

RESERVOIR SEDIMENTATION
DATA SUMMARY

Guernsey Reservoir
NAME OF RESERVOIR
North Platte Project

34-3
DATA SHEET NO.

DAM	1. OWNER Bureau of Reclamation			2. RIVER North Platte			3. STATE Wyoming									
	4. SEC. 27 TWP. 27N RANGE 66W			5. NEAREST TOWN Guernsey, Wyo.			6. COUNTY Platte									
	7. STREAM BED ELEV. 4329			8. TOP OF DAM ELEV. 4430			9. SPILLWAY CREST ELEV. 4420 1/									
RESERVOIR	10. STORAGE ALLOCATION		11. ELEVATION TOP OF POOL		12. SURFACE AREA ACRES		13. STORAGE ACRE- FEET		14. ACCUMULATED ACRE- FEET		15. DATE STORAGE BEGAN					
	a. FLOOD CONTROL		4420		2,386		49,150				Feb. 27, 1927					
	b. POWER															
	c. WATER SUPPLY										16. DATE NORMAL OPER. BEGAN					
	d. IRRIGATION															
	e. CONSERVATION															
f. INACTIVE		4360		99		189		189		Oct. 1, 1927						
17. LENGTH OF RESERVOIR 14.6 MILES			AV. WIDTH OF RESERVOIR 0.26 MILES													
18. TOTAL DRAINAGE AREA 16,200 2/ SQ. MI.			22. MEAN ANNUAL PRECIPITATION 13.89 INCHES													
19. NET SEDIMENT CONTRIBUTING AREA 5,400 SQ. MI.			23. MEAN ANNUAL RUNOFF 4.03 INCHES													
20. LENGTH 127 MILES AV. WIDTH 43 MILES			24. MEAN ANNUAL RUNOFF 1,198,800 AC.-FT.													
21. MAX. ELEV. 8,000 ft. MIN. ELEV. 4420 ft.			25. CLIMATIC CLASSIFICATION semi-arid													
WATERSHED	26. DATE OF SURVEY		27. PERIOD YEARS		28. ACCL. YEARS		29. TYPE OF SURVEY		30. NO. OF RANGES OR CONTOUR INT.		31. SURFACE AREA ACRES		32. CAPACITY ACRE- FEET		33. C/W RATIO 3/ AC.-FT. PER SQ. MI.	
	Feb. 1927		0		0		contour		5-ft. int.		2,405		73,810		13.42	
Jan. 1931		3.83		3.3		range		19 ranges		2,400		67,840		11.31		
Jan. 1933		2.00		2.0		"		18		2,398		62,050		11.82		
Jan. 1935		2.00		2.0		"		17		2,396		62,940		11.44		
Feb. 1937		2.10		1.9		"		17		2,365		60,930		11.08		
Feb. 1939		2.00		1.9		"		16		2,364		58,430		10.81		
Jan. 1941		2.00		1.3		"		19		2,363		56,600		10.05		
Jan. 1944		3.00		16.03		"range		26		2,360		53,180		9.83		
July 1947		3.50		20.43		cont. & 1/		5-ft. int.		2,386		53,150		9.10		
26. DATE OF SURVEY		34. PERIOD ANNUAL PRECIPITATION		35. PERIOD WATER INFLOW		ACRE- FEET		36. WATER INFL. TO DATE AC.-FT.								
		a. MEAN ANNUAL		b. MAX. ANNUAL		c. PERIOD TOTAL		d. MEAN ANNUAL		e. TOTAL TO DATE						
Feb. 1927		0		0		0		0		0		0		0		
Jan. 1931		18.88"		1,499,514		2,141,850		5,743,140		1,499,514		5,743,140		8,465,524		
Jan. 1933		9.73		1,361,192		1,798,110		2,722,384		1,361,192		8,465,524		10,534,194		
Jan. 1935		10.69		1,316,774		1,515,540		2,068,670		1,316,774		10,534,194		12,490,274		
Feb. 1937		11.47		1,238,704		1,091,890		1,956,080		1,238,704		12,490,274		14,938,824		
Feb. 1939		13.69		1,236,319		1,244,290		2,448,580		1,236,319		14,938,824		16,718,124		
Jan. 1941		9.55		1,194,195		1,130,190*		1,176,870*		1,194,195		16,718,124		20,062,524		
Jan. 1944		13.16		1,180,148		1,197,980		3,343,800		1,180,148		20,062,524		24,083,004		
July 1947		15.29		1,175,657		1,141,000		3,940,480		1,175,657		24,083,004		24,083,004		
26. DATE OF SURVEY		37. PERIOD SEDIMENT DEPOSITS ACRE- FEET		38. TOTAL SED. DEPOSITS TO DATE ACRE- FEET												
		a. PERIOD TOTAL		b. AV. ANNUAL		c. PER SQ. MI.-YEAR		d. TOTAL TO DATE		e. AV. ANNUAL		f. PER SQ. MI.-YEAR				
Feb. 1927		0		0		0		0		0		0		0		
Jan. 1931		5,970		1,560		0.28		5,970		1,560		0.284		0.284		
Jan. 1933		2,790		1,400		0.26		8,760		1,502		0.273		0.273		
Jan. 1935		2,120		1,106		0.20		10,880		1,390		0.253		0.253		
Feb. 1937		2,010		930		0.18		12,890		1,298		0.236		0.236		
Feb. 1939		2,510		1,260		0.23		15,400		1,291		0.239		0.239		
Jan. 1941		1,830		915		0.17		17,230		1,237		0.226		0.226		
Jan. 1944		3,420		1,140		0.21		20,650		1,220		0.226		0.226		
July 1947		4,930		1,150		0.21		24,680		1,208		0.224		0.224		
26. DATE OF SURVEY		39. AV. DRY WGT. LBS. PER CU. FT.		40. SED. DEP. TONS PER SQ. MI.-YR.		41. STORAGE LOSS PCT.		42. SED. INFLOW PPM								
		a. PERIOD		b. TOTAL TO DATE		a. AV. ANNUAL		b. TOT. TO DATE		c. PERIOD		d. TOT. TO DATE				
July 1947		53.2		243		259		0.0246		0.503		873		877		

1/ Elevation of top of gates--north gate sill elevation is 4370
 2/ Includes all drainage area upstream of dam
 3/ Item 32 divided by item 19
 * Estimated

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET ABOVE, AND BELOW, CREST ELEVATION <u>1/</u>										
	91-90	90-80	80-70	70-60	60-50	50-40	40-30	30-20	20-10	10-crest	
PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION											
1927											
July 1947,	0.06	1.05	3.71	5.89	5.97	11.72	21.31	30.97	16.83	2.47	

26. DATE OF SURVEY	44. REACH DESIGNATION PERCENT OF TOTAL ORIGINAL LENGTH OF RESERVOIR													
	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	-105	-110	-115	-120
PERCENT OF TOTAL SEDIMENT LOCATED WITHIN REACH DESIGNATION														
1927														
July 1947	5.80	4.39	6.78	25.20	35.27	12.62	3.93	2.24	1.96	1.79				

45. RANGE IN RESERVOIR OPERATION							
WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.
1927(Oct.)			86,900	1938	4419.89	4403.53	1,189,090
1928	4420.35	4385.20	2,096,225	1939	4416.30	4402.88	1,145,390
1929	4420.90	4382.90	2,141,850	1940	4419.27	4398.33	642,500
1930	4420.20	4402.89	1,418,165	1941	4419.97	4386.62	1,001,250
1931	4415.52	4391.35	1,224,274	1942	4419.83	4400.53	1,197,980
1932	4419.39	4398.15	1,498,110	1943	4420.08	4392.49	1,144,570
1933	4420.80	4396.00	1,515,540	1944	4419.71	4402.30	1,138,290
1934	4414.50	4388.26	533,130	1945	4422.01	4402.51	1,096,370
1935	4421.25	4400.70	847,090	1946	4420.23	4395.10	1,141,000
1936	4417.90	4397.81	1,091,890	1947(July)	4420.52	4401.25	572,000
1937	4419.49	4393.50	1,261,390				

46. ELEVATION-AREA-CAPACITY DATA								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
4420	2,386	49,150	4380	289	4,052			
4415	2,159	37,770	4375	242	2,726			
4410	1,874	27,680	4370	190	1,647			
4405	1,376	19,570	4365	148	802			
4400	948	13,790	4360	99	189			
4395	561	10,050	4355	1.6	0.6			
4390	425	7,588	4350	0	0			
4385	350	5,650	4345					

47. REMARKS AND REFERENCES

Sedimentation Survey of Guernsey Reservoir, L. M. Seavy, Hydrology Division, Bureau of Reclamation

North Platte Project Histories

48. AGENCY SUPPLYING DATA Bureau of Reclamation

49. DATE 9/29/50

RESERVOIR SEDIMENTATION
DATA SUMMARY

Guernsey Reservoir
NAME OF RESERVOIR

34-3a
Supplement to 34-3 DATA SHEET NO.

DAM	1. OWNER Dept. of Int. U.S.B.R.			2. RIVER North Platte		3. STATE Wyoming		
	4. SEC. 27 TWP. 27N RANGE 66W			5. NEAREST TOWN Guernsey, Wyo.		6. COUNTY Platte		
	7. STREAM BED ELEV. 4325			8. TOP OF DAM ELEV. 4430		9. SPILLWAY CREST ELEV. 4420 1/2		
RESERVOIR	10. STORAGE ALLOCATION	11. ELEVATION TOP OF POOL	12. SURFACE AREA ACRES	13. STORAGE ACRE- FEET	14. ACCUMULATED ACRE- FEET	15. DATE STORAGE BEGAN		
	a. FLOOD CONTROL					Feb. 27, 1927		
	b. POWER							
	c. WATER SUPPLY					16. DATE NORMAL OPER. BEGAN		
	d. IRRIGATION	4420	2405	70,976	73,810			
	e. CONSERVATION							
	f. INACTIVE	4360	237 1/2	3,253 1/2	3,253 1/2	Oct. 1, 1927		
WATERSHED	17. LENGTH OF RESERVOIR 14.6 MILES			AV. WIDTH OF RESERVOIR 0.26 MILES				
	18. TOTAL DRAINAGE AREA 16,200 SQ. MI.			22. MEAN ANNUAL PRECIPITATION 8-24 INCHES				
	19. NET SEDIMENT CONTRIBUTING AREA 5,400 3/4 SQ. MI.			23. MEAN ANNUAL RUNOFF 1.41 INCHES				
	20. LENGTH 127 3/4 MILES AV. WIDTH 4.3 1/2 MILES			24. MEAN ANNUAL RUNOFF 1,221,310 AC.-FT.				
	21. MAX. ELEV. 10,274 MIN. ELEV. 4,325			25. CLIMATIC CLASSIFICATION Semiarid				
SURVEY DATA	26. DATE OF SURVEY	27. PERIOD YEARS	28. ACCL. YEARS	29. TYPE OF SURVEY	30. NO. OF RANGES OR CONTOUR INT.	31. SURFACE AREA ACRES	32. CAPACITY ACRE- FEET	33. C _w RATIO AC.-FT. PER SQ. MI.
	Feb. 27, 1927	0	0	Contour	5-ft. Inter.	2,405	73,810	-
	For intermediate Surveys see Data Sheet No. 34-3							
	July 1947	-	20.43	Range & Contour	5-ft. Inter.	2,386	49,150	9.10
	June 1953	5.924	26.35	Range & Contour	5-ft. Inter.	2,386 1/2	44,800	8.30
	26. DATE OF SURVEY	34. PERIOD ANNUAL PRECIPITATION	35. PERIOD WATER INFLOW ACRE- FEET			36. WATER INFL. TO DATE AC.-FT.		
			a. MEAN ANNUAL	b. MAX. ANNUAL	c. PERIOD TOTAL	d. MEAN ANNUAL	e. TOTAL TO DATE	
	Feb. 27, 1927	0	0	0	0	0	0	
	July 1947	8-24	-	-	-	1,175,657	24,003,004	
	June 1953	8-24	1,196,860 6/8	1,530,020	6,978,180	1,221,310 7/8	30,785,860	
26. DATE OF SURVEY	37. PERIOD SEDIMENT DEPOSITS ACRE- FEET			38. TOTAL SED. DEPOSITS TO DATE ACRE- FEET.				
	a. PERIOD TOTAL	b. AV. ANNUAL	c. PER SQ. MI.-YEAR	d. TOTAL TO DATE	e. AV. ANNUAL	f. PER SQ. MI.-YEAR		
Feb. 27, 1927	0	0	0	0	0	0		
July 1947	-	-	-	24,680	1,208	0.224		
June 1953	4,350 8/8	735 8/8	0.136 8/8	29,010	1,101 2/8	0.204 8/8		
26. DATE OF SURVEY	39. AV. DRY WGT. LBS. PER CU. FT.	40. SED. DEP. TONS PER SQ. MI.-YR.		41. STORAGE LOSS PCT.		42. SED. INFLOW PPM		
		a. PERIOD	b. TOTAL TO DATE	a. AV. ANNUAL	b. TOT. TO DATE	a. PERIOD	b. TOT. TO DATE	
June 1953	53.210	158	236	1.49	39.30	531	803	

1/ Elevation of top of gates; north gate sill elevation is 4370.
 2/ From original area-capacity data, survey of May-July 1917.
 3/ Drainage area below Alcova Dam.
 4/ Period considered--July 1, 1947 to June 1, 1953.

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET ABOVE, AND BELOW, CREST ELEVATION										
	95-90	90-80	80-70	70-60	60-50	50-40	40-30	30-20	20-10	10-Crest	
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION										
June 1953	0.1	0.9	3.2	5.5	7.7	12.6	20.1	27.0	17.8	5.1	

26. DATE OF SURVEY	44. REACH DESIGNATION PERCENT OF TOTAL ORIGINAL LENGTH OF RESERVOIR														
	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	-105	-110	-115	-120	-125
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN REACH DESIGNATION														
June 1953	-	-	-	-	-	Not available		-	-	-	-	-	-	-	-

45. RANGE IN RESERVOIR OPERATION							
WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.
1947	4420.20	4396.49	1,038,720				
1948	4420.28	4388.26	1,187,650				
1949	4419.93	4400.60	1,096,460				
1950	4420.18	4398.81	1,200,660				
1951	4418.09	4369.90	1,044,830				
1952	4420.25	4362.66	1,530,020				
1953	4419.78	4366.05	1,049,350				

46. ELEVATION-AREA-CAPACITY DATA								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
4420	2,386	44,800	4,380	221	2,360			
4415	2,159	33,750	4,375	161	1,400			
4410	1,746	24,210	4,370	114	720			
4405	1,268	16,710	4,365	70	270			
4400	893	11,330	4,360	26	40			
4395	574	7,700	4,357	0	0			
4390	386	5,310						
4385	290	3,630						

47. REMARKS AND REFERENCES Sedimentation Survey of Guernsey Reservoir, L. M. Seavy, Hydrology Division, Bureau of Reclamation. the dam.
 North Platte Project Histories
 In 1951-1952 the Reservoir was drawdown in an attempt to draw sediment through/
 5/ 1953 survey was not carried above elevation 4410.
 6/ Summation of monthly averages--July 1, 1947 to June 1, 1953. Includes releases from Alcova Reservoir.
 7/ Summation of monthly averages--Jan. 1, 1928 to June 1, 1953. Includes releases from upstream storage.
 48. AGENCY SUPPLYING DATA Department of Interior, Bureau of Reclamation, North Platte Projects Office DATE 12-22-54

8/ Considered from 5400 square miles of sediment contributing area.
 9/ Considered for the total period of 26.35 years.
 10/ From 1947 survey.

RESERVOIR SEDIMENTATION
DATA SUMMARY

Guernsey Reservoir

34-3^c

NAME OF RESERVOIR
Supplement to 34-3 and 34-3a

DATA SHEET NO.

DAM	1. OWNER Dept of Int., USBR		2. RIVER North Platte		3. STATE Wyoming		
	4. SEC. 27 TWP. 27N RANGE 66W		5. NEAREST TOWN Guernsey, Wyo.		6. COUNTY Platte		
	7. STREAM BED ELEV. 4325		8. TOP OF DAM ELEV. 4430		9. SPILLWAY CREST ELEV. 4420 <u>1/</u>		
RESERVOIR	10. STORAGE ALLOCATION	11. ELEVATION TOP OF POOL	12. SURFACE AREA ACRES	13. STORAGE ACRE- FEET	14. ACCUMULATED ACRE- FEET	15. DATE STORAGE BEGAN	
	a. FLOOD CONTROL					Feb 27, 1927	
	b. POWER						
	c. WATER SUPPLY					16. DATE NORMAL OPER. BEGAN	
	d. IRRIGATION	4420	2405	70,976	73,810		
	e. CONSERVATION					10-1-27	
	f. INACTIVE	4360	237 <u>2/</u>	3,253 <u>2/</u>	3,253 <u>2/</u>		
17. LENGTH OF RESERVOIR 14.6 MILES			AV. WIDTH OF RESERVOIR 0.26 MILES				
WATERSHED	18. TOTAL DRAINAGE AREA 16,200 SQ. MI.		22. MEAN ANNUAL PRECIPITATION 8-24 INCHES				
	19. NET SEDIMENT CONTRIBUTING AREA 5400 <u>3/</u> SQ. MI.		23. MEAN ANNUAL RUNOFF 1.30 <u>4/</u> INCHES				
	20. LENGTH 127 <u>3/</u> MILES		AV. WIDTH 43 <u>3/</u> MILES		24. MEAN ANNUAL RUNOFF 1,122,400 <u>4/</u> AC.-FT.		
	21. MAX. ELEV. 10,274		MIN. ELEV. 4,325		25. CLIMATIC CLASSIFICATION Semi-arid		
	26. DATE OF SURVEY	27. PERIOD YEARS	28. ACCL. YEARS	29. TYPE OF SURVEY	30. NO. OF RANGES OR CONTOUR INT.	31. SURFACE AREA ACRES	32. CAPACITY ACRE- FEET
Feb. 1927	0	0	Contour	5' Int.	2405	73,810	4.56
July 1947	-	20.43	For Intermediate Surveys, see Data Sheets 34-3 and 34-3a.		2386	49,150	3.03
June 1957	9.92	30.35	Range & Cntr	5' Int.	2382	44,800	2.77
			Contour				
SURVEY DATA	26. DATE OF SURVEY	34. PERIOD ANNUAL PRECIPITATION	35. PERIOD WATER INFLOW ACRE- FEET			36. WATER INFL. TO DATE AC.-FT.	
			a. MEAN ANNUAL	b. MAX. ANNUAL	c. PERIOD TOTAL	a. MEAN ANNUAL	b. TOTAL TO DATE
	Feb. 1927	0	0	0	0	0	0
	July 1947	8-24	-	-	-	1,175,657	24,003,004
June 1957	8-24	1,014,264	1,530,020	10,061,496	1,122,400	34,064,500	
26. DATE OF SURVEY	37. PERIOD SEDIMENT DEPOSITS ACRE- FEET			38. TOTAL SED. DEPOSITS TO DATE ACRE- FEET.			
	a. PERIOD TOTAL	b. AV. ANNUAL	c. PER SQ. MI.-YEAR	a. TOTAL TO DATE	b. AV. ANNUAL	c. PER SQ. MI.-YEAR	
	Feb. 1927	0	0	0	0	0	
July 1947	-	-	-	24,660	1,208	0.224	
June 1957	(For partial survey in June 1953, see 34-3a)	4350 <u>5/</u>	4385 <u>5/</u>	0.084 <u>4/</u>	29,010	956	0.103 <u>6/</u>
26. DATE OF SURVEY	39. AV. DRY WGT. LBS. PER CU. FT.	40. SED. DEP. TONS PER SQ. MI.-YR.		41. STORAGE LOSS PCT.		42. SED. INFLOW PPM	
		a. PERIOD	b. TOTAL TO DATE	a. AV. ANNUAL	b. TOT. TO DATE	a. PERIOD	b. TOT. TO DATE
June 1957	60.7 <u>1/</u>	107	206 136 <u>1/</u>	1.31 1.29 <u>1/</u>	33.41 39.30 <u>1/</u>	420	740

Elevation of top of gates; north gate sill elevation is 4370.
From original area-capacity data; survey of May-July, 1917.
Drainage area below Alcova Dam.
Includes releases from upstream storage.

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET ABOVE, AND BELOW, CREST ELEVATION										
	91-70	70-60	60-50	50-40	40-30	30-20	20-10	crest			
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION										
June 1957	4.10	5.54	8.07	12.95	21.02	29.98	14.20	4.14			

28. DATE OF SURVEY	44. REACH DESIGNATION PERCENT OF TOTAL ORIGINAL LENGTH OF RESERVOIR														
	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	-105	-110	-115	-120	-125
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN REACH DESIGNATION														
June 1957															

45. RANGE IN RESERVOIR OPERATION							
WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.
1954	4420.23	4379.10	704,760	1955	4420.12	4385.75	621,230
1955	4420.12	4385.75	621,230	1956	4419.42	4385.75	915,700
1956	4419.42	4385.75	915,700	1957	4420.41	4388.00	908,400
1957	4420.41	4388.00	908,400				

46. ELEVATION-AREA-CAPACITY DATA								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
4420	2382	44,800	4385	254	3360			
4415	2122	33,540	4380	204	2215			
4410	1822	23,680	4375	154	1320			
4405	1340	15,775	4370	110	660			
4400	844	10,315	4365	74	200			
4395	520	6,905	4360	5	2			
4390	322	4,800	4355	0	0			

47. REMARKS AND REFERENCES
Sedimentation Resurvey of Guernsey Reservoir, 1957, Commissioner's Office, Denver
North Platte Project Histories
 The reservoir was drawn down at various times (1951-1957) in attempt to draw sediment through dam.
 5/ Considered from 5400 square miles of sediment contributing area.
 6/ Weighted average of 16,200 and 5,400 square miles.
 7/ Average for period (July 1947-June 1957)

48. AGENCY SUPPLYING DATA Department of Interior, Bureau of Reclamation, North Platte River Projects Office

49. DATE 9-25-61

RESERVOIR SEDIMENT
DATA SUMMARY

GUERNSEY RESERVOIR
NAME OF RESERVOIR

34-3d
DATA SHEET NO.

DAM	1. OWNER U.S. Dept. of Int., Bur. of Recl.		2. STREAM North Platte River		3. STATE Wyoming			
	4. SEC. 27 TWP. 27N RANGE 66W		5. NEAREST P. O. Guernsey, 2NW		6. COUNTY Platte			
	7. LAT. 42° 17' 25" LONG. 104° 45' 49"		8. TOP-OF DAM ELEVATION 4430		9. SPILLWAY CREST ELEV. 4420 ¹			
RESERVOIR	10. STORAGE ALLOCATION	11. ELEVATION TOP OF POOL	12. ORIGINAL SURFACE AREA, ACRES	13. ORIGINAL CAPACITY, ACRE-FEET	14. GROSS STORAGE, ACRE-FEET	15. DATE STORAGE BEGAN		
	a. FLOOD CONTROL					Feb. 27, 1927		
	b. MULTIPLE USE							
	c. POWER							
	d. WATER SUPPLY							
	e. IRRIGATION	4420	2406	70,976	73,810	16. DATE NORMAL OPER. BEGAN		
	f. CONSERVATION					Oct. 1, 1927		
	g. INACTIVE	4360 ²	237 ²	3,253 ²	3,253 ²			
17. LENGTH OF RESERVOIR 14.6 MILES			AV. WIDTH OF RESERVOIR 0.26 MILES					
WATERSHED	18. TOTAL DRAINAGE AREA 15,004 SQ. MI.		22. MEAN ANNUAL PRECIPITATION 13.7 (8-20) INCHES					
	19. NET SEDIMENT CONTRIBUTING AREA 675 SQ. MI.		23. MEAN ANNUAL RUNOFF 1.21 INCHES					
	20. LENGTH 31.7 ³ MILES	AV. WIDTH 21.3 MILES	24. MEAN ANNUAL RUNOFF 968,700 ⁴ AC.-FT.					
	21. MAX. ELEV. 10,274	MIN. ELEV. 4325	25. ANNUAL TEMP.: MEAN 48.3 RANGE -27 to 104					
	26. DATE OF SURVEY	27. PERIOD YEARS	28. ACCL. YEARS	29. TYPE OF SURVEY	30. NO. OF RANGES OR CONTOUR INT.	31. SURFACE AREA, ACRES	32. CAPACITY, ACRE-FEET	33. C/I. RATIO, AC.-FT. PER AC.-FT.
Feb. 1927	0	0	Contour	5 ft. Int.	2,406	73,810		
June 1957	-	30.35	Range & Contour (R)	35 (R) 5 (CI)	2,382	44,800		
Dec. 1966 ⁵	9.40	39.75	Range (R)	35	2,377	45,228	0.0467	
SURVEY DATA	26. DATE OF SURVEY	34. PERIOD ANNUAL PRECIPITATION		35. PERIOD WATER INFLOW, ACRE-FEET			36. WATER INFL. TO DATE, AC.-FT.	
		a. MEAN ANNUAL	b. MAX. ANNUAL	c. PERIOD TOTAL	a. MEAN ANNUAL	b. TOTAL TO DATE		
	Feb. 1927	0	0	0	0	0	0	
	June 1957	8-24	1,014,264	1,530,020	10,061,496	1,122,400	34,064,500	
	Dec. 1966	8-20	968,700	1,137,000	8,749,720	1,077,087	42,814,220	
	26. DATE OF SURVEY	37. PERIOD CAPACITY LOSS, ACRE-FEET			38. TOTAL SED. DEPOSITS TO DATE, ACRE-FEET			
		a. PERIOD TOTAL	b. AV. ANNUAL	c. PER SQ. MI.-YEAR	a. TOTAL TO DATE	b. AV. ANNUAL	c. PER SQ. MI.-YEAR	
	Feb. 1927							
	June 1957	29,010	956	0.103	-	-	-	
	Dec. 1966	-428 ⁶	-	-	28,582	719	0.062 ⁷	
26. DATE OF SURVEY	39. AV. DRY WGT., LBS. PER CU. FT.	40. SED. DEP., TONS PER SQ. MI.-YR.		41. STORAGE LOSS, PCT.		42. SED. INFLOW, PPM		
		a. PERIOD	b. TOTAL TO DATE	a. AV. ANN.	b. TOT. TO DATE	a. PERIOD	b. TOT. TO DATE	
Dec. 1966	54	- ⁸	72.9	0.974	38.724	- ⁸	578	

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26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION											
	95-90	90-75	75-60	60-45	45-30	30-15	15-Cr.					
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION											
Dec. 1966	0.3	3.9	10.0	20.8	35.8	25.7	3.5					

26. DATE OF SURVEY	44. REACH DESIGNATION PERCENT OF TOTAL ORIGINAL LENGTH OF RESERVOIR														
	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100	-105	-110	-115	-120	-125
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN REACH DESIGNATION														
Dec. 1966	23	13.5	11	9	21	13	5	2.5	1	1					

45. RANGE IN RESERVOIR OPERATION							
WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW, AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW, AC.-FT.
1958	4418.38	4387.55	1,042,664	1966	4418.20	4365.19	1,152,500
1959	4418.32	4361.50	970,500				
1960	4418.36	4365.70	927,790				
1961	4419.60	4380.85	691,282				
1962	4417.10	4371.94	975,520				
1963	4416.84	4362.00	1,070,220				
1964	4418.43	4368.10	1,115,780				
1965	4418.41	4365.00	1,050,390				

46. ELEVATION-AREA-CAPACITY DATA								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
4385.6	0	0	4390	371	3,529	4415	2,109	34,042
4370	47	105	4395	589	5,871	4420	2,377	45,228
4375	100	477	4400	1,014	9,840			
4380	139	1,065	4405	1,425	15,939			
4385	245	2,009	4410	1,842	24,136			

47. REMARKS AND REFERENCES

- ¹ Elevation of the top of south spillway gates. North spillway gate elevation is 4370.
- ² Taken from original area-capacity data of May-July, 1917 survey.
- ³ Drainage area below Glendo Dam.
- ⁴ North Platte River below Glendo Dam.
- ⁵ Intermediate surveys are reported on Data Sheets 34-3, -3a, -3b, and -3c.
- ⁶ Gain in capacity due to sediments sluiced from dam.
- ⁷ Weighted average of 675 and 15,004 sq. mi. based on time period.
- ⁸ No sediment inflow during period.
- ⁹ Information prior to 1958 in Data Sheets 34-3, -3a, -3b, and -3c.

48. AGENCY MAKING SURVEY Bureau of Reclamation
49. AGENCY SUPPLYING DATA Bureau of Reclamation

50. DATE January 1970