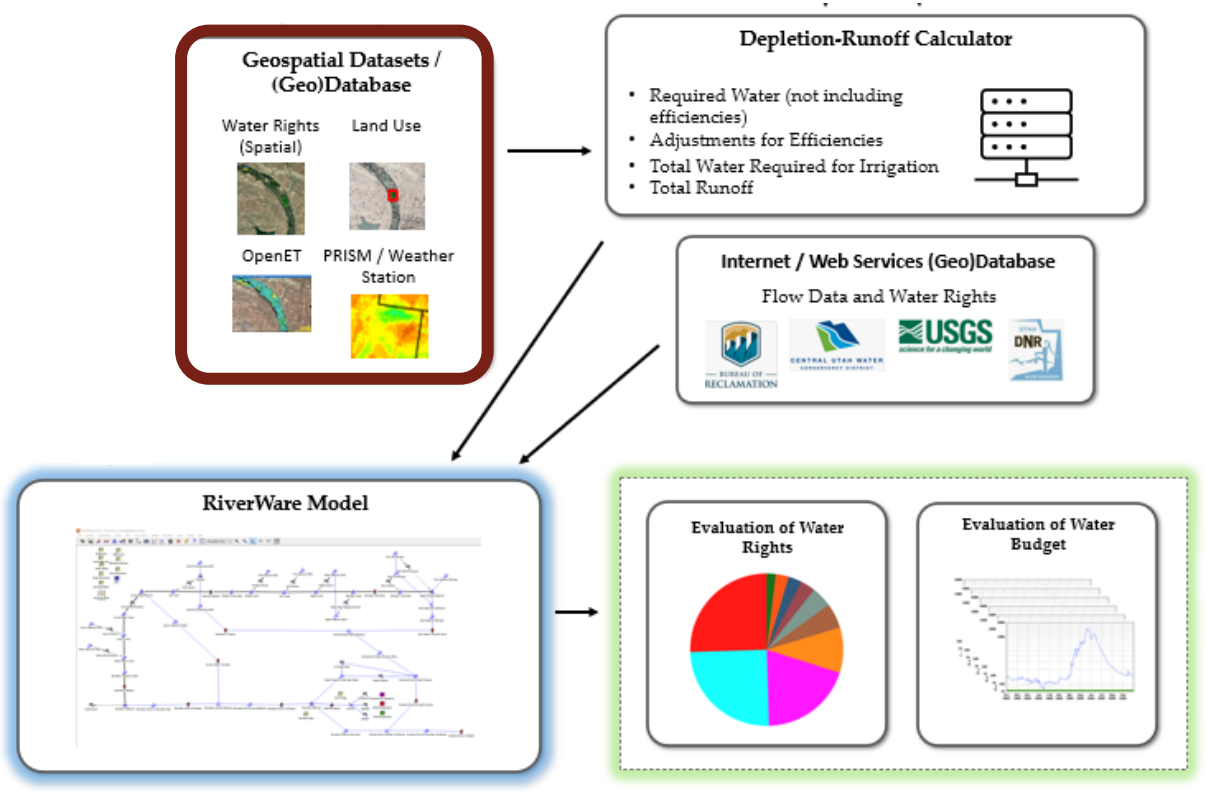


# UCRAF - Phase 1 Progress

## Geospatial Datasets

- **New Datasets**:
  - OpenET
  - Utah Water Right Distribution Network (DWRi)

- **Ongoing Coordination**

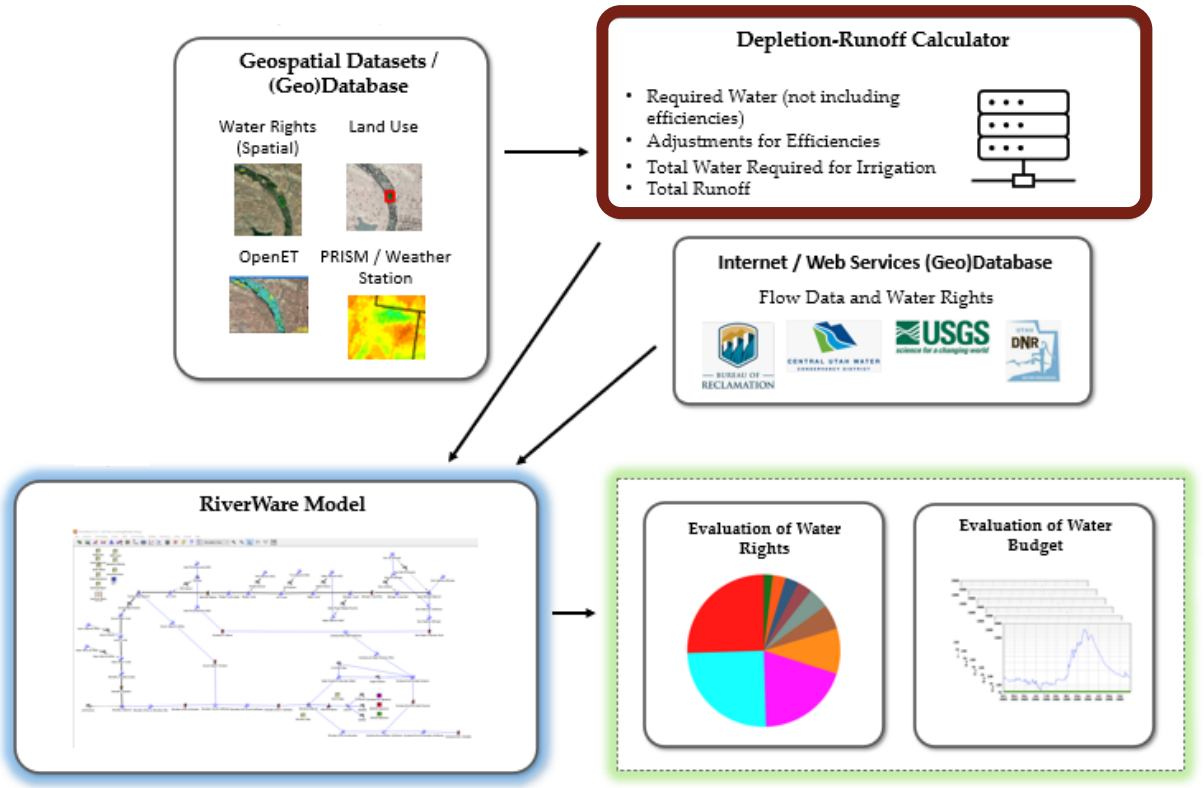


# UCRAF - Phase 1 Progress

## Depletion-Runoff Calculator

- **Irrigation Water Requirement**
  - OpenET
  - Calibrated Blaney-Criddle (Hill 1994)

- Updated code and User Manual

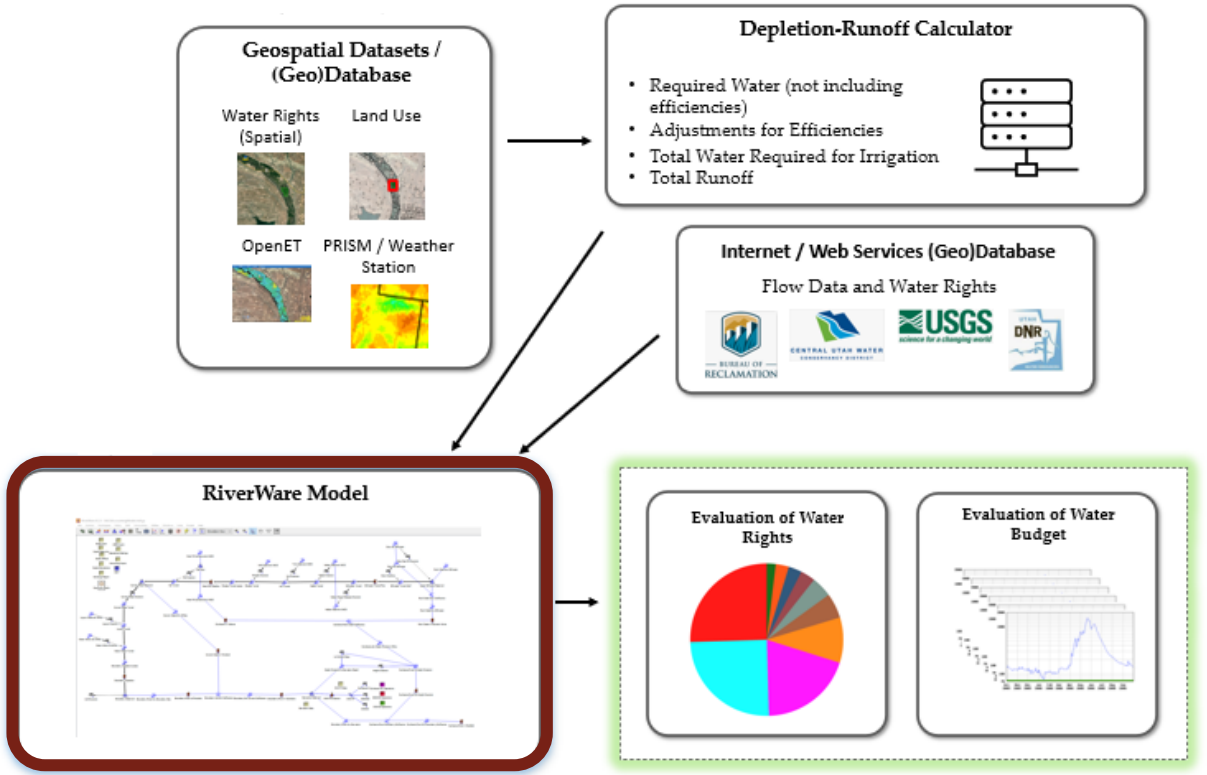


# UCRAF - Phase 1 Progress

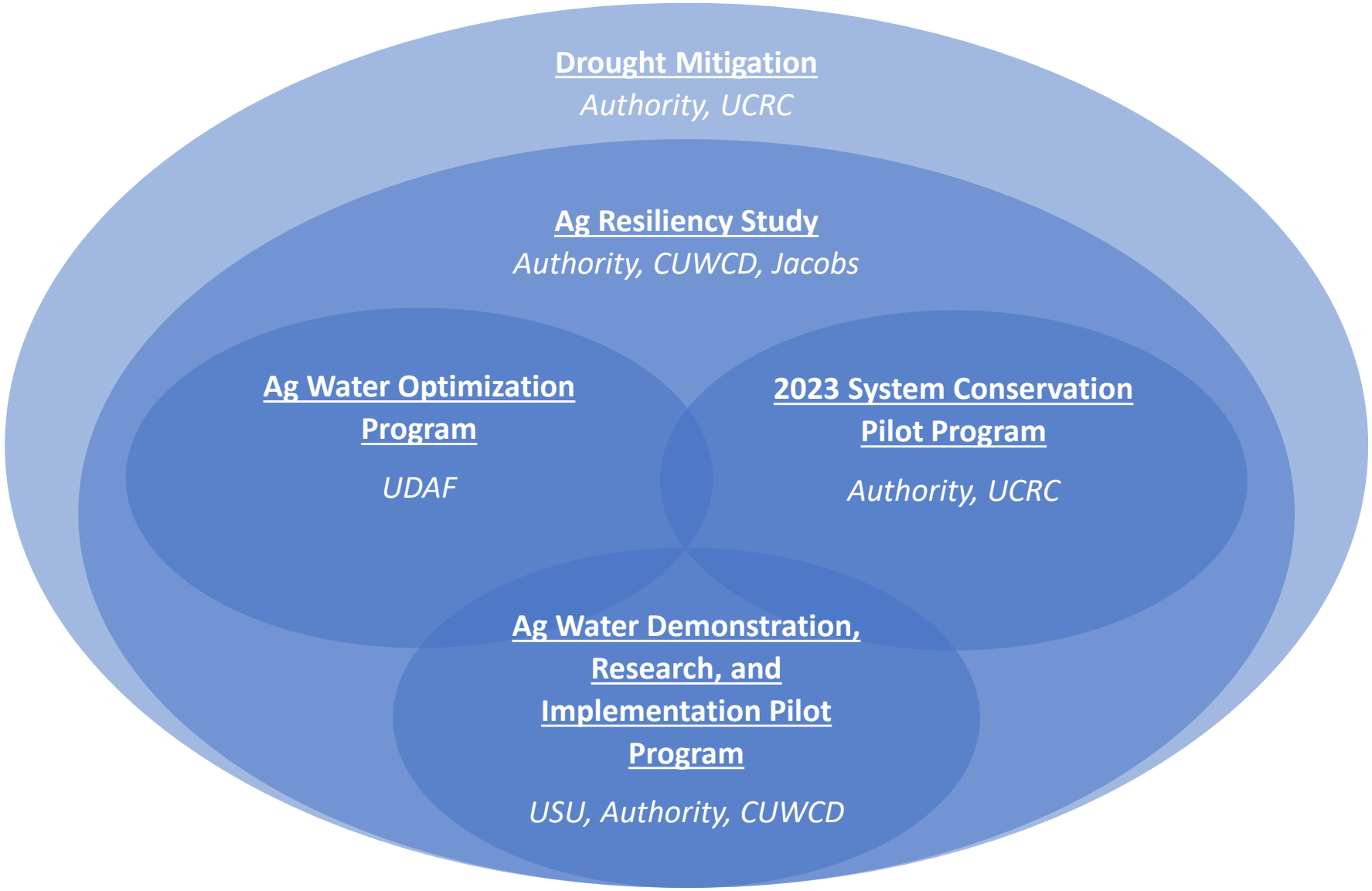
## RiverWare Model

- Model is **built and simulating** historic data

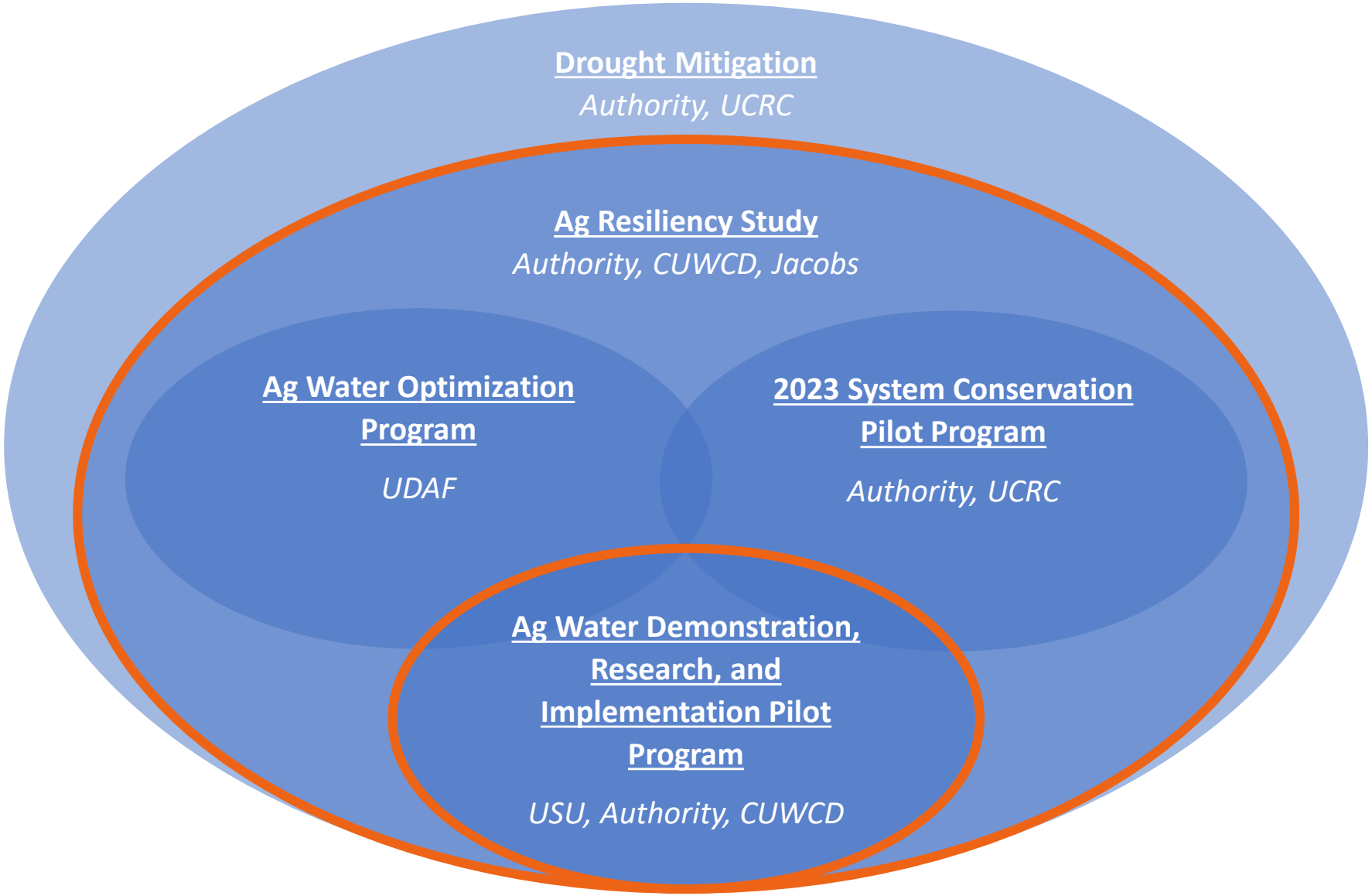
- Next:
  - **Rule-based simulation**
  - Adding **water right** information



# Agricultural Resiliency: Research & Implementation



# Agricultural Resiliency: Research & Implementation



# Agricultural Resiliency: Research

Ag Resiliency Study

CENTRAL UTAH WATER CONSERVANCY DISTRICT

Jacobs

THE COLORADO RIVER AUTHORITY OF UTAH

## PHASE 1: CUWCD

**May 2022 – December 2022**

- Water Resource Inventory
- Water Demand Analysis
- Quantify the Possible
- Develop Prioritization Criteria

## PHASE 2: Utah's CRB

**May 2022 – December 2023**

- Water Resource Inventory
- Water Demand Analysis
- Quantify the Possible
- **Assess Economic Impacts**
- Develop Prioritization Criteria

# Agricultural Resiliency: Implementation

**Ag Resiliency Study**

**agDRIP**
Ag Demonstration, Research, & Implementation Pilot

CENTRAL UTAH WATER CONSERVANCY DISTRICT

THE COLORADO RIVER AUTHORITY OF UTAH

EXTENSION UtahStateUniversity


## PHASE 1

**2023 – 2027***

Establish Program

Develop & Disseminate Education Materials

Develop Training Network & Resources

Develop Irrigation Management Plans: 125 Farms, 50 Irrigation Companies

Invest in Equipment, Alternative Crops, & Incentives for Monitoring & Reporting Water Use

Program Evaluation


THE COLORADO RIVER AUTHORITY
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