

# 2023 ARCA ANNUAL MEETING

## ARKANSAS RIVER BASIN REPORT

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South Pacific Division  
Albuquerque District

7 December 2023



US Army Corps  
of Engineers®





# TOPICS

- Compact Year 2023 Water Management
- Arkansas Basin Water Quality Monitoring
- Operations and Maintenance
- Civil Works Projects
- Emergency Management Coordination



Arkansas River Basin

Albuquerque District

Fryngpan-Arkansas

Pueblo

John Martin

Trinidad

KANSAS

COLORADO

NEW MEXICO

US Army Corps of Engineers  
Albuquerque District

2023 Water Management and Civil Works Activities



# COMPACT YEAR 2023 WATER MANAGEMENT

## Snowpack and Runoff



### May 1<sup>st</sup> Natural Resources Conservation Service Forecast

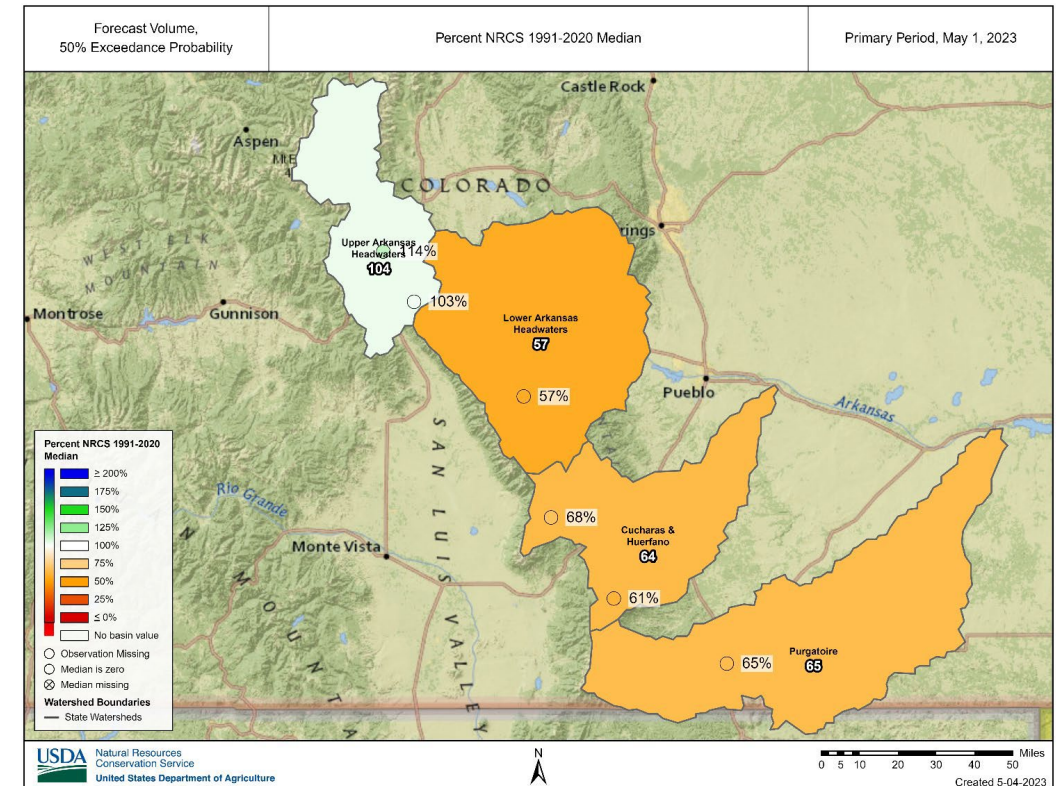
- Arkansas Headwaters Basin snowpack: 104% of median
- Upper Arkansas Basin snowpack: 57% of median
- Purgatoire Basin snowpack: 65% of median
- Basin-wide average: 84% of median

### Trinidad Dam and Lake

- NRCS Forecast runoff inflow: 18,700 ac-ft
- Actual runoff inflow: 27,100 ac-ft (93% of median)

### John Martin Dam and Reservoir

- NWS Forecast runoff inflow: 109,000 ac-ft
- Actual runoff inflow: 147,500 ac-ft (117% of median)





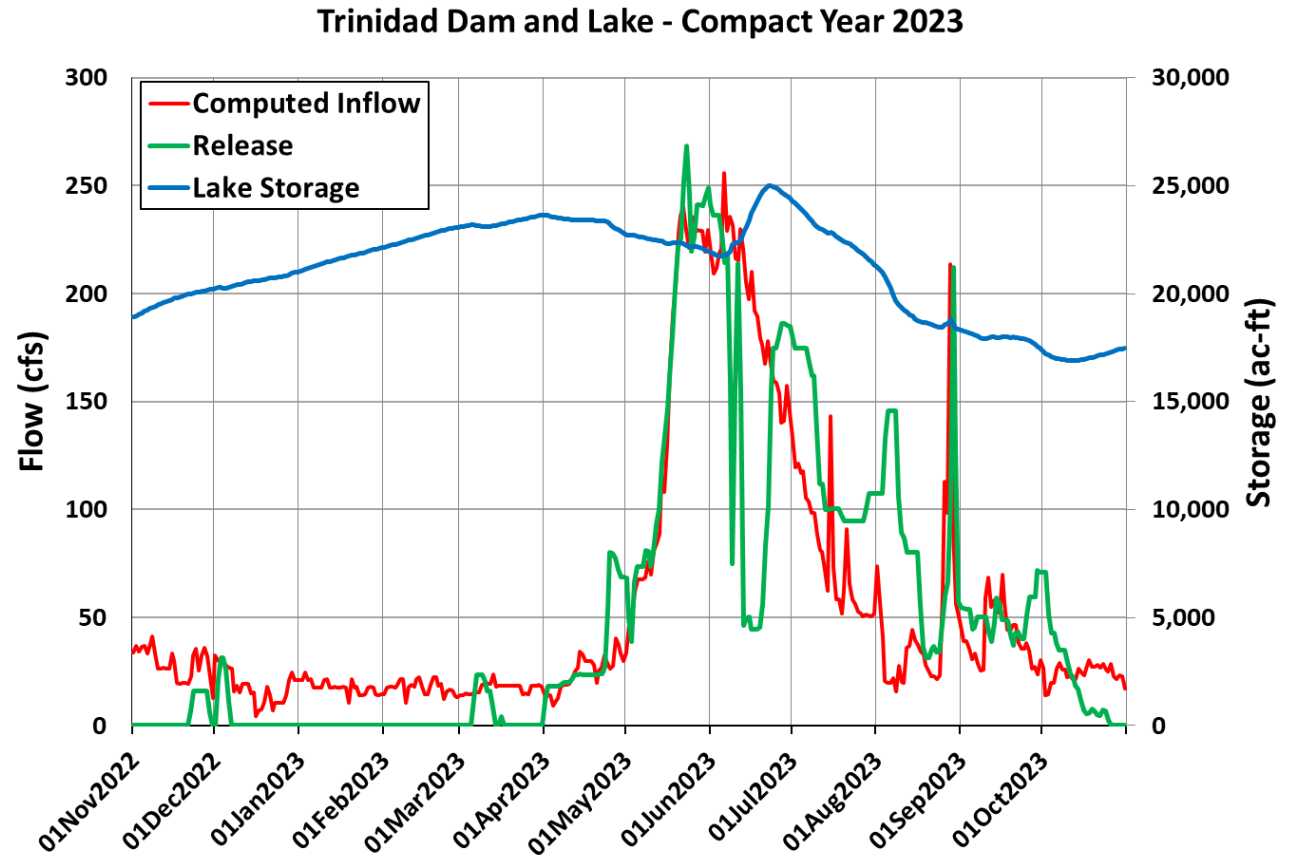
# COMPACT YEAR 2023 WATER MANAGEMENT

## Trinidad Dam and Lake



### Compact Year 2023 Water Management

- Computed inflow: 39,700 ac-ft
- Release: 37,910 ac-ft
- Maximum storage: 25,010 ac-ft
- Minimum storage: 16,890 ac-ft
- End of Compact Year storage: 17,480 ac-ft
- No Flood Risk Management Operations
- No evidence of zebra or quagga mussels





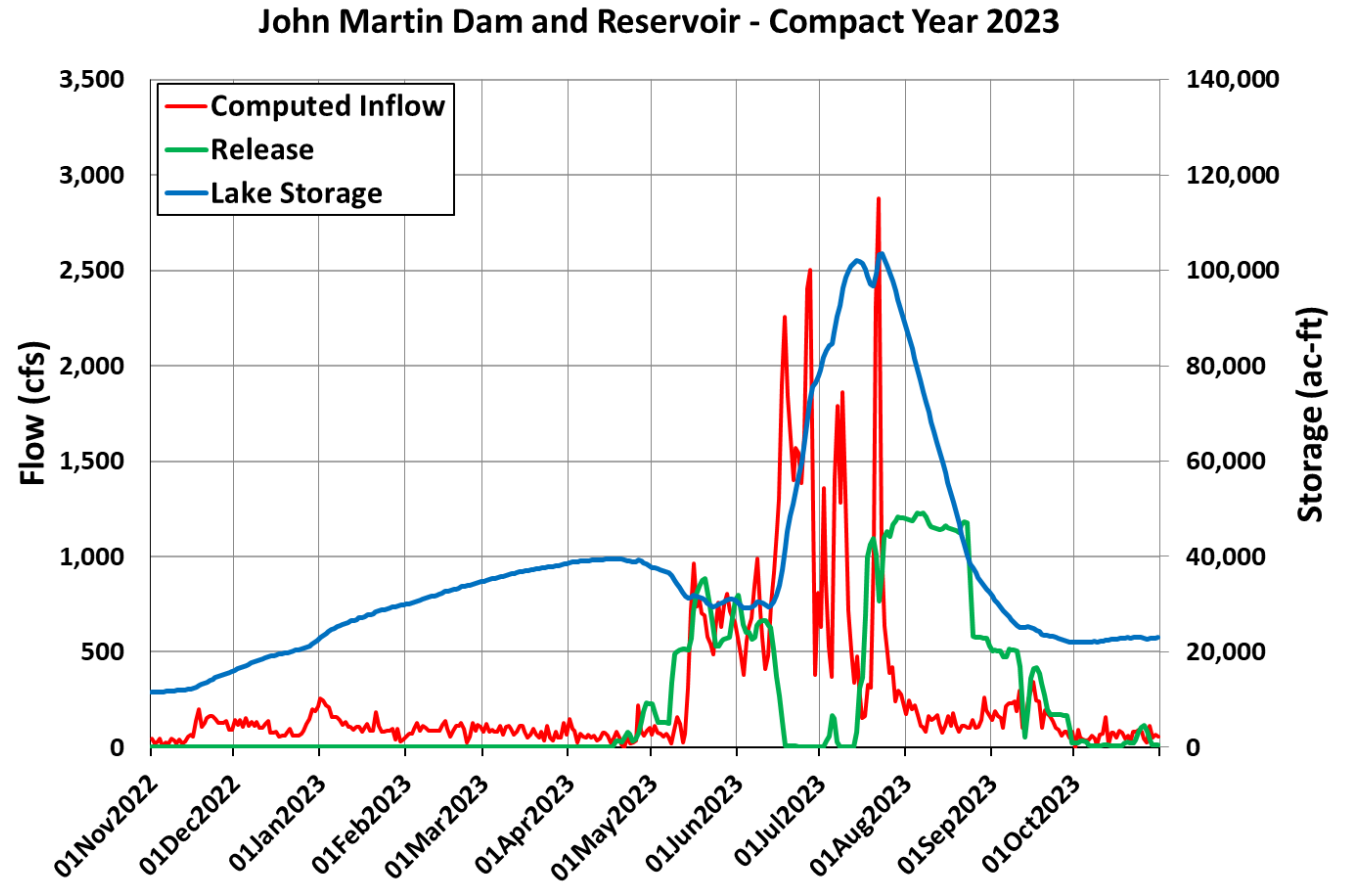
# COMPACT YEAR 2023 WATER MANAGEMENT

## John Martin Dam and Reservoir



### Compact Year 2023 Water Management

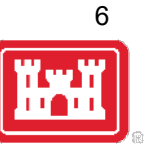
- Computed inflow: 199,470 ac-ft
- Release: 171,600 ac-ft
- Maximum storage: 103,480 ac-ft
- Minimum storage: 11,540 ac-ft
- No Flood Risk Management Operations
- Zebra mussels detected and removed from dredging contractor's equipment. None detected in reservoir.





# COMPACT YEAR 2023 WATER MANAGEMENT

## Fountain Creek and Mainstem High Flows



USACE coordinated with Reclamation and the State of CO during Fountain Creek high flow

Pueblo Dam operated to reduce impact of Fountain Creek storm peaks

6,000 cfs channel capacity at Avondale

### May 11 – 12

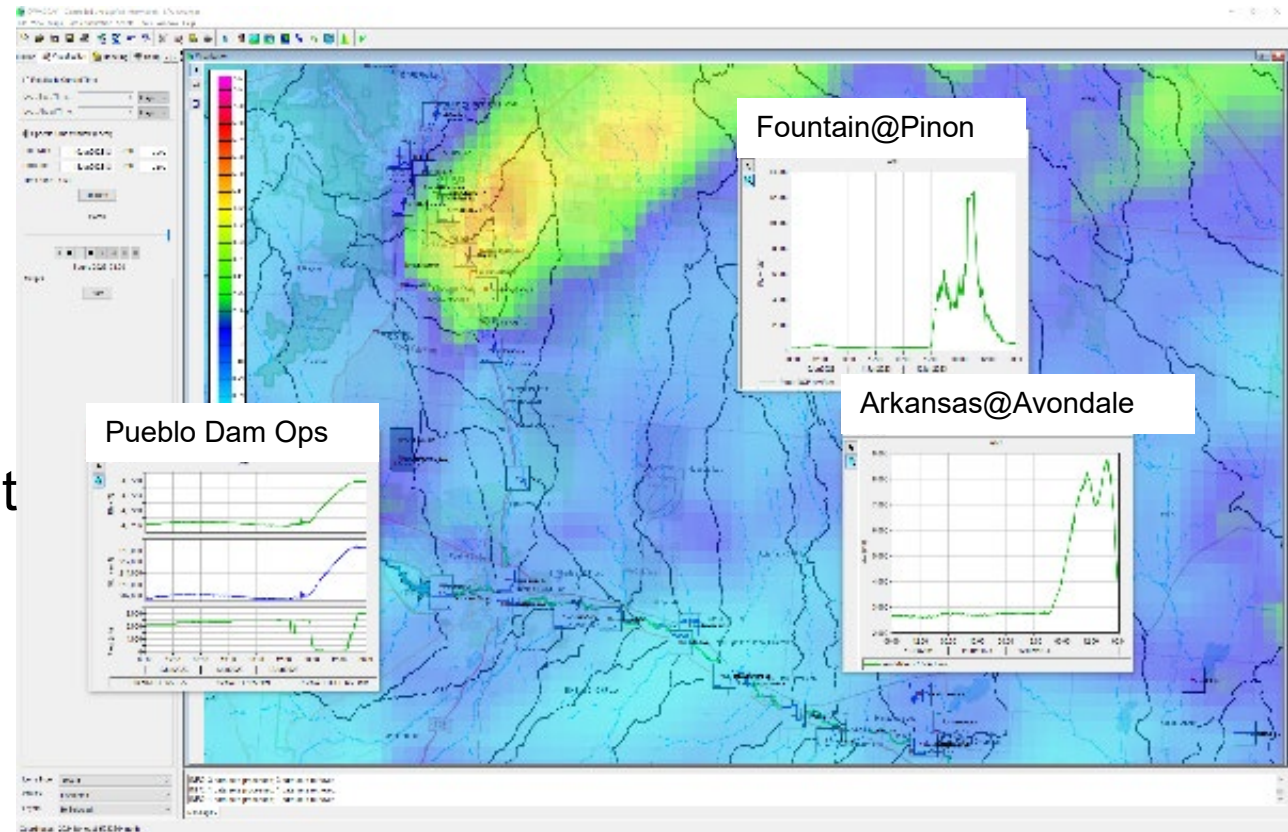
- 5,800 cfs Peak flow at Avondale

### June 11 – 13 (shown to right)

- 8,730 cfs Peak flow at Avondale, Pueblo cut
- Flow greater than 6,000 cfs for 18 hours

### June 22 – 23

- 11,000 cfs peak at Avondale, Pueblo cut
- Flow greater than 6,000 cfs for 14 hours



June 11 – 13 High Flow Event



# ARKANSAS WATER QUALITY MONITORING



## ● 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

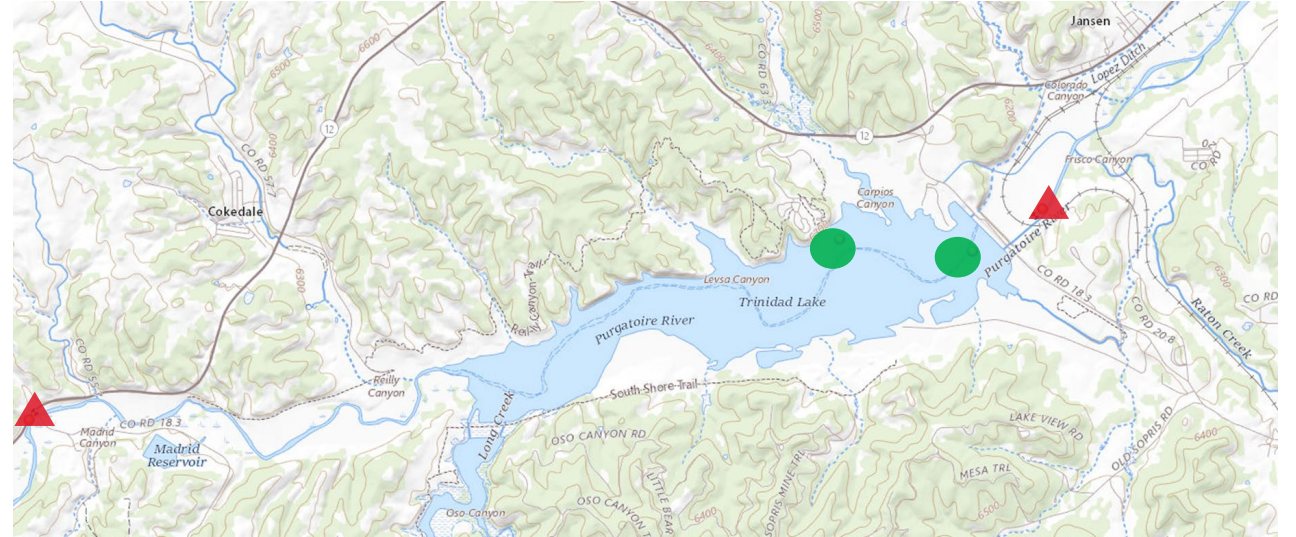
Dissolved oxygen

Turbidity

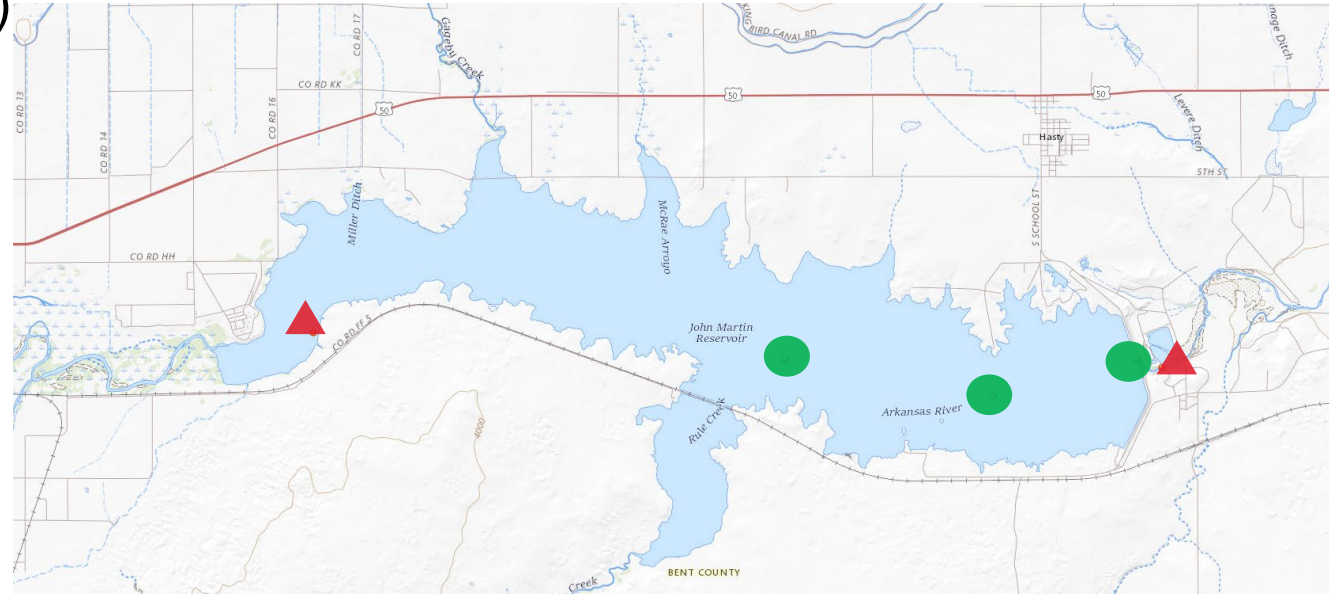
pH

Specific conductance

– Monthly anions/cations and total suspended sediment



**Trinidad Dam and Lake**



**John Martin Dam and Reservoir**



# OPERATIONS AND MAINTENANCE

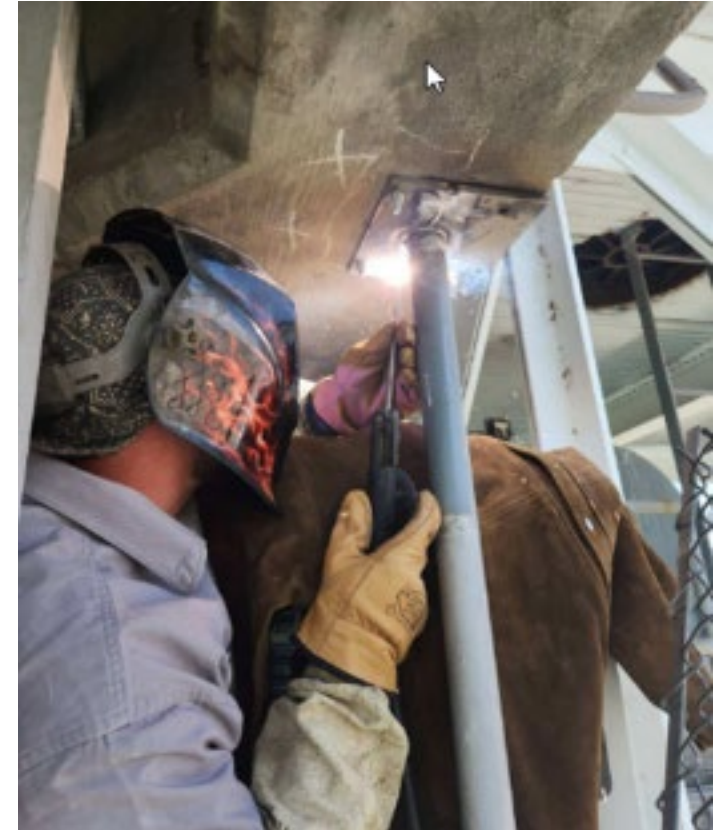


## John Martin Dam and Reservoir

- Upstream dredging started November 10, 2023
- Work proceeding on yard and dam crane repairs
- Completed steel repairs to tower platform bridge
- Routine annual O&M

## Trinidad Dam and Lake

- Project Delivery Team for Upstream Dam Slope Riprap Project
- Dam crest stationing
- Completed steel repairs to tower platform bridge
- Routine annual O&M







# CIVIL WORKS SECTION 206- ECOSYSTEM RESTORATION



## Spring Creek, Colorado Sponsor: City of Colorado Springs

- 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
- Feasibility study expected to complete in 2025



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



# EMERGENCY MANAGEMENT COORDINATION



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**

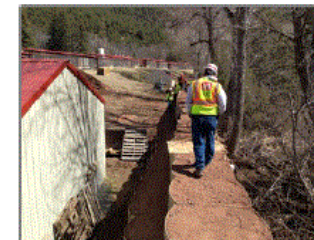
**[cespa-eoc@usace.army.mil](mailto:cespa-eoc@usace.army.mil)**

**505-342-3686**



**US Army Corps  
Of Engineers**  
Albuquerque District

## FLOOD EMERGENCY HANDBOOK



**JULY 2020**  
(SUPERSEDES ALL PREVIOUS VERSIONS)



# QUESTIONS

