



*An Overview: Upper Rio Grande Water
Management and the Rio Grande
Compact*

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Rio Grande Water Management Agencies/Entities

- U.S. Bureau Of Reclamation
 - U.S. Army Corps of Engineers
 - U.S. Bureau of Indian Affairs
 - International Boundary & Water Commission
 - New Mexico Office of the State Engineer
 - New Mexico Interstate Stream Commission
 - State of Colorado DWR
 - Rio Grande Compact Commission
 - Pueblo's and Tribe's
 - Conservancy and Irrigation districts
 - Acequias
 - Cities, counties, mutual domestic water associations
 - Flood control authorities
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The Upper Rio Grande Basin



Platoro Dam



Rio Chama below Abiquiu Dam





Cochiti Dam





San Acacia Diversion Dam



San Marcial Railroad Bridge



Elephant Butte Dam and Reservoir





Generalized History

- Late 1800's – Drought and Increased Irrigation Diversion in Colorado
 - 1896 – Federal Embargo on Water Development
 - 1906 – Treaty of 1906
 - 1916 – Elephant Butte Reservoir Operational
 - 1925 – Federal Water Development Embargo Lifted
 - Late 1920's – Middle Rio Grande Conservancy District
 - Construct the MRGCD diversion dams, canals, drains, and El Vado Reservoir
 - 1929 – Interim Rio Grande Compact
 - Sets limits on depletions of water
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Generalized History (Continued)

- 1935 – El Vado Reservoir Completed
 - Supreme Court Lawsuit by Texas
 - 1938 – Rio Grande Compact Signed,
 - Supreme Court Lawsuit dismissed
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The Rio Grande Compact

- Signed in 1938 in Santa Fe following those four decades of controversy to:
 - Effect an equitable apportionment of the waters of the Rio Grande above Ft. Quitman, Texas
 - Remove all causes of present and future controversy
 - Promote interstate comity
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The Rio Grande Compact

- The Compact apportions the waters of the Upper Rio Grande Basin amongst the three States
 - The Compact does not affect the obligations of the United States to Indian Tribes or impair their Rights
 - San Juan-Chama Project Water is not subject to Compact apportionment
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The Rio Grande Compact - Colorado

- Colorado is Required to Deliver Water to New Mexico at the Stateline
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The Rio Grande Compact - Colorado

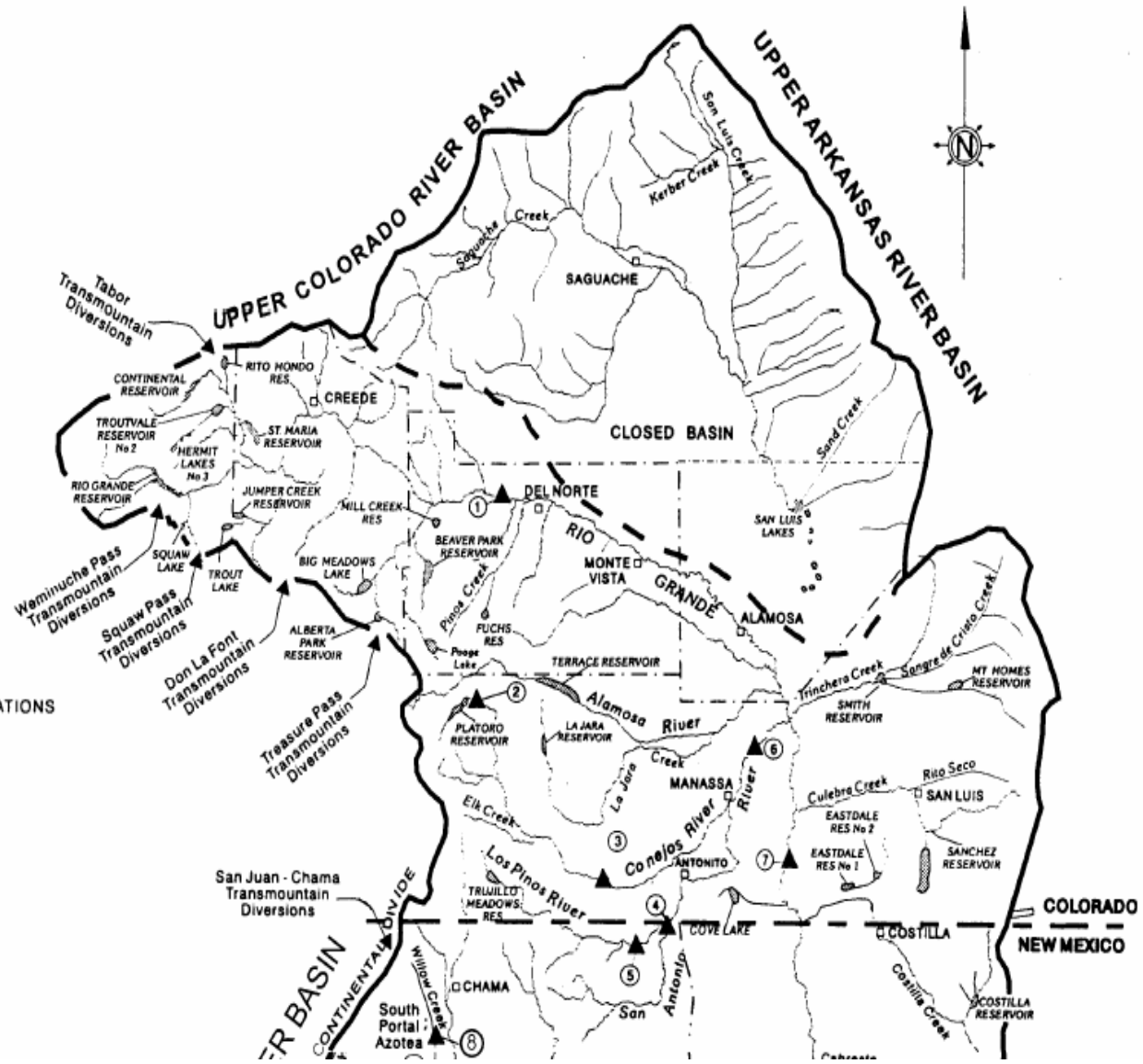
LEGEND

- ▲ STREAM-GAGING STATION
- CITY OR TOWN
- BASIN BOUNDARY
- - - COUNTY LINE
- ▬ CLOSED BASIN BOUNDARY
- TABOR TRANSMOUNTAIN DIVERSION

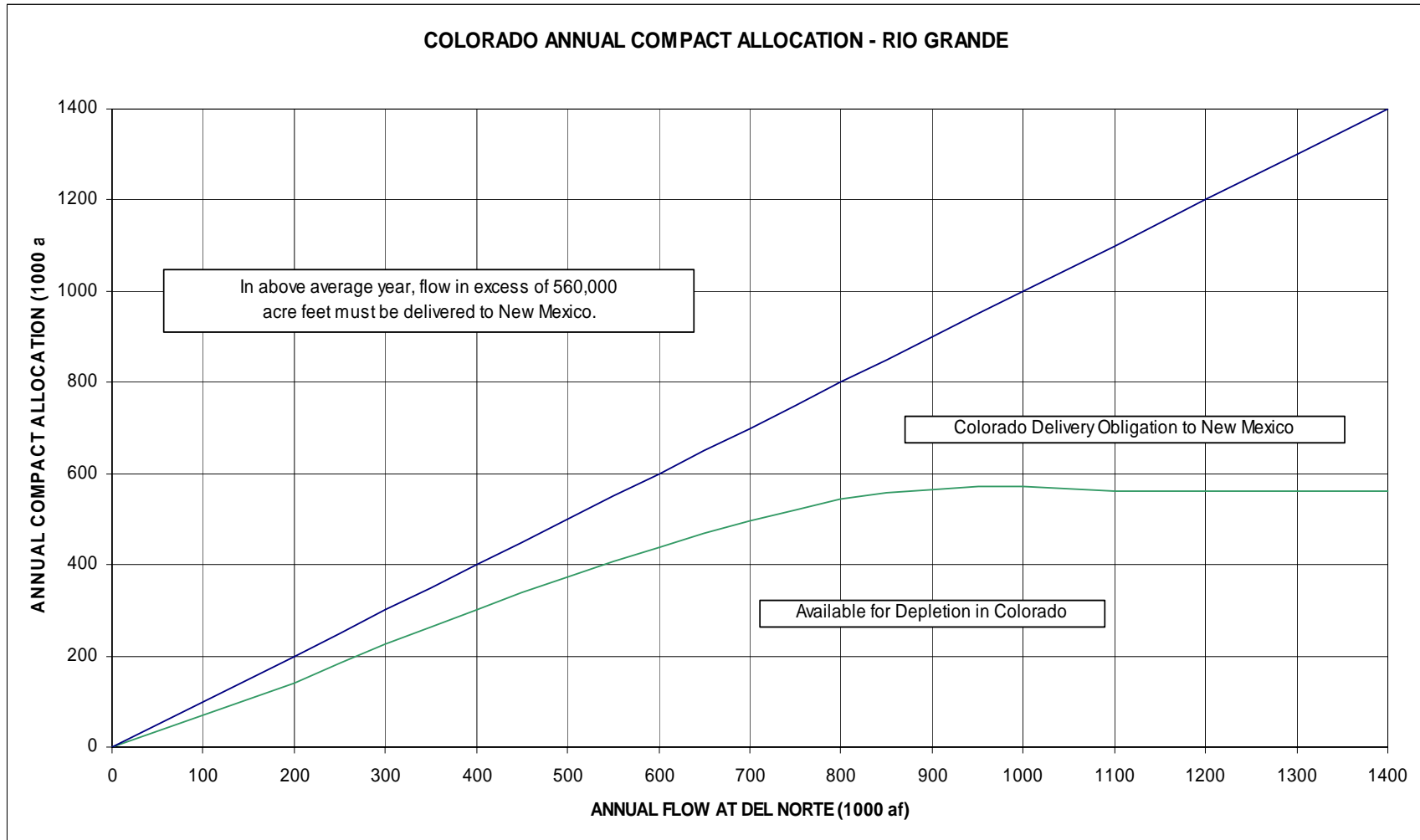
EXPLANATION

RIO GRANDE COMPACT STREAM-GAGING STATIONS

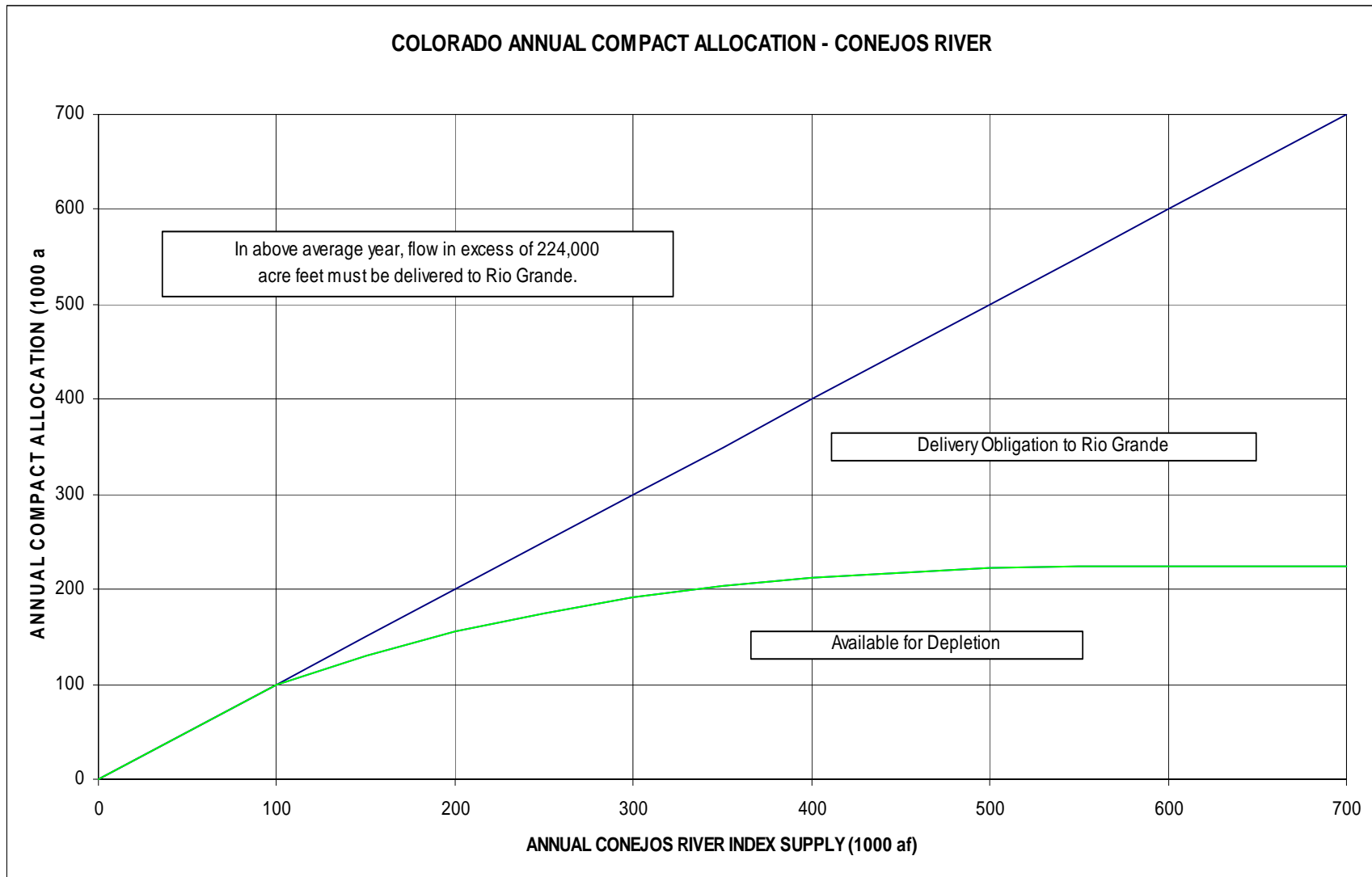
- ① Rio Grande near Del Norte
- ② Conejos River below Platoro Reservoir
- ③ Conejos River near Mogote
- ④ San Antonio River at Ortiz
- ⑤ Los Pinos River near Ortiz
- ⑥ Conejos River near Lasauses
- ⑦ Rio Grande near Lobatos
- ⑧ Azotea Tunnel at South Portal
- ⑨ Willow Creek above Heron Reservoir



The Rio Grande Compact - Colorado



The Rio Grande Compact - Colorado



The Rio Grande Compact – New Mexico

- New Mexico is Required to Deliver a Portion of the Flow at Otowi Bridge to Texas at Elephant Butte Reservoir
 - An explicit Middle Rio Grande allocation
 - If depletions change between the Stateline with Colorado and Otowi Bridge, modify Middle Rio Grande allocation
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The Upper Rio Grande Basin



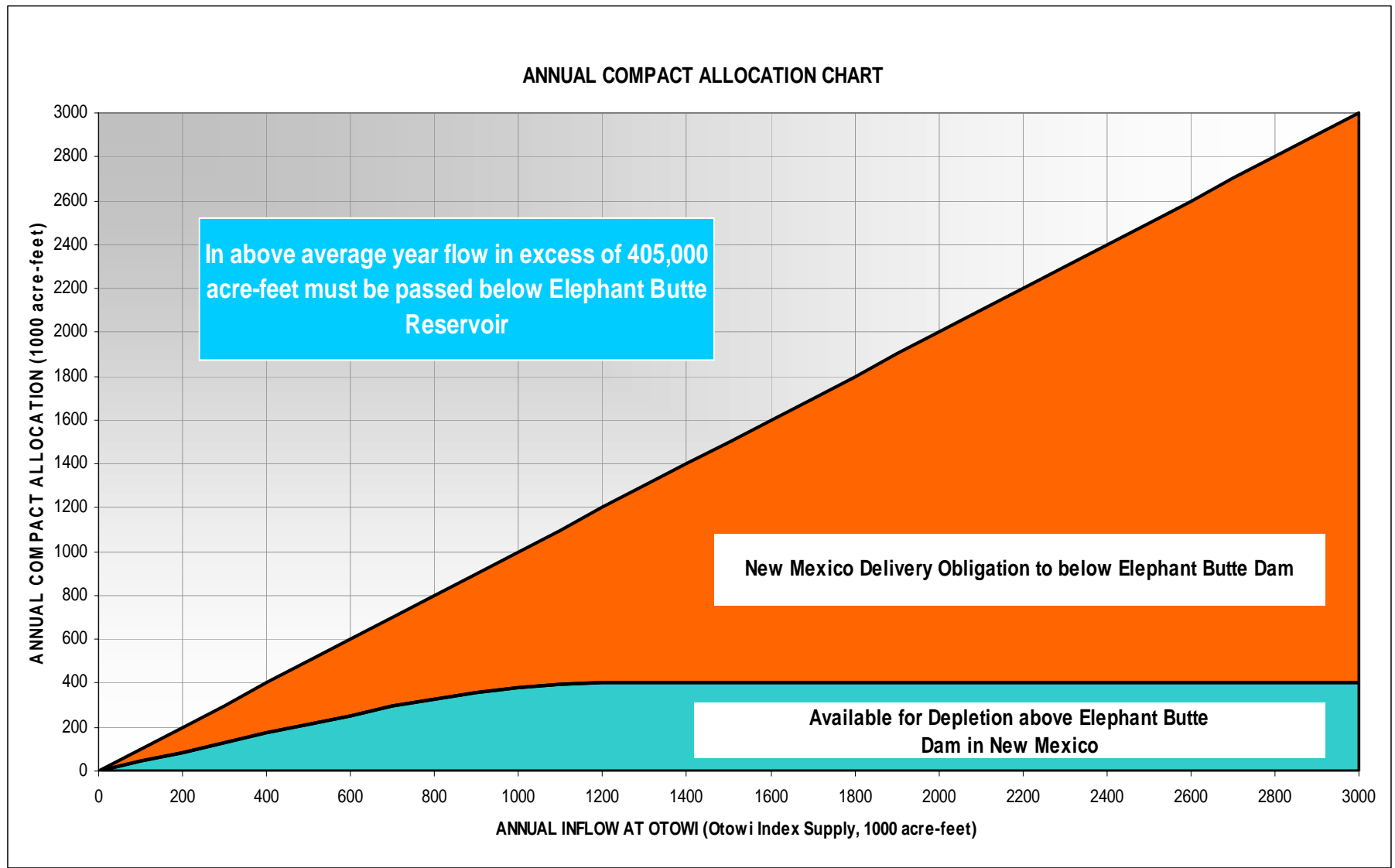
Otowi Gage



Elephant Butte Dam

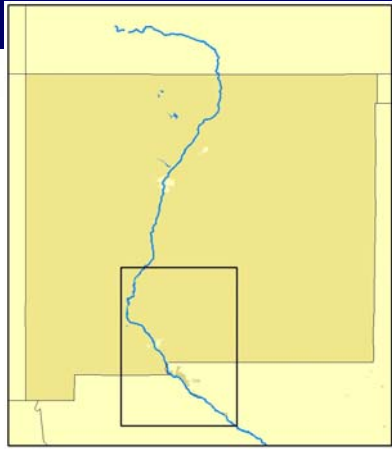


Middle Rio Grande Compact Allocation and Obligation

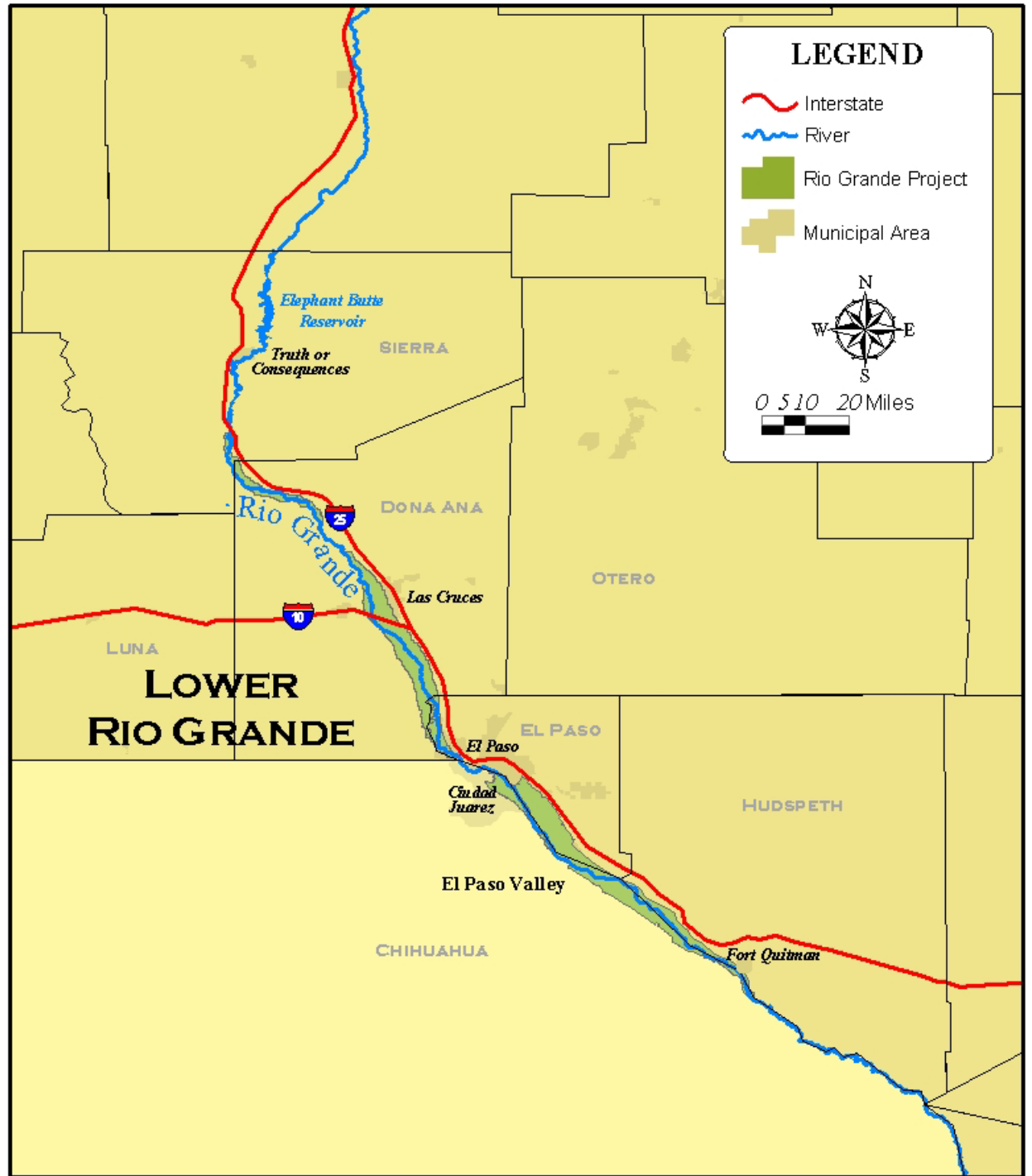


The Rio Grande Compact - Texas

- From Elephant Butte Reservoir to Fort Quitman, Texas
 - 57% of the Rio Grande Project Supply delivered to New Mexican's
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The Rio Grande Project



Compact Storage Restrictions

- If We Accrue Debits to Texas:
 - Water Must be Retained in Storage in Post-1929 reservoirs to the extent of the debits and cannot be used
 - If Usable Storage in Rio Grande Project Reservoirs is low:
 - cannot increase the amount of native water stored in post-1929 reservoirs
 - An accepted Relinquishment allows for some upstream storage
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Credit, Debit, and Spills

- Colorado and New Mexico Credit Water is held in Elephant Butte Reservoir
 - Colorado may accrue up to 100,000 acre-feet of debit
 - New Mexico may accrue up to 200,000 acre-feet of debit
 - Spills from Elephant Butte Reservoir eliminate credits and debits
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Generalized History (Continued)

- 1941 – Severe Flooding north of Elephant Butte Reservoir
 - 1948 & 1950 Flood Control Acts
 - Jemez Canyon, Abiquiu, Galisteo, and Cochiti dams
 - Rehabilitation of the MRGCD
 - 1950's – Severe Drought
 - Late 1950's – Additional Supreme Court Compact Litigation
 - Late 1960's – San Juan-Chama Project
 - Diversions from San Juan Basin to Heron Reservoir
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Rio Grande Floodway in 1952



Looking downstream from south boundary of Bosque del Apache
(courtesy of Reclamation)

The Middle Rio Grande Project – Flood Control Reservoirs



The Middle Rio Grande Project – Rehabilitate the MRG

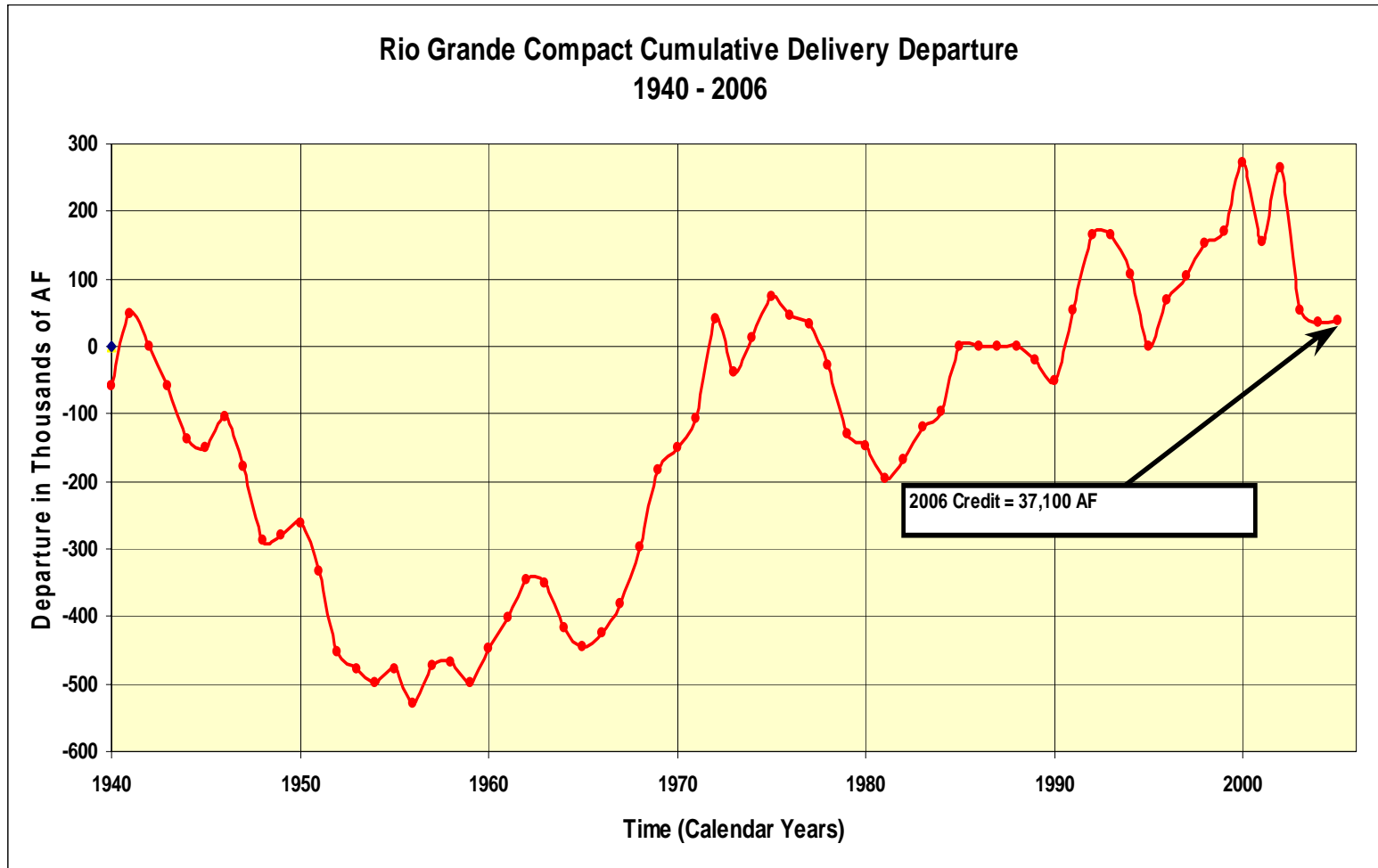


The San Juan-Chama Project – Import Water to Rio Grande

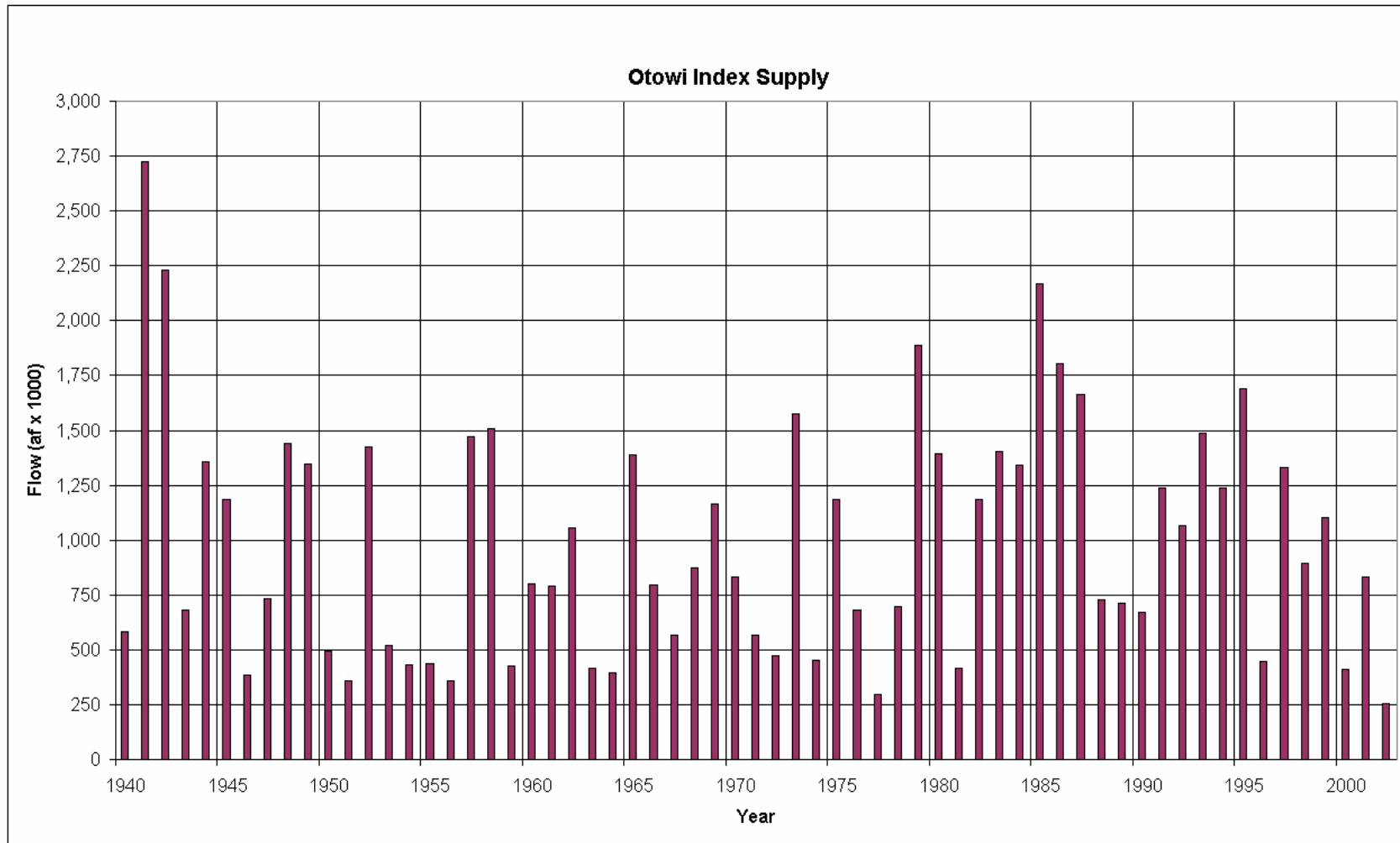


Source: SSPA, July 2000 Water Supply
Study of the Middle Rio Grande

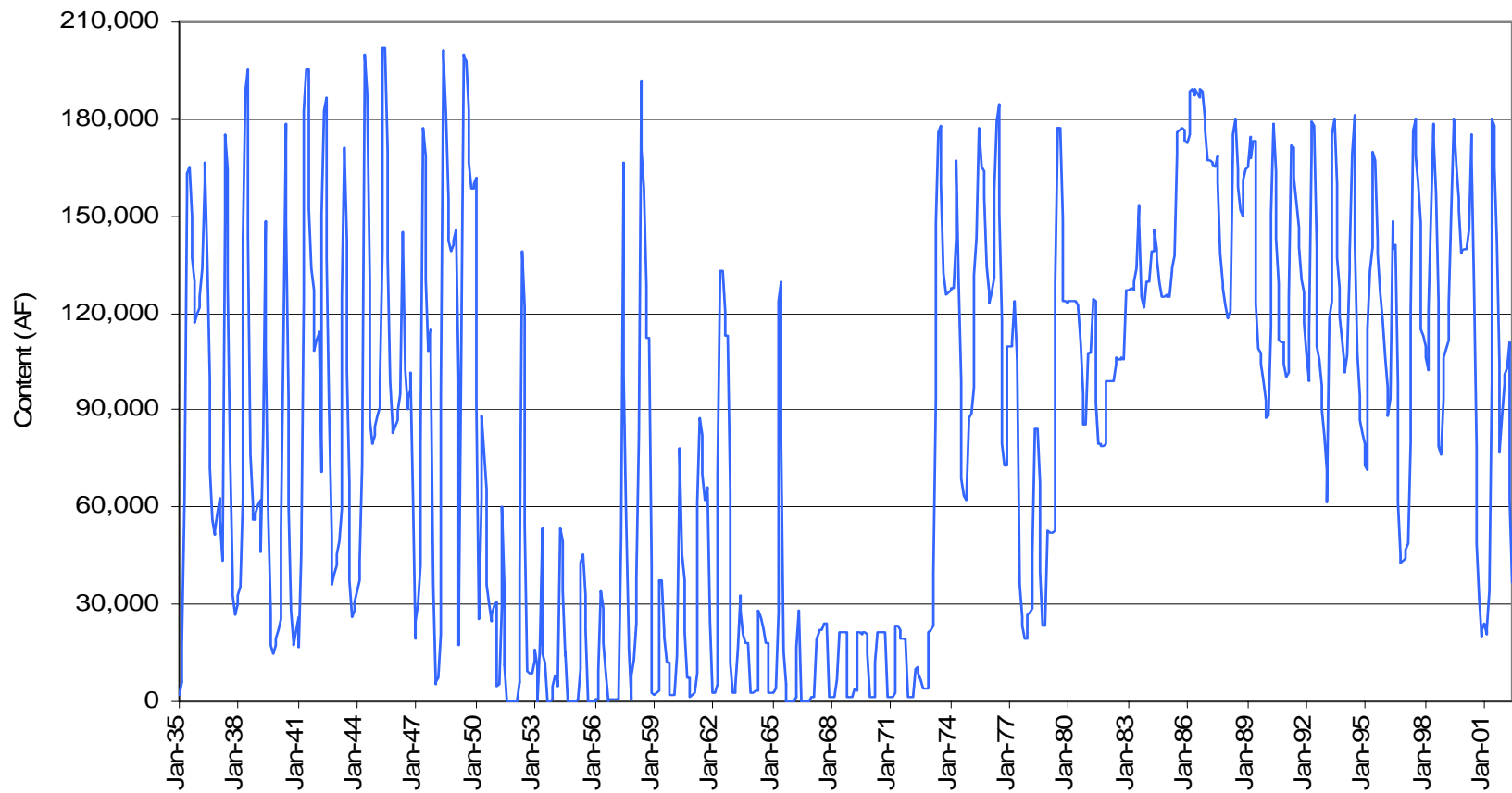
New Mexico's Compact Compliance



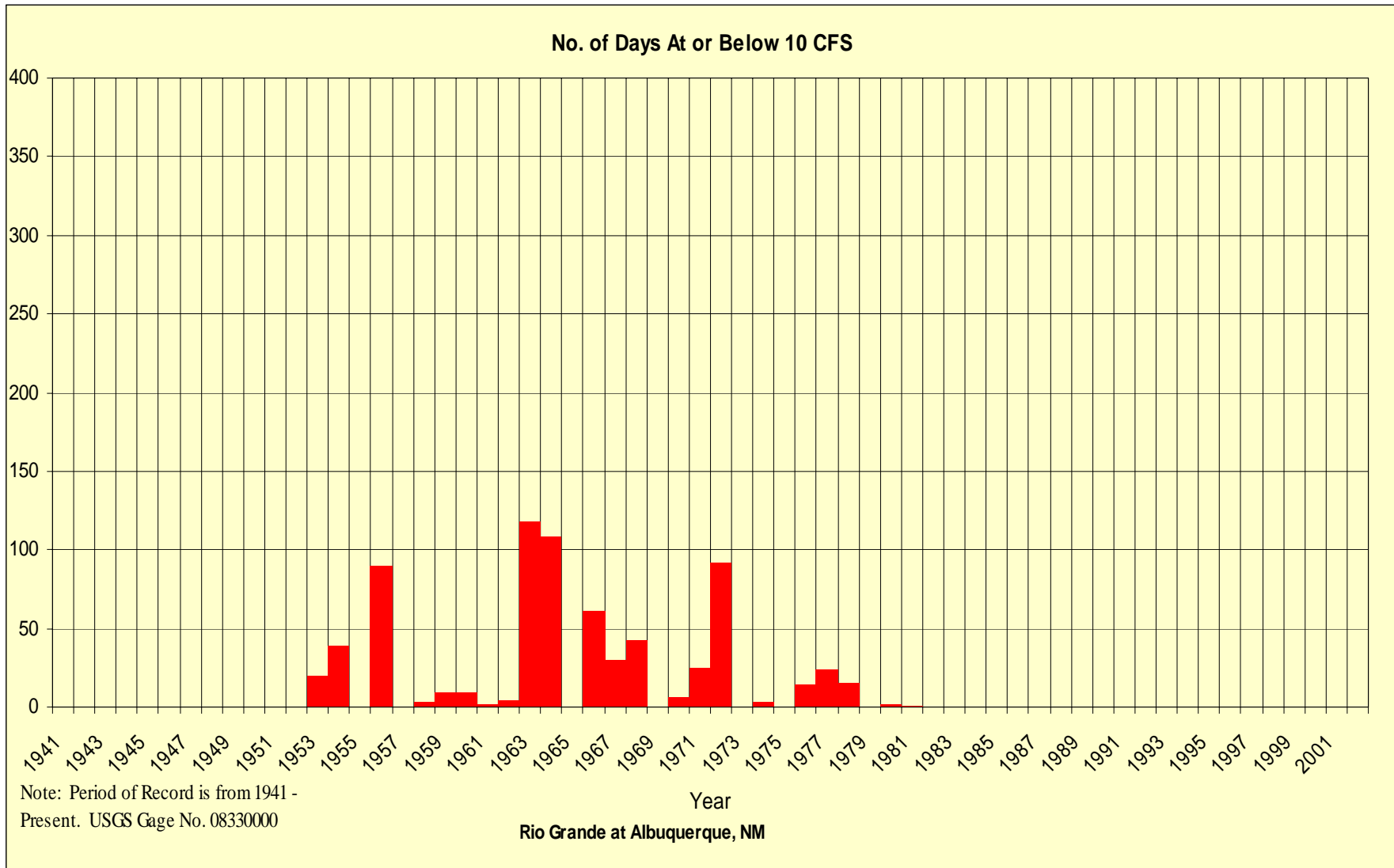
Variable and Limited Surface Water Supply



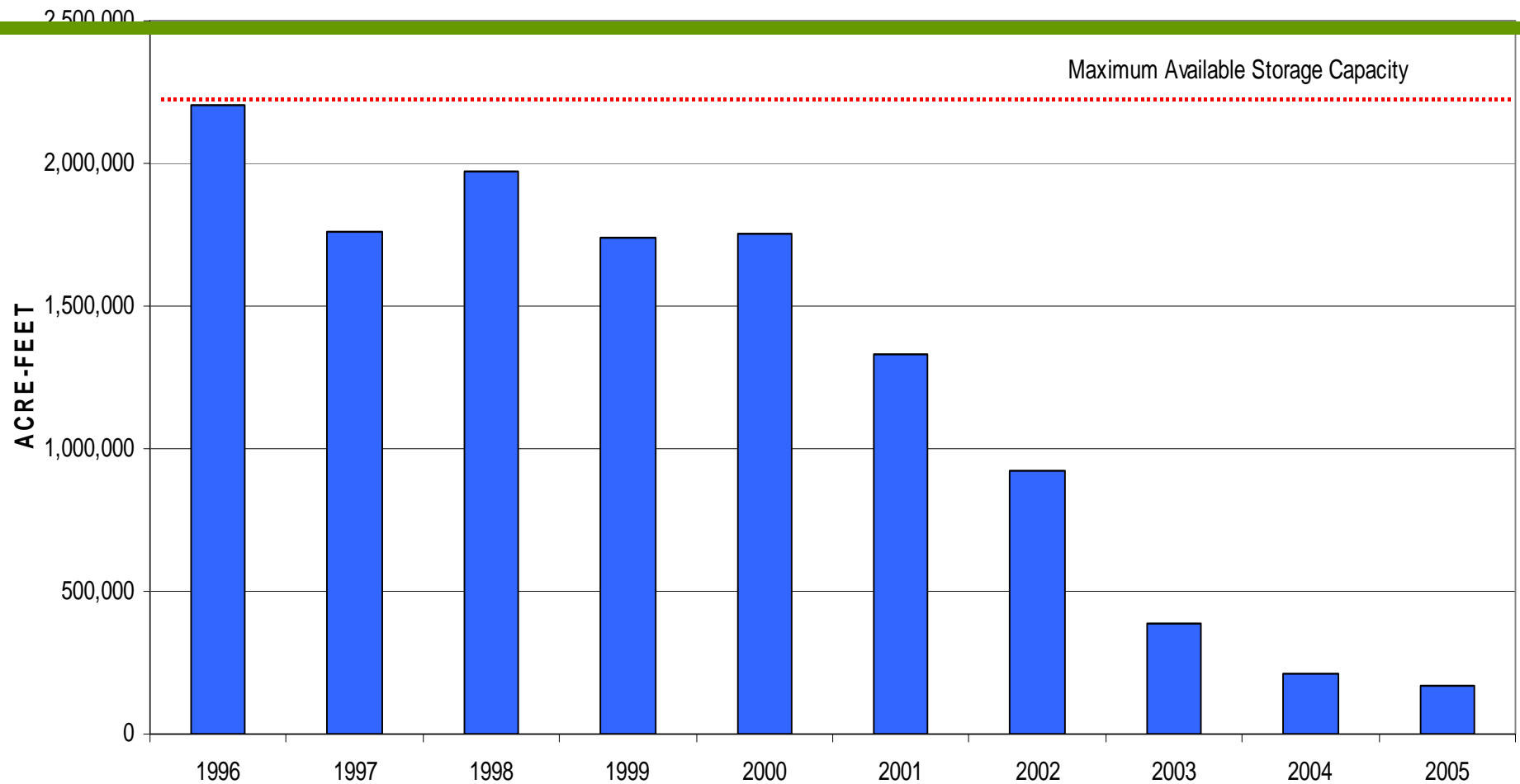
El Vado Reservoir - Historical End of Month Storage Levels



Hydrologic Reality at Albuquerque



RIO GRANDE PROJECT STORAGE



Note: Storage values as of Jan 1 each year. Elephant Butte and Caballo Reservoirs included in analysis. Value for Jan 1, 2005 is estimated

Some NMISC Rio Grande Basin Bureau Work

- **Efforts to Balance/Increase Supply**
 - River Maintenance with Reclamation
 - Elephant Butte Pilot Channel
 - Daily River Management
 - Compact Oversight
 - Hydrologic Investigations and Research
 - **Addressing Federal Natural Resource Issues**
 - NEPA
 - ESA Collaborative Program
 - Litigation
 - **Addressing the Texas Litigation Threat**
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