2023 Water Leaders Workshop

Lower Rio Grande Groundwater Opportunities for Innovation

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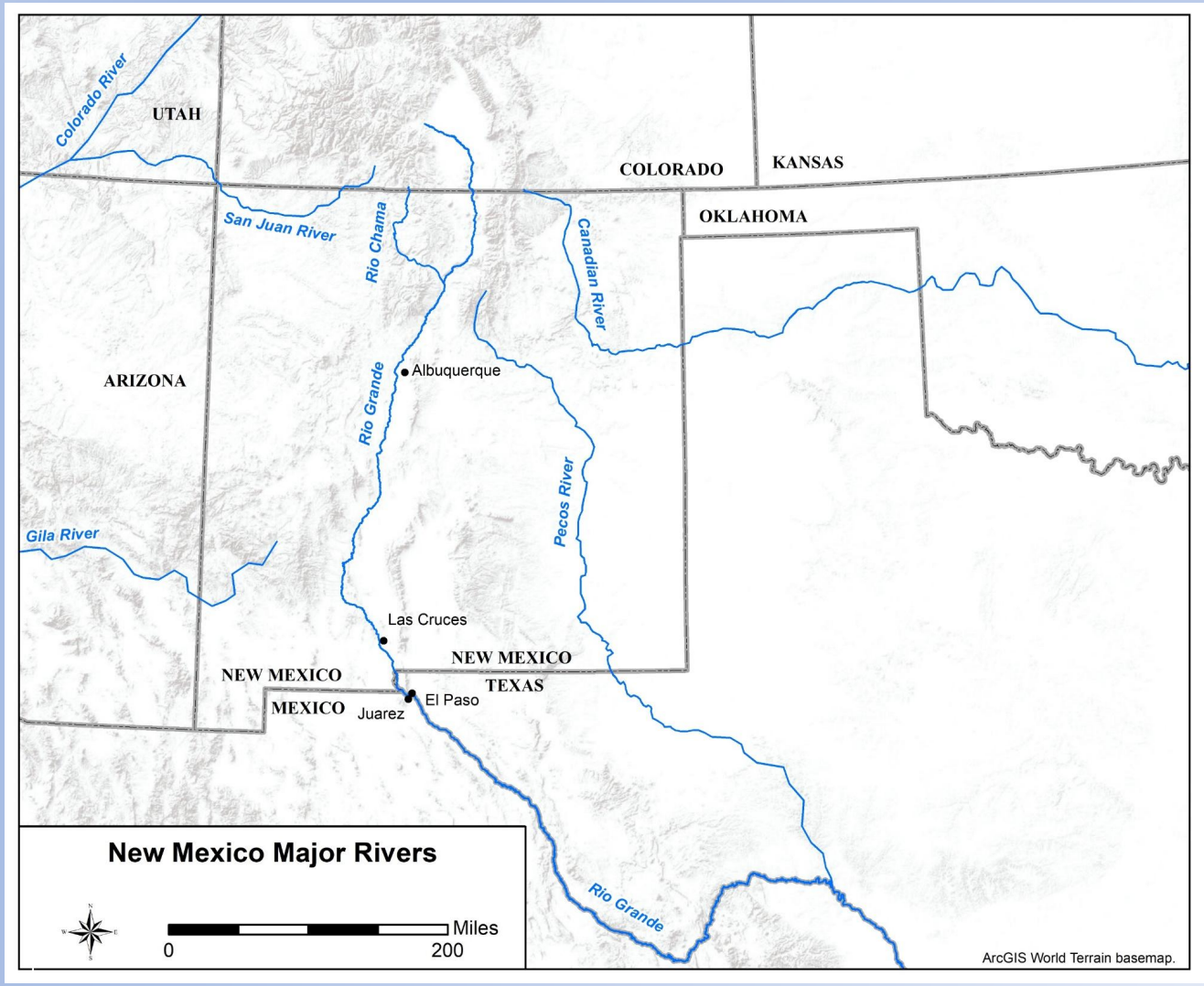
Overview

- Elements of the Consent Decree
- New Mexico's implementation activities

New Mexico Major Rivers



Map Selector

- New Mexico Major Rivers
- New Mexico Interstate Compacts
- Rio Grande Compact Area
- Rio Grande Compact Area and LRG Irrigation Districts
- LRG Irrigation Districts
- New Mexico – Texas State Line

Elements of the Consent Decree

Settlement Concepts

- Each State responsible for depletions by its own water users.
- Transition period to help NM improve aquifer conditions.
- Index designed to be consistent with 57%-43% division of Project Supply.
- Project allocation/accounting must be consistent with the Index.

Significant features of the consent decree

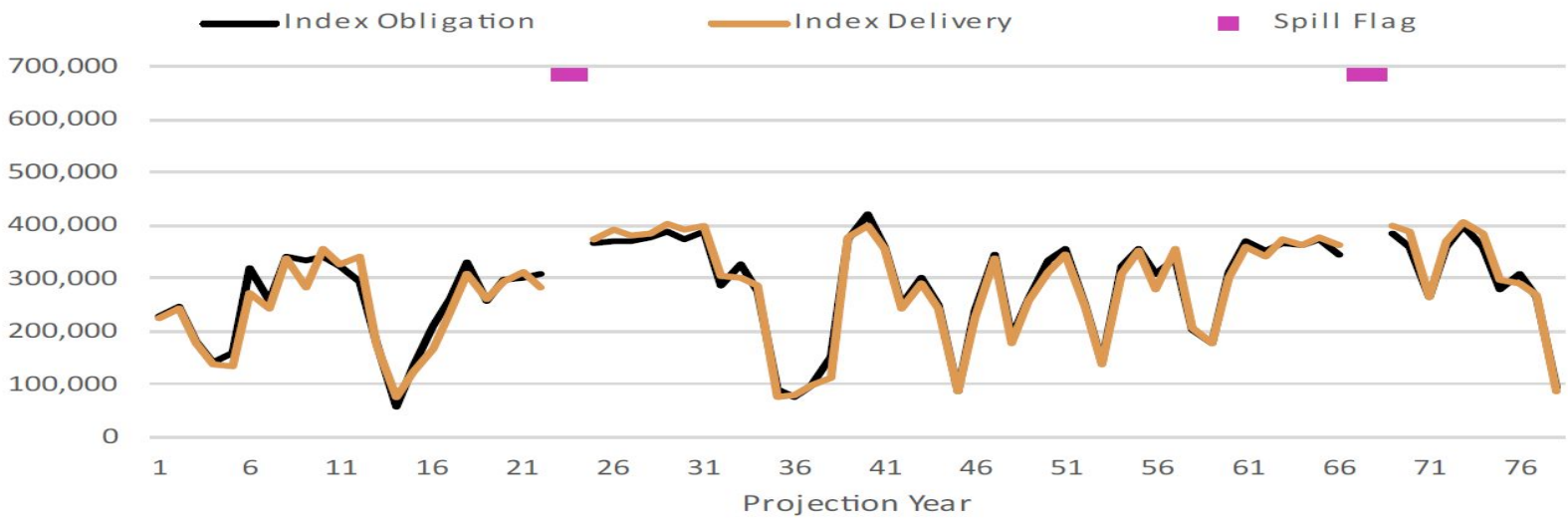
- Effective El Paso Index
- Based on a D2 Baseline
- Allows continued use of groundwater in both States
- Adjustments to allow 57%-43% division of Project Supply
- Accounting for Carryover to preserve Compact apportionment

Index Summary

- Quantifies the delivery to Texas at the El Paso gage
  - Adjusted for Texas depletions above El Paso Gage
  - Includes “Lag-1” adjustment for conditions in previous year
- Allowances for under-delivery and over-delivery (like Compact Upstream)
- Adjustments for Compact Spills, very-low supply conditions, increasing temperatures, and Carryover
- Intermediate Trigger Levels for remedial actions

EEPI: Historical Analysis
Compare Historical Index Obligation with Index Delivery

Figure 2: Annual Index Obligation and Index Delivery (acre-feet per year)



Under and over delivery Limits

Under-delivery Limits:

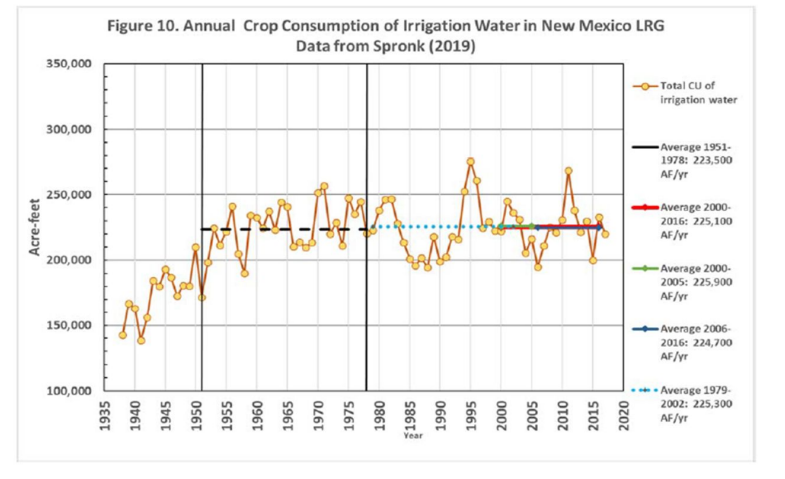
1. Limits on the accrued under-deliveries: 150,000 AF for the first 5 years; 120,000 AF thereafter
2. Maximum under-delivery that can be charged in any one year 90,000 AF
3. Trigger at 80,000 AF requires NM to undertake corrective action. This starts a 6 year period for reducing accrued under-deliveries

Over-delivery Limits:

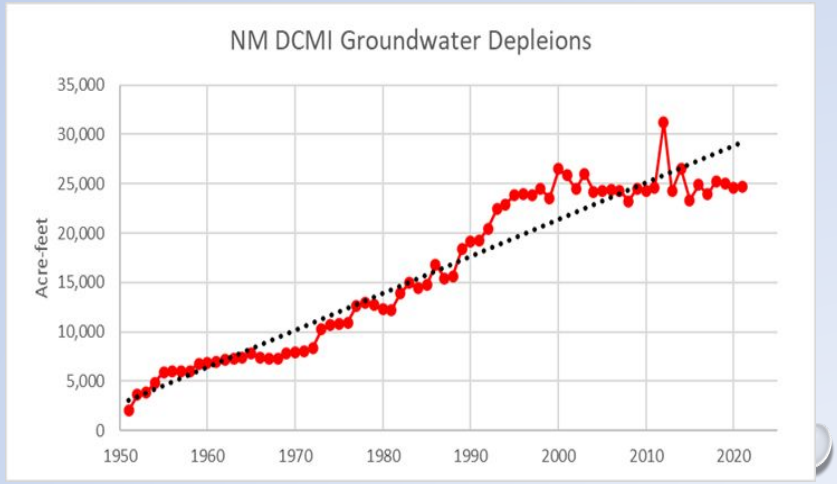
1. No total limit on accrued over-deliveries
2. Maximum over-delivery in any one year of 67,500 acre-feet
3. Trigger at 30,000 AF initiates a 3 year period for reducing accrued under-deliveries

Post-D2 depletions in the LRG

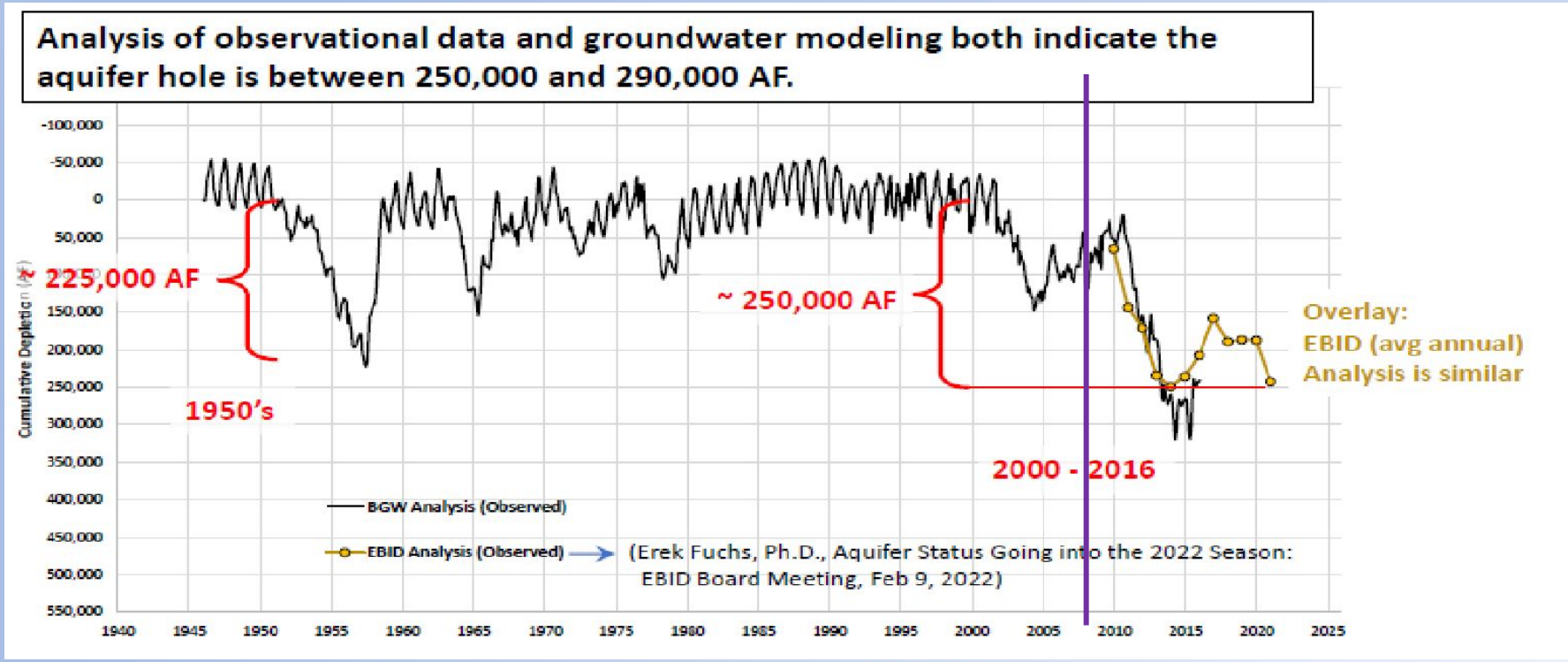
Agricultural depletions



Municipal depletions



Size of Hole in Aquifer



Settlement Implementation Overview

- **Desired Outcomes and Role for the State**
  - Compliance with new Rio Grande Compact delivery obligations for the LRG
    - Depletion Management
    - Stormwater Management
    - Brackish Water
- **Review of work ahead for the State**
  - Addressing need for depletion reductions
  - Work on improving habitat
  - Continue improving aquifer health
- **Essential Partners**
  - Elephant Butte Irrigation District (EBID)
  - United States Bureau of Reclamation (USBR)
  - NM Amici

Depletion Management

- **Groundwater Leasing Program**
  - "Bridge“ to begin reducing water depletions long term
  - Between September 25th and October 16th, the NMISC received 62 applications from members of the agricultural community interested in volunteering to conserve groundwater associated with 3,800 acres across 125 individual parcels of previously irrigated land
- **GW Only Acquisition Program**
  - Parallel task with leasing
  - Early phase of designing program
    - Development of this Program will require significant public involvement

Depletion Management

- **Surface Water Lease or Purchase**
  - Needs further evaluation
  - Preliminary discussions are being held with USBR and EBID
- **Other depletion management strategies**
  - Rotational fallowing
  - Others, still being investigated
- **Land management – Healthy Soils Initiative**
  - *NMISC, NMDA, NMSU*
  - *Will visit later today*

Stormwater Management

- **Climate Change**
  - Increased high intensity and short duration storm flow management
  - Prepare and optimize the management of this new precipitation pattern
- **Stormwater management need**
  - Proposed Consent Decree accounting
    - Limitation on delivery credit for river flows 1,000 cfs and above

Stormwater Management

- **Regional dam initiative**
  - Rapid assessment
  - Evaluate storage expansion to retain stormwater
- **Off-channel development**
  - Attenuate flood flow
  - Habitat improvement
- **Assist in rerouting storm water to RG Project**
  - Cooperative effort with EBID and USBR
  - Evaluate potential to optimize drain system
    - Draft Report regional infiltration opportunities
    - Pilot Infiltration Study
    - Coordinating with EBID

Brackish Supply

- **Brackish Water**
  - Working with USBR for a regional assessment brackish water characteristics
    - NMISC awarded a competitive grant to support this work
- **Importation of Brackish Water**
  - Salt Basin
    - Initial assessment
      - Groundwater modeling
      - Preliminary engineering is underway
      - This FY we will begin public outreach
    - USBR Grant - $ 0.750 m
  - Westside Mesilla aquifer characterization
    - Need sampling plan for aquifer characterization
      - NMBG, NMSU, NMISC consulting experts
    - Implement the sampling plan
      - TBD

Questions?

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