



# Upper Colorado River Commission Federal Funding to Improving Water Management in the Upper Division States

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DECEMBER 05, 2024

# Upper Division States Implementing Conservation Programs and World Class Water Use Observing Network

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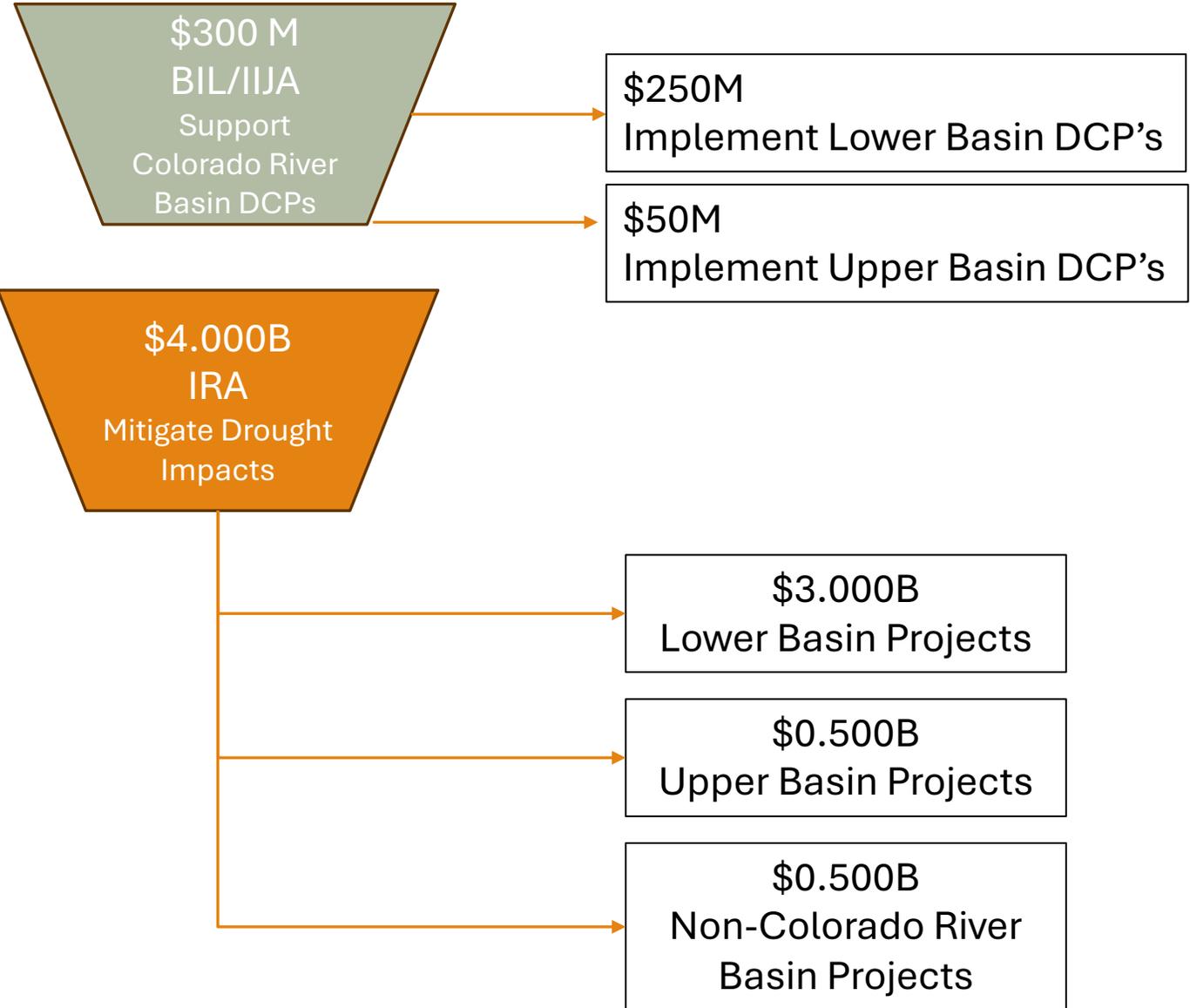
## **Conservation Programs**

- Funding an exploration of the impacts and feasibility of water conservation programs to mitigate the impacts of drought in the Upper Basin
- Studying the impacts of water conservation programs on sustainability of irrigated agriculture
- Developing tools for local drought resiliency

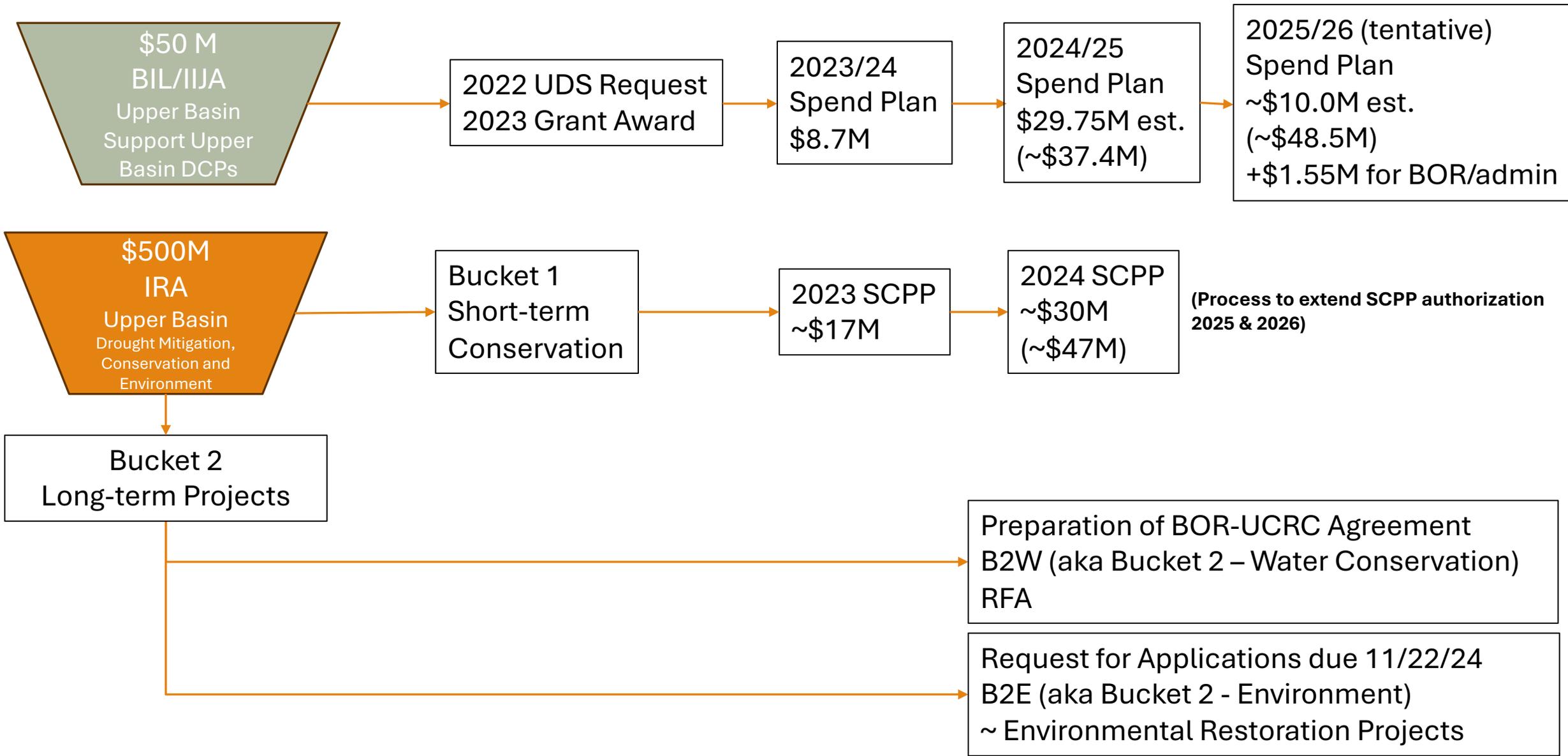
## **Water Use Observing Network**

- Install new observing network to improve accuracy of water use estimates
- Improve performance of OpenET tools used by Reclamation and the UCRC

# Colorado River Basin - Federal Grants



# Upper Basin - UCRC Federal Grants



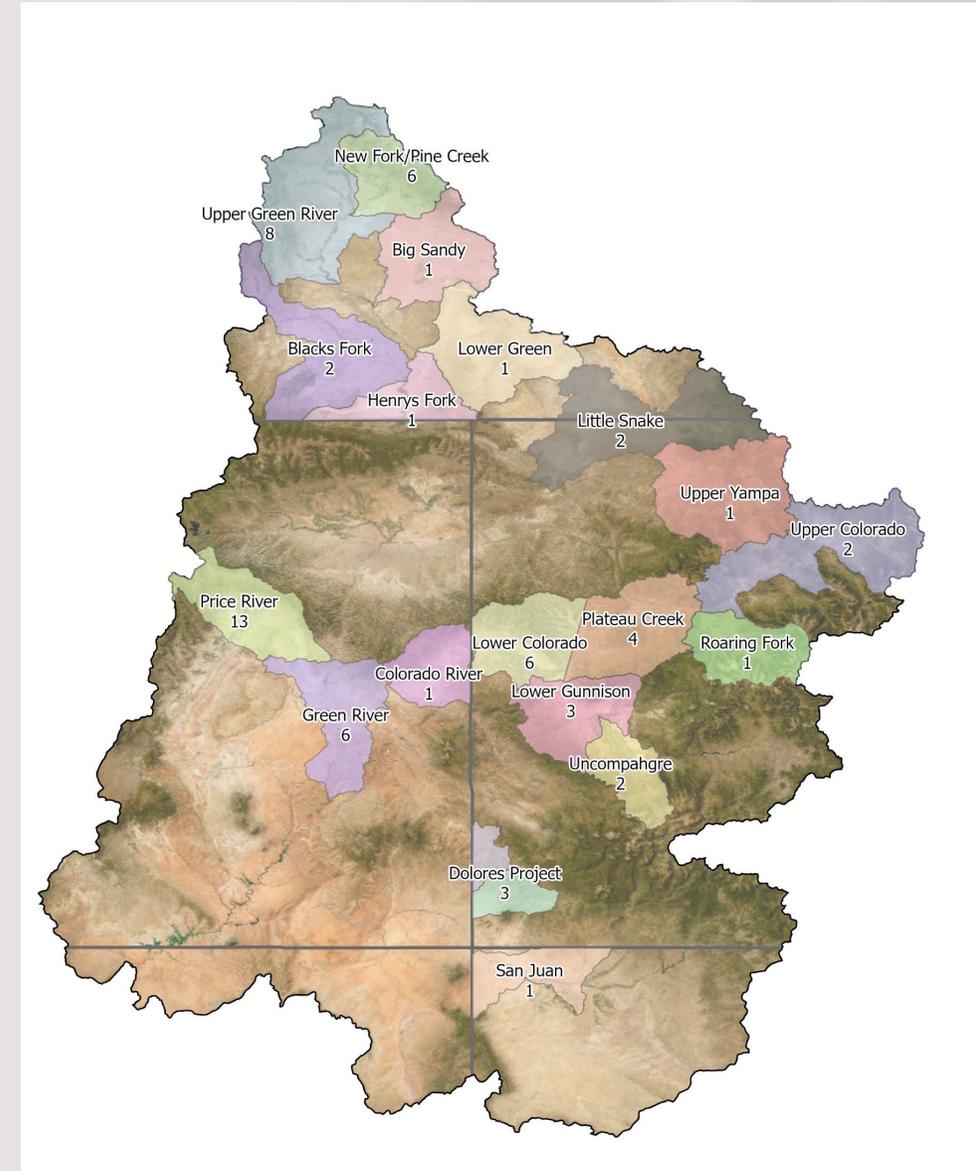
# 2023 SCPP

## Project Types Funded in 2023:

- Municipal
- Industrial
- Agricultural
- Storage Forbearance

State	Number of Projects Funded	Estimated Water Conserved (ac-ft)	Dollar Amount for Funded Projects
<b>CO</b>	22	2,517	\$991,929
<b>NM</b>	1	4,633	\$1,205,182
<b>UT</b>	20	15,091	\$5,437,255
<b>WY</b>	20	11,338	\$5,749,557
<b>CO/WY</b>	1	4,231	\$2,585,110
<b>Total</b>	<b>64</b>	<b>37,810</b>	<b>\$15,969,035</b>

Average Price per ac-ft = \$422



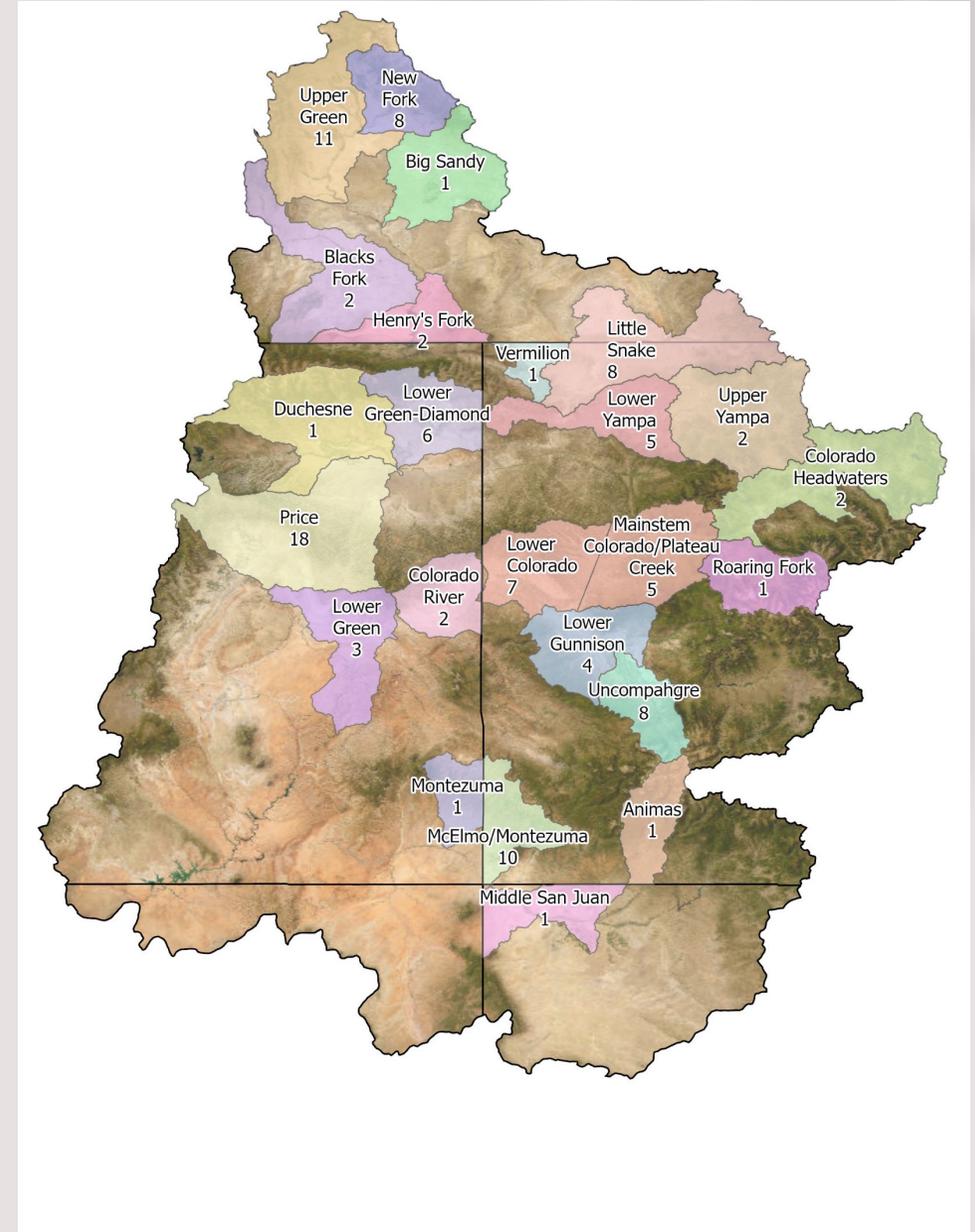
# 2024 SCPP

## Project Types Funded in 2023:

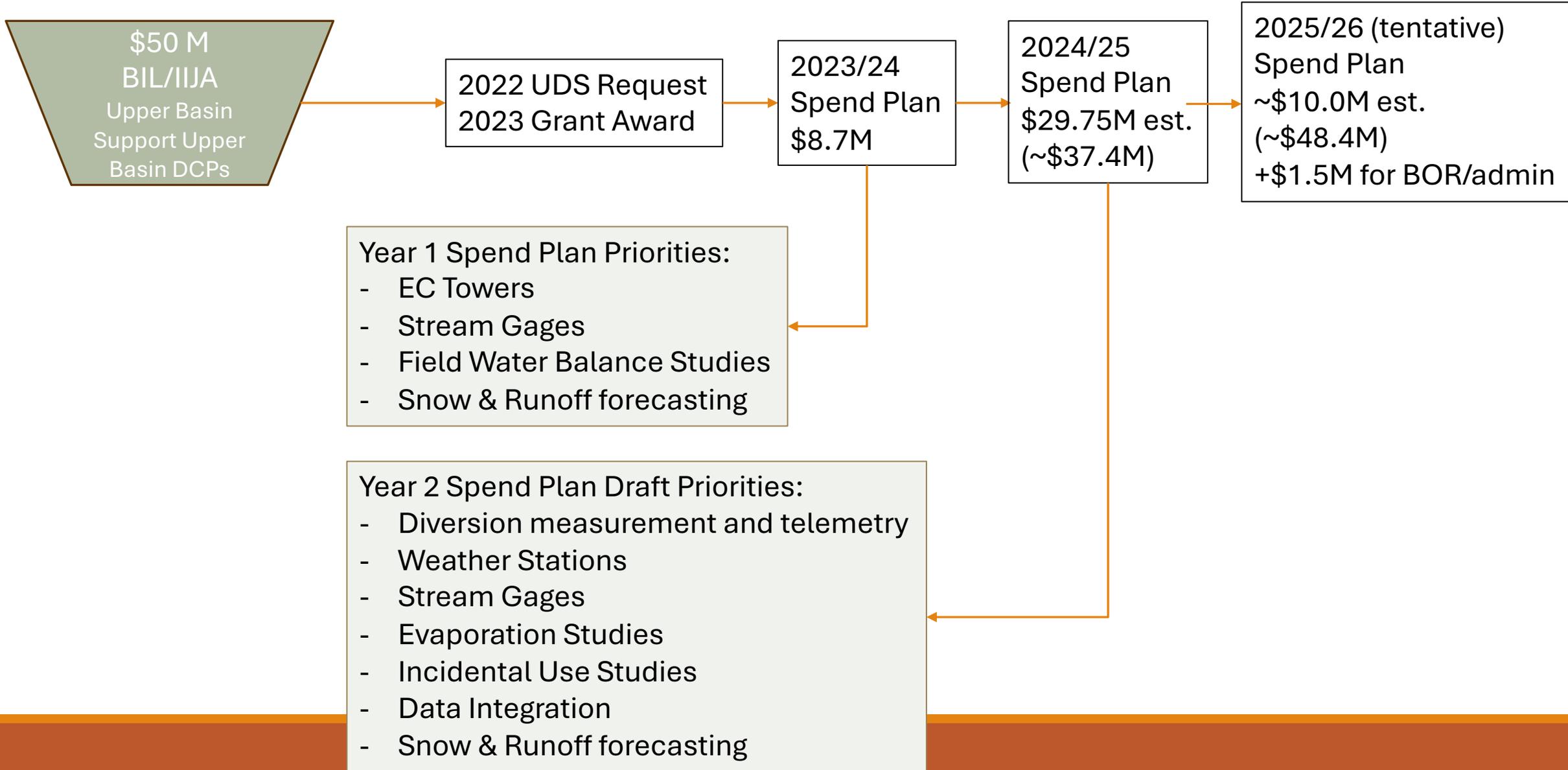
- Municipal
- Agricultural
- Storage Forbearance

State	Number of Projects Funded	Estimated Water Conserved (ac-ft)	Dollar Amount for Funded Projects
CO	46	14,239	\$7,204,730
UT	31	22,351	\$9,954,819
NM	1	4,933	\$1,479,900
WY	26	19,209	\$8,493,429
CO/WY	6	2,899	\$1,475,392
<b>Total</b>	<b>110</b>	<b>63,631</b>	<b>\$28,608,270</b>

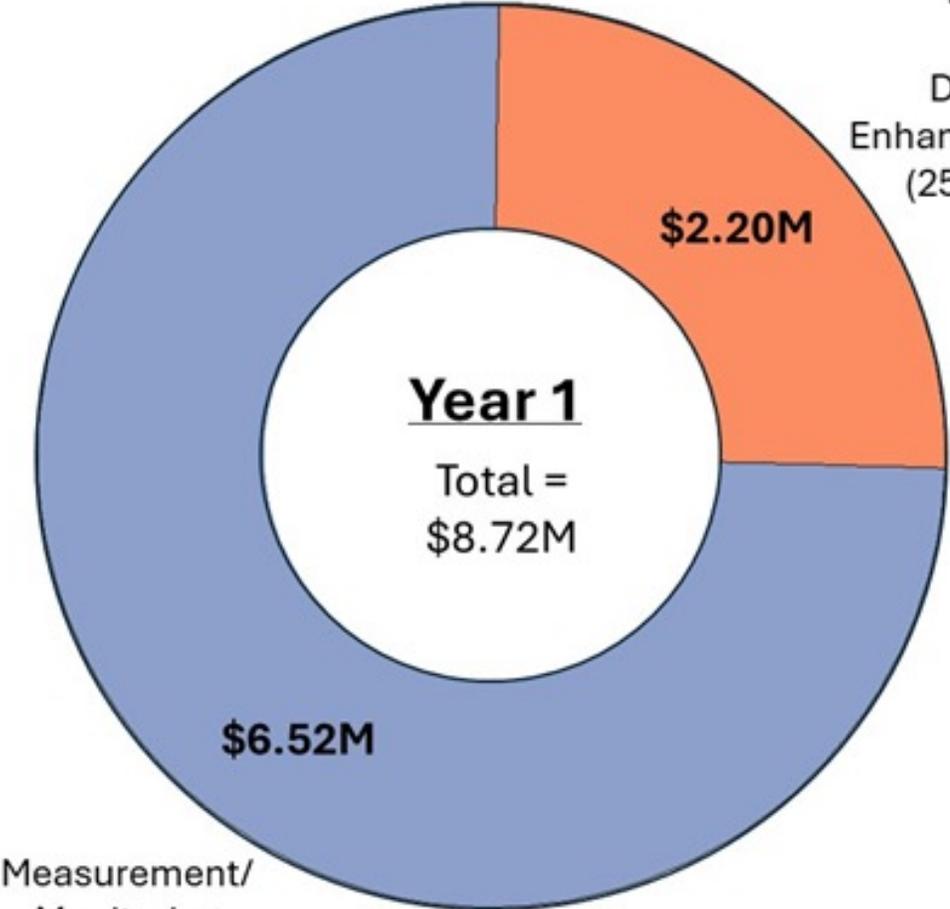
Average Price per ac-ft = \$449



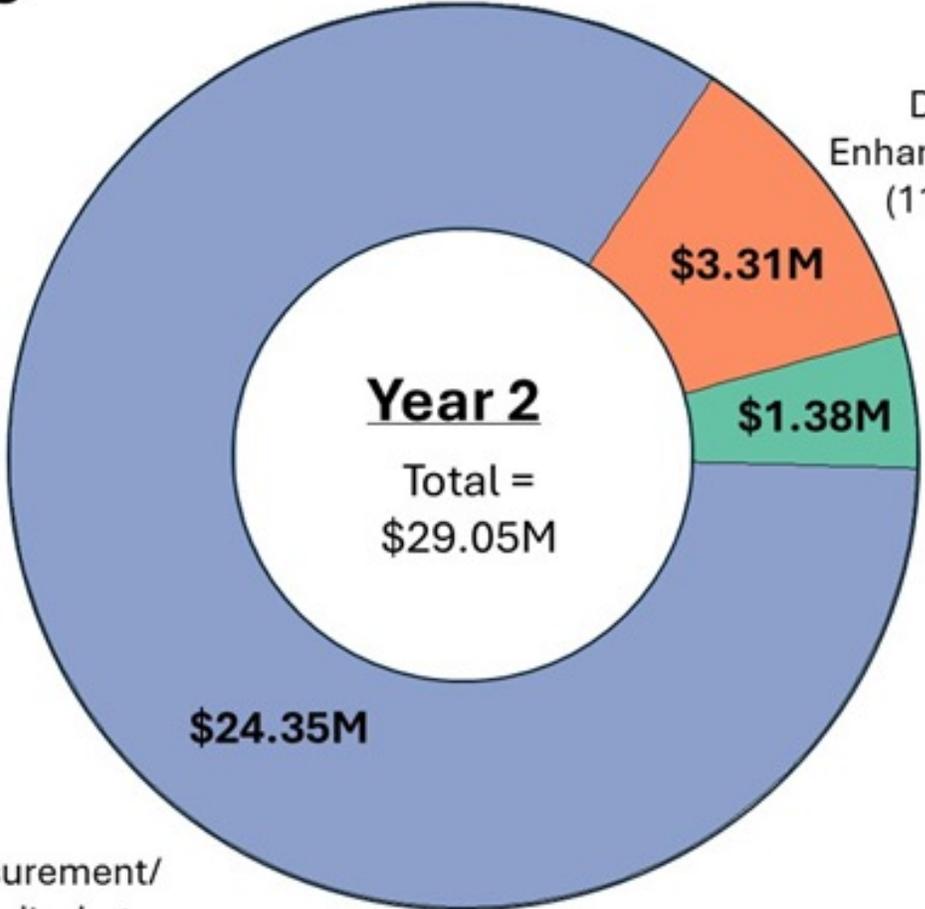
# BIL/IIJA Federally Funded Activities



# UCRC BIL/IIJA Spending Themes



Measurement/  
Monitoring  
(74.8%)



Measurement/  
Monitoring  
(83.80%)

# BIL DCP Year 1 Accomplishments

## EC Towers

- 9 Installed
- 2 Funded (CWCB – Kremmling & UGS – Green River)
- 1 Spring 2025 Installation

## Stream Gages

- 31 Installed, Re-installed or funded

## Airborne Snow Observation

- Expansion of CWCB Program

## Field Water Balance Studies

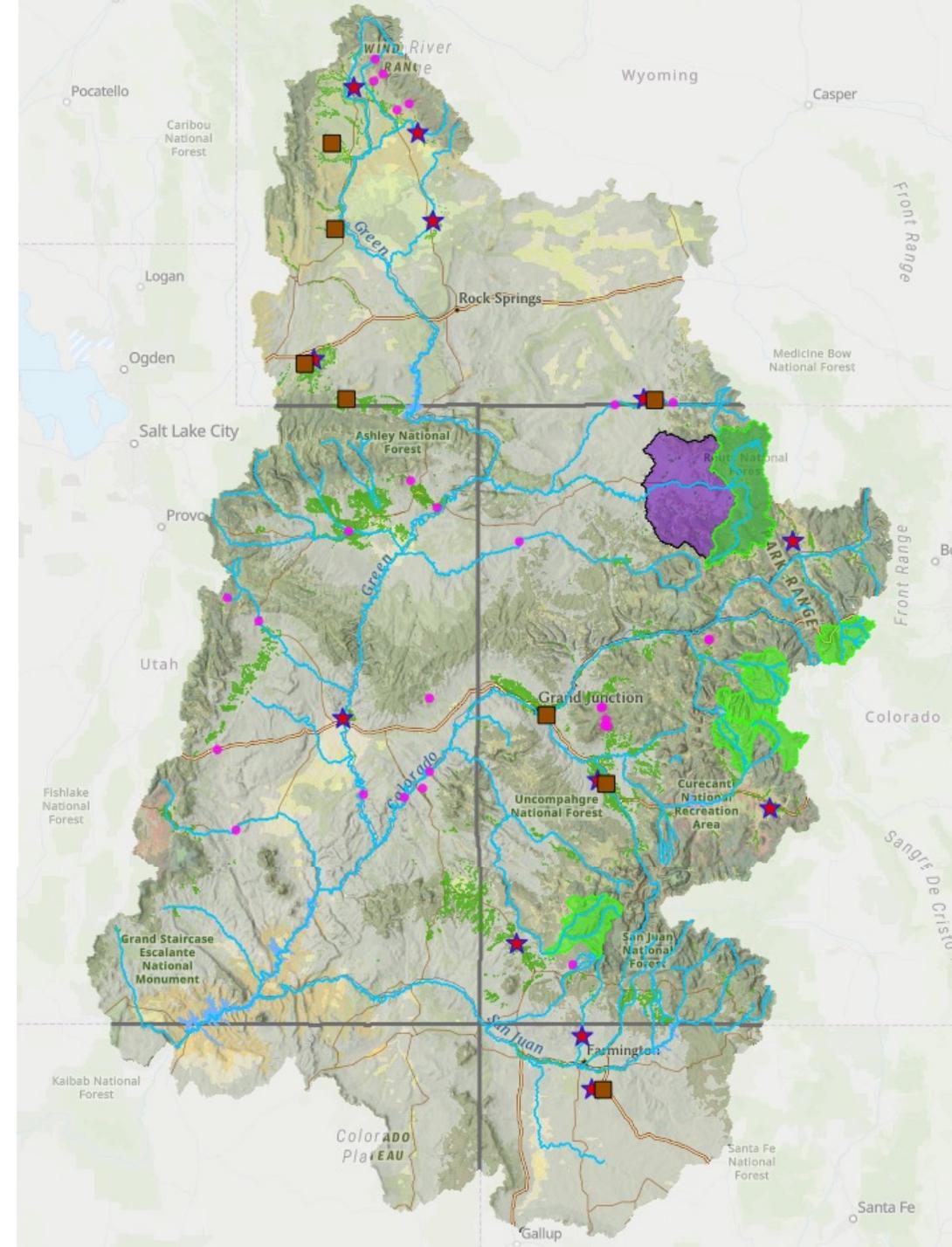
- 5 On-going
- 3 Planning

## Soil Moisture Study

Weather Stations (moved to 2025 Installations)

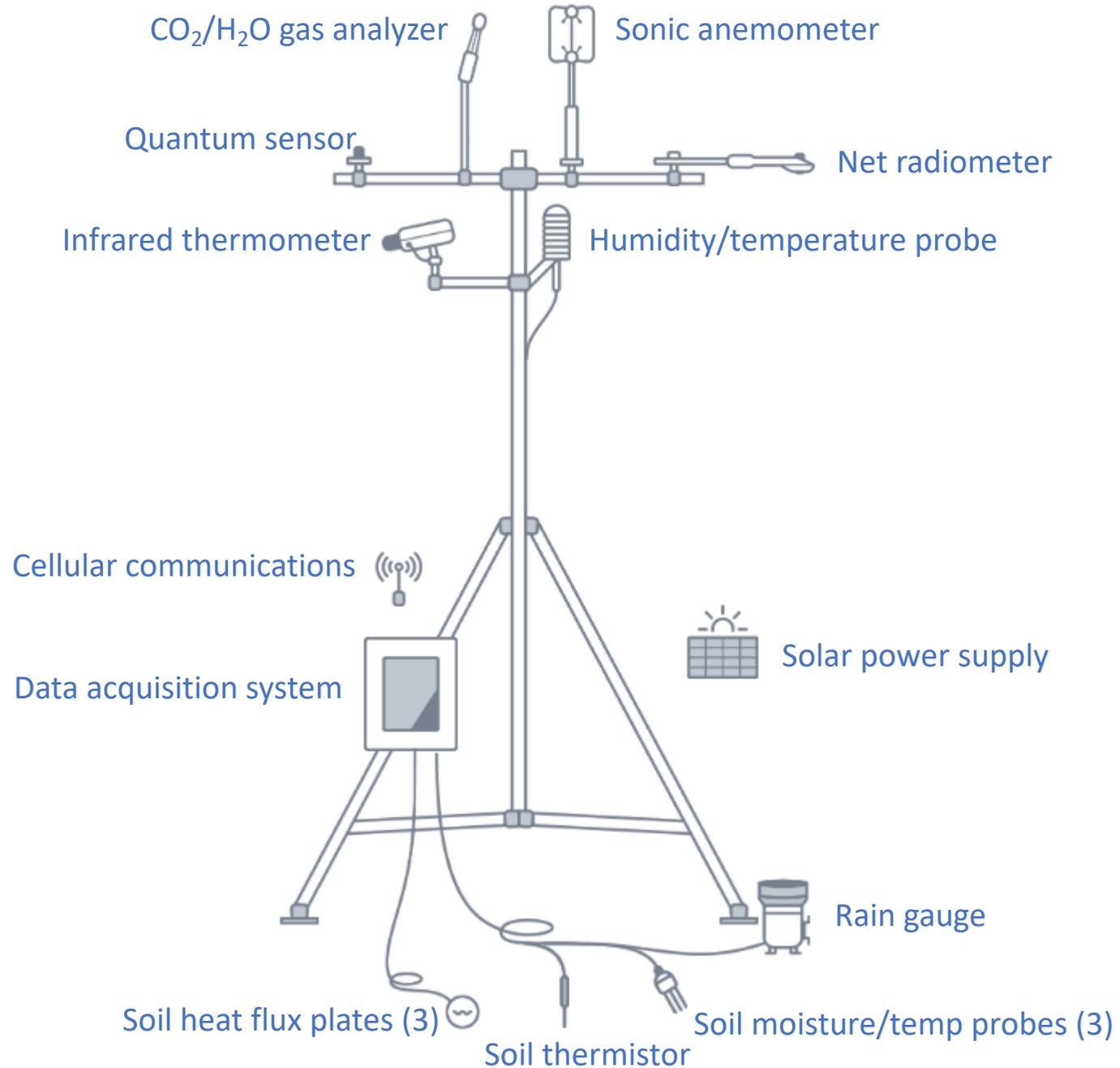
## Legend

- ★ Eddy Covariance Towers (12)
- Streamgages (31)
- Studies (8)
- ASO Investigations
- Soil Moisture Study



# Eddy Covariance Tower

- EddyFlux System
  - LI-7500DS CO<sub>2</sub>/H<sub>2</sub>O Analyzer
  - Gill® Windmaster
  - SmartFlux System
- Premium Biomet Package
  - LI-COR Data Acquisition System with programs
  - LI-COR Data Retention Module with back-up battery
  - A preconfigured enclosure
  - Vaisala HMP155 Humidity and Temperature Probe with RM Young Radiation Shield
  - Texas Electronics TR-525M Tipping Bucket Rain Gauge
  - LI-190R Quantum Sensor
  - Stevens Hydra Probe II Soil Probes (3)
  - Kipp & Zonen CNR4 Net Radiometer with optional CNF 4 Ventilation Unit
  - HukseFlux HFP01SC Self-calibrating Soil Heat Flux Plates (3)
  - Add Data Retention Module
- Cellular Communications Package
- Solar Power Supply
- Heavy Duty Adjustable Tripod
- EddyPro 7
- FluxSuite



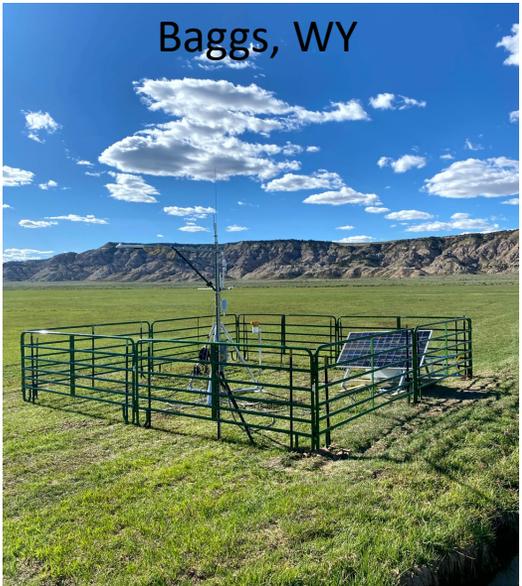
# EC Tower Installations



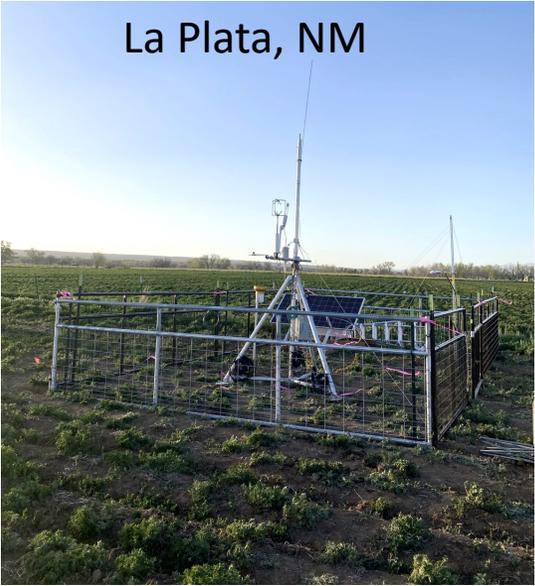
# EC Tower Installations



Boulder, WY



Baggs, WY



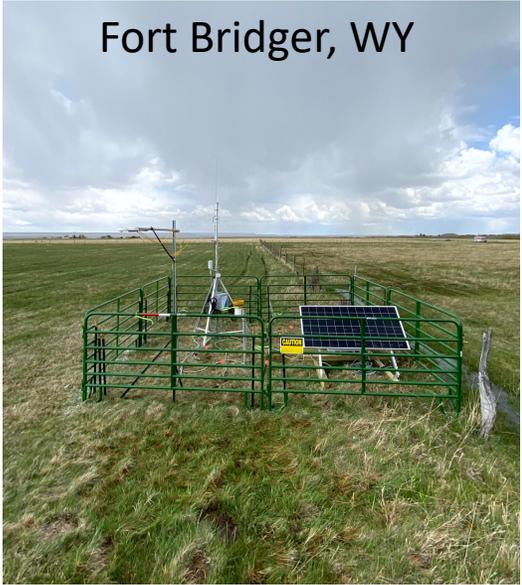
La Plata, NM



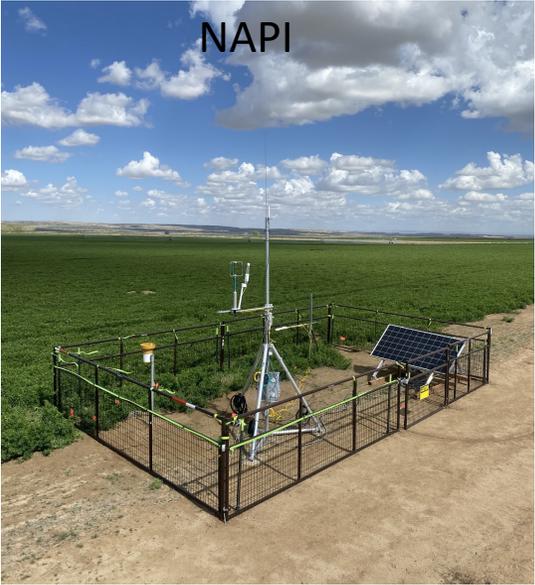
Gunnison, CO



Cora, WY



Fort Bridger, WY



NAPI



Yellow Jacket, CO



Olathe, CO



# BIL DCP Year 2 Plans (cumulative)

## EC Towers

- 9 Installed
- 2 Funded (CWCB – Kremmling & UGS – Green River)
- 1 Spring 2025 Installation

## Stream Gages

- 31 Installed, Re-installed or funded
- **61 Additional Installations**

## Airborne Snow Observation

- **Expansion of CWCB Program**
- New Target Area in Wind River Range

## Field Water Balance Studies

- 5 On-going
- 3 Planning
- **5 Additional Studies (Incidental Use, Evaporation, etc)**

## Soil Moisture Study

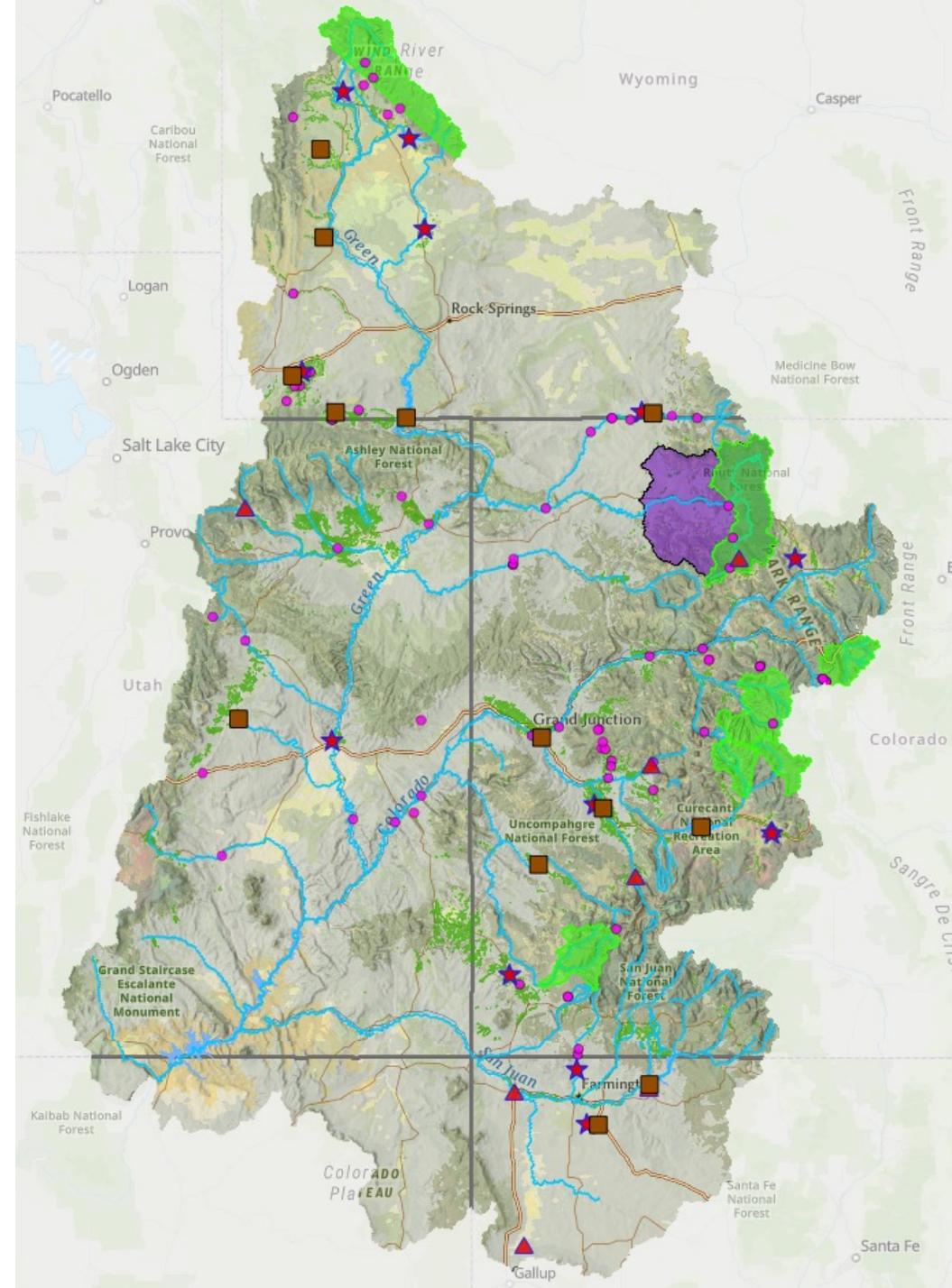
## Weather Stations

- **8+ New Weather Stations**

## Diversion Measurement and Telemetry

### Legend

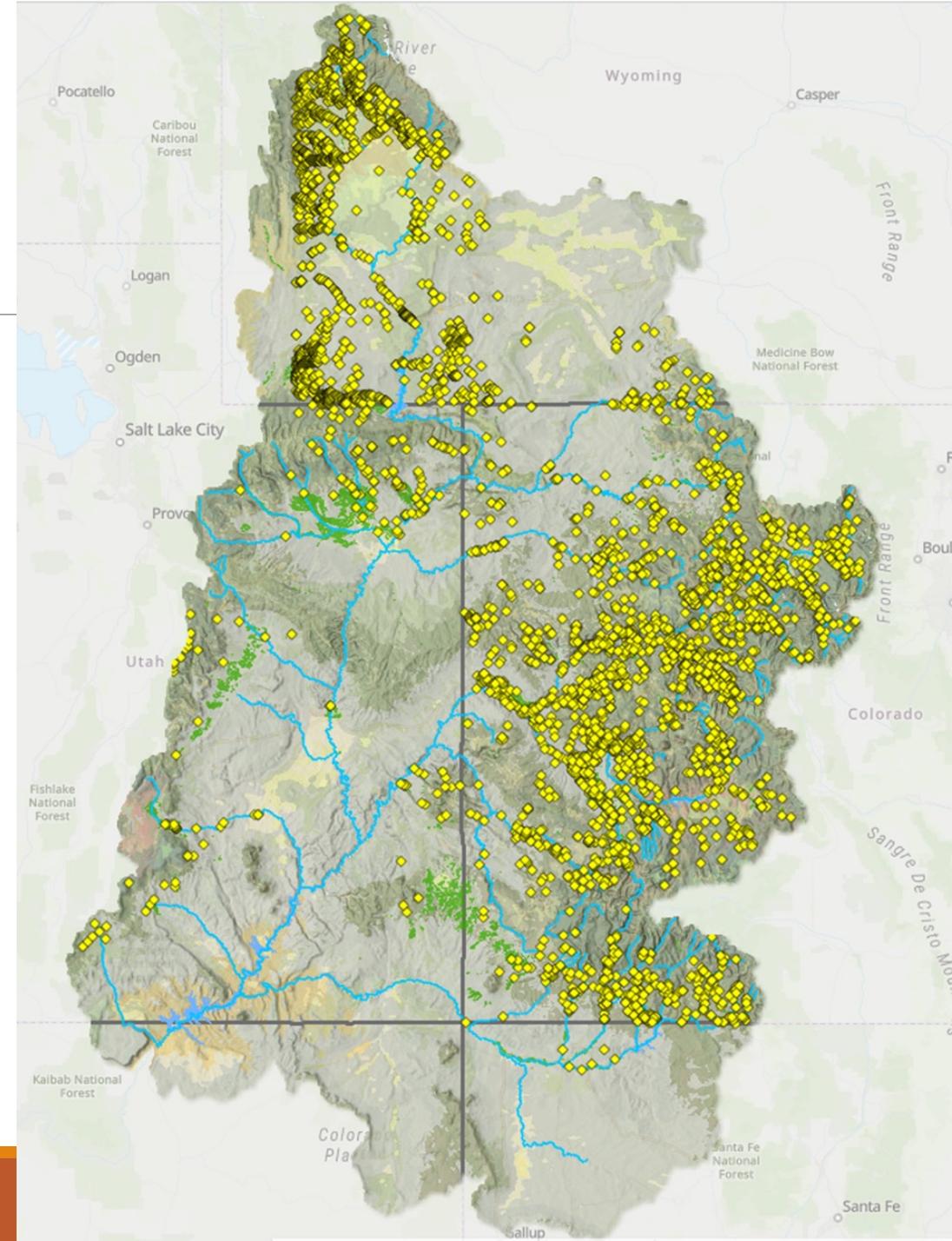
- ★ Eddy Covariance Towers (12)
- Streamgages (92)
- Studies (13)
- ASO Investigations
- Soil Moisture Study
- ▲ Weather Stations (8+)



# BIL/IIJA Year 2 Diversion & Telemetry Funding

State	Funding Availability (Up to)	Potential Need
Colorado	\$7.0 M	~2,800
New Mexico	\$0.1 M	~ 6
Utah	\$2.9 M	~ 180
Wyoming	\$6.0 M	~2,100

- Programs to start as soon as possible
- Report on progress at June 2025 UCRC Meeting
- Report on progress at 2025 CRWUA UCRC Meeting, potential to revisit funding distribution



# Consumptive Use Sectors

## The BIG 3:

63.4% Irrigated Agriculture

16.5% Trans-Basin Diversions

12.2% Major Reservoir Evap

92.1% of Consumptive Use Sectors

# Use Sectors Cont.

- 3% Thermal Power
- 2.1% Municipal & Industrial
- 1.9% Minor Reservoir Evap.
- 0.5% Stock Ponds
- 0.2% Livestock
- 0.2% Minerals
- 100% Total UB from 2018 CU&L Report-Reclamation