

# Colorado River Compact Compliance Update

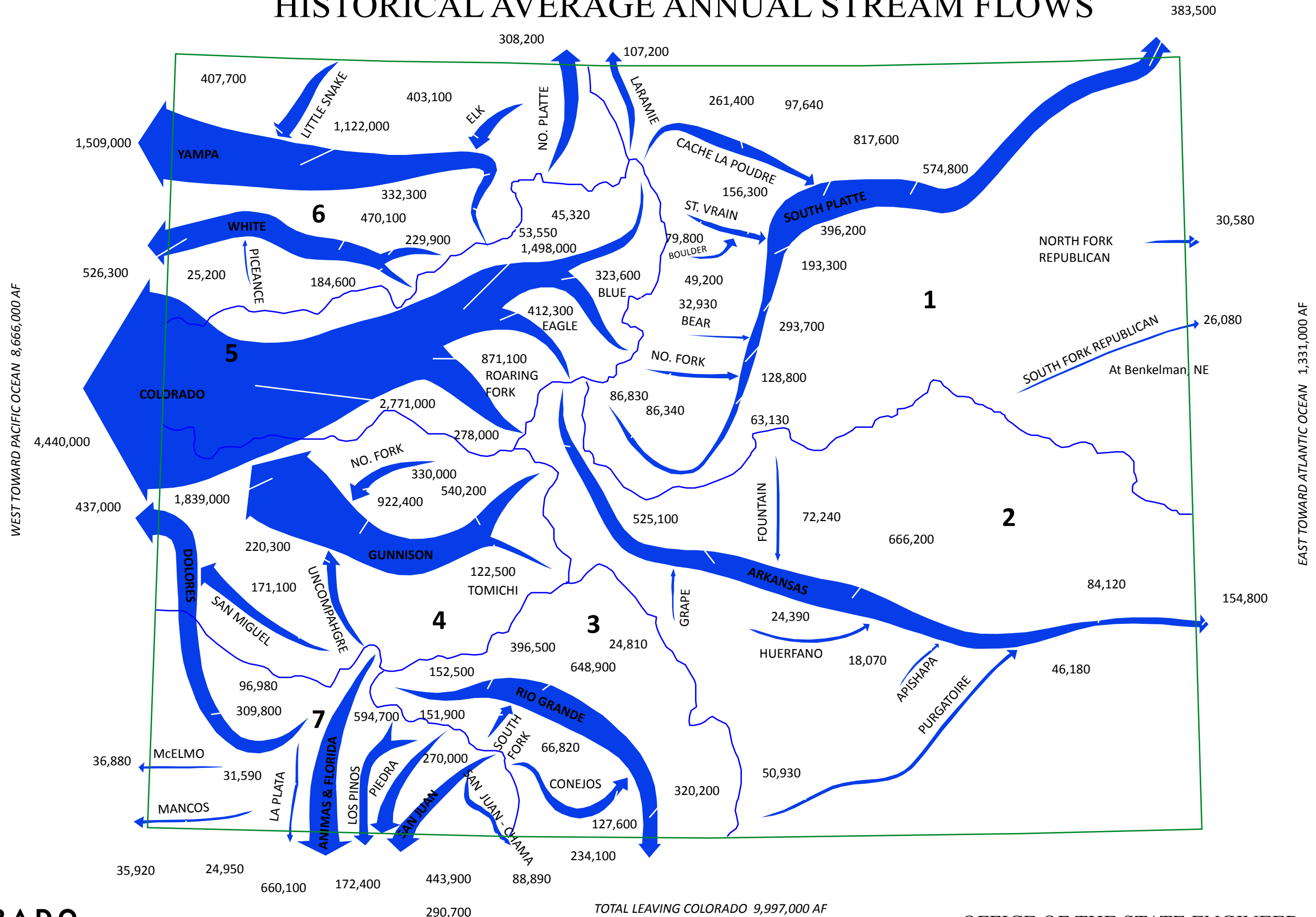
## Augmentation Plans

January 12, 2023  
Kevin G. Rein, P.E., State Engineer  
Division of Water Resources

# Colorado River Compact Compliance Update

# COLORADO

## HISTORICAL AVERAGE ANNUAL STREAM FLOWS



# Colorado River Compact



# Colorado River (and its tributaries in Colorado)

- *Drought*
- *Over-appropriation*
- *Colorado River Compact*
- *Upper Colorado River Compact*
- *Compact Compliance Administration*
- *Drought Contingency Plan*
- *Demand Management*
- *Lake levels*
- *Drought Response Operations Agreement*
- ...



# Colorado River (SEO Interest) (and its tributaries in Colorado)

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## *Compact Compliance Administration*

- *Colorado River Compact*
- *Upper Colorado River Compact*

# Understand Compact Compliance Strategy

## What does the Colorado River Compact say (Article III(d))?

- “The states of the Upper Division will not cause the flow of the river at Lee Ferry to be depleted below an aggregate of 75,000,000 acre-feet for any period of ten consecutive years...”
- That is the recognized (Upper Basin States’) standard for maintaining compact compliance,
- What is compliance? How do we maintain it?



**COLORADO**

Division of Water Resources

Department of Natural Resources

# Understand Compact Compliance Strategy

What does the  
Upper Colorado River Compact say (Article IV)?

- a) “Curtailment” may be necessary, if the flow at Lee Ferry is depleted below Article III
- b) UCRC sets “quantity” and “time” of curtailment for each state
- c) The state (Colorado) determines how to meet compact compliance obligations

All premised on the outcome of an “inquiry” by the UCRC

Compact Compliance Strategy addresses a), b), and c).



# Understand Compact Compliance Strategy

- *Multi-faceted, holistic approach that addresses a), b), and c),*
- *The State Engineer's actions are part of a Compact Compliance Strategy, not simple curtailment based on priority*

# Outlook of Certain Flows Occurring

Year	Annual Lee Ferry Flow (ac-ft)	Ten-Year Total (ac-ft)
2002	8,347,000	102,197,000
2003	8,372,000	102,432,000
2004	8,348,000	102,475,000
2005	8,395,000	101,628,000
2006	8,507,000	98,603,000
2007	8,421,000	93,150,000
2008	9,180,000	88,890,000
2009	8,406,000	85,866,000
2010	8,437,000	84,774,000
2011	12,753,000	89,166,000
2012	9,542,000	90,361,000
2013	8,289,000	90,277,000
2014	7,590,000	89,519,000
2015	9,157,000	90,282,000
2016	9,138,000	90,913,000
2017	9,170,000	91,661,000
2018	9,171,000	91,653,000
2019	9,264,000	92,511,000
2020	8,436,000	92,509,000
2021	8,293,000	88,049,000

Source: Page 43, UCRC 73rd Annual Report for WY 2021

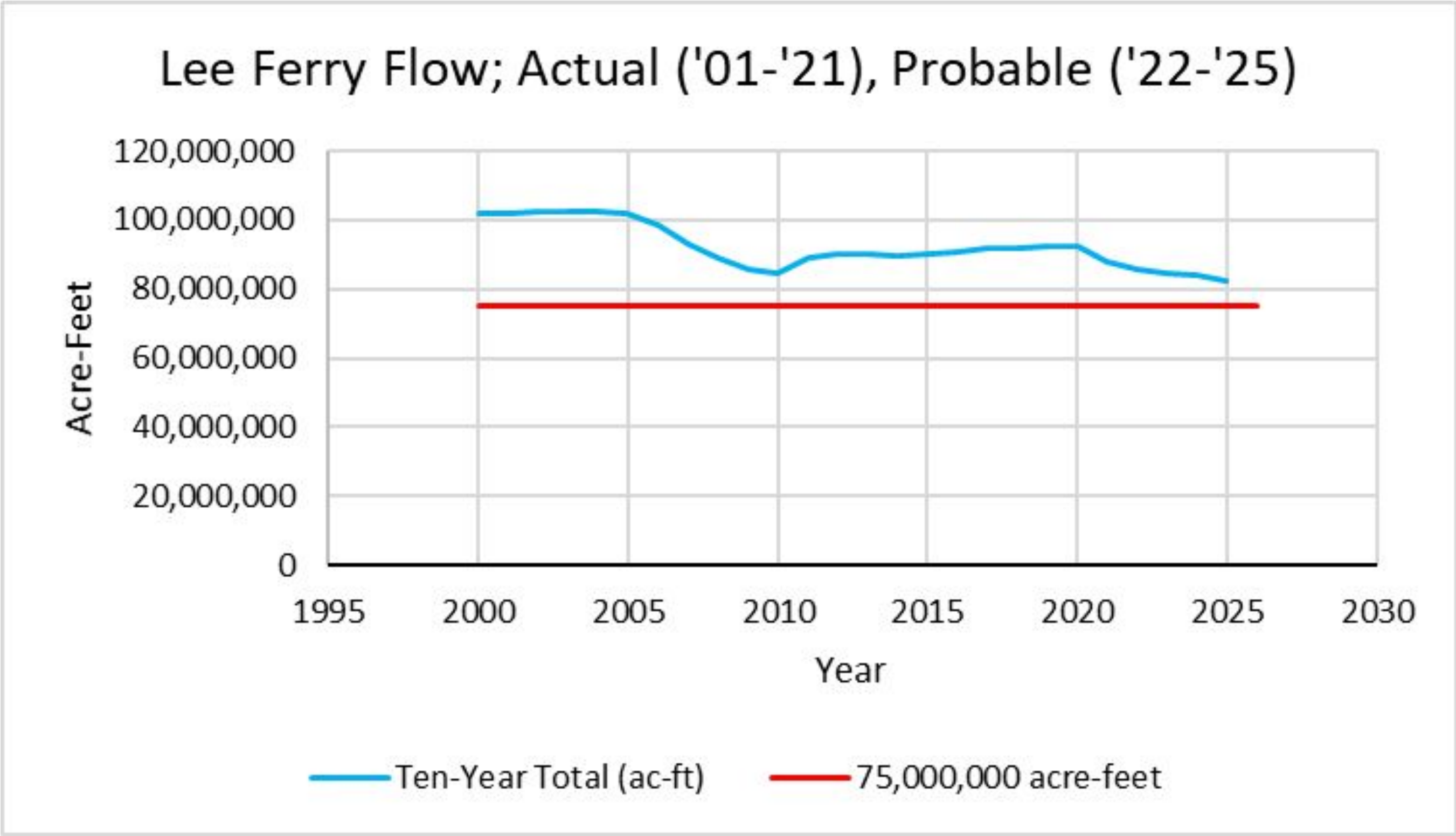
# Outlook of Certain Flows Occurring

- 2017-2021 Actual Totals<sup>1</sup>
- 2022-2023; Current projection<sup>2</sup>
- 2024-2025; Conservative SEO assumption, for planning only = 7,000,000 acre-feet<sup>3</sup>
- For 2022 through 2025, add 150,000 ac-ft for inflows from the Paria River

- Sources:
  1. 73rd Annual Report of the UCRC, September, 2022
  2. USBR 24-Month Study (September, 2022)
  3. '07 Guidelines, conservative assumption

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2017	9,170,000	91,661,000
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2019	9,264,000	92,511,000
2020	8,436,000	92,509,000
2021	8,293,000	88,049,000
2022	7,150,000	85,658,000
2023	7,150,000	84,519,000
2024	7,150,000	84,079,000
2025	7,150,000	82,072,000

# Outlook of Certain Flows Occuring

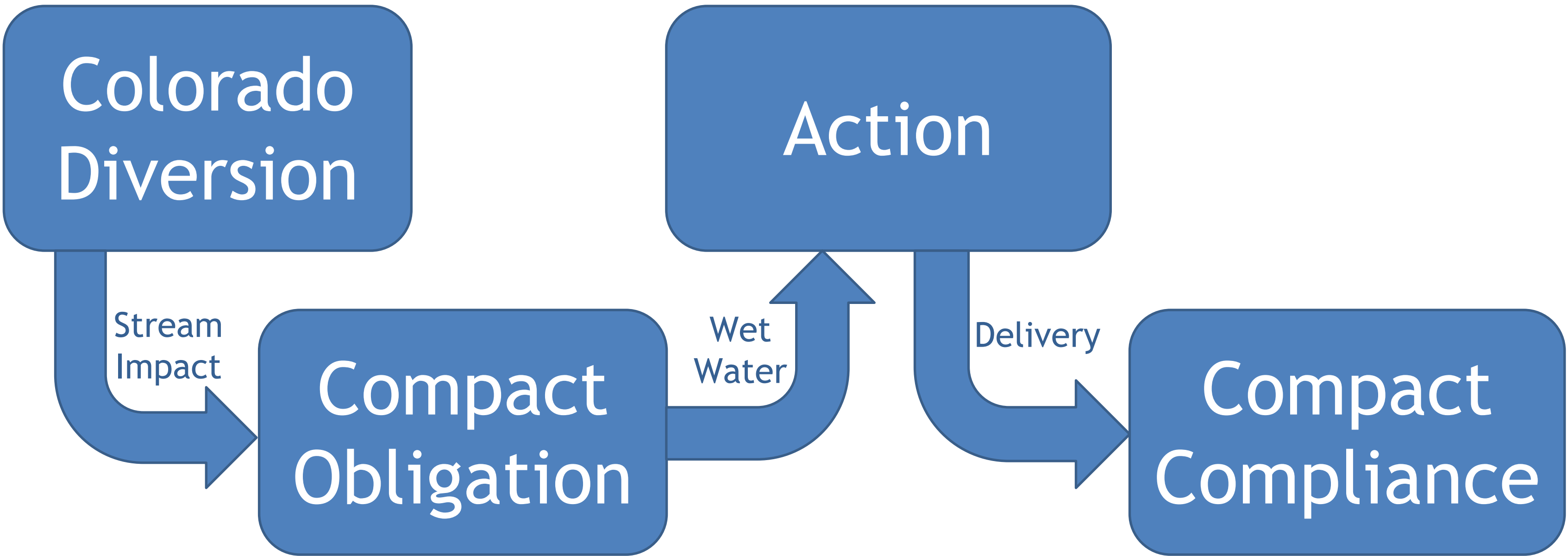


# What Influences Compact Compliance Strategy?

- What influences Compact Compliance Strategy?
  - Probability of a UCRC determination, that Colorado would need to take action. **Probability is low, near term**
  - Upper Colorado River Compact; UCRC role. **Many unknowns,**
  - Implement, if and when necessary. **Many unknowns, many unidentified alternatives.**
    - What can be done now? What should be done now?

# Allowing Diversions that Result in Compliance Conflicts

## Other Compacts - *It Works*



# Allowing Diversions that Result in Compliance Conflicts

## Colorado River - Does it Work?

Four-states compliance obligation, not just one water user or even just Colorado

How and when do we know we're out of compliance?

UCRC Determination, not a seven-state or just Colorado Determination

How do the four states/Colorado maintain compliance?

Compliance point is two states and at least one major, regulated reservoir away

How to deliver water to the state line and to the point of compliance? Legal authority?

What is "compliance" or "out of compliance?" ("...shall not cause...")

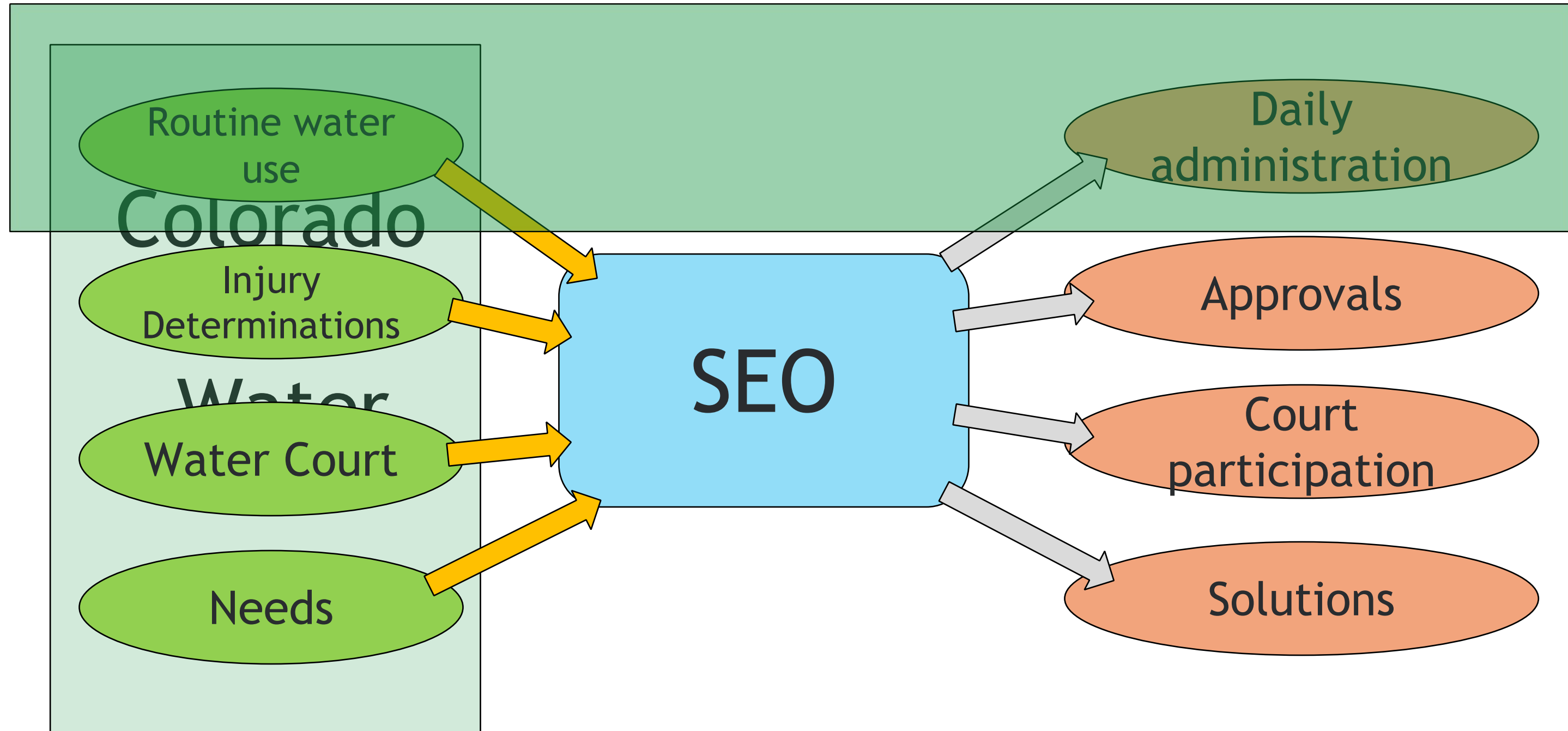
Is there a conflict with other Compact provisions?

# Prior Appropriation Administration

## Augmentation Plans

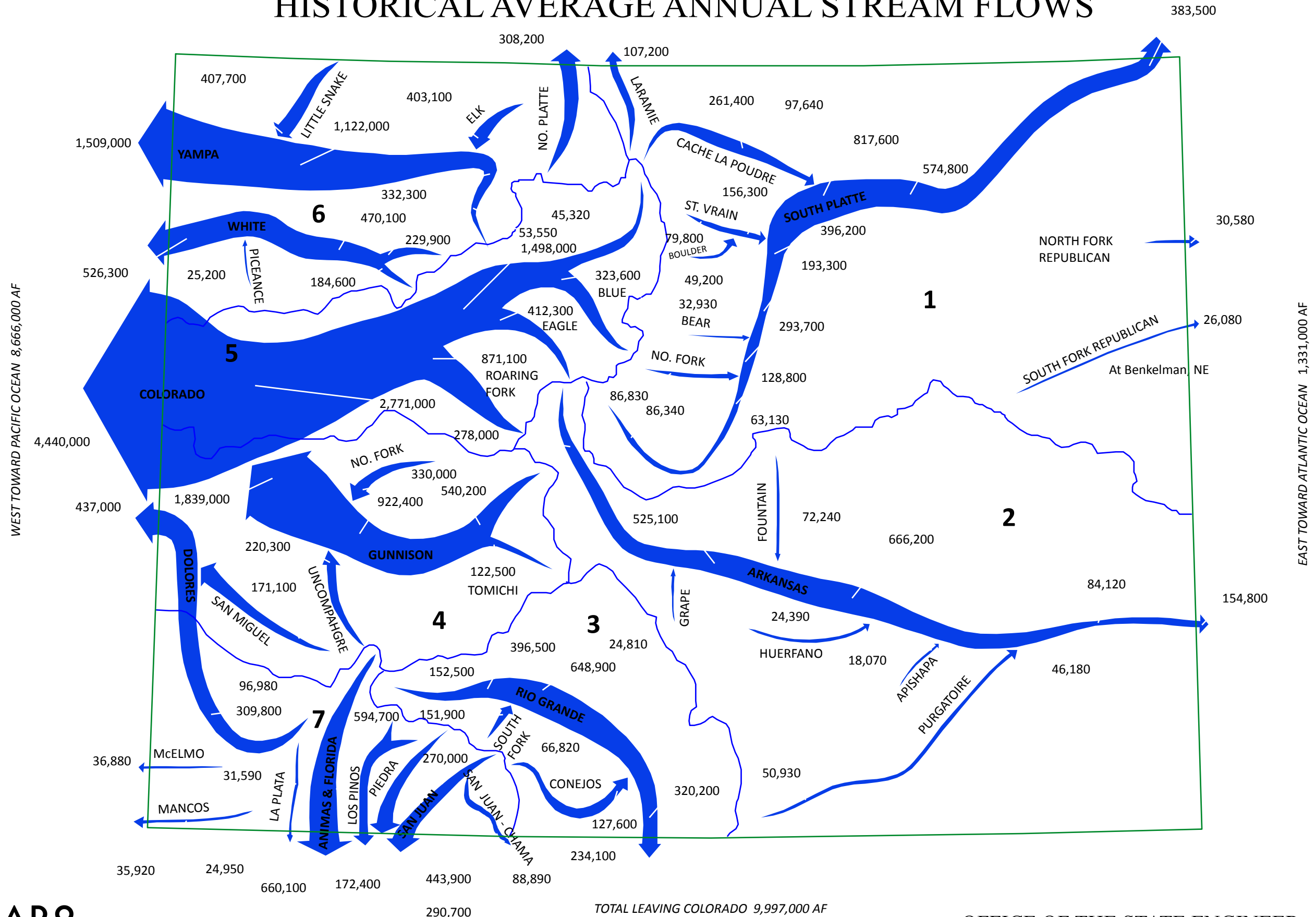


# State Engineer's Office Role



# COLORADO

## HISTORICAL AVERAGE ANNUAL STREAM FLOWS





Mining Diversions

# Historic Basis for Water Administration

Surface water administration:

- Territorial Law
- State Constitution
- Adjudication act of 1879, Water Commissioners,
- Adjudication Act of 1881, Office of the State Hydraulic Engineer
- 1887, Superintendent of Irrigation

Beginning in 1887, the fundamental structure for water administration is already in place



# Current Statutes

Surface water administration:

- Section 37-92-501(1), C.R.S.

*“The state engineer and the division engineers shall administer, distribute, and regulate the waters of the state in accordance with the constitution of the state of Colorado...”*

- Balance: Maximize beneficial use, no injury

# Current Statutes

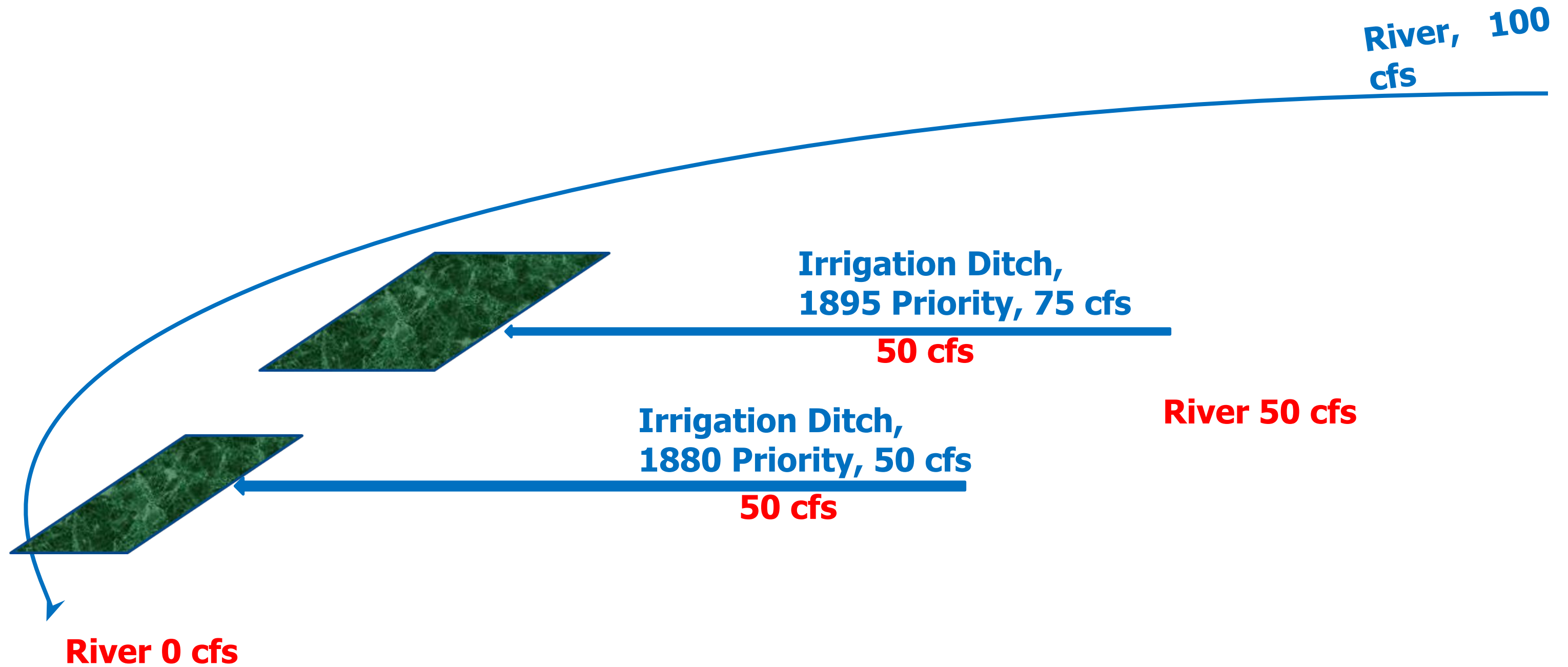
## Water Administration:

- Section 37-92-502(2)(a), C.R.S.

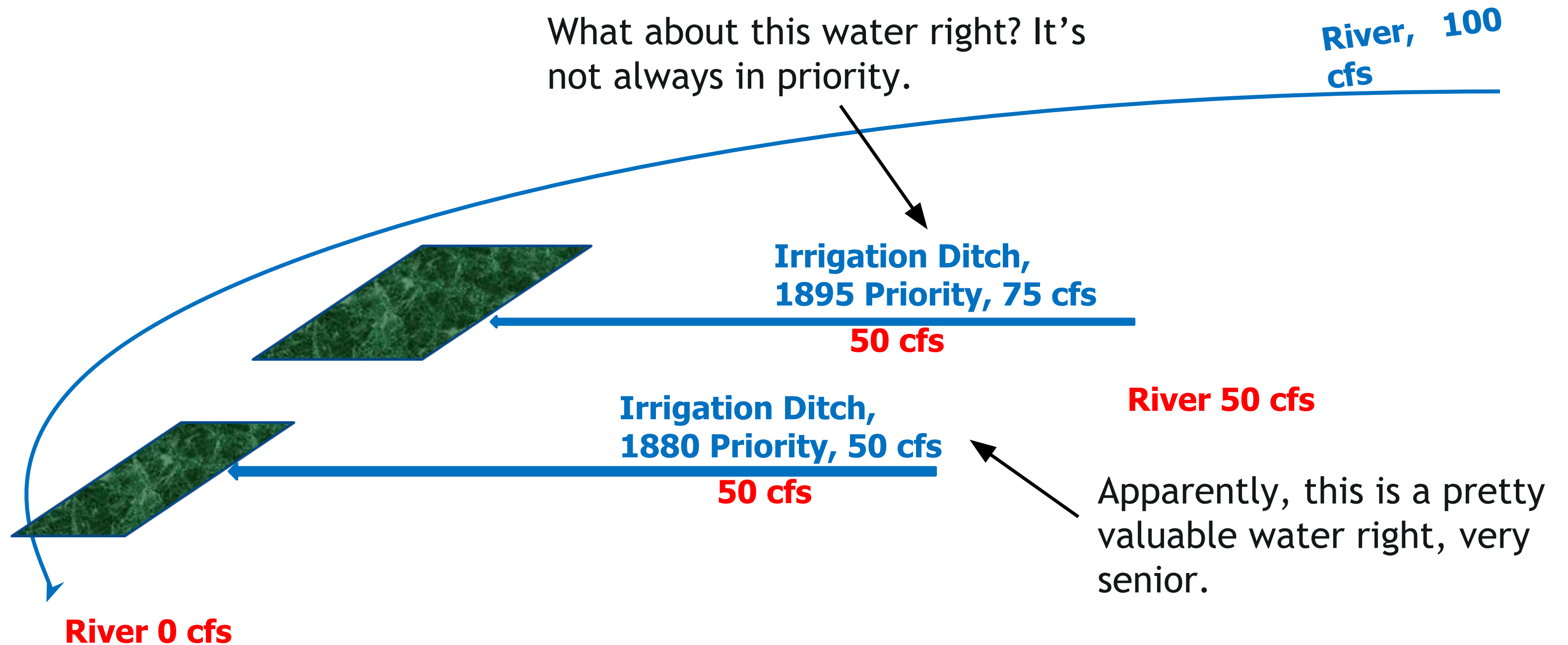
*“Each division engineer...shall order the total or partial discontinuance of any diversion in his division to the extent that the water being diverted is required by...senior priorities...”*



# Prior Appropriation Administration



# Prior Appropriation Administration





# Over-appropriation

## Not enough water to satisfy all rights

What do you do if you are “*out of priority?*”

# Current Statutes

## Water Administration:

- Section 37-92-502(2)(a), C.R.S.

*“Each division engineer...shall order the total or partial discontinuance of any diversion in his division to the extent that the water being diverted is required by...senior priorities...”*



# Water Administration

## Plans for augmentation

# Replacing Depletions

- In plain language

*Augmentation Plan is a plan to replace induced stream depletions using a substitute supply of water*

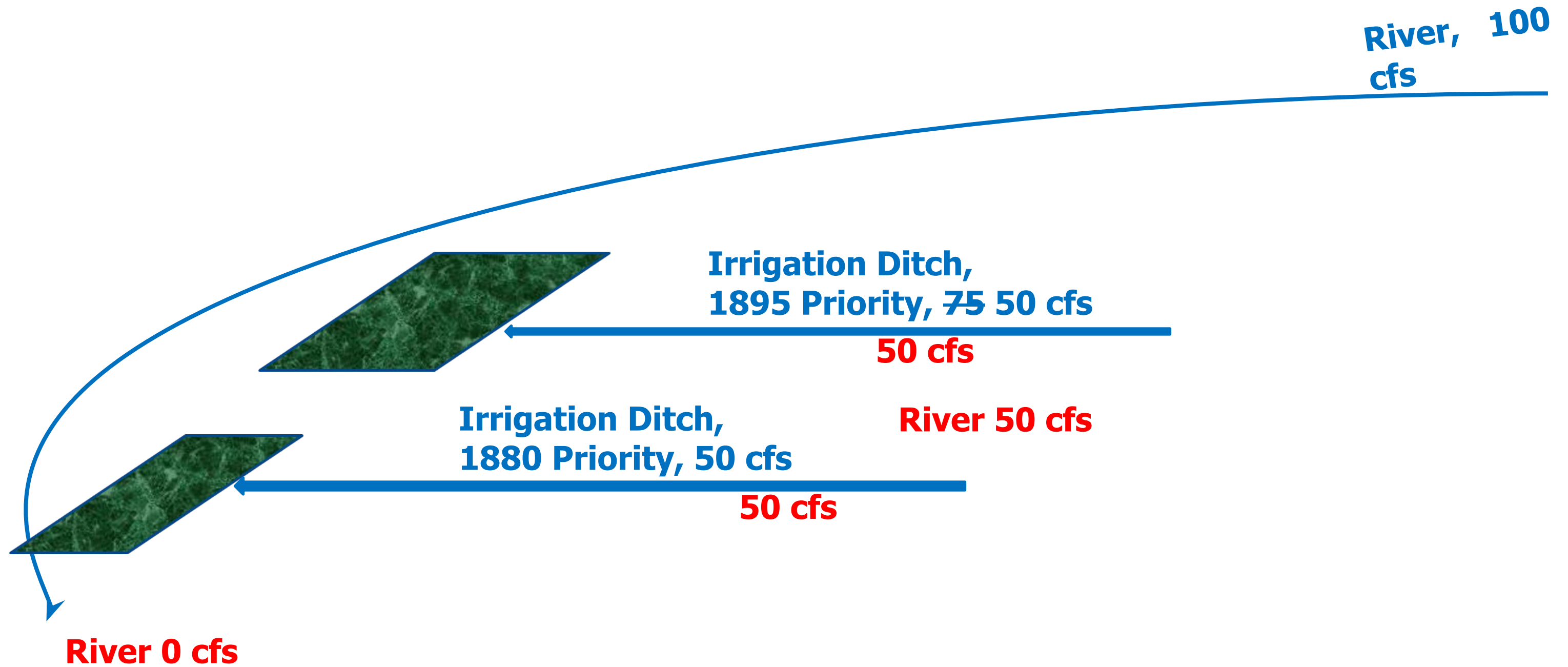
# Replacing Depletions

- Actual objectives of augmentation:
  - Statewide; replace stream depletions caused by out-of-of priority diversions, often from well pumping

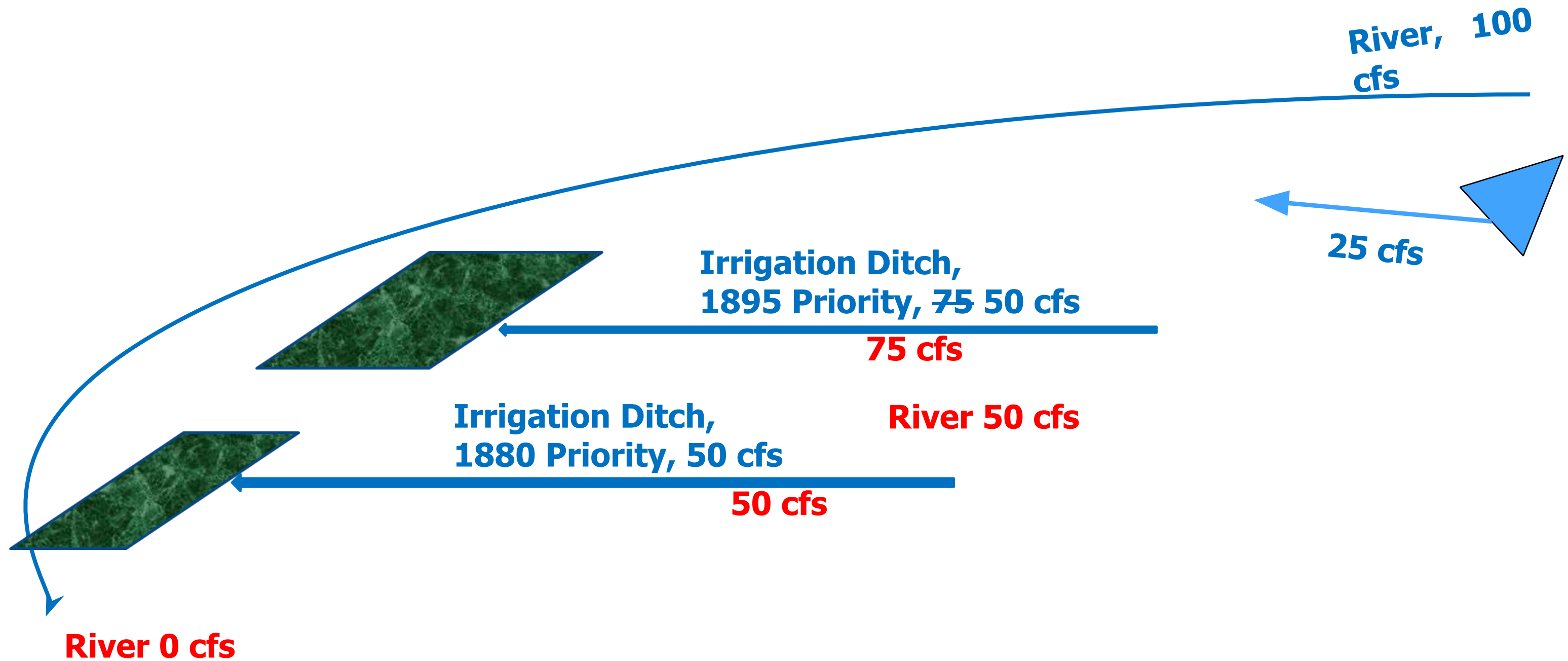
# Current Law

- Section 37-92-305(8), C.R.S.
  - Consider injury caused by out-of-priority diversions,
  - Allows continuation of diversions,
  - Provide replacement water in time, location, and amount.

# Augmentation Plan

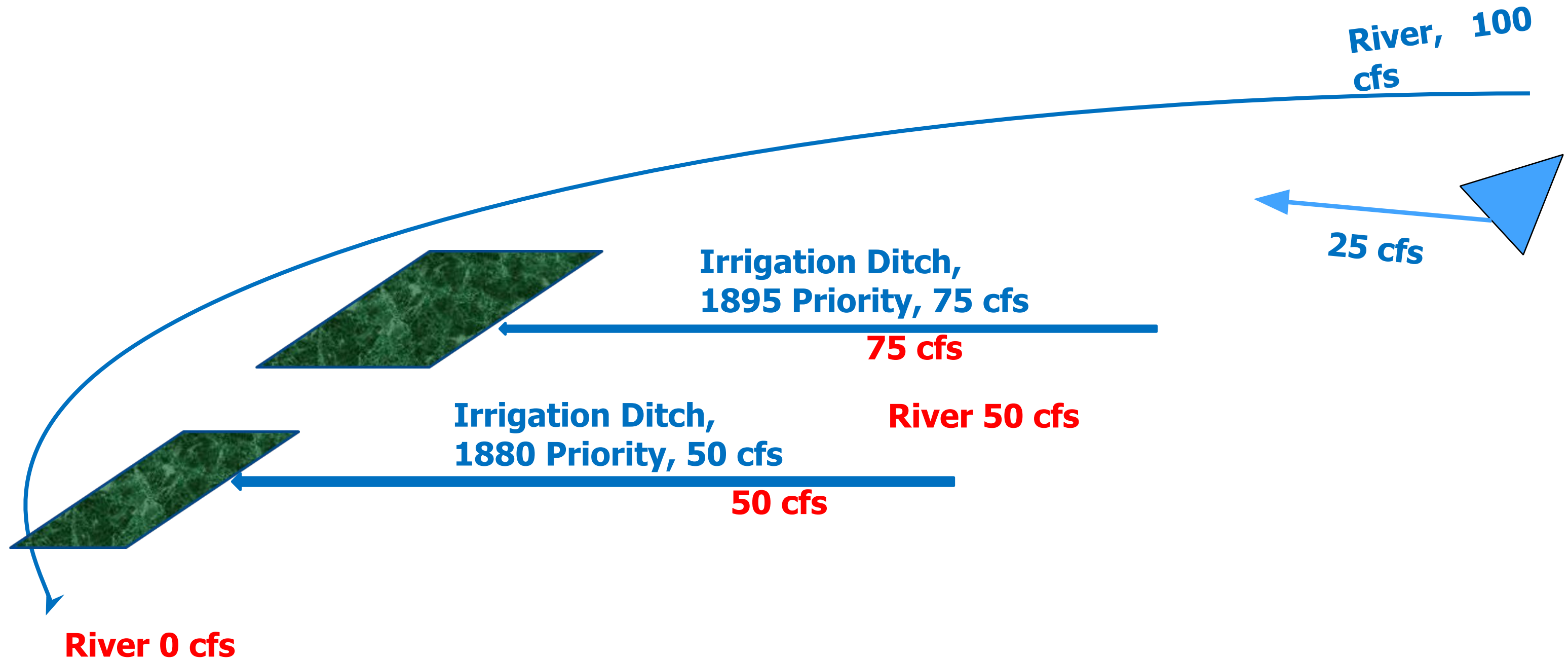


# Augmentation Plan

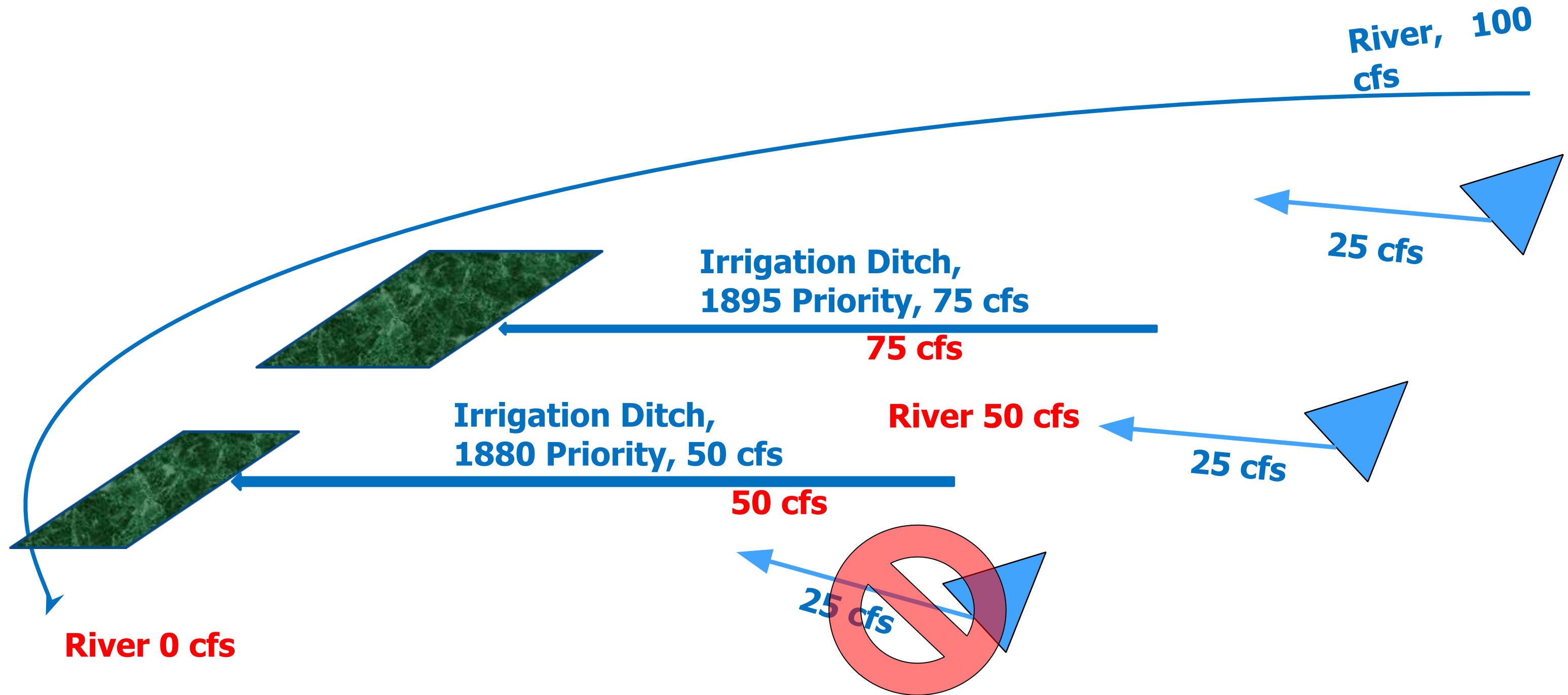




# Augmentation Plan



# Augmentation Plan



# Current Law

- Distinguish Augmentation from *Exchange*
  - Plan for Augmentation,
    - Allows continuation of diversions,
    - Uses a substitute supply decreed for the purpose of allowing such diversions,
  - Exchange
    - Allows delivery of decreed water into the stream
    - Owner may take a like amount upstream, real-time

