

Pilot flex accounting to encourage more water conservation in a combined Lake Powell-Lake Mead system



David E. Rosenberg

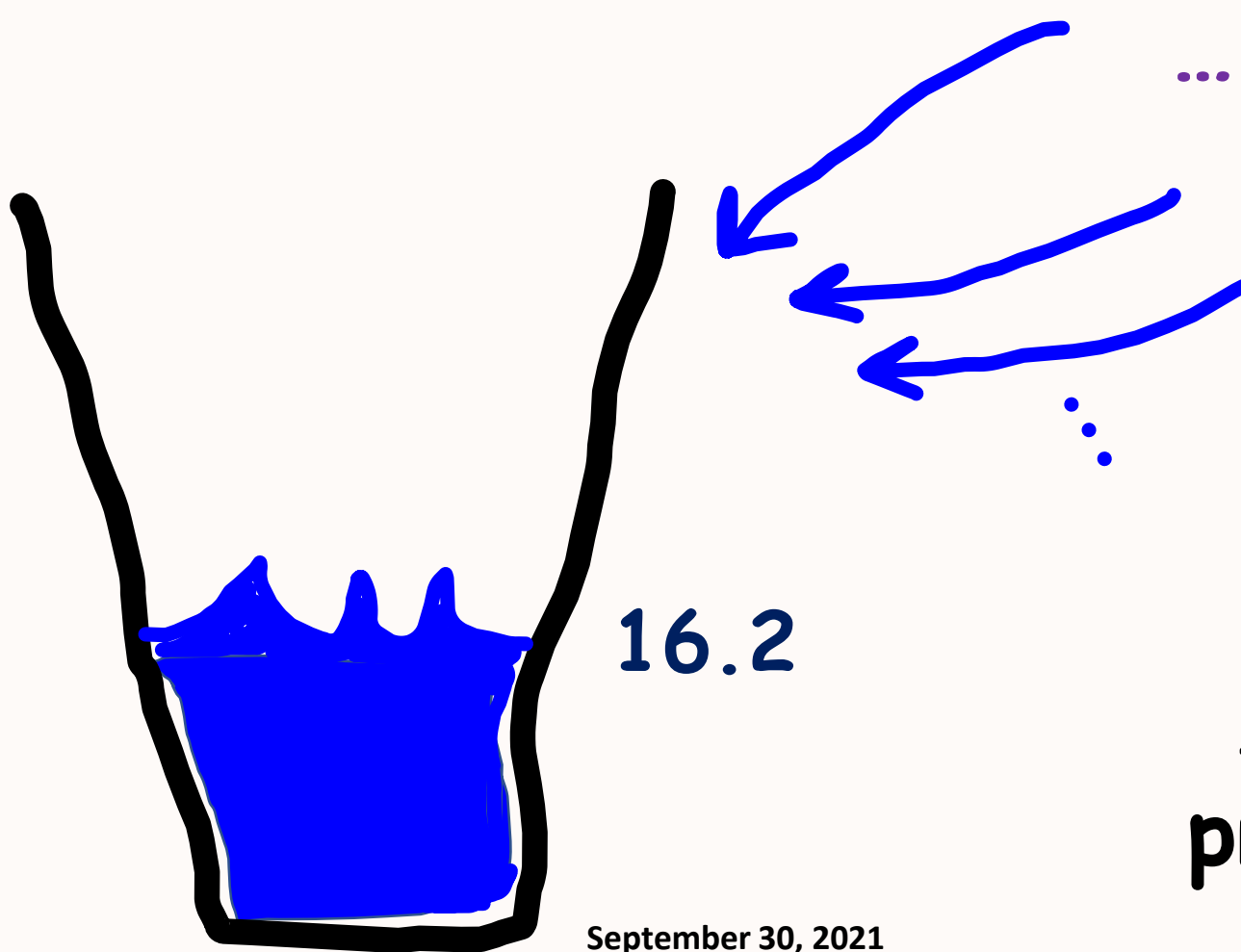
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Manage the water we already have ...

Combined Powell + Mead
Active Storage
(MAF)



... and will come in
future years ...

... while build on
prior agreements.

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1. Guiding principles

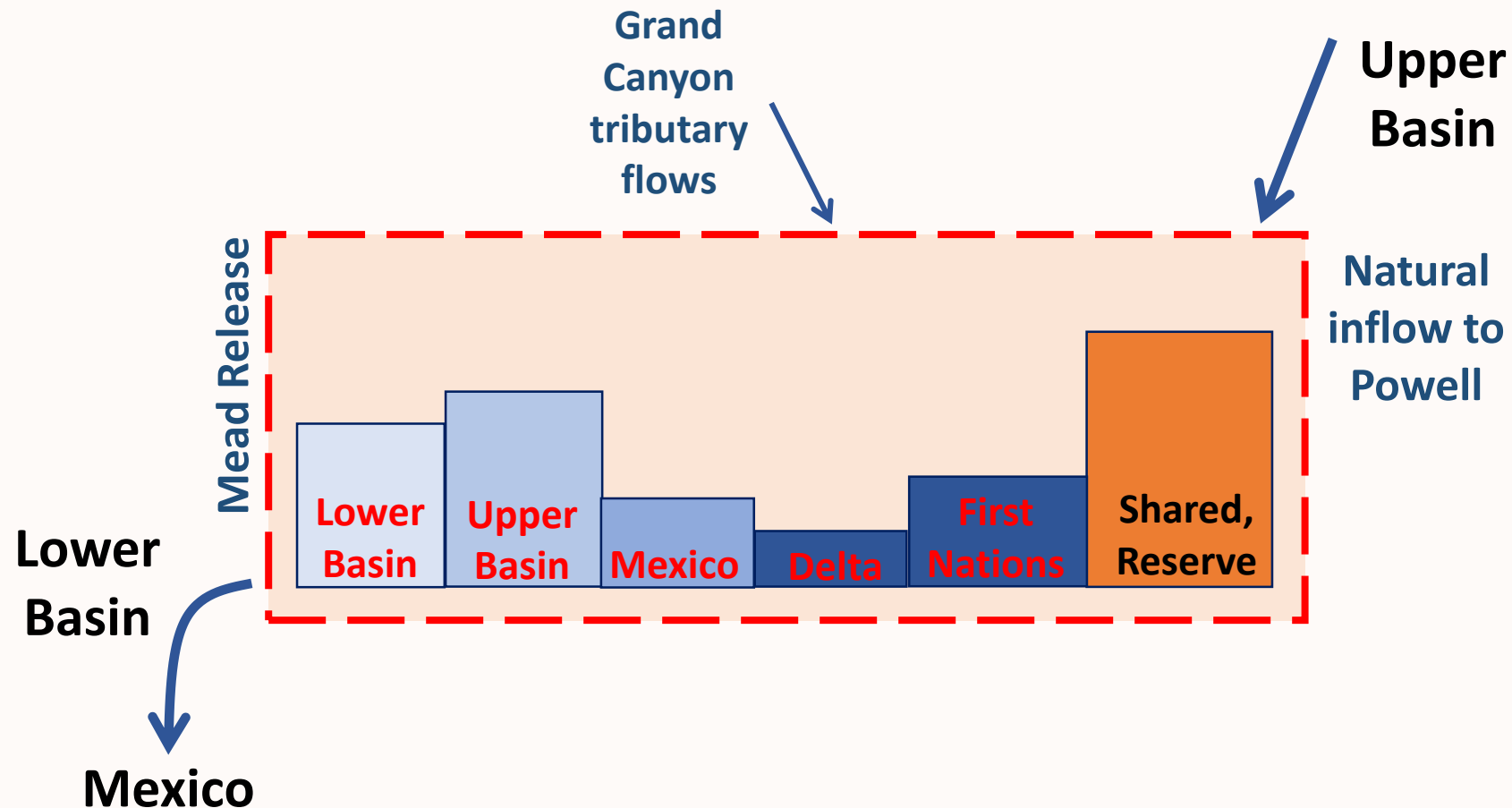
Give managers more flexibility to conserve and consume water independent of other parties.

Provoke thought and discussion on renegotiations of Lake Powell-Lake Mead operations.

Convert a shrinking pie (lose-lose) conflict — Colorado River drying — into more positive processes for people and endangered fish.

Build on prior agreements.

2. Region of Combined Management



3. Include more parties

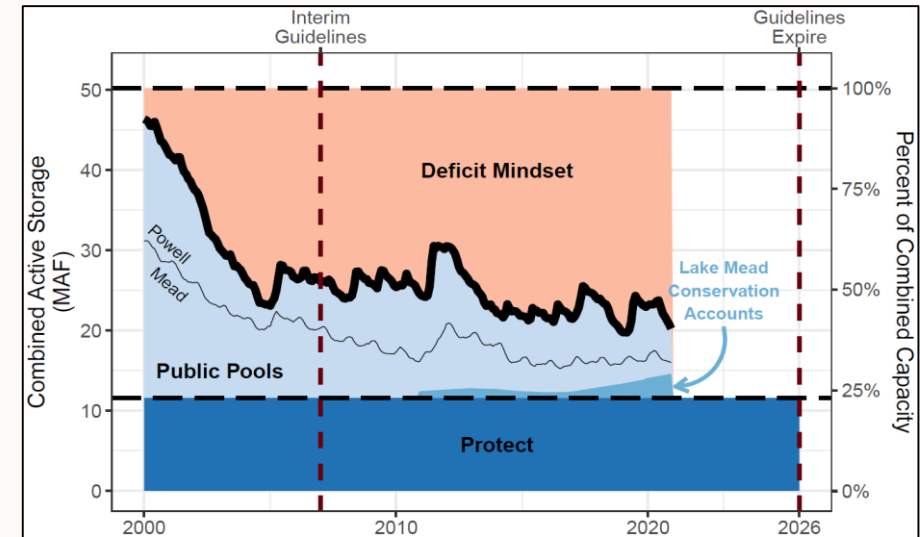
4. Manage all available water not just prior conserved water

$$\begin{array}{ccccccccccc} \text{Available} & & & & \text{Flex} & & \text{Share of} & & \text{Share of} & & \text{Purchases} & - & \text{Sales} \\ \text{Water} & = & \text{Account} & + & \text{Balance} & & \text{natural} & - & \text{Evaporation} & + & & & \\ & & \text{Balance} & & & & \text{flow} & & & & & & \\ & & & & & & & & & & \underbrace{\hspace{10em}} & & \\ & & & & & & & & & & \text{Optional} & & \end{array}$$

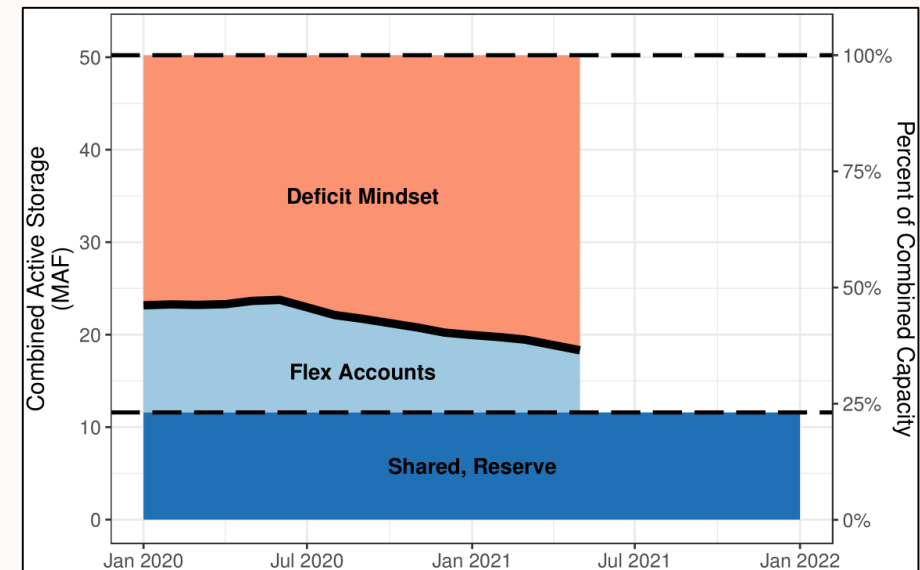
5. Adapt releases to natural flow and storage levels

6. Key Steps

1. Decide which parties get a flex account.
2. Assign reservoir storage (top) to accounts (bottom).
3. Divide natural flow among parties.
4. Parties conserve & consume within their available water.
5. Split combined storage between Powell & Mead.



2. Assign reservoir storage (top) to accounts (bottom).



7. I see benefits to ...

1. Give parties more flexibility.
2. Manage all water not just prior conserved water.
3. Adapt releases to inflows.
4. Include more parties.
5. More flexibility to protect endangered fish.
6. Carry over conservation account balances.
7. Nudge "my basin-reservoir-contingency plan" towards "our" reservoirs.

8. Effect on Existing Agreements?



The Same

- 1922 Compact
- 1928 Boulder Canyon Project Act
- 1944 US-Mexico Treaty
- 1948 Upper Basin Compact
- 1956 CRSP
- 1964 Arizona v. California
- 1968 CRBPA
- 2007 Lake Mead conservation account balances, Quantified surplus, Shortage conditions
- 2019 Drought Contingency Plan contributions, protect volumes, contributions for another party
- Expiration date for operations

Depends on Party Actions

- 2007 Lake Powell-Lake Mead Equalization

Flex accounting meets Interim Guidelines goals

- ✓ Encourage conservation.
- ✓ Plan for shortages.
- ✓ Closer coordinate Lake Powell and Lake Mead operations.
- ✓ ~~Preserve~~ Increase flexibility to deal with further challenges such as climate change and deepening drought.
- ✓ Implement operational rules for a long – but not permanent – period.
- ✓ Federal government facilitates – but not dictates – informed decision-making.
- ✓ Encourage parties to address future controversies on the Colorado River through consultation and negotiation... not litigation.

9. How can I help?



Manage a flex account!



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<https://github.com/dzeke/ColoradoRiverCoding/tree/main/ModelMusings>



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