

RESERVOIR SEDIMENT  
DATA SUMMARY

U. S. DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE

NORTH BASIN (3-B)

63-13

SCS-34 Rev. 6-66

NAME OF RESERVOIR

DATA SHEET NO.

DAM	1. OWNER USDI BLM		2. STREAM/TRIB. OF BADGER WASH		3. STATE COLO.			
	4. SEC. 25 TWP. 8 S. RANGE 104 W		5. NEAREST P.O. MACK, Colo.		6. COUNTY MESA			
	7. LAT. 39 20' " LONG. 108 56' "		8. TOP OF DAM ELEVATION 5,015		9. SPILLWAY CREST ELEV. 5,009.5			
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						Dec. 1953	
	b. MULTIPLE USE							
	c. POWER						16. DATE NORMAL OPER. BEGAN	
	d. WATER SUPPLY		5,009.5	2.02	8.10	8.10		
	e. IRRIGATION							
	f. CONSERVATION						Dec. 1953	
g. INACTIVE								
WATERSHED	17. LENGTH OF RESERVOIR .098		MILES		AV. WIDTH OF RESERVOIR .032		MILES	
	18. TOTAL DRAINAGE AREA .048		SQ. MI.		22. MEAN ANNUAL PRECIPITATION 8.75 (38 YR)		INCHES	
	19. NET SEDIMENT CONTRIBUTING AREA .048		SQ. MI.		23. MEAN ANNUAL RUNOFF .69 (17 YR)		INCHES	
	20. LENGTH .39		MILES		AV. WIDTH .12		MILES	
	21. MAX. ELEV. 5,130		MIN. ELEV. 5,005		25. ANNUAL TEMP: MEAN 51°F RANGE --			
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/I. RATIO, AC.-FT. PER AC.-FT.
	12-6-53	--	--	Range D	6	2.02	8.10	4.60
	7-28-55	1.6	1.6	"	6	"	7.69	4.37
	11-4-56	1.3	2.9	"	6	"	7.69	4.37
	10-25-57	1.0	3.9	"	5	"	7.58	4.31
	11-20-58	1.1	5.0	"	5	"	7.58	4.31
	11-12-59	1.0	6.0	"	5	"	7.51	4.27
	11-2-61	2.0	8.0	"	5	"	7.38	4.19
	26. DATE OF SURVEY	34. PERIOD ANNUAL PRECIPITATION		35. PERIOD WATER INFLOW, ACRE-FEET <sup>2/</sup>			36. WATER INFL. TO DATE, AC.-FT.	
		a. MEAN ANNUAL	b. MAX. ANNUAL	c. PERIOD TOTAL	a. MEAN ANNUAL	b. TOTAL TO DATE		
	12-6-53	--	--	--	--	--		
	7-28-55	11.3	2.82	2.14	4.52	2.82	4.52	
	11-4-56	7.7	.29	.33	.38	1.69	4.90	
10-25-57	13.0	4.64	4.64	4.64	2.44	9.54		
11-20-58	9.3	0	0	0	1.90	9.54		
11-12-59	6.0	1.39	1.39	1.39	1.82	10.93		
11-2-61	17.8	2.59	4.93	5.18	2.02	16.11		
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		
12-6-53	--	--	--	--	--			
7-28-55	.41	.26	5.42	.41	.26	5.42		
11-4-56	0	0	0	.41	.14	2.92		
10-25-57	.11	.11	2.29	.52	.13	2.71		
11-20-58	0	0	0	.52	.10	2.08		
11-12-59	.07	.07	1.46	.59	.10	2.08		
11-2-61	.13	.07	1.46	.72	.09	1.88		
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		
12-6-53	--	--	--	--	--			
7-28-55	90*	10,624	10,624	3.21	5.06	130,829		
11-4-56	"	--	5,724	1.73	5.06	120,683		
10-25-57	"	4,492	5,312	1.60	6.42	78,616		
11-20-58	"	--	4,077	1.23	6.42	78,616		
11-12-59	"	2,859	4,077	1.23	7.28	77,859		
11-2-61	"	2,654	3,685	1.11	8.89	64,461		

\*Assumed

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION													
	10-8	8-6	6-4	4-2	2-0									
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION													
10-25-57	0	74	17	4	5									
11-10-63	0	48	34	5	13									
10-25-67		31	42	9	18									

  

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														
11-4-56	13	25	19	14	9	8	4	3	3	2					
11-10-63	11	23	17	15	12	10	4	3	3	2					
10-25-57	11	23	18	15	11	10	4	3	3	2					

  

45. RANGE IN RESERVOIR OPERATION							
WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW, AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW, AC.-FT.
1954	4.82	4,999.5	2.14	1966	5.93	3.4	1.55
1955	5.85	5,002.0	2.71	1967	5.99	3.7	3.26
1956	2.30	2.0	.05	1968	8.04	4.3	5.40
1957	5.7	2.4	4.64	1969	4.33	4.2	.02
1958	--	--	0	1970	4.97	4.3	.90
1959	3.14	2.5	1.39				
1960	2.98	2.6	.26				
1961	6.87	2.7	4.93				
1962	4.98	2.4	1.49				
1963	4.04	3.1	.58				
1964	4.71	3.1	.79				
1965	5.27	3.6	1.94				

  

46. ELEVATION-AREA-CAPACITY DATA								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
<u>ORIGINAL CAPACITY 1953</u>			<u>CAPACITY 1969</u>					
4,999.5	0	0	4.2	0	0			
5,001.0	.04	.03	5.0	.61	.32			
5,003.0	.40	.48	6.0	.92	1.09			
5,005.0	.84	1.73	7.0	1.18	2.18			
5,007.0	1.36	3.91	9.0	1.70	5.41			
5,009.0	1.88	7.14	10.0	1.98	7.43			
5,010.0	2.16	9.16						

  

47. REMARKS AND REFERENCES

- 1/ From National Weather Service Record at Fruita, Colo.
- 2/ Inflow amounts recorded during April 1 to Nov. 1 season. This generally includes most of the inflow for the year.
- 3/ Capacity increase.

Lusby, G. C., Turner, G. T., Thompson, J. R., and Reid, V. H., Hydrologic and biotic characteristics of grazed and ungrazed watersheds of Badger Wash basin in western Colorado, 1953-58: U.S. Geol. Survey Water-Supply Paper 1532-B, 1963.

Lusby, G. C., Reid, V. H., and Knipe, O. D., Effects of grazing on the hydrology and biology of the Badger Wash basin in western Colorado, 1953-66: U.S. Geol. Survey Open-file rept.

  

48. AGENCY MAKING SURVEY U.S. Geological Survey

49. AGENCY SUPPLYING DATA U.S. Geological Survey

50. DATE 11/71

RESERVOIR SEDIMENT  
DATA SUMMARY

NORTH BASIN (3-B)--Cont.

U. S. DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE

SCS-34 Rev. 6-66

NAME OF RESERVOIR

63-13

DATA SHEET NO.

DAM	1. OWNER				2. STREAM				3. STATE					
	4. SEC.		TWP.		RANGE		5. NEAREST P. O.				6. COUNTY			
	7. LAT.				" LONG.				8. TOP OF DAM ELEVATION				9. SPILLWAY CREST ELEV.	
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													
	b. MULTIPLE USE													
	c. POWER													
	d. WATER SUPPLY										16. DATE NORMAL OPER. BEGAN			
	e. IRRIGATION													
	f. CONSERVATION													
	g. INACTIVE													
WATERSHED	17. LENGTH OF RESERVOIR				MILES				AV. WIDTH OF RESERVOIR				MILES	
	18. TOTAL DRAINAGE AREA				SQ. MI.				22. MEAN ANNUAL PRECIPITATION				INCHES	
	19. NET SEDIMENT CONTRIBUTING AREA				SQ. MI.				23. MEAN ANNUAL RUNOFF				INCHES	
	20. LENGTH		MILES		AV. WIDTH		MILES		24. MEAN ANNUAL RUNOFF				AC.-FT.	
	21. MAX. ELEV.		MIN. ELEV.		25. ANNUAL TEMP: MEAN				RANGE					
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/I. RATIO, AC.-FT. PER AC.-FT.					
	11-10-63		2.0	10.0	Range D	6	2.00	7.10	4.03					
	11-5-64		1.0	11.0	"	6	"	7.05	4.00					
	11-4-65		1.0	12.0	"	6	"	6.81	3.87					
	11-3-66		1.0	13.0	"	9	1.98	6.81	3.87					
	10-25-67		1.0	14.0	"	8	1.96	6.54	3.72					
	11-9-68		1.0	15.0	"	7	"	6.07	3.45					
	11-4-69		1.0	16.0	"	7	"	6.18	3.51					
	10-29-70		1.0	17.0	"	3	"	6.13	3.48					
	26. DATE OF SURVEY		34. PERIOD ANNUAL PRECIPITATION		35. PERIOD WATER INFLOW, ACRE-FEET <sup>2/</sup>			36. WATER INFL. TO DATE, AC.-FT.						
			a. MEAN ANNUAL		b. MAX. ANNUAL		c. PERIOD TOTAL	a. MEAN ANNUAL		b. TOTAL TO DATE				
	10-11-63		17.8		.99		1.49	1.98	1.81	18.09				
	11-5-64		5.2		.79		.79	1.72	18.88					
	11-4-65		10.9		1.95		1.95	1.73	20.83					
	11-3-66		6.2		0		0	1.60	20.83					
10-25-67		8.0		3.26		3.26	1.72	24.09						
11-9-68		20.7		5.32		5.32	1.96	29.41						
11-4-69		16.7		.01		.01	1.84	29.42						
10-29-70		13.7		.90		.90	1.78	30.32						
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							
10-11-63		.28	.14	2.92	1.00	.10	2.08							
11-5-64		.05	.05	1.04	1.05	.10	2.08							
11-4-65		.24	.24	5.00	1.29	.11	2.29							
11-3-66		0	0	0	1.29	.10	2.08							
10-25-67		.27	.27	5.63	1.56	.11	2.29							
11-9-68		.47 <sup>3/</sup>	.47 <sup>3/</sup>	9.80	2.03	.13	2.71							
11-4-69		-.11 <sup>3/</sup>	-.11 <sup>3/</sup>	--	2.03	.13	2.71							
10-29-70		.05	.05	1.04	2.08	.12	2.50							
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					
10-11-63		90*		5,717		1.23	12.34	203,964	79,730					
11-5-64		"		2,042		1.23	12.96	91,296	80,213					
11-4-65		"		9,801		1.36	15.92	177,524	89,322					
11-3-66		"		--		1.23	15.92	--	89,322					
10-25-67		"		11,026		1.36	19.26	119,459	93,400					
11-9-68		"		19,194		1.60	25.06	127,431	99,554					
11-4-69		"		--		1.60	25.06 <sup>4/</sup>	--	99,520					
10-29-70		"		2,042		1.48	25.68	80,137	98,944					

\*Assumed

<sup>4/</sup> Capacity increase was not considered in computations of storage loss.

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION											
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION											

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														

45. RANGE IN RESERVOIR OPERATION							
WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW, AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW, AC.-FT.

46. ELEVATION-AREA-CAPACITY DATA								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY

47. REMARKS AND REFERENCES

48. AGENCY MAKING SURVEY USGS

49. AGENCY SUPPLYING DATA

50. DATE 11/71

RESERVOIR SEDIMENT  
DATA SUMMARY

U. S. DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE

SCS-34 Rev. 6-66

North Basin (3-B)

NAME OF RESERVOIR

63-13 a

DATA SHEET NO.

DAM	1. OWNER				2. STREAM				3. STATE							
	4. SEC.		TWP.		RANGE		5. NEAREST P. O.				6. COUNTY					
	7. LAT.				" LONG.				8. TOP OF DAM ELEVATION		9. SPILLWAY CREST ELEV.					
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															
	b. MULTIPLE USE															
	c. POWER															
	d. WATER SUPPLY								8.1		16. DATE NORMAL OPER. BEGAN					
	e. IRRIGATION															
	f. CONSERVATION															
	g. INACTIVE															
WATERSHED	17. LENGTH OF RESERVOIR				MILES				AV. WIDTH OF RESERVOIR				MILES			
	18. TOTAL DRAINAGE AREA				SQ. MI.				22. MEAN ANNUAL PRECIPITATION				INCHES			
	19. NET SEDIMENT CONTRIBUTING AREA				.048				23. MEAN ANNUAL RUNOFF				INCHES			
	20. LENGTH		MILES		AV. WIDTH		MILES		24. MEAN ANNUAL RUNOFF		1.76		AC.-FT.			
	21. MAX. ELEV.		MIN. ELEV.		25. ANNUAL TEMP.: MEAN				RANGE							
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/I. RATIO, AC.-FT. PER AC.-FT.	10-28-71	1	18.0	Range D	12	1.96	6.03	3.4
	11-09-72	1	19.0	"	11	1.96	5.99	3.4								
	10-17-73	1	20.0	"	12	1.96	5.94	3.4								
	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									
	10-28-71	8.50	1.03	1.03	1.03	1.74	31.35									
	11-09-72	7.61	.76	.76	.76	1.69	32.11									
	10-17-73	10.17	.68	.68	.68	1.64	32.79									
	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									
10-28-71	.10	.10	2.08	2.18	.12	2.50										
11-09-72	.04	.04	.83	2.22	.12	2.50										
10-17-73	.05	.05	1.04	2.27	.11	2.29										
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									
10-28-71	90*	4,077	4,900	1.42	25.56	---	---									
11-09-72	"	1,627	4,900	1.37	26.67	---	---									
10-17-73	"	2,039	4,489	1.33	26.67	---	---									

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION													
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION													
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														
45. RANGE IN RESERVOIR OPERATION														
WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW, AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW, AC.-FT.							
46. ELEVATION-AREA-CAPACITY DATA														
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY						
47. REMARKS AND REFERENCES														
48. AGENCY MAKING SURVEY														
49. AGENCY SUPPLYING DATA														
										U. S. Geological Survey				
										50. DATE <u>January 1977</u>				