2024 ARCA ANNUAL MEETING
ARKANSAS RIVER BASIN REPORT

Prakash Kaini, PE
Chief, Water Management Section

Ryan Gronewold, PE
Chief, Planning Branch

USACE, Albuquerque District

13 December 2024

US Army Corps of Engineers

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TOPICS

- Compact Year 2024 Water Management
- Arkansas Basin Water Quality Monitoring
- Operations and Maintenance
- Civil Works Projects
- Emergency Management Coordination

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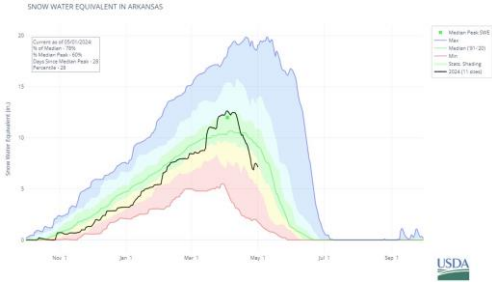
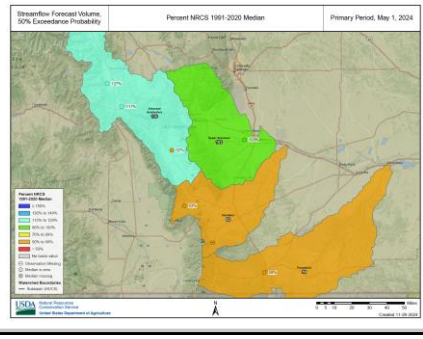
COMPACT YEAR 2024- WATER MANAGEMENT

SNOWPACK AND RUNOFF

Arkansas River Basin Snowpack Analysis May 1st, 2024		
	# of Sites	% of Median
Cucharas & Huerfano	5	4.4
Upper Arkansas Headwaters	8	102.3
Lower Arkansas Headwaters	3	77.8
Purgatoire	3	6.5
Apishapa	2	12.1
Basin Average	**21**	**84**

Arkansas River Basin May 1st Most Probable Snowmelt Runoff Forecast (April 1 – July 31 50% Exceedance)				
	Snowmelt Runoff (x 1,000 Acre-Feet)		Percent of Median/Normal	
Measurement Location	May Forecast	Actual	May Forecast	Actual
Arkansas River above Pueblo (Normal: 455 kaf)	364	301	80%	66%
Purgatoire River at Trinidad (Normal: 47 kaf)	10	20	22%	43%
John Martin Dam and Reservoir (Normal: 172 kaf)	213	117.5	124%	68%

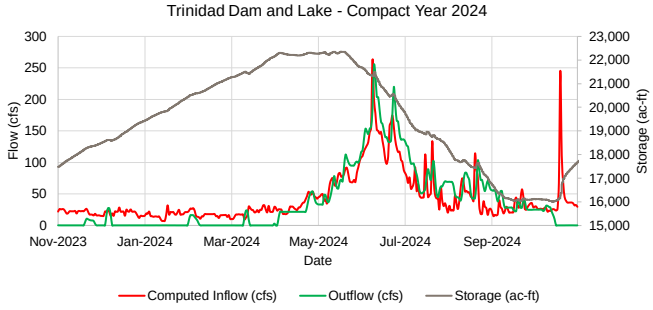




TRINIDAD DAM AND LAKE

Compact Year 2024 Water Management

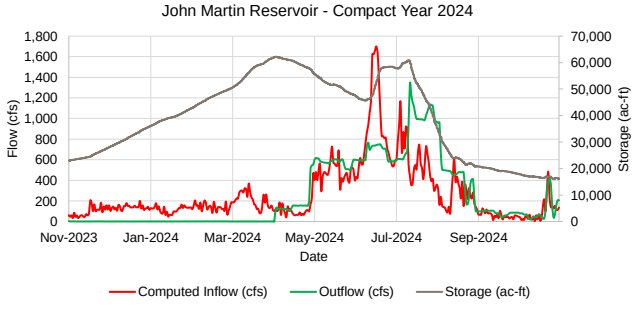
- Total Computed inflow: 30,744 acre-feet
- Total Release: 27,740 acre-feet
- Maximum storage: 22,352 acre-feet
- Minimum storage: 16,002 acre-feet
- End of Compact Year storage: 17,736 acre-feet
- No Flood Risk Management Operations
- No evidence of zebra or quagga mussels



JOHN MARTIN DAM AND RESERVOIR

Compact Year 2024 Water Management

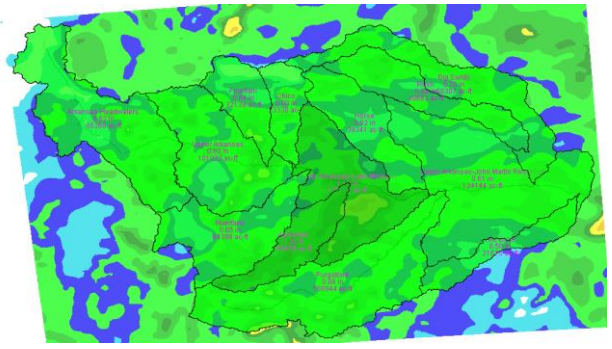
- Total Computed inflow: 193,233 ac-ft
- Total Release: 181,001 ac-ft
- Maximum storage: 62,232 acre-feet
- Minimum storage: 15,965 acre-feet
- End of Compact Year storage: 15,965 acre-feet
- No Flood Risk Management Operations
- No evidence of zebra or quagga mussels

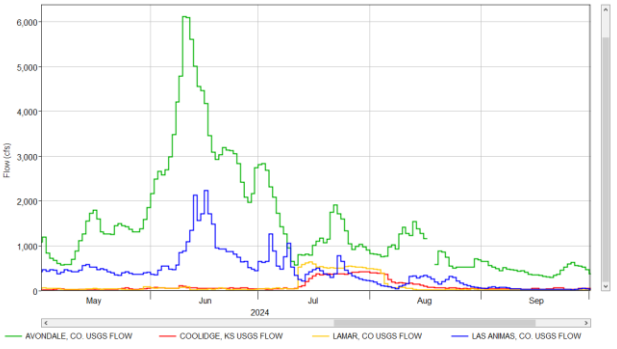


HIGH FLOW IN JUNE

The USGS gage at Arkansas River near Avondale, CO surpassed channel capacity of 6,000 cfs on June 10th, peaking at 6,870 cfs.

This was due to heavy precipitation across the basin, travelling east to west, with a subbasin average of 1.18 inches over the Upper Arkansas-Lake Meredith subbasin.





ARKANSAS WATER QUALITY MONITORING

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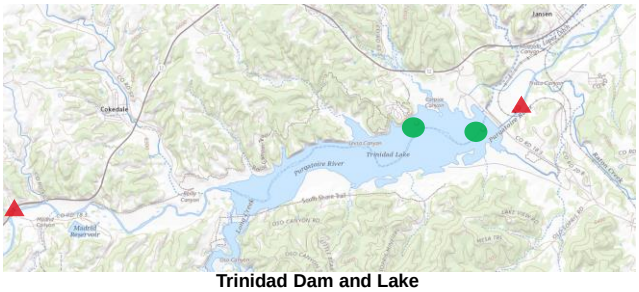
● Reservoir Stations (2012 – Current)

Monthly during ice-free period

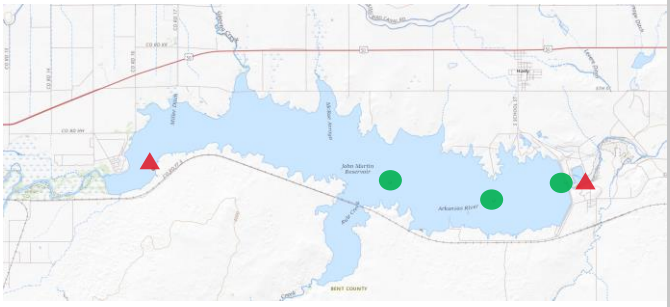
- Vertical profiles
  - Temperature
  - Dissolved oxygen
- Surface measurements
  - Turbidity
  - pH
  - Specific conductance
- Secchi depth
- Zebra and quagga mussel (June-October)

▲ Riverine Stations (2020 – 2025)

- 15-minute interval
  - Water Temperature
  - Dissolved oxygen
  - Turbidity
  - pH
  - Specific conductance
- Monthly anions/cations and total suspended sediment



Trinidad Dam and Lake

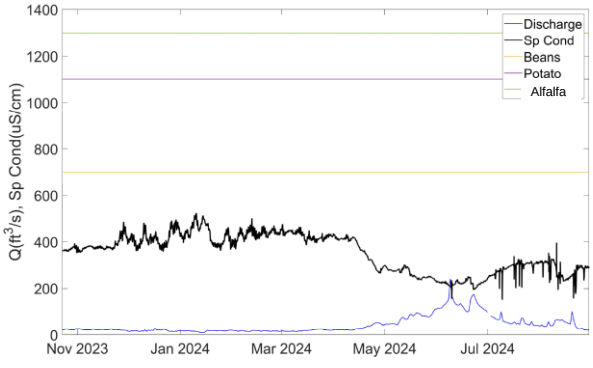


John Martin Dam and Reservoir

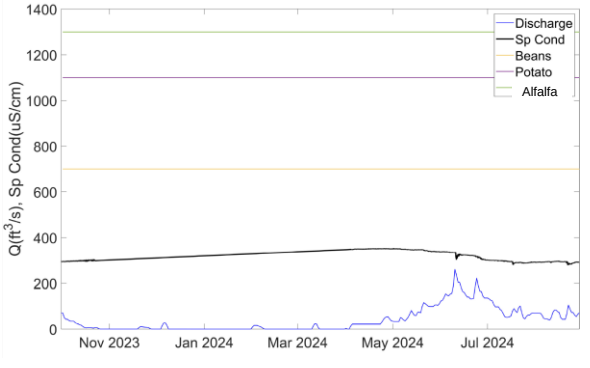
ARKANSAS WATER QUALITY MONITORING DATA

2024 Discharge, Specific Conductance, and Crop thresholds

Upstream of Trinidad Lake



Downstream of Trinidad Lake



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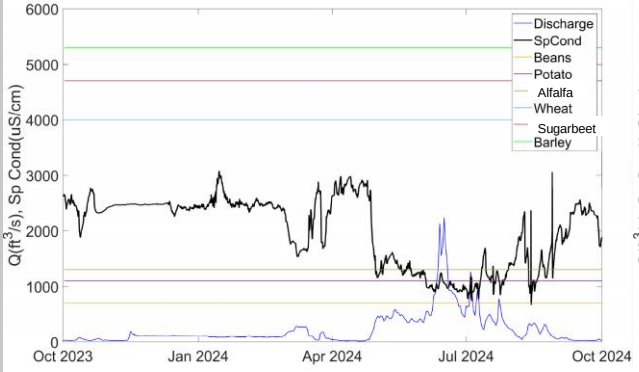
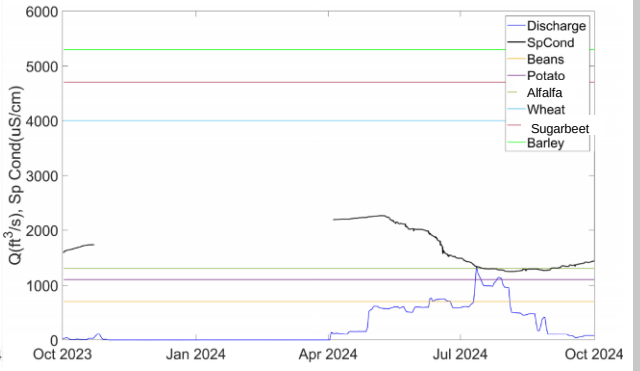
2024 Discharge, Specific Conductance, and Crop thresholds

Upstream of John Martin Reservoir



Downstream of John Martin Reservoir



OPERATIONS AND MAINTENANCE

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John Martin Dam and Reservoir

- Completed dredging of main conduits entries, replacement of bulkhead seal plates, and conduit inspections
- Completed crane repair work and inspections
- Partially completed Spillway Bridge Deck Repair
- Completed Sump Pump Replacements
- Work proceeding on various O&M projects

Trinidad Dam and Lake

- Overlaying the sandstone on the dam with granite riprap
- Completed EAP
- Completed Periodic Bulkhead Inspection
- Work proceeding on Boundary Survey
- Work proceeding on Master Plan

CIVIL WORKS

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SECTION 206- ECOSYSTEM RESTORATION

Spring Creek, Colorado

Sponsor: City of Colorado Springs

- Only active CAP project, still ongoing
- The purpose of the project is to restore a wetland and bird sanctuary formerly managed by the Audubon Society.
- In FY21, funds were used to complete the Federal Interest Determination
- Feasibility Cost Share Agreement signed July 2022

Project site location in Colorado Springs, CO. Former wetland outlined in light blue.

EMERGENCY MANAGEMENT COORDINATION

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Public Law 84-99 authorized USACE to assist state and local governments before, during, and after flood events.

Assistance can be obtained by contacting:

Albuquerque District, U.S. Army Corps of Engineers, Emergency Management Branch, Operations Office
cespa-eoc@usace.army.mil
505-342-3686