

Where Does All the Water Go in New Mexico?

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Jeff Wechsler concentrates his practice in the areas of water law, environmental law, and public utilities. In the area of water law, Jeff has litigated cases involving surface and groundwater throughout the West. Jeff has continuously represented states before the United States Supreme Court in interstate water litigation since 2002. He is currently counsel for the State of Montana in Montana v. Wyoming, No. 137 Original, and for the State of New Mexico in Texas v. New Mexico, No. 141 Original. He also successfully represented the State of Kansas in Kansas v. Colorado, No. 105 Original, and Kansas v. Nebraska, No. 126 Original.

In the area of environmental law, Jeff works in the areas of water quality, air quality, hazardous waste, NEPA and the Endangered Species Act. Representative environmental clients include many of the leading energy companies operating in New Mexico, water and electric utilities, national laboratories, and municipalities.

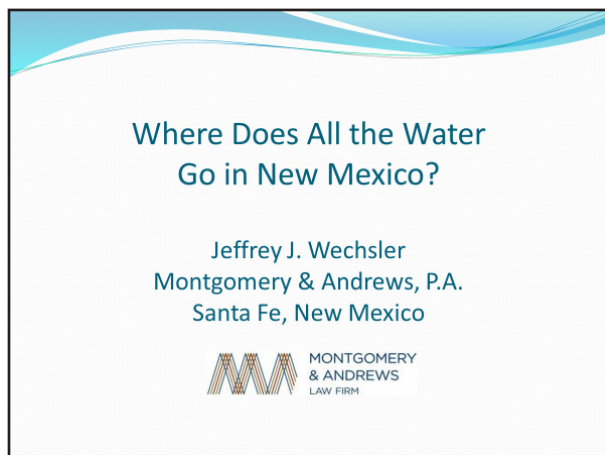


Figure 1. Introduction.



Figure 2. Where does the water go?

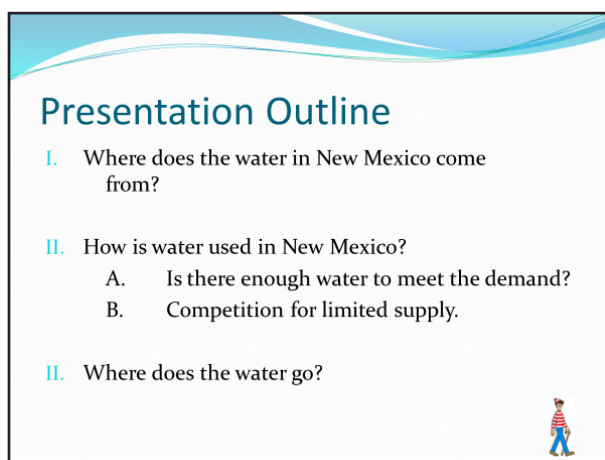


Figure 3. Presentation outline.



Figure 4. Where does the water in New Mexico come from?

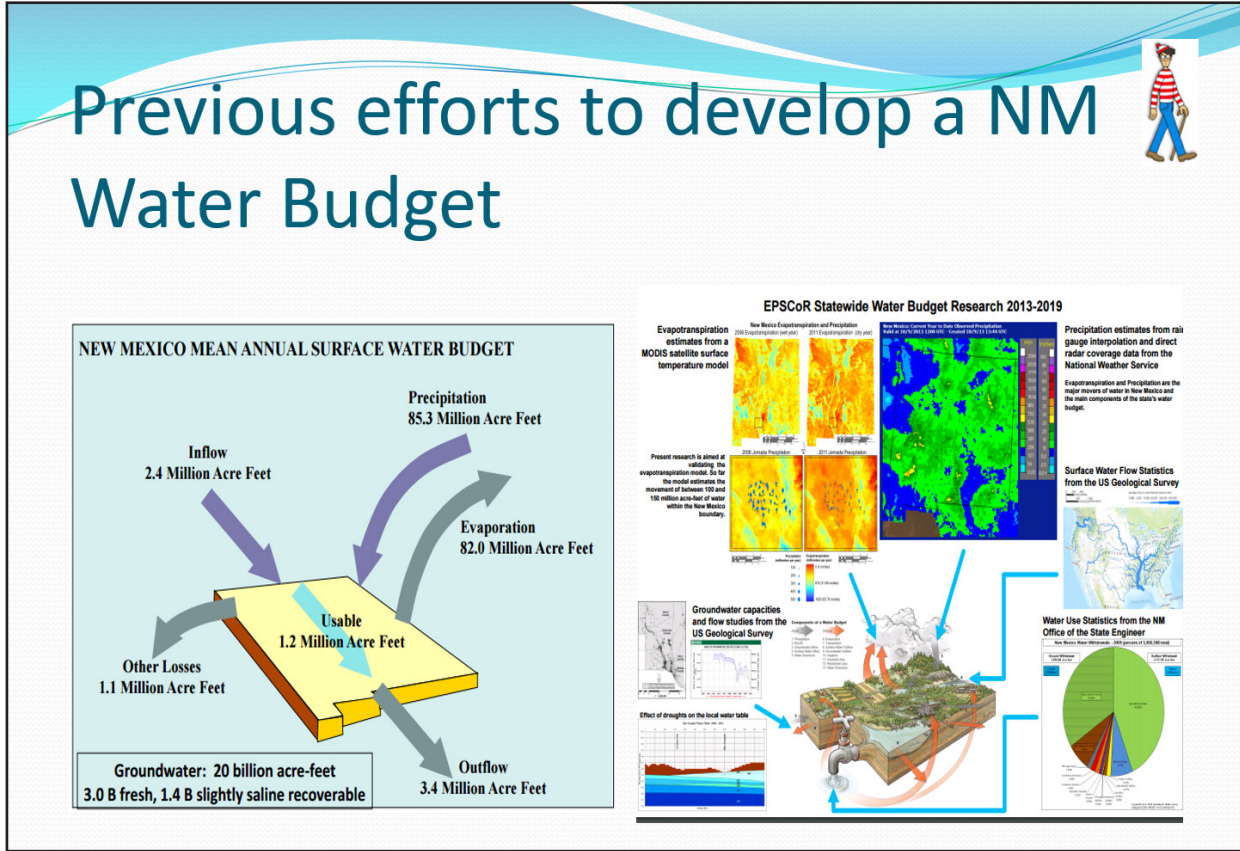


Figure 5. Previous efforts to develop a NM water budget.

Precipitation

NEW MEXICO STATEWIDE	Network	Elevation (ft)	Current (in)	Average (in)	% Average	Last Year (in)	Last Year % Avg	Current (in)	Average (in)	% Average	Last Year (in)	Last Year % Avg
Bateman	SNOTEL	9300	2	1.9	105%	0.9	47%	27.2	24.6	111%	25.1	102%
Chamita	SNOTEL	8400	1.1	2	55%	1.8	90%	19	24.1	79%	26	108%
Elk Cabin	SNOTEL	8210	1	2.2	45%	0.8	36%	23.5	26.6	88%	27.1	102%
Frisco Divide	SNOTEL	8000	3	2.1	143%	3.4	162%	14.6	21.3	69%	20.2	95%
Gallegos Peak	SNOTEL	9800	1.3	2	65%	0.3	15%	27	27.9	97%	26.3	94%
Hopewell	SNOTEL	10000	1.3	1.7	76%	0.3	18%	26.5	31.1	85%	25	80%
Lookout Mountain	SNOTEL	8500	2.6	2.2	118%	1.3	59%	19.5	20.2	97%	20.2	100%
Mcknight Cabin	SNOTEL	9240	5.1	3.1	165%	2.4	77%	29.7	28	106%	21.3	76%
Navajo Whiskey Ck	SNOTEL	9050	1.9			1.1		22			26	
North Costilla	SNOTEL	10600	0.7	2.1	33%	0	0%	23.4	28	84%	23.9	85%
Palo	SNOTEL	9350	1.3			0.6		20			22.8	
Quemazon	SNOTEL	9500	1.2	2.6	46%	0.2	8%	22.6	28.4	80%	30.3	107%
Red River Pass #2	SNOTEL	9850	1.2	1.5	80%	0.1	7%	17	21.4	79%	20.5	96%
Rice Park	SNOTEL	8460	1.5	1.6	94%	1.3	81%	17.1	22.2	77%	22	99%
Rio Santa Barbara	SNOTEL	10664	1.4			0		31.9			22.4	
San Antonio Sink	SNOTEL	9100	0.9			1.1		21.4			21.8	
Santa Fe	SNOTEL	11445	1.3	2.4	54%	0.8	33%	32.2	36.7	88%	34.1	93%
Senorita Divide #2	SNOTEL	8600	1.5	2	75%	0.7	35%	23.6	27.6	86%	27.6	100%
Shuree	SNOTEL	10100	1.5			0.5		22.1			27.4	
Sierra Blanca	SNOTEL	10280	3.6	4	90%	1.5	38%	42.6	40.2	106%	32.9	82%
Signal Peak	SNOTEL	8360	4.6	2.8	164%	3.8	136%	28.6	29.3	98%	21.8	74%
Silver Creek Divide	SNOTEL	9000	6.9	3.1	223%	3.9	126%	33.8	35	97%	30	86%
Taos Powderhorn	SNOTEL	11057	2.4			2.7		39.1			44	
Tolby	SNOTEL	10180	1.9	1.9	100%	0.4	21%	26.8	26.8	100%	31.6	118%
Tres Ritos	SNOTEL	8600	1.6			0.1		23.7			27.7	
Vacas Locas	SNOTEL	9306	1.5	2.2	68%	0.3	14%	26.5	28.1	94%	26.2	93%
Wesner Springs	SNOTEL	11120	2.6	2.8	93%	0.3	11%	37.9	40	95%	36.4	91%
Basin Index					99%		53%			91%		93%
# of sites					20		20			20		20

Figure 6. Precipitation.

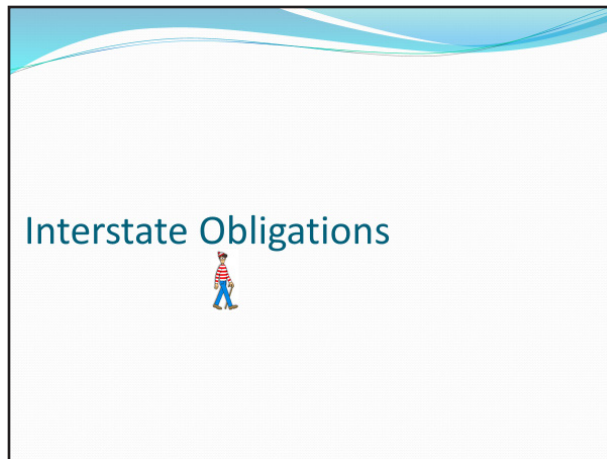


Figure 7. Interstate obligations.

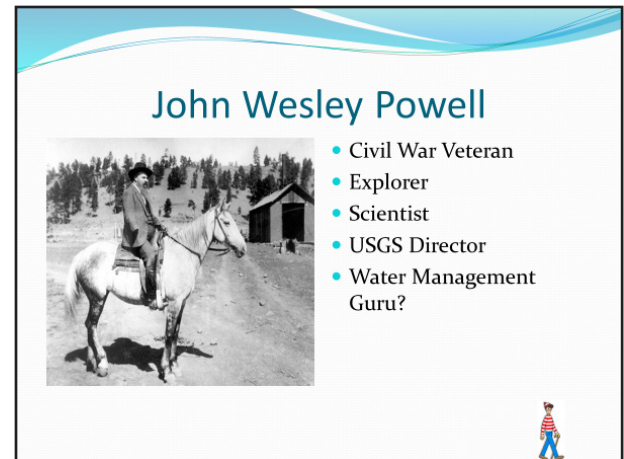


Figure 8. John Wesley Powell.

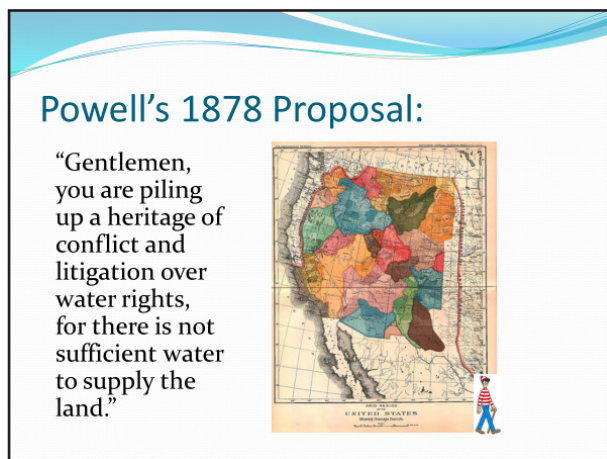


Figure 9. Powell's 1878 proposal.

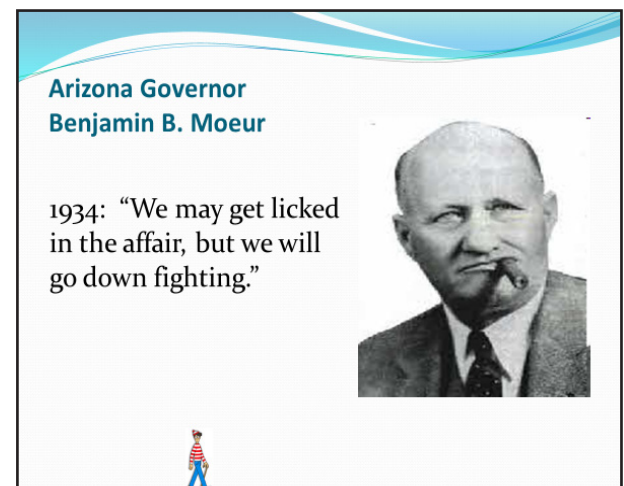


Figure 10. Governor Benjamin Moeur of Arizona took umbrage at the fact that the federal government was building another dam on the Colorado River without the permission of the State of Arizona. Arizona had previously sued the U.S. government and the other Colorado Basin States, without success, to prevent the construction of Hoover Dam and to have the Colorado River Compact declared unconstitutional. *Arizona v. California*, 283 U.S. 423 (1931). Governor Moeur was determined that this time would be different.

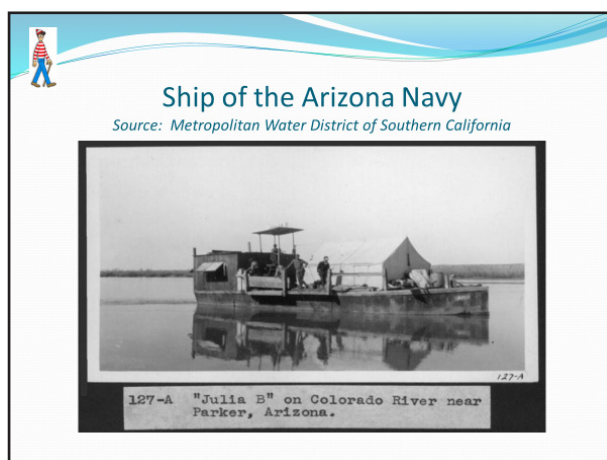



Figure 11. Governor Moeur called out the Arizona National Guard, which commandeered two ferry boats named the "Julia B" and the "Nellie T." These boats became known as the "Arizona Navy."

Equitable Apportionment by Compact:
Art. I, § 10, cl. 3

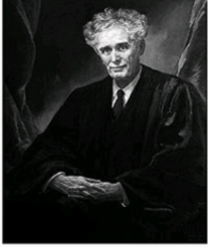


“No State shall, without the Consent of Congress, . . . enter into Agreement or Compact with another State.”


Figure 12. Equitable apportionment by compact.

***Hinderlider v. La Plata River & Cherry Creek Co.*, 304 U.S. 92, 106 (1938)**

“Whether the apportionment of the water of an interstate stream be made by compact between the upper and lower States with the consent of Congress or by a decree of this Court, the apportionment is binding upon the citizens of each State and all water claimants, even where the State had granted the water rights before it entered into the compact.”



(Emphasis added)(Brandeis, J.)


Figure 13. *Hinderlider v. La Plata River & Cherry Creek Ditch Co.*

New Mexico Water Compacts

- Canadian River Compact
- Colorado River Compact
- Upper Colorado River Compact
- La Plata River Compact
- Costilla Creek Compact
- Pecos River Compact
- Animas-La Plata Project Compact



Figure 14. New Mexico water compacts.

Gila River Project

- Arizona Water Settlements Act (2004)
- New Mexico's share of Central Arizona Project water
- Funding from the federal government to develop the New Mexico unit
- Conservation Projects





Figure 15. Gila River Project.

Relevant Supreme Court cases impacting New Mexico's share of interstate waters

- *Arizona v. California*, 373 U.S. 546 (1963) (Colorado River)
- *Colorado v. New Mexico*, 467 U.S. 310 (1984) (Vermejo River)
- *Hinderlider v. La Plata River & Cherry Creek Ditch Co.*, 304 U.S. 92 (1938) (La Plata River)
- *Oklahoma v. New Mexico*, 501 U.S. 221 (1991) (Canadian River)
- *Texas v. New Mexico*, 485 U.S. 388 (1988) (Pecos River)
- *Texas v. New Mexico*, No. 141 Original (Pending) (Rio Grande)





Figure 16. Relevant Supreme Court cases impacting New Mexico's share of interstate waters.

Private Enforcement of Water Rights Across State Lines

- *Bean v. Morris*, 221 U.S. 485 (1911)
- *Conant v. Deep Creek & Curlew*, 66 P. 188 (Utah 1901)
- *Albion –Idaho Land Co. v. Naf Irrigation Co.*, 97 F.2d 439 (10th. Cir. 1938)




Figure 17. Private enforcement of water rights across state lines.

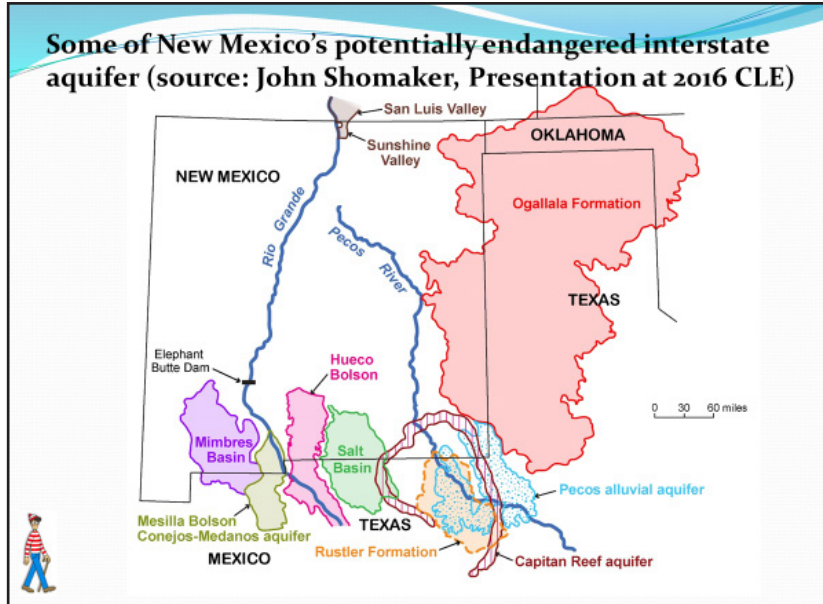



Figure 18. New Mexico's potentially endangered interstate aquifer.



Protection of Interstate Aquifers

- Does the doctrine of equitable apportionment apply?
- Can private groundwater rights be protected across state lines?
- How should the State Engineer address pumping in other States?

No. 143, Original

In the Supreme Court of the United States

STATE OF MISSISSIPPI,
Plaintiff,

v.

STATE OF TENNESSEE; CITY OF MEMPHIS, TENNESSEE;
AND MEMPHIS LIGHT, GAS & WATER DIVISION,
Defendants.


ON BILL OF COMPLAINT

MEMORANDUM OF DECISION ON TENNESSEE'S MOTION TO DISMISS,
MEMPHIS AND MEMPHIS LIGHT, GAS & WATER DIVISION'S MOTION TO
DISMISS, AND MISSISSIPPI'S MOTION TO EXCLUDE

Figure 19. Protection of interstate aquifers.

Figure 20. How is water used in New Mexico?

How is water used in New Mexico?



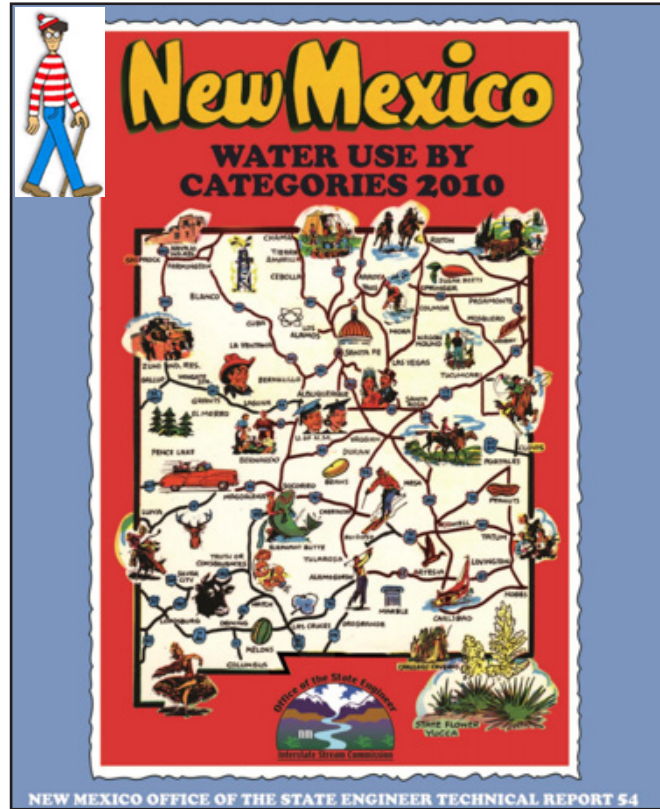


Figure 21. New Mexico water use by categories 2010.

Table ES.1. Summary of withdrawals in acre-feet and as a percentage of the basin totals for New Mexico's six river basins.

River Basin	Withdrawals Surface Water (WSW)		Withdrawals Groundwater (WGW)		Total Withdrawals (TW)	
	acre-feet	% of basin total	acre-feet	% of basin total	acre-feet	% of state total
Arkansas-White-Red	163,347	66	83,349	34	246,696	6
Lower Colorado	58,861	45	73,313	55	132,174	3
Pecos	242,338	36	433,988	64	676,325	18
Rio Grande	1,163,929	66	609,592	34	1,773,521	46
Texas Gulf	237	0	569,830	100	570,068	15
Upper Colorado	413,131	99	4,029	1	417,160	11
State Totals	2,041,844		1,774,101		3,815,945	100.0

Figure 22. Summary of 2010 withdrawals in acre-feet and as a percentage of the basin totals for New Mexico's six river basins.

Table 3.2. Irrigated acreage in New Mexico, 1980-2010, and percent change in irrigated acreage.

Year	Acres	Percent Change from Previous Inventory
1980	1,087,120	
1985	941,245	-13.42
1990	984,285	4.57
1995	963,050	-2.16
1999	998,793	3.71
2005	875,415	-12.35
2010	872,664	-0.31



Figure 23. Irrigated acreage in New Mexico, 1980-2010, and percent change in irrigated acreage.

Table 3. Water use by category expressed as a percent of state totals in New Mexico, 2010. Surface water and groundwater component of each category is identified.

Category	% TW	% WSW	% GWG
Public Water Supply	8.32	25.55	74.45
Domestic (self-supplied)	0.76	0.00	100.00
Irrigated Agriculture	78.62	54.46	45.54
Livestock (self-supplied)	1.05	8.54	91.46
Commercial (self-supplied)	1.43	3.54	96.46
Industrial (self-supplied)	0.33	7.44	92.56
Mining (self-supplied)	1.09	26.10	73.90
Power (self-supplied)	1.53	81.32	18.68
Reservoir Evaporation	6.87	100.00	0.00
State Totals	100.00		



Figure 24. Water use by category expressed as a percent of state totals in New Mexico, 2010. Surface water and groundwater component of each category is identified.

Table 4. Percent of withdrawals measured in each water use category in New Mexico, 2010.

Category	MSW	MGW	MTW
Public Water Supply	93	83	85
Domestic (self-supplied)	0	0	0
Irrigated Agriculture	61	30	47
Livestock (self-supplied)	0	19	18
Commercial (self-supplied)	86	93	93
Industrial (self-supplied)	100	100	100
Mining (self-supplied)	97	97	97
Power (self-supplied)	100	100	100
Reservoir Evaporation	96	0	96




Figure 25. Percent of withdrawals measured in each water use category in New Mexico, 2010.

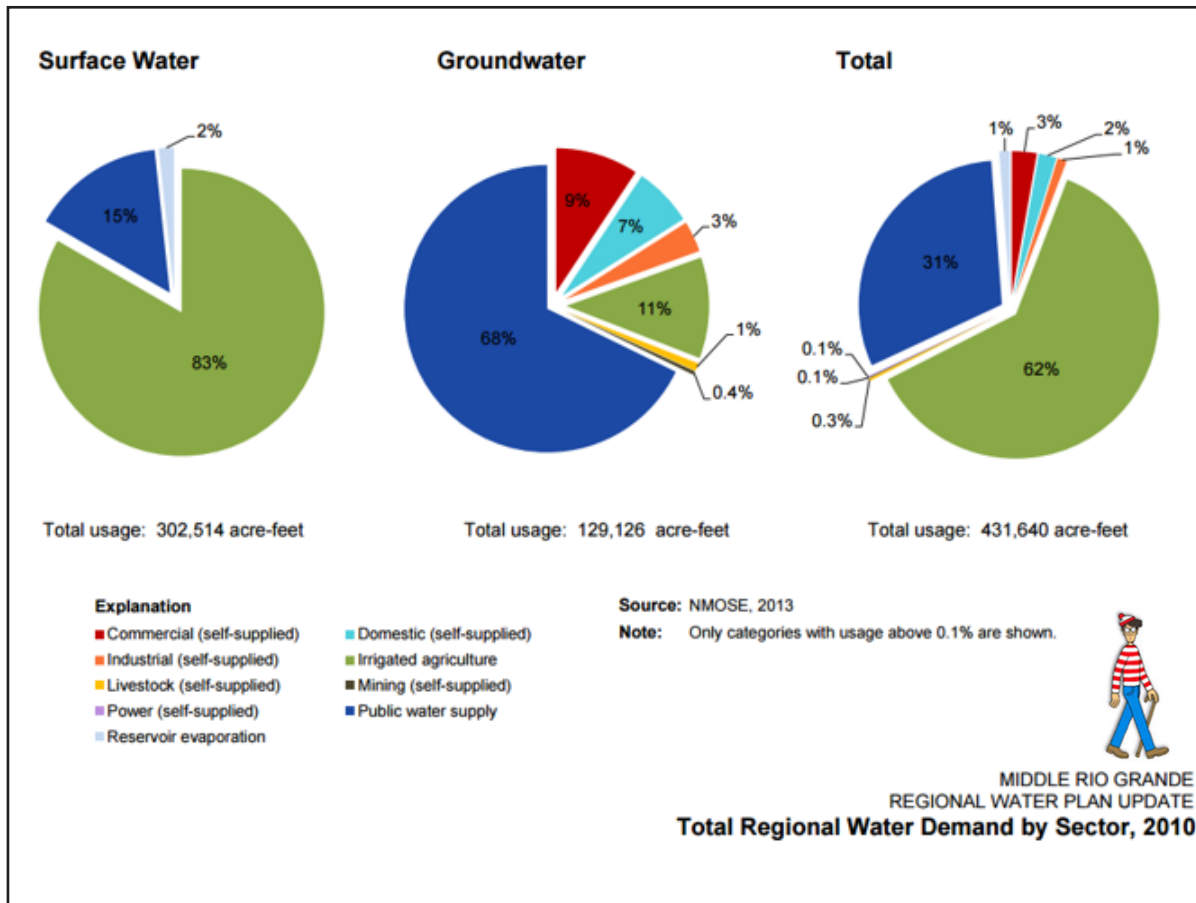


Figure 26. Total regional water demand by sector.

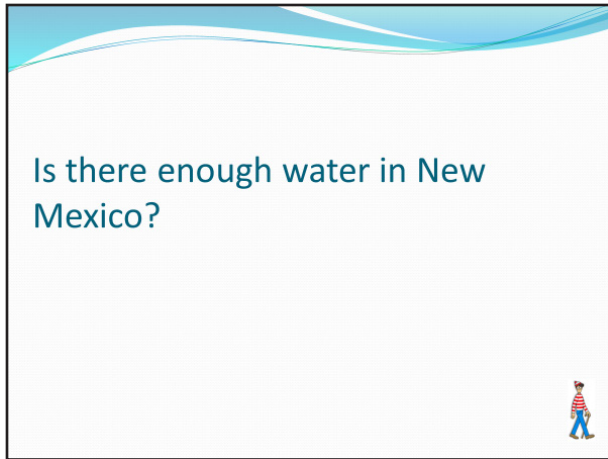


Figure 27. Is there enough water in New Mexico?

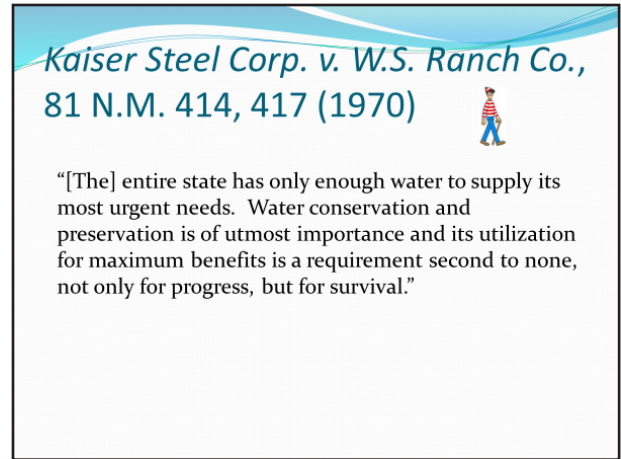


Figure 28. Kaiser Steel Corp. v. W.S. Ranch Co.

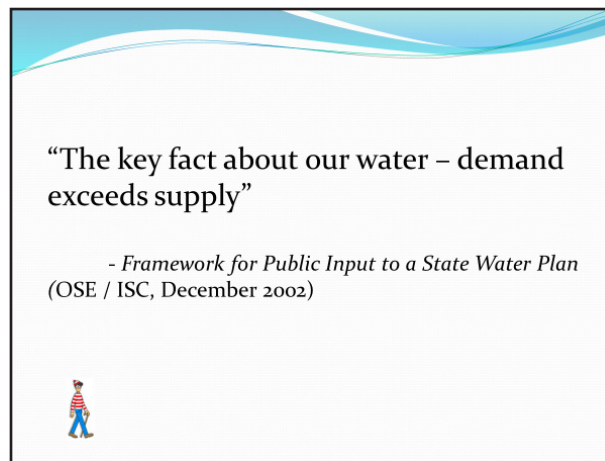


Figure 29. “The key fact about our water - demand exceeds supply.”

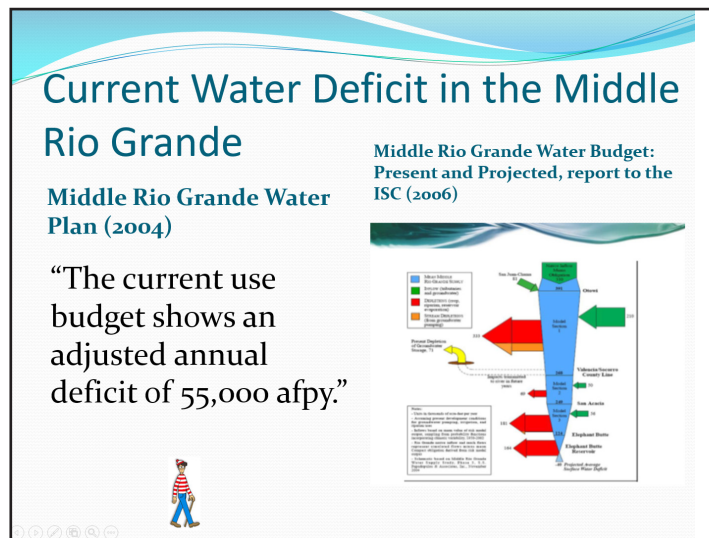


Figure 30. Current water deficit in the Middle Rio Grande. Middle Rio Grande Water Budget: Present and Projected, report to the ISC (2006).

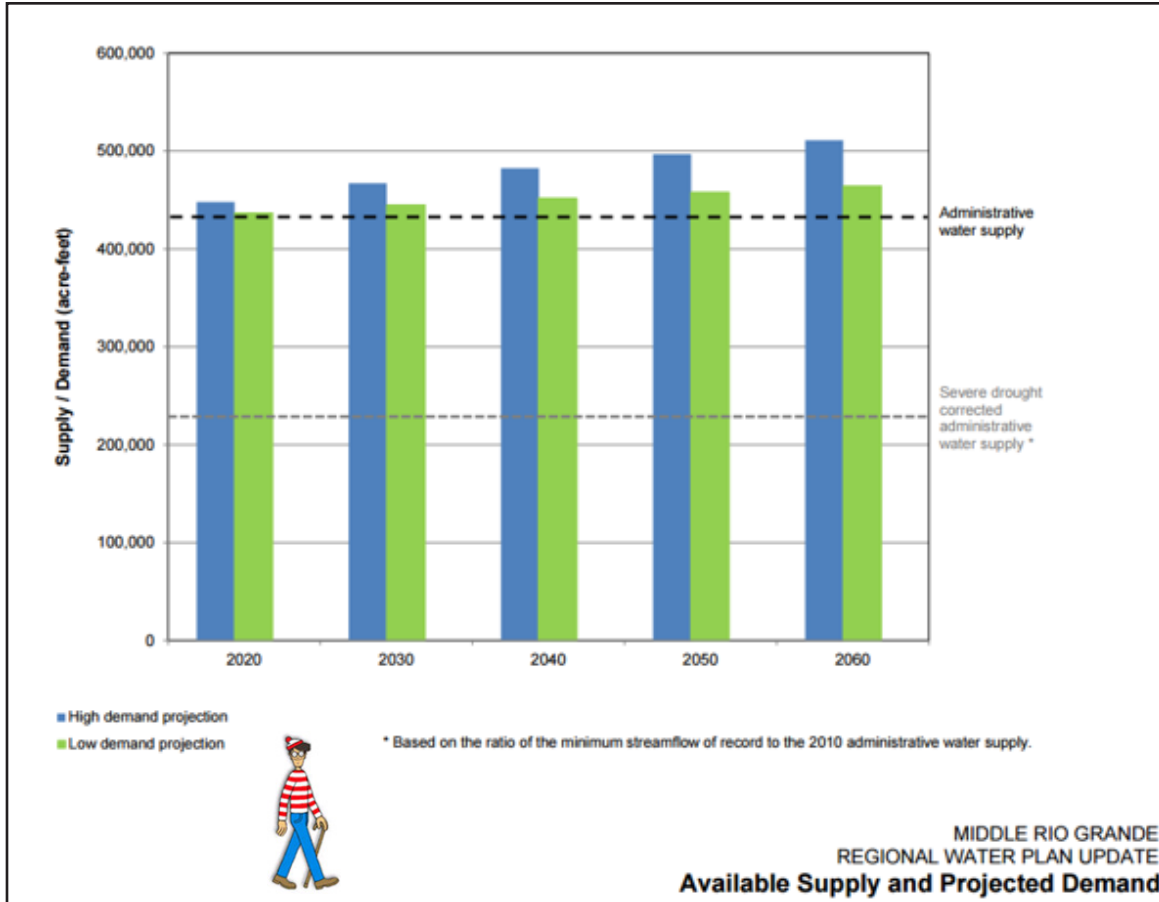




Figure 31. Available supply and projected demand.




David Anderson Memo

“Based upon the 1919 Rio Grande Drainage Report, there were approximately 102,500 acre-feet of pre-1907 consumptive-use surface water rights at that time. WRD District 1 estimates that approximately 21,000 acre feet have been transferred to ground water. Current permits require approximately another 38,000 acre feet to be transferred. Theoretically, that leaves approximately 43,500 acre-feet available for transfer.”



STATE OF NEW MEXICO
OFFICE OF THE STATE ENGINEER
ALBUQUERQUE



MEMORANDUM

DATE: June 26, 2007
 TO: Uday Joshi, Special Assistant Attorney General
 FROM: David B. Anderson, Water Resource Specialist Senior
 FILE: Application RG-4462-S-14 through RG-4462-S-82 New Mexico Utilities, Inc.
 SUBJECT: NMUI's Plan for Offsetting Depletions Caused by Pumping from Wells

NMUI's Water-Acquisition Supply Strategy
 The first element of NMUI's strategy is the transfer of pre-1907 surface water rights. Based upon the 1919 Rio Grande Drainage Report, there were approximately 102,500 acre-feet of pre-1907 consumptive-use surface water rights at that time. WRD District 1 estimates that approximately 21,000 acre-feet have been transferred to ground water. Current permits require approximately another 38,000 acre-feet to be transferred. Theoretically, that leaves approximately 43,500 acre-feet available for transfer (however, since the 38,000 acre-feet are not willing to sell, financial ability of the buyers, validity and existence of the rights (the WRD believes that at least 4,200 acre-feet are invalid), conservation, public welfare, etc. Current consumptive-use water rights total 1,261,62 acre-feet.

Figure 32. David Anderson Memo.

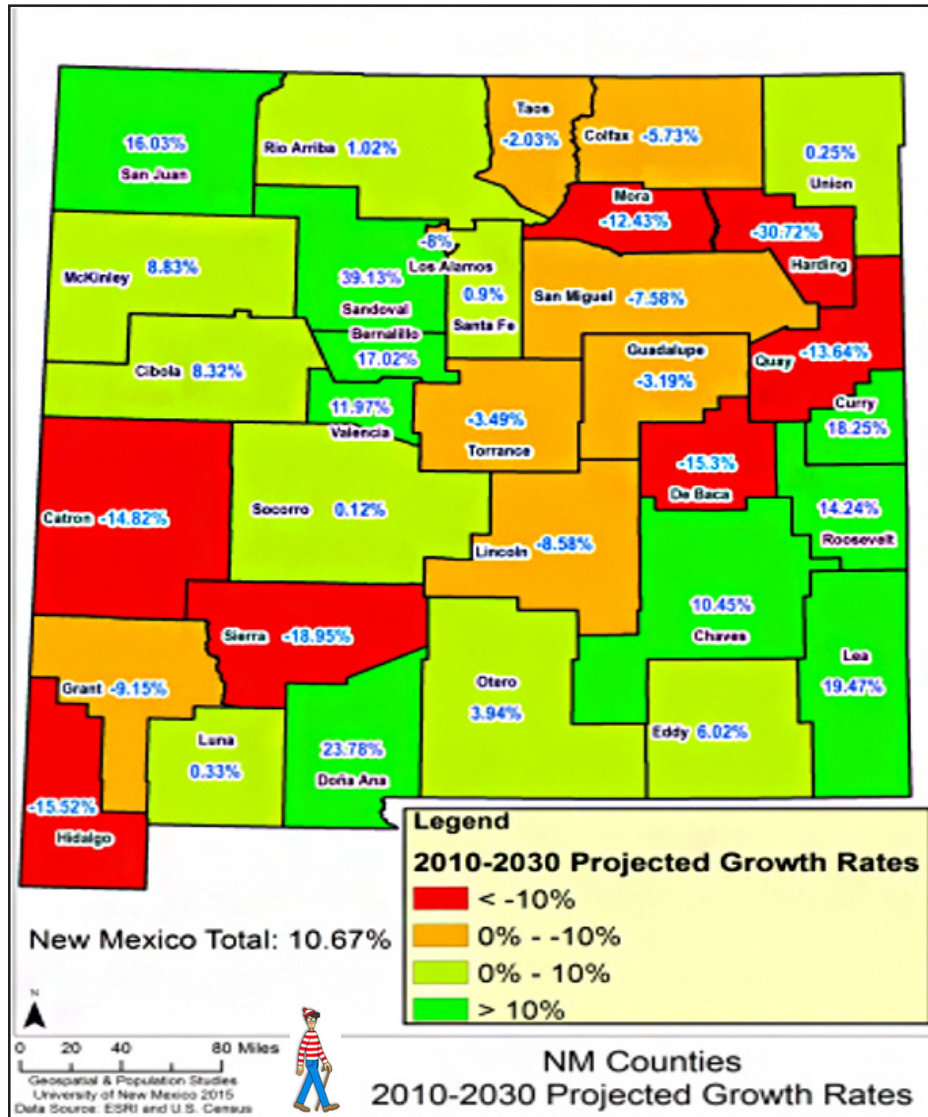


Figure 33. Population Projections (source: BBER at UNM).



Figure 34. Competition for limited supply.



Figure 35. Water for endangered species.

Settlements Approved by Congress for New Mexico Tribes

- Jicarilla Apache, Public Law 102-441, 106 Stat. 237, as amended, Public Law 104-261, 110 Stat. 3176 (1996), Public Law 105-256, Section 10, 112 Stat. 1896 (1998)
- Zuni Indian Tribe Water Rights Settlement Act of 2003, Public Law 108-34, 117 Stat. 782
- Navajo-Gallup Water Supply Project and Navajo Nation Water Rights, Public Law 111-11, 120 Stat. 1991, 1379
- Taos Pueblo Indian Water Rights Settlement Act, Public Law, 111-291, Title V, 124 Stat. 3064, 3122 (2010)
- Aamodt Litigation Settlement Act, Public 111-291, Title VI, 124 Stat. 3064, 3134 (2010)



Figure 36. Settlements approved by Congress for New Mexico tribes.

Rio San Jose Adjudication

State of New Mexico, ex rel. State Engineer v. Kerr-McGee Corporation

- Claims of the Pueblos of Acoma and Laguna for the waters of the Rio San Jose
- Pueblo water claims quantified by an aboriginal rights standard, as opposed to the *Winters* doctrine (PIA). *State ex rel. Martinez v. Kerr-McGee Corp.*, 120 N.M. 118 (Ct. App. 1995)
- 44 experts to address wide-ranging issues including irrigation practices, hydrographic surveys, reservoir storage, hydrology, irrigation water requirements, water use, history, anthropology, and Spanish and Mexican law prior to statehood
- Pueblos claim that dam at Bluewater Lake and groundwater pumping during the uranium boom, led to diminished flows in the Rio San Jose.
- Decision has implications for all groundwater rights in the basin.




Figure 37. Rio San Jose adjudication.

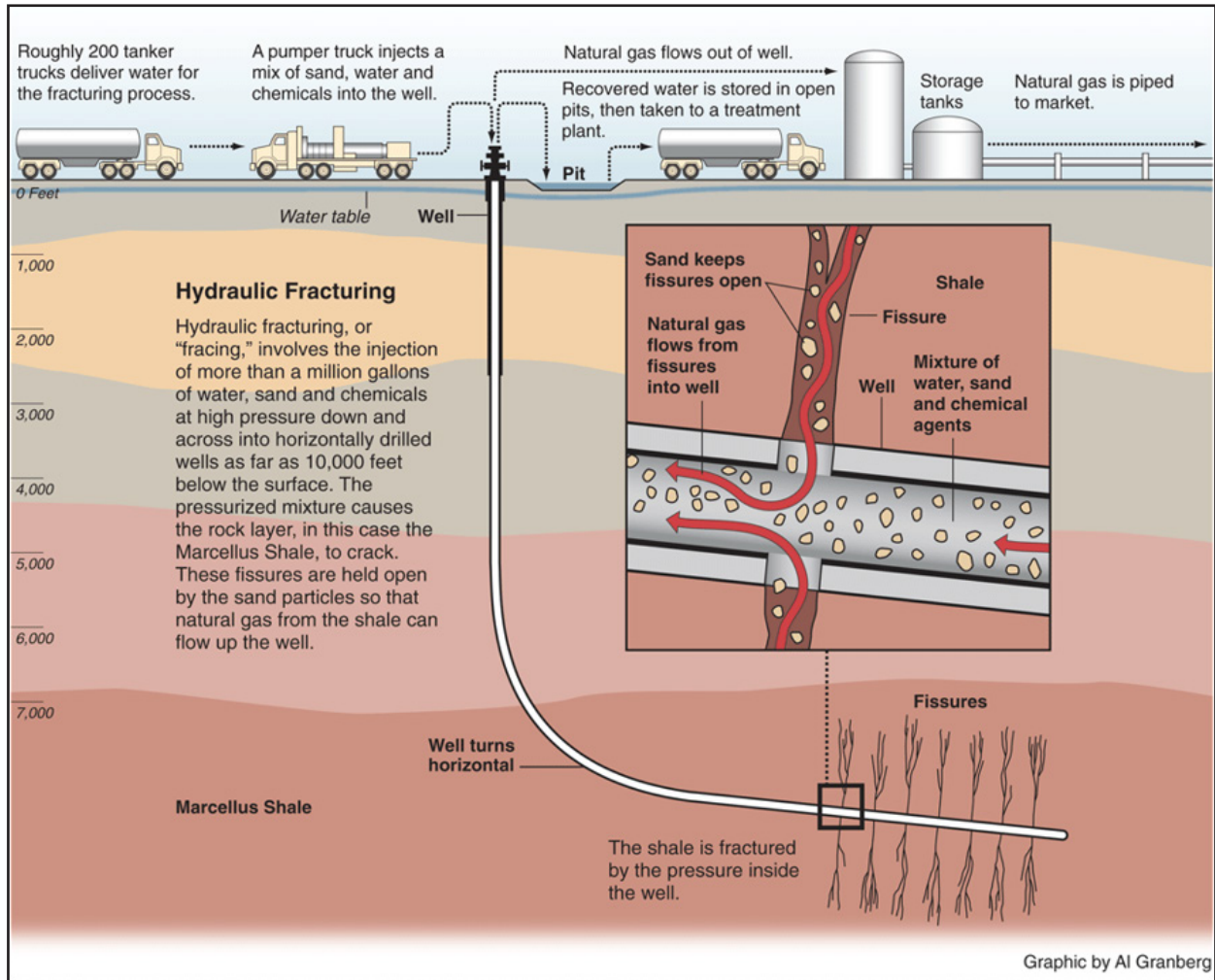


Figure 38. Hydraulic Fracturing.

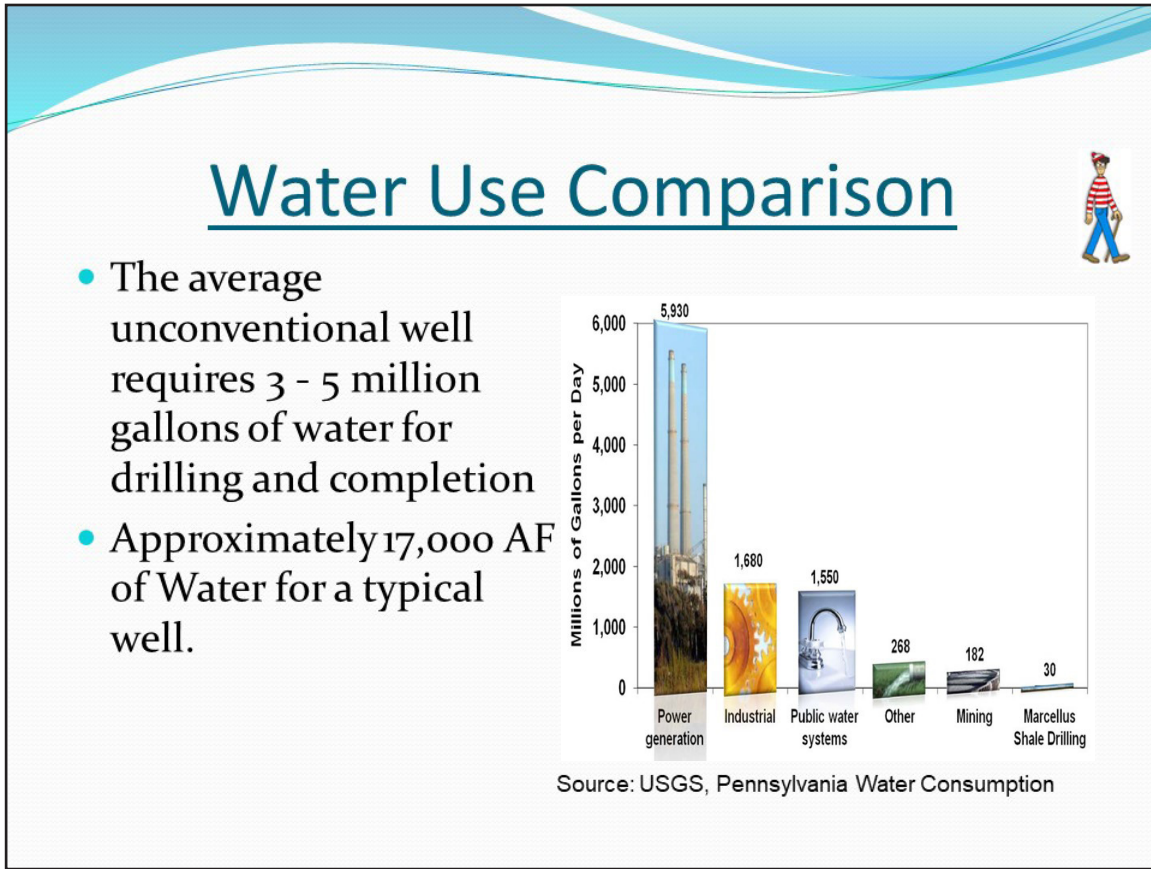



Figure 39. Water use comparison.

Questions Related to Hydraulic Fracturing

- How might large volume water withdrawals from ground and surface water impact water resources?
- What are the possible impacts of hydraulic fracturing fluids on drinking water resources?
- What are the possible impacts of the injection and fracturing process on water resources?
- What are the possible impacts of inadequate treatment of hydraulic fracturing wastewater?

Figure 40. Questions related to hydraulic fracturing.




72-1-9

A. . . . The state further recognizes the state engineer's administrative policy of not allowing municipalities, member-owned community water systems, counties and state universities to acquire and hold unused water rights in an amount greater than their reasonable needs within forty years.

B. Municipalities, counties, school districts, state universities, member-owned community water systems, special water users' associations and public utilities supplying water to municipalities or counties shall be allowed a water use planning period not to exceed forty years, and water rights for [those entities] shall be based upon a water development plan the implementation of which shall not exceed a forty-year period


Figure 41. 72-1-9.



Purpose of 72-1-9

- Balance the unique needs of municipalities to accommodate expected growth against the requirement that water rights be based on beneficial use.
- Promote water planning.

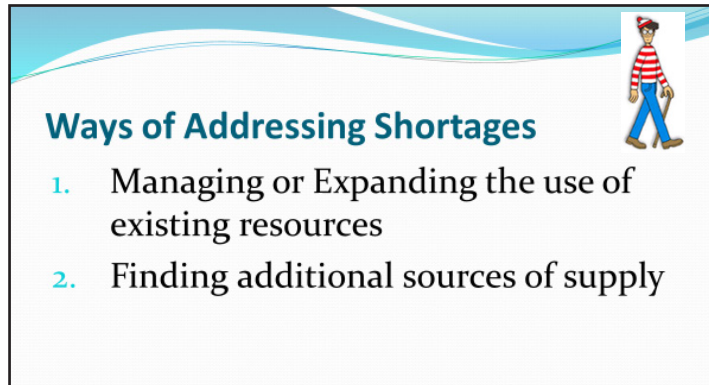
Figure 42. Purpose of 72-1-9.



Challenge

Allowing flexibility in water development and planning while avoiding hoarding or speculation.

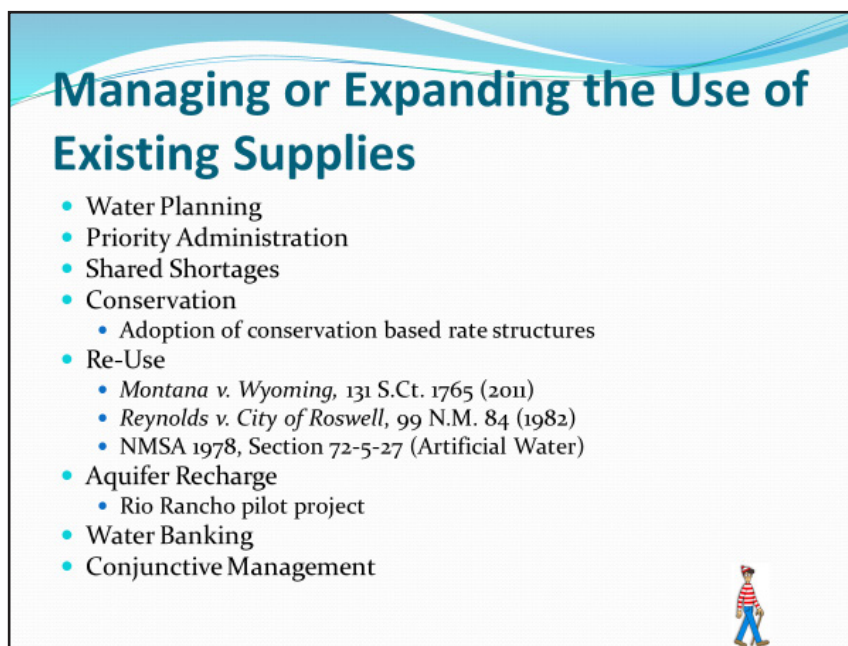
Figure 43. Challenge.



Ways of Addressing Shortages

1. Managing or Expanding the use of existing resources
2. Finding additional sources of supply

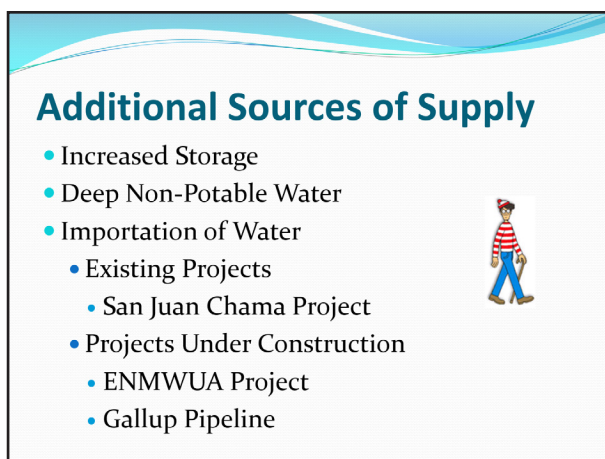
Figure 44. Ways of addressing shortages.



Managing or Expanding the Use of Existing Supplies

- Water Planning
- Priority Administration
- Shared Shortages
- Conservation
 - Adoption of conservation based rate structures
- Re-Use
 - *Montana v. Wyoming*, 131 S.Ct. 1765 (2011)
 - *Reynolds v. City of Roswell*, 99 N.M. 84 (1982)
 - NMSA 1978, Section 72-5-27 (Artificial Water)
- Aquifer Recharge
 - Rio Rancho pilot project
- Water Banking
- Conjunctive Management

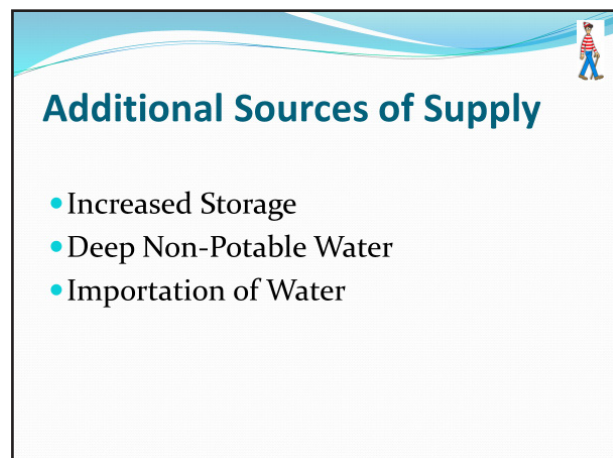
Figure 45. Managing or expanding the use of existing supplies.



Additional Sources of Supply

- Increased Storage
- Deep Non-Potable Water
- Importation of Water
 - Existing Projects
 - San Juan Chama Project
 - Projects Under Construction
 - ENMWUA Project
 - Gallup Pipeline


Figure 46. Additional sources of supply.



Additional Sources of Supply

- Increased Storage
- Deep Non-Potable Water
- Importation of Water

Figure 47. Additional sources of supply (Cont.).



New Mexico Pipeline Projects

- Distinction between Riparian and Prior Appropriation
- Long History of Projects
 - Bonito Lake Pipeline
 - San Juan Chama Project
- Projects Under Construction
 - Gallup Pipeline
 - Ute Lake Pipeline

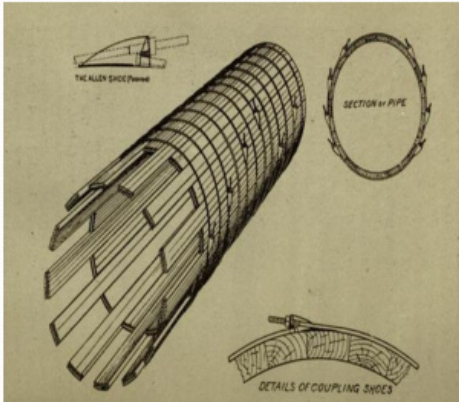


Figure 48. New Mexico pipeline projects.

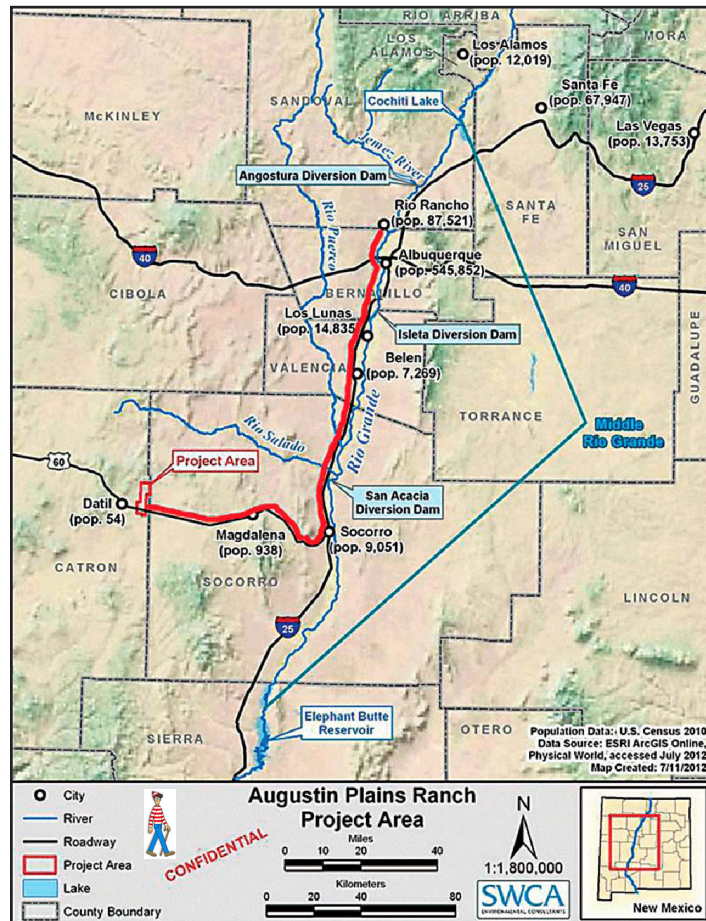


Figure 49. New Mexico pipeline projects. Augustin Plains Ranch Proposed Project.

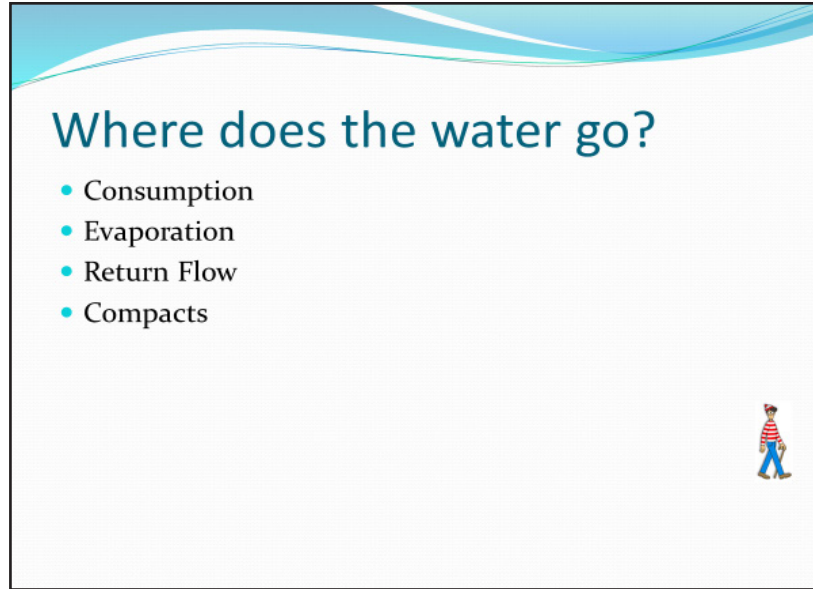


Figure 50. Where does the water go?

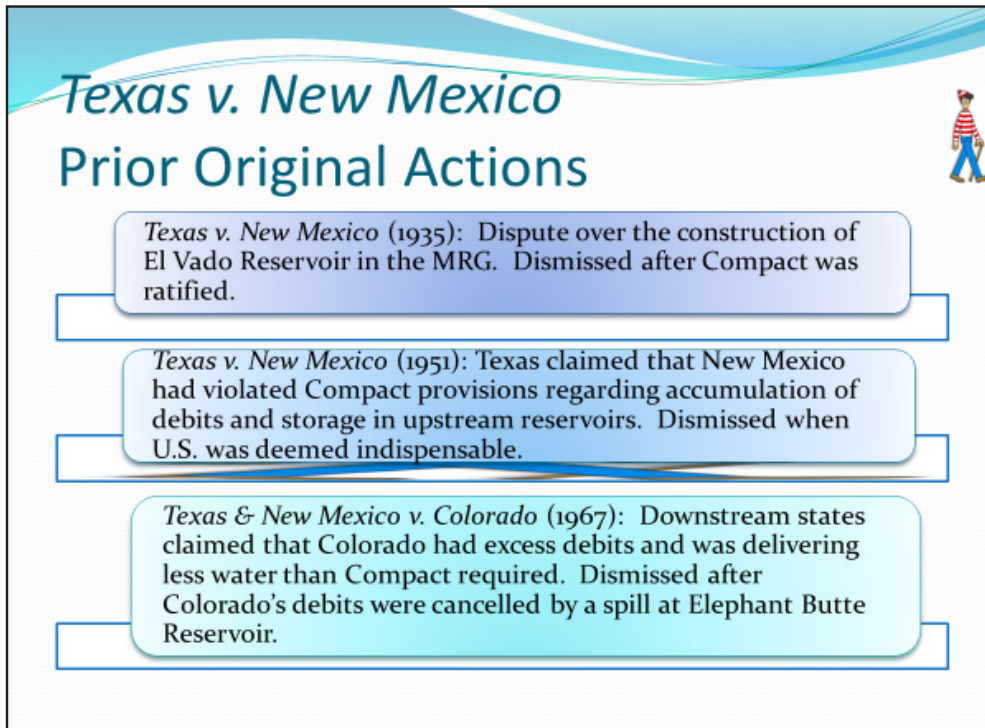


Figure 51. Texas v. New Mexico prior original actions.

Lower Rio Grande Adjudication

EBID v. Regents of New Mexico State Univ., 849 P.2d 372 (N.M. Ct. App. 1993): U.S. properly joined in adjudication under McCarran Amendment.

United States v. City of Las Cruces, 289 F.3d 1170 (10th Cir. 2002): Federal court would abstain in favor of ongoing state proceeding.

U.S. Right to Return Flows (2012): Project is entitled to return flows so long as it maintains control of surface water. Determination of when water loses its identity as surface water should initially be addressed by State Engineer.





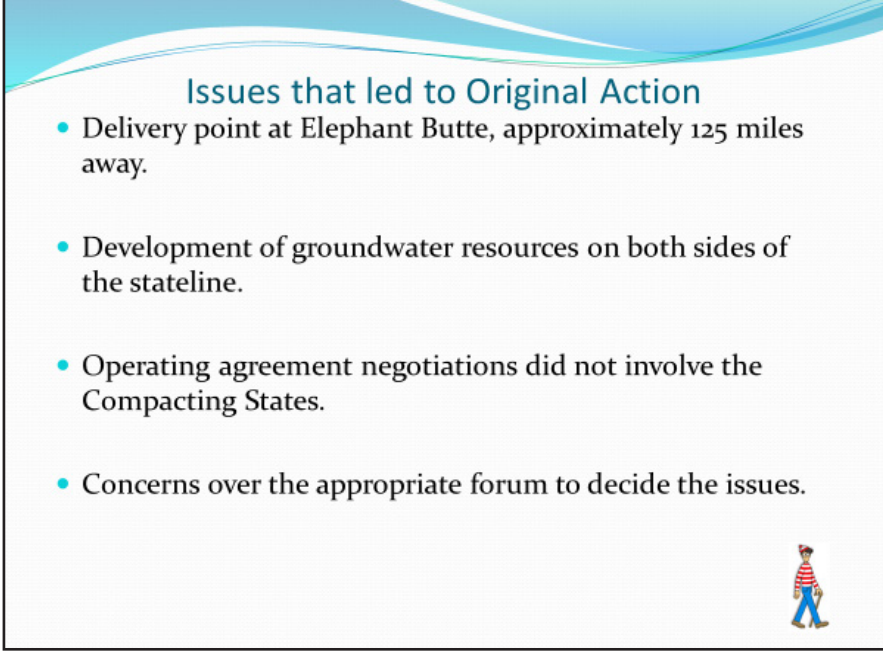
Figure 52. Lower Rio Grande Adjudication.



New Mexico v. United States, No. 11-CV-0691 (D.N.M. Aug. 8, 2011)

- New Mexico filed suit in federal court challenging the 2008 Operating Agreement.
- New Mexico alleges that the 2008 Operating Agreement materially changes the historical 57%/43% allocation of Project water
- New Mexico also claims that Reclamation improperly released credit water

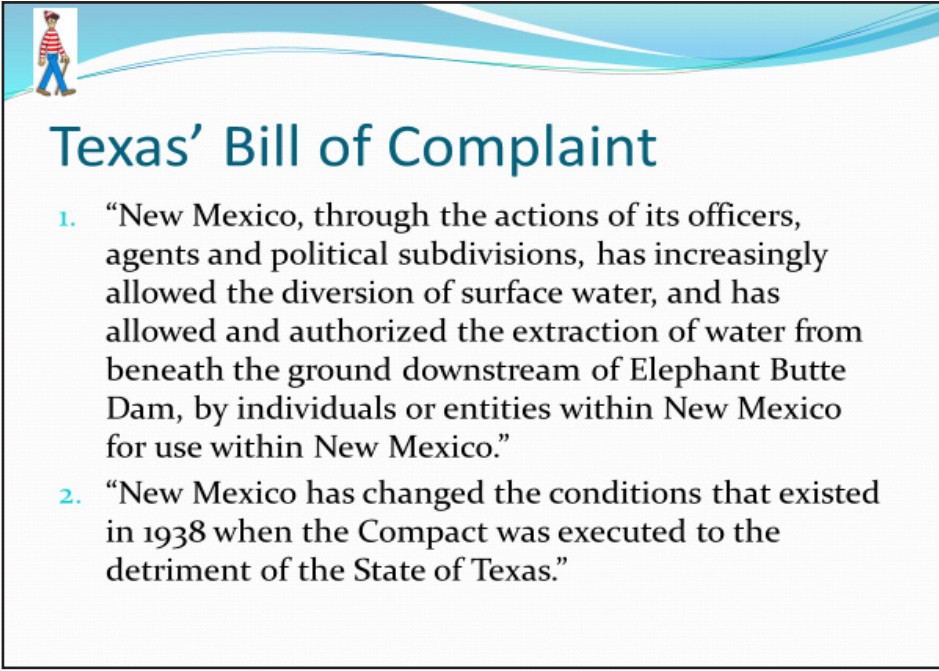
Figure 53. New Mexico v. United States.



Issues that led to Original Action

- Delivery point at Elephant Butte, approximately 125 miles away.
- Development of groundwater resources on both sides of the stateline.
- Operating agreement negotiations did not involve the Compacting States.
- Concerns over the appropriate forum to decide the issues.

Figure 54. Issues that led to original action.



Texas' Bill of Complaint

1. "New Mexico, through the actions of its officers, agents and political subdivisions, has increasingly allowed the diversion of surface water, and has allowed and authorized the extraction of water from beneath the ground downstream of Elephant Butte Dam, by individuals or entities within New Mexico for use within New Mexico."
2. "New Mexico has changed the conditions that existed in 1938 when the Compact was executed to the detriment of the State of Texas."

Figure 55. Texas' Bill of Complaint.

Questions Presented by the New Mexico Motion to Dismiss

- Are Project deliveries protected by Reclamation Law or the Compact?
- Does the Compact impliedly prohibit development in New Mexico below Elephant Butte?




Figure 56. Questions presented by the New Mexico Motion to Dismiss.

Draft First Report of the Special Master

- Recommends denying the Motion to Dismiss
- Recommends denying the Motions to Intervene by EBID and EPCWID




Figure 57. Draft first report of the Special Master.

