

RESERVOIR SEDIMENTATION
DATA SUMMARY

Upper Hanks (1A)

63-8

NAME OF RESERVOIR

DATA SHEET NO.

DAM	1. OWNER USDI - BIM			2. RIVER Badger Wash			3. STATE Colorado					
	4. SEC. 24 TWP. 8S RANGE 104W			5. NEAREST TOWN Mack			6. COUNTY Mesa					
	7. STREAM BED ELEV. 5045.7			8. TOP OF DAM ELEV. 5058			9. SPILLWAY CREST ELEV. 5054.7					
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	
	d. FLOOD CONTROL										Dec. 1953	
	b. POWER											
	c. WATER SUPPLY										16. DATE NORMAL OPER. BEGAN	
	d. IRRIGATION											
	e. CONSERVATION		5054.7		1.40		8.30		8.30		Dec. 1953	
	f. INACTIVE											
WATERSHED	17. LENGTH OF RESERVOIR .07 MILES				AV. WIDTH OF RESERVOIR .03 MILES							
	18. TOTAL DRAINAGE AREA .066 SQ. MI.				22. MEAN ANNUAL PRECIPITATION 8.3 (Fruita) INCHES							
	19. NET SEDIMENT CONTRIBUTING AREA .064 SQ. MI.				23. MEAN ANNUAL RUNOFF 0.76 INCHES							
	20. LENGTH .67 MILES		AV. WIDTH .1 MILES		24. MEAN ANNUAL RUNOFF 2.58 AC.- FT.							
	21. MAX. ELEV.		MIN. ELEV. 5045.7		25. CLIMATIC CLASSIFICATION arid							
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.			
	Dec. 20, 1953		-	-	Contour	1 ft.	1.40	8.30	126			
	July 25, 1955		1.6	1.6	& ranges		1.40	7.52	114			
	Nov. 6, 1956		1.4	3.0	detailed		1.40	7.52	114			
	Nov. 1, 1957		1.0	4.0			1.40	7.27	110			
	Nov. 2, 1958		1.0	5.0			1.40	7.27	110			
	Nov. 10, 1959		1.0	6.0			1.40	6.97	108			
	Nov. 2, 1961		2.0	8.0			1.40	6.60	100			
	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		
	July 25, 1955		11.61		4.42		3.81	7.08	4.42		7.08	
Nov. 6, 1956		6.92		.34		.48	.48	2.52		7.56		
Nov. 1, 1957		13.74		4.05		4.05	4.05	2.90		11.61		
Nov. 2, 1958		8.95		0		0	0	2.32		11.61		
Nov. 10, 1959		5.80		1.53		1.53	1.53	2.19		13.14		
Nov. 2, 1961		18.65		3.75		6.86	7.50	2.58		20.64		
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				
July 25, 1955		0.78		0.49	7.66	0.78	0.49	7.66				
Nov. 6, 1956		0		0	0	.78	.26	4.07				
Nov. 1, 1957		.25		.25	3.91	1.03	.26	4.07				
Nov. 2, 1958		0		0	0	1.03	.21	3.28				
Nov. 10, 1959		.30		.30	4.69	1.33	.22	3.44				
Nov. 2, 1961		.37		.18	2.81	1.70	.21	3.28				
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		c. AV. ANNUAL	d. TOT. TO DATE	e. PERIOD	f. TOT. TO DATE			
July 25, 1955						5.9	9.4					
Nov. 6, 1956						3.1	9.4					
Nov. 1, 1957						3.1	12.4					
Nov. 2, 1958						2.5	12.4					
Nov. 10, 1959						2.7	16.0					
Nov. 2, 1961						2.6	20.5					

25. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET ABOVE, AND BELOW, 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

Data through 1958 contained in U. S. Geological Survey Water Supply Paper in process of publication.

48. AGENCY SUPPLYING DATA U. S. Geological Survey
Water Resources Division

49. DATE April 27, 1962

**RESERVOIR SEDIMENT
DATA SUMMARY**

UPPERHANKS (1-A)

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SCS-34 Rev. 6-66

NAME OF RESERVOIR

63-8a

DATA SHEET NO.

DAM	1. OWNER USDI BLM		2. STREAM TRIB. OF BADGER WASH.		3. STATE COLO.			
	4. SEC. 24 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 5,058		9. SPILLWAY CREST ELEV. 5,054.7			
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							
	d. WATER SUPPLY	5,054.7	1.37	8.30	8.30	16. DATE NORMAL OPER. BEGAN		
	e. IRRIGATION					Dec. 1953		
	f. CONSERVATION							
	g. INACTIVE							
17. LENGTH OF RESERVOIR .076		MILES		AV. WIDTH OF RESERVOIR .026		MILES		
WATERSHED	18. TOTAL DRAINAGE AREA 0.066		SQ. MI.		22. MEAN ANNUAL PRECIPITATION 8.75(38 yr)		INCHES	
	19. NET SEDIMENT CONTRIBUTING AREA .066		SQ. MI.		23. MEAN ANNUAL RUNOFF .62(17 yr)		INCHES	
	20. LENGTH .36		MILES		24. MEAN ANNUAL RUNOFF 2.18(17 yr)		AC.-FT.	
	21. MAX. ELEV. 5,150		MIN. ELEV. 5,045		25. ANNUAL TEMP.: MEAN 51°F		RANGE --	
	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	5	1.37	8.30	3.81	
7-28-55	1.6	1.6	"	5	"	7.59	3.48	
11-4-56	1.3	2.9	"	5	"	7.59	2.56	
10-25-57	1.0	3.9	"	5	"	7.34	3.37	
11-20-58	1.1	5.0	"	5	"	7.34	3.37	
11-12-59	1.0	6.0	"	3	"	7.04	3.23	
11-2-61	2.0	8.0	"	5	1.36	6.70	3.07	
SURVEY DATA	26. DATE OF SURVEY	34. PERIOD ANNUAL PRECIPITATION		35. PERIOD WATER INFLOW, ACRE-FEET <u>2/</u>			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	4.43	3.81	7.08	4.43	7.08	
	11-4-56	7.4	.37	.48	.48	2.61	7.56	
	10-25-57	13.9	4.05	4.05	4.05	2.98	11.61	
	11-20-58	9.2	0	0	0	2.32	11.61	
	11-12-59	6.0	1.53	1.53	1.53	2.19	13.14	
	11-2-61	18.8	3.76	6.86	7.52	2.58	20.66	
	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	0.71	0.44	6.68	0.71	0.44	6.68		
11-4-56	0	0	0	.71	.24	3.64		
10-25-57	.25	.25	3.78	.96	.25	3.79		
11-20-58	0	0	0	.96	.19	2.88		
11-12-59	.30	.30	4.55	1.26	.21	3.18		
11-2-61	.35	.18	2.73	1.61	.20	3.03		
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*	13,094	13,094	5.3	8.6	143,700	144,638	
11-4-56	"	--	7,135	2.9	8.6	--	135,454	
10-25-57	"	7,425	7,429	3.0	11.6	89,036	119,260	
11-20-58	"	--	5,645	2.3	11.6	--	119,260	
11-12-59	"	9,061	6,233	2.5	15.2	287,613	138,303	
11-2-61	"	5,198	5,939	2.4	19.4	67,139	112,396	

*Assumed

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION											
	12-10	10-8	8-6	6-4	4-2	2-0						
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION											
10-25-57	23	55	20	2	0	0						
11-10-63	13	43	30	9	5	0						
11-9-68	8	27	43	18	4	0						

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														
10-25-57	24	36	22	10	6	2									
11-10-63	20	30	26	14	8	1	1								
11-9-68	15	25	23	19	14	13	1								

45. RANGE IN RESERVOIR OPERATION ^{2/}							
WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW, AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW, AC.-FT.
1954	48.80	43.1	3.81	1966	49.04	47.70	.35
1955	50.35	45.7	3.75	1967	49.47	47.81	1.26
1956	--	--	0	1968	53.82	47.80	8.54
1957	48.60	45.7	4.05	1969	48.30	48.30	0
1958	--	--	0	1970	48.53	48.30	.03
1959	48.08	46.40	1.53				
1960	47.38	46.40	0.64				
1961	52.39	46.40	6.86				
1962	49.03	46.95	1.18				
1963	48.22	46.95	.46				
1964	49.45	47.00	1.13				
1965	50.94	47.70	3.65				

46. ELEVATION-AREA-CAPACITY DATA								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
ORIGINAL CAPACITY 1953			CAPACITY - 1969					
43.1	0	0	48.3	.02	0			
44.0	.10	.04	49.0	.36	.13			
45.0	.25	.22	50.0	.65	.64			
46.0	.38	.53	52.0	1.03	2.32			
48.0	.62	1.52	54.0	1.22	4.57			
50.0	.83	2.97						
52.0	1.04	4.85						
54.0	1.27	7.15						

47. REMARKS AND REFERENCES

1/ From National Weather Service record at Fruita, Colo.

2/ Inflow amounts are for April 1 to Nov. 1 season.

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

UPPERHANKS (1-A)--Cont.

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SCS-34 Rev. 6-66

NAME OF RESERVOIR

63-8a

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		5		1.35		6.59		3.02	
	11-5-64		1.0	11.0	"		5				6.55		3.00	
	11-4-65		1.0	12.0	"		5				6.10		2.84	
	11-3-66		1.0	13.0	"		7				6.16		2.82	
	10-25-67		1.0	14.0	"		7		1.35		6.00		2.75	
	11-9-68		1.0	15.0	"		6				5.48		2.51	
	11-4-69		1.0	16.0	"		7				5.54		2.54	
	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					
	11-10-63		17.4		0.82	1.18	1.65	2.23	22.31					
	11-5-64		5.2		1.13	1.13	1.13	2.13	23.44					
	11-4-65		11.6		3.66	3.66	3.66	2.26	27.10					
	11-3-66		7.0		0	0	0	2.08	27.10					
	10-25-67		11.4		1.26	1.26	1.26	2.02	28.36					
11-9-68		13.3		8.58	8.58	8.58	2.46	36.94						
11-4-69		11.4		0	0	0	2.31	36.94						
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							
11-10-63		0.11	0.055	0.83	1.72	0.17	2.58							
11-5-64		.04	.04	.60	1.76	.16	2.42							
11-4-65		.45 ^{3/}	.45	6.82	2.21	.18	2.73							
11-3-66		-.06 ^{3/}	--	--	2.21	.17	2.58							
10-25-67		.16	.16	2.41	2.37	.17	2.58							
11-9-68		.52 ^{3/}	.52	7.84	2.89	.19	2.88							
11-4-69		-.06 ^{3/}	--	--	2.89	.18	2.72							
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							
11-10-63		90*	1,634	5,057	2.0	20.7	96,188	111,195						
11-5-64		"	1,188	4,744	1.9	21.2	51,057	108,296						
11-4-65		"	13,865	5,351	2.2	26.6	191,428	117,619						
11-3-66		"	--	5,057	2.0	26.6	--	117,619						
10-25-67		"	4,752	5,057	2.0	28.6	183,159	120,531						
11-9-68		"	15,444	5,645	2.3	34.8	87,417	112,838						
11-4-69		"	--	5,332	2.2	34.8	--	112,838						

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															
49. AGENCY SUPPLYING DATA															
50. DATE _____															

RESERVOIR SEDIMENT
DATA SUMMARY

UPPERHANKS (1-A)

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SCS-34 Rev. 6-66

NAME OF RESERVOIR

63-8a

DATA SHEET NO.

DAM	1. OWNER USDI BLM		2. STREAM TRIB. OF BADGER WASH		3. STATE COLO.											
	4. SEC. 24 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 5,058		9. SPILLWAY CREST ELEV. 5,054.7											
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															
	d. WATER SUPPLY		5,054.7		1.37		8.30		8.30		16. DATE NORMAL OPER. BEGAN					
	e. IRRIGATION															
	f. CONSERVATION															
	g. INACTIVE										Dec. 1953					
WATERSHED	17. LENGTH OF RESERVOIR .076 MILES				AV. WIDTH OF RESERVOIR .026 MILES											
	18. TOTAL DRAINAGE AREA 0.066 SQ. MI.				22. MEAN ANNUAL PRECIPITATION 8.75 (38 yr) INCHES											
	19. NET SEDIMENT CONTRIBUTING AREA .066 SQ. MI.				23. MEAN ANNUAL RUNOFF .62 (17 yr) INCHES											
	20. LENGTH .36 MILES		AV. WIDTH .18 MILES		24. MEAN ANNUAL RUNOFF 2.18 (17 yr) AC.-FT.											
	21. MAX. ELEV. 5,150		MIN. ELEV. 5,045		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		5		1.37		8.30		3.81	
	7-28-55		1.6		1.6		"		5		"		7.59		3.48	
	11-4-56		1.3		2.9		"		5		"		7.59		2.56	
	10-25-57		1.0		3.9		"		5		"		7.34		3.37	
	11-20-58		1.1		5.0		"		5		"		7.34		3.37	
	11-12-59		1.0		6.0		"		3		"		7.04		3.23	
	11-2-61		2.0		8.0		"		5		1.36		6.70		3.07	
	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			
	12-6-53		--		--		--		--		--		--			
	7-28-55		11.3		4.43		3.81		7.08		4.43		7.08			
	11-4-56		7.4		.37		.48		.48		2.61		7.56			
	10-25-57		13.9		4.05		4.05		4.05		2.98		11.61			
	11-20-58		9.2		0		0		0		2.32		11.61			
11-12-59		6.0		1.53		1.53		1.53		2.19		13.14				
11-2-61		18.8		3.76		6.86		7.52		2.58		20.66				
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		0.71		0.44		6.68		0.71		0.44		6.68				
11-4-56		0		0		0		.71		.24		3.64				
10-25-57		.25		.25		3.78		.96		.25		3.79				
11-20-58		0		0		0		.96		.19		2.88				
11-12-59		.30		.30		4.55		1.26		.21		3.18				
11-2-61		.35		.18		2.73		1.61		.20		3.03				
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*		13,094		13,094		5.3		8.6		143,700		144,638		
11-4-56		"		--		7,135		2.9		8.6		--		135,454		
10-25-57		"		7,425		7,429		3.0		11.6		89,036		119,260		
11-20-58		"		--		5,645		2.3		11.6		--		119,260		
11-12-59		"		9,061		6,233		2.5		15.2		287,613		138,303		
11-2-61		"		5,198		5,939		2.4		19.4		67,139		112,396		

*Assumed

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION												
	12-10	10-8	8-6	6-4	4-2	2-0							
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION												
10-25-57	23	55	20	2	0	0							
11-10-63	13	43	30	9	5	0							
11-9-68	8	27	43	18	4	0							

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														
10-25-57	24	36	22	10	6	2									
11-10-63	20	30	26	14	8	1	1								
11-9-68	15	25	23	19	14	3	1								

45. RANGE IN RESERVOIR OPERATION ^{2/}							
WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW, AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW, AC.-FT.
1954	48.80	43.1	3.81	1966	49.04	47.70	.35
1955	50.35	45.7	3.75	1967	49.47	47.81	1.26
1956	--	--	0	1968	53.82	47.80	8.54
1957	48.60	45.7	4.05	1969	48.30	48.30	0
1958	--	--	0	1970	48.53	48.30	.03
1959	48.08	46.40	1.53				
1960	47.38	46.40	0.64				
1961	52.39	46.40	6.86				
1962	49.03	46.95	1.18				
1963	48.22	46.95	.46				
1964	49.45	47.00	1.13				
1965	50.94	47.70	3.65				

46. ELEVATION-AREA-CAPACITY DATA								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
<u>ORIGINAL CAPACITY 1953</u>			<u>CAPACITY - 1969</u>					
43.1	0	0	48.3	.02	0			
44.0	.10	.04	49.0	.36	.13			
45.0	.25	.22	50.0	.65	.64			
46.0	.38	.53	52.0	1.03	2.32			
48.0	.62	1.52	54.0	1.22	4.57			
50.0	.83	2.97						
52.0	1.04	4.85						
54.0	1.27	7.15						

47. REMARKS AND REFERENCES

1/ From National Weather Service record at Fruita, Colo.

2/ Inflow amounts are for April 1 to Nov. 1 season.

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

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

UPPERHANKS (1-A)--Cont.

SCS-34 Rev. 6-66

NAME OF RESERVOIR

63-8a

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.-F. T.		
	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		5		1.35		6.59		3.02								
	11-5-64		1.0	11.0	"		5				6.55		3.00								
	11-4-65		1.0	12.0	"		5				6.10		2.84								
	11-3-66		1.0	13.0	"		7				6.16		2.82								
	10-25-67		1.0	14.0	"		7		1.35		6.00		2.75								
	11-9-68		1.0	15.0	"		6				5.48		2.51								
	11-4-69		1.0	16.0	"		7				5.54		2.54								
	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											
	11-10-63		17.4		0.82	1.18	1.65		2.23	22.31											
	11-5-64		5.2		1.13	1.13	1.13		2.13	23.44											
	11-4-65		11.6		3.66	3.66	3.66		2.26	27.10											
	11-3-66		7.0		0	0	0		2.08	27.10											
	10-25-67		11.4		1.26	1.26	1.26		2.02	28.36											
11-9-68		13.3		8.58	8.58	8.58		2.46	36.94												
11-4-67		11.4		0	0	0		2.31	36.94												
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													
11-10-63		0.11	0.055	0.83		1.72	0.17	2.58													
11-5-64		.04	.04	.60		1.76	.16	2.42													
11-4-65		.45 _{3/}	.45	6.82		2.21	.18	2.73													
11-3-66		-.06 _{3/}	--	--		2.21	.17	2.58													
10-25-67		.16	.16	2.41		2.37	.17	2.58													
11-9-68		.52 _{3/}	.52	7.84		2.89	.19	2.88													
11-4-69		-.06 _{3/}	--	--		2.89	.18	2.72													
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														
11-10-63		90%	1,634	5,057	2.0	20.7	96,188	111,195													
11-5-64		"	1,188	4,744	1.9	21.2	51,057	108,296													
11-4-65		"	13,365	5,351	2.2	26.6	191,428	117,619													
11-3-66		"	--	5,057	2.0	26.6	--	117,619													
10-25-67		"	4,752	5,057	2.0	28.6	83,159	120,531													
11-9-68		"	15,444	5,645	2.3	34.8	87,417	112,838													
11-4-69		"	--	5,332	2.2	34.8	--	112,838													

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				49. AGENCY SUPPLYING DATA				USGS		50. DATE _____					

RESERVOIR SEDIMENT
DATA SUMMARY

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

SCS-34 Rev. 6-66

Upper Hanks (1-A)

NAME OF RESERVOIR

63-8b

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								8.3															
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						.066 SQ. MI.						23. MEAN ANNUAL RUNOFF						INCHES					
	20. LENGTH				MILES				AV. WIDTH				MILES				24. MEAN ANNUAL RUNOFF				2.18 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.									
	10-28-70		1.0		17		Range D		7		1.35		5.54		2.54									
	11-18-71		1.0		18		"		7		1.35		5.28		2.42									
	11-09-72		1.0		19		"		7		1.35		5.33		2.44									
	10-18-73		1.0		20		"		7		1.35		5.22		2.39									
	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											
	10-28-70		7.83		0		0		0		2.17		36.95											
	11-18-71		8.34		.57		.57		.57		2.08		37.51											
	11-09-72		6.39		.86		.86		.86		2.01		38.37											
	10-18-73		10.15		1.23		1.23		1.23		1.98		39.60											
	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											
	10-28-70		0		0		0		2.89		.17		2.57											
	11-18-71		.26		.26		3.94		3.15		.18		2.73											
11-09-72		-.053/		--		--		3.15		.17		2.58												
10-18-73		.11		.11		1.66		3.26		.16		3.42												
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										
10-28-70		90*		0		5,038		2.0		34.8		--		--										
11-18-71		"		7722		5,351		2.2		38.0		--		--										
11-09-72		"		--		5,057		2.0		38.0 4		--		--										
10-18-73		"		3,254		4,744		1.9		39.3		--		--										

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															
4/ Capacity increase was not considered in computations of storage loss.															
48. AGENCY MAKING SURVEY				U. S. Geological Survey		50. DATE		January 1977							
49. AGENCY SUPPLYING DATA															