

# Colorado River Compact Curtailment Alternative

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# A Conceptual “Insurance” Plan:

- To collaboratively minimize the risk of a compact “call.”
- Preserve pre-compact rights.
- Meet critical water needs in the face of a call with the “banked” consumptive use of pre-compact water rights.
- Mitigate the secondary impacts of temporarily fallowed “banked” rights.

# Colorado River Basin



# Colorado River Compact of 1922

- III (d) the Upper Division shall “not cause the flow of the river at Lee Ferry to be depleted below an aggregate of 75,000,000 acre-feet for any ten consecutive years.”
- III (c) regarding Mexico...the Upper Division must “deliver at Lee Ferry water to supply one-half of the deficiency so recognized in addition to that provided in paragraph (d).”

# Colorado River Compact of 1922

- The Upper Basin does not have a delivery obligation to the Lower Basin

Instead, a subtle but important difference:

The States of the Upper Division are required to limit their post-compact development of water so that their actions *do not cause* the flow at Lee Ferry to drop below a 10-year running average of 75MAF

# Upper Colorado River Basin Compact of 1948

- Apportion waters allocated to the Upper Basin by the 1922 Colorado River Compact.
- Establish the obligations of each Upper Division state with respect to deliveries of water at Lee Ferry.
- Determine how much water Colorado would have to provide if “curtailment of the use of water...becomes necessary in order that the flow at Lee Ferry shall not be depleted below that required by Article III (of the 1922 Compact).”

# What is Colorado's Compact Entitlement?

- 1948 Upper Colorado River Basin Compact Provides Arizona with 50,000 af per year, with the remainder of the Upper Basin's entitlement allocated:
  - 51.75 % to Colorado
  - 23.00 % to Utah
  - 14.00 % to Wyoming
  - 11.25 % to New Mexico
- Actual entitlement depends on the level of risk!

# Estimates of Colorado's Allocation

a. Paragraph III(a) of 1922 Compact:

$$51.75\% \times (\underline{7,500,000} - 50,000) = 3,855,000 \text{ AF}$$

b. Reclamation's hydrologic determination:

$$14.5 \text{ MAF} - 8.25 \text{ MAF deliveries} = 6,250,000$$

$$51.75\% \times (\underline{6,250,000} - 50,000) = 3,208,500 \text{ AF}$$

c. 1931-1964 hydrology estimate:

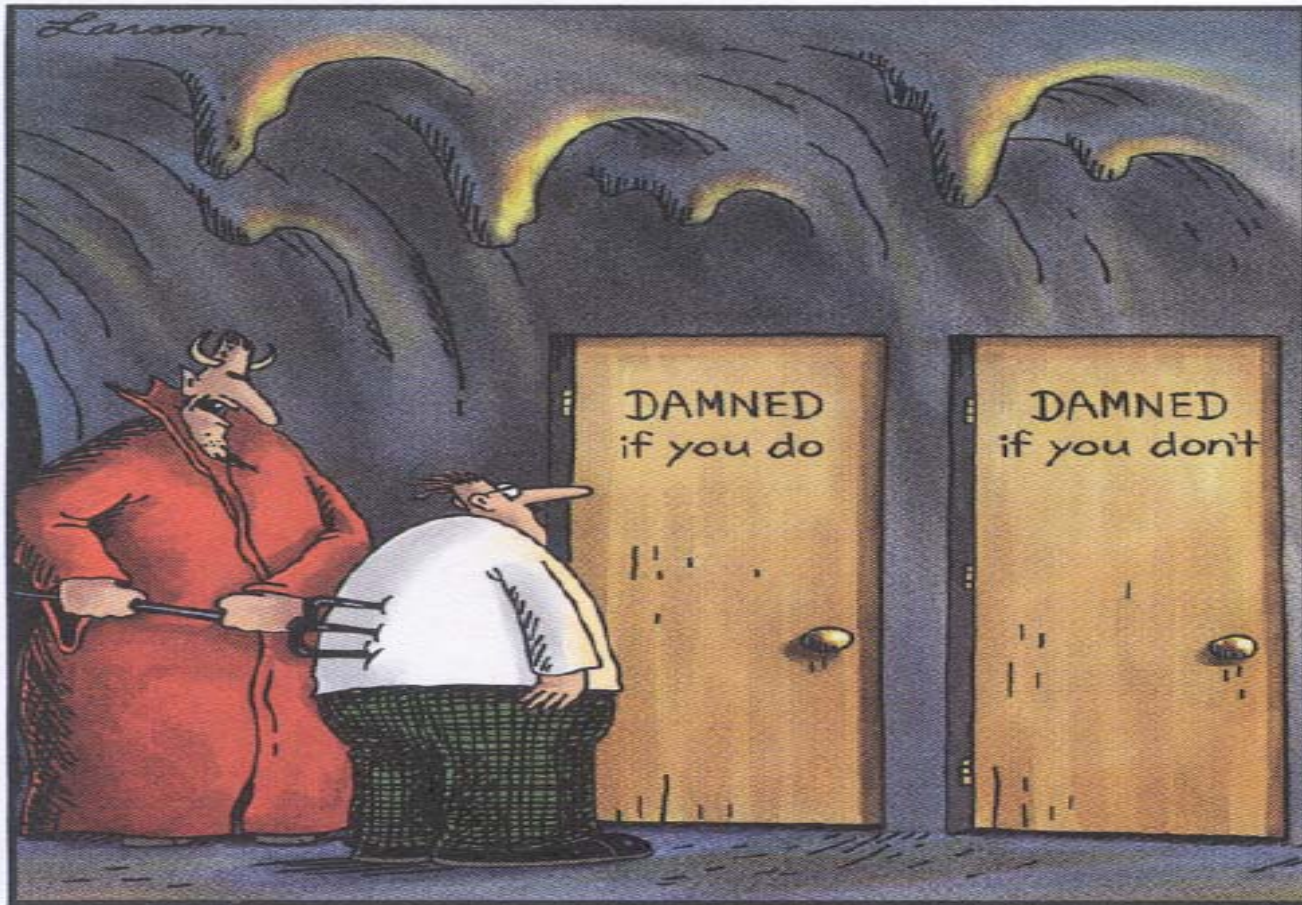
$$13 \text{ MAF} - 8.25 \text{ MAF} = 4,750,000 \text{ AF}$$

$$51.75\% \times (\underline{4,750,000} - 50,000) = 2,432,000 \text{ AF}$$

# Overdevelopment by Juniors puts Seniors at Risk

- Development of Colorado's maximum possible entitlement creates an unreasonable risk on rights junior to 1922
- Overdevelopment also increases the risk that pre-1922 agricultural rights will be dried up to provide a replacement supply

# Compact Development



"C'mon, c'mon—it's either one or the other."



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# Pre-Compact Rights

- **Article VIII of the 1922 Compact:**

“...present perfected rights to the beneficial use of waters of the Colorado River System are unimpaired by this compact.”

- **Article IV(c) of the 1948 Compact:**

Excludes water rights perfected prior to Nov. 24, 1922 from curtailment.

# Important Considerations

- **Curtailment probability**

The chance of a curtailment in the next decade or two is very remote. In the last 10 years, we've delivered MUCH more than 75,000,000 acre-feet at Lee Ferry.

- **Colorado hydrology highly variable**

Paleohydrology suggests past droughts have been more severe than what we've experienced the last 100 years.

- **Drier future**

Climate science suggests less river flow. Any increase in precipitation will be offset by increased evaporation and transpiration caused by increased temperature.

- **Legal matters**

Difficult legal issues among the Upper and Lower Basins will have to be resolved before a curtailment would likely occur.

# Objectives of the Plan

- 1. Develop Colorado's remaining compact entitlement while minimizing risk.**
- 2. Avoid compact curtailment.**
- 3. Preserve and protect Colorado's pre-compact rights.**
- 4. In event of curtailment:**
  - Cooperatively satisfy critical post-compact water demands (West Slope and Front Range).**
  - Mitigate the secondary impacts of temporary water transfers (e.g., local economy, water quality, in-stream flows).**

# Plan Assumptions

- **Compact curtailment could be significant and protracted, impacting all post-1922 rights.**
- **Within Colorado, pre-1922 rights would be administrated by priority.**
- **Consumptive use credits from pre-1922 rights can be used to replace depletions made by critical post-1922 rights.** (definition of “critical” is an important statewide issue)

# Plan Assumptions (con't)

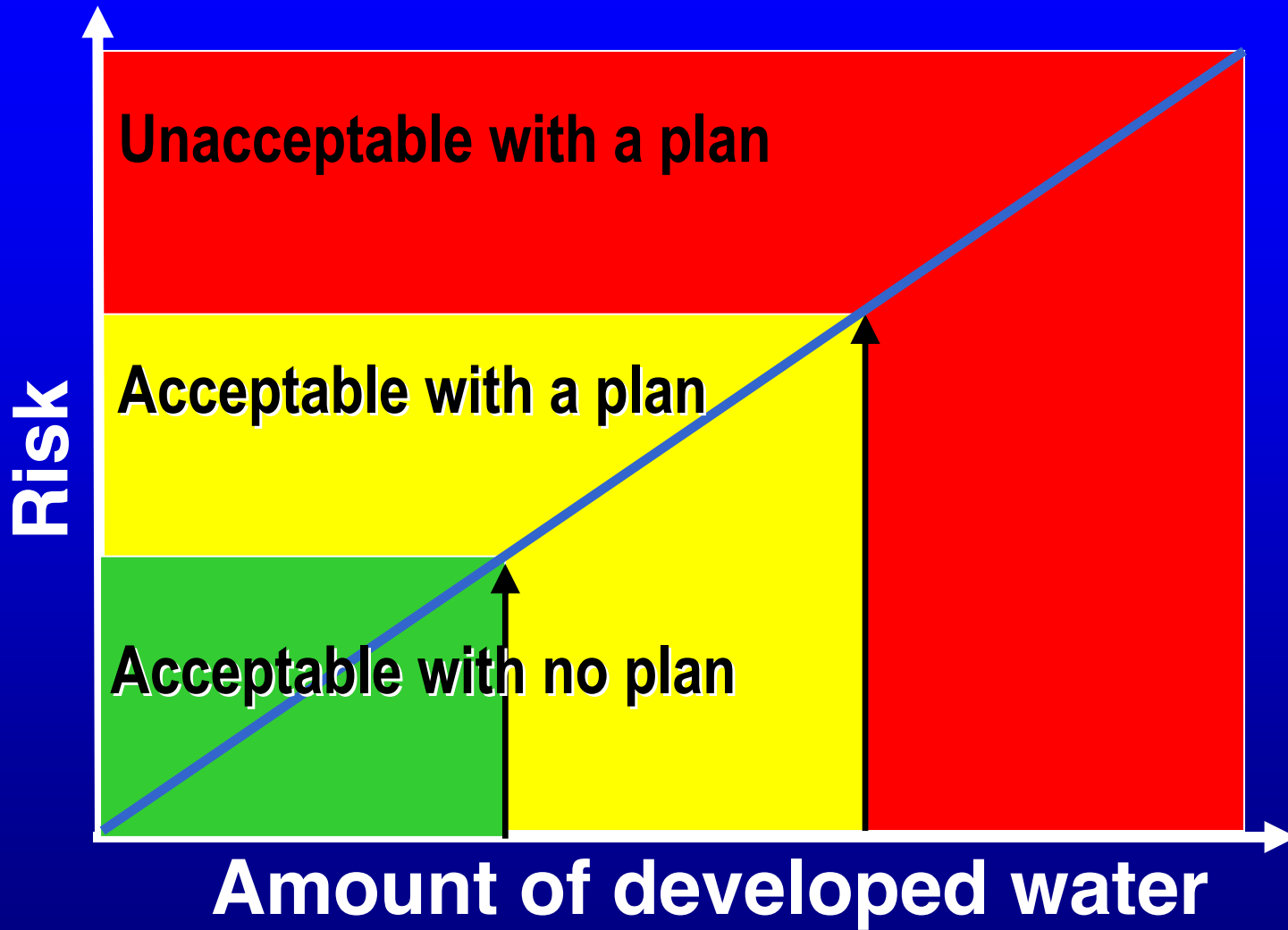
- Water stored by post-1922 rights in the nine years prior to the curtailment would be excluded from curtailment.
- The State Engineer would issue rules and regulations to administer a Colorado River Compact curtailment.

# Elements of the Plan

## ***#1 Avoid a compact curtailment***

- **Over-development presents an unacceptable risk.**
- **Avoid the economic and social hardship faced by other basins due to over-development of the resource.**
- **At some point, development of junior uses substantially increases the risk of curtailment on existing water rights.**

# Risk Reduced with Plan



# Elements of the Plan

## *#2 Operation of a pre-1922 water bank*

- Willing lessor basis; no permanent dry-up.
- Need to resolve numerous legal issues regarding temporary transfer of CU credits.
- Cover critical post-1922 uses, east and west slopes.
- Limit purpose of the water bank to compact curtailment situations.

# Elements of the Plan

## ***#3 Protection of Colorado's pre-1922 Colorado water rights***

- **Work together to protect and preserve these valuable rights.**
- **Once a right is abandoned through non-use, it is gone forever.**
- **Use variety of tools: education, legislation, financial and technical assistance.**

# Elements of the Plan

## *#4 Mitigate secondary impacts*

- **Effects on local economy**
- **Water quality**
- **Environment and recreation**

# Important Questions

- **Is there sufficient pre-compact water available to protect all critical uses?**
- **Who determines what uses are critical?**
- **What percentage of pre-compact rights can be temporarily fallowed (legally and sustainably)?**
- **Is a formal change of water right required for every fallowed pre-compact right?**
- **How are costs to participate determined?**

# More Unresolved Issues

- **Governance**
- **Funding**
- **Necessary powers**
- **State legislation**

# *Can we sell insurance before the fire?*



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