New Mexico Water Infrastructure—Status of Dams



Eagle Nest Dam under construction Circa 1917

NMOSE Dam Safety Bureau



Interstate Stream Commission

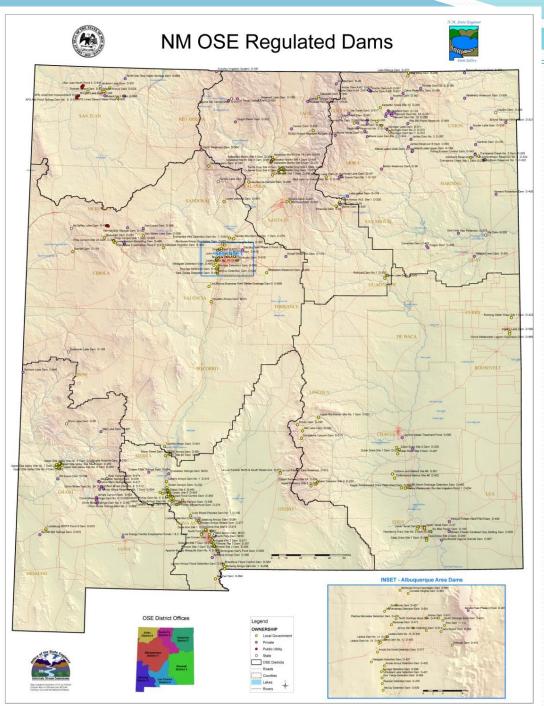
NM Dam Safety Program





- <u>Enforcement of State</u>
 <u>Statute and NM Code.</u>
- 4 Dam Safety Engineers
 - Executive Assistant
 - Bureau Chief





Over 500 dams – 407 in the 2018 National Inventory of Dams -- 298 directly regulated by the State Engineer

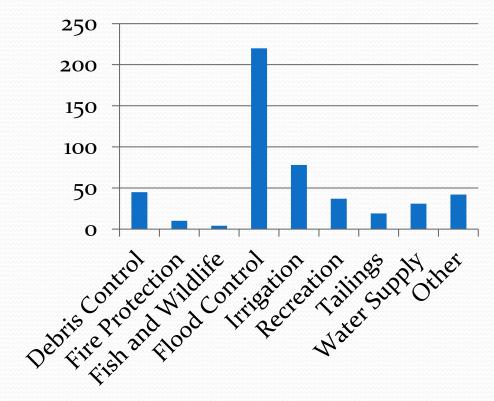
Dams in 29 of 33 Counties

All NMOSE dams have a Condition Rating and a Hazard Potential Rating

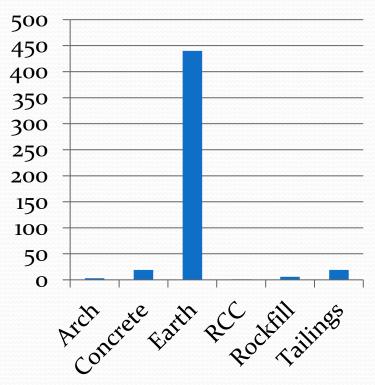
172 have potential to cause loss of life in a failure event

New Mexico Dams

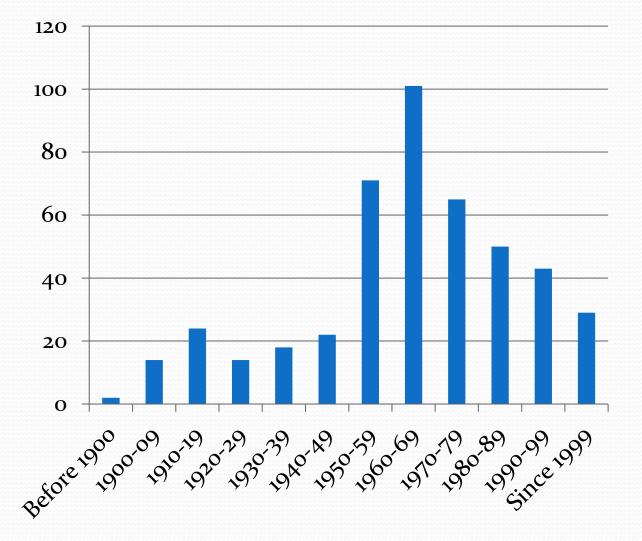
Number of Dams by Purpose



Number of Dams by Type



New Mexico Issues – Age



Status of Dams –

Incidents and Failures 1890-2017

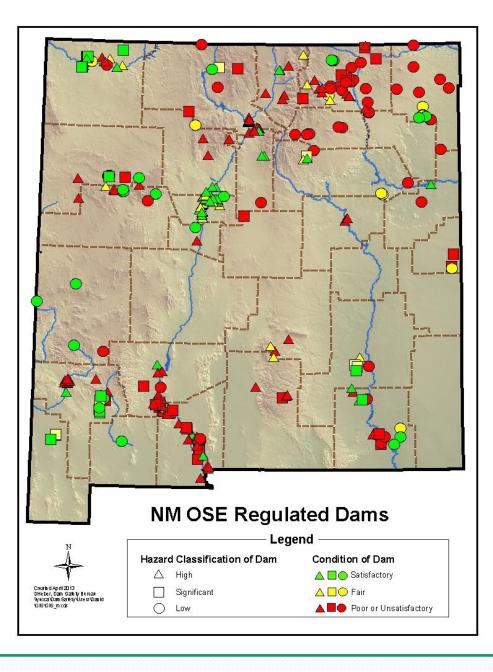
LAKE MALOYA DAM,

						FARMING TON DAM, 1942
						DAM, 1980S CROWLEY CABRESTO DAM DAM DAM DAM DAM SPACE IRRIGATION
ID COUNTY	DAM NAME	NATIONAL ID	OSE DAM FILE NO	LATITUDE	LONGITUDE D/	SYSTEM 1941 CARPETID DAM WE TO THE DAM NO 2, 1988
			000 01111110			2005 CHEEK SPRINGER
1 DONA ANA	LA UNION B		NJ	31.9477	-106.6741 20:	CARSON DAM, 1932 CAM 1932 CAM 193 CAMP 1 CAM 1932 CAM 1932 CAM 1932 CAMP 1 CAM 1935 CAMPAGER RESERVICE 1500
	POWER LAKE			31.3177	100.07 11 20.	NACIMIENTO LOS ALAMOS
2 E	DAM	NM00319	D-319	34.9268	-104.6801 20:	DAM CANYON
26	DOM:	141100313	0-313	34.3200	-104.0001 20.	DAM_2011 UNNAMED CHAMITA DAM (OHKAY OWNGEH), 2016
						BLUEWATER MANZANARES BRADNER
LOS	LOS ALAMOS					
3 ALAMOS	CANYON DAM	NM00299	D-299	35.8835	-106.354 20:	RAMAH 1009 1975 DAM, 1975
3 ALAMOS	CANTON DAW	1414100233	0-233	33.0033	-100.334 20.	BLACK FOOK DAM, RAM TOM OSALAMATEO
						RAMAH LDAW, 1975 BLACK ROCK DAM, 1909 DAM 1909 1931 190 UNITED LAKE DAM, 2001 BLACK BLACK NUCLEAR RENAISSANCE POWER LAKE ROCK DAM, 1992 BLACK NUCLEAR RENAISSANCE DAM, 2013
	LITTLE HALLA					ROCK DAM, 1932 ROCK HOMESTAKE, 1970S RENAISSANCE DAM, 2013
	WILSON DAM	NM00661	MISC	31.989	-106.682 20	DAM, 1936 BASIN, 1987
TUOINAANA	WILSON DAW	141100001	MIDC	51.565	-100.002 20	
5 TAOS	CABRESTO DAM	NM00240	D-240	36.7467	-105,4983 20	DAM FAILURE?
5 1705	CABICSTO DAM	111100210	0-210	30.7407	-103.4503 20	O Unknown
	SAN MATEO LAKE					• NO
6 CIBOLA	DAM	NM00356	D-356	35.3237	-107.6338 20	
6 CIBOLA	DAM	NIVIOUSSO	0-330	33.3237	-107.0550 20	• YES
	MIAMI LAKE DAM					BONITO
7 COLFAX	NO. 2	NM00344	D-344	36.3431	-104.8927 19	DAM, 1930
7 COLFAX	NO. 2	NIVI00344	D-344	30.3431	-104.8927 19:	SOLON
						COBRE MAIN DAM
	COBRE MAIN					PHELPS DODGE TAILINGS CABALLO DAM 1996
8 GRANT	TAILINGS DAM	NM00417	D-417	32.8513	-108.0876 19	ARROYODAM DAM 1999 ARROYODAM
o GRAINT	TAILINGS DAIN	NIVI00417	0-417	32.0313	-106.0676 15	NO. 4, 1981 MCMILLAN AVALON INTREPID SOUTH
A COLEAN			4420		10	MCLEAD FLOOD DAM, 1911 DAM, CONTROL HACKBERRY DRAW 1893 PERIMIETER DAM 1987 SITE NO. 2 10750-000 DPAM, 2017
9 COLFAX	MCCRYSTAL DAM		7720		19	SITE NO. 3, 1975 ATREPID
10 COLFAX	THROTTLE DAM NO. 2	NM00361	D-361	36.8272	104.2274 19	MERRELI LITTLE HALLA POTASH WEST
10 COLFAX	110.2	1000001	0-501	30.02/2	104.2274 13	WILSON DAM 1980S
	RENAISSANCE					DAM, 2007
	DETENTION					B 2013
			0.400	35 4369	105 5343 10	
11 BERNALILLO	DASIN	NM00480	D-480	35.1362	-106.6242 19	NM DAM INCIDENTS
	Mail FAD FLOOR					
	McLEAD FLOOD				407.0574.4555	INTERNAL EROSION ALONG
12 DONA ANA	CONTROL DAM	NM00343	D-343	32.7384	-107.2571 1987	PIPING YES RODENT BURROWS
						DOWNSTREAM SLOPE
13 COLFAX	UTE CREEK DAM	NM00317	D-317	36.58	-105.1228 1982	SLOPE FAILURE NO FAILED

BEELINE

Status of Dams

- 60% of High Hazard potential dams will spillway capacity issues
- 33% with spillway capacity
 <30%
- Uncertainty and Risk multiple dams
- 12 dams under State Engineer Order

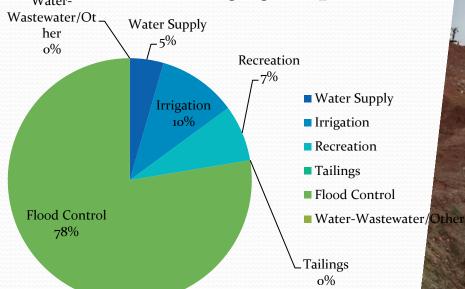




Status of Dams – Maintenance and

Rehabilitation

Percentage of High Hazard Potential Dams Ranked Poor or Unsatisfactory by Purpose



A Multi-million \$ Issue



Status of Dams – Rehabilitation

Successes



Status of Dams – Rehabilitation Successes



Springer Lake Dam No. 2, Colfax County

Status of Dams – Rehab Planning

- Cimarroncito Dam– Colfax County
- Santa Cruz Site 1 Dam Rio Arriba County
- San Mateo Lake Dam Cibola County
- Nichols Dam Santa Fe County
- Bear Canyon Lake Dam Grant County
- Sebastian Martin Dams Rio Arriba County
- Tortugas Site 1 Dam, Dona Ana County
- Power Lake Dam—Guadalupe County
- Webster Dam Philmont Colfax County
- Upper Rio Hondo Site 1 Dam -- Lincoln County
- Lake Maloya Dam Colfax County
- Miami Lake Dam Colfax County
- Bonito Lake Dam Lincoln County
- Peterson Dam San Miguel County

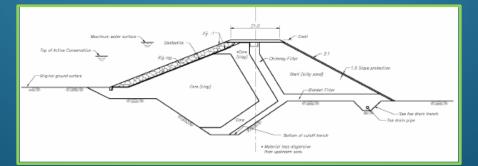
Dam Safety—A Shared Responsibility



- Prioritization
- Project Management
- Owner Support
- Funding
- Follow up

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President-Elect ASDSO

Interstate Stream Commission