

RESERVOIR SEDIMENT

U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

DATA SUMMARY

San Carlos Reservoir (Coolidge Dam)

SCS-34 Rev. 6-66

NAME OF RESERVOIR

60-2a

DATA SHEET NO.

DAM	1. OWNER BIA - Int. Dept.		2. STREAM Gila		3. STATE Arizona			
	4. SEC. 17 TWP. 3S RANGE 18E		5. NEAREST P.O. Globe, Ariz.		6. COUNTY Gila, Pinal, Graham			
	7. LAT. 33° 10' 30" LONG. 110° 31' 45"		8. TOP OF DAM ELEVATION 2557 rdwy		9. SPILLWAY CREST ELEV. 2513			
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					Nov. 15, 1928		
	b. MULTIPLE USE							
	c. POWER							
	d. WATER SUPPLY							
	e. IRRIGATION	2523.00	19,580	1,241,670	1,266,837	16. DATE NORMAL OPER. BEGAN		
	f. CONSERVATION					Nov. 1928		
	g. INACTIVE	2382.63	about 1,780	25,167				
17. LENGTH OF RESERVOIR twenty two		MILES		AV. WIDTH OF RESERVOIR about 1.4		MILES		
WATERSHED	18. TOTAL DRAINAGE AREA 12,900		SQ. MI.		22. MEAN ANNUAL PRECIPITATION 13.8		INCHES	
	19. NET SEDIMENT CONTRIBUTING AREA 11,900		SQ. MI.		23. MEAN ANNUAL RUNOFF 0.30 1/		INCHES	
	20. LENGTH 250		MILES		AV. WIDTH 52		MILES	
	24. MEAN ANNUAL RUNOFF 209,239 1/						AC.-FT.	
	21. MAX. ELEV. 11,000+ ft		MIN. ELEV. 2308 ft		25. ANNUAL TEMP. MEAN 65.9		RANGE 26-111.2/	
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.
	1914 & 1915			Contour	5 & 10 ft CI	19,580	1,266,837	6.054
	1935	6.3 ^v		Range	40 R	19,580	1,232,725	5.891
	1937	1.9	8.2	Contour & Range	5 ft C	19,580	1,230,695	5.882
	1947	10.0	18.2	"	5 CI, 18 R	19,580	1,209,343	5.780
	1966	19.6	37.8	Range	51 R	19,580	1,170,118	5.592
	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	
	1935	approx. 13.6	269,590	425,580	1,698,390	269,590	1,698,390	
	1937	15.4	259,050	193,540	492,200	267,150	2,190,590	
	1947	13.9	239,825	1,072,500	2,398,250	252,130	4,588,840	
	1966		182,220	432,910	3,571,500	215,880	8,160,340	
	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	
	1935	34,112	5,410	.455	34,112	5,410	.455	
	1937	2,030	1,068	.090	36,142	4,408	.370	
	1947	21,352	2,135	.179	57,494	3,159	.265	
	1966	39,225	2,001	.168	96,719	2,559	.215	
	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
1935	not available	could only be estimated		0.43	2.69			
1937	"	"		0.35	2.85			
1947	"	"		0.25	4.54			
1966	"	"		0.20	7.63			

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26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION														
	215-148	148-123	123-98	98-73	73-48	48-23	23-Crest								
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION														
1928-1947	24	38	27	9	2	>0	0								
1928-1966	15	34	26	16	5	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														

45. RANGE IN RESERVOIR OPERATION							
WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW, AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW, AC.-FT.
Mar. 1942	2501.62	*		Maximum yearly inflows were 1,097,941 ac. ft. in 1941; 580,917 ac. ft. in 1968; & 437,545 ac. ft. in 1949. Minimum yearly inflows were 21,609 ac. ft. in 1956; 37,150 ac. ft. in 1950; and 47,403 ac. ft. in 1953.			
Apr. 1968	2491.17	*					
Apr. 1966	2477.30	*					
Apr. 1932	2471.56	*					
*Minimum elevation (elevation of lowest point of release) of 2382.63 ft, occurred many times.							

46. ELEVATION-AREA-CAPACITY DATA								
ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
2374	0	0	2430	4,538	103,089	2490	13,224	628,610
2380	174	414	2440	5,839	154,472	2500	15,250	771,100
2390	599	3,744	2450	7,123	218,712	2510	17,027	932,356
2400	1,508	13,764	2460	8,654	296,878	2520	18,974	1,112,295
2410	2,562	34,206	2470	10,460	392,969	2523	19,580	1,170,118
2420	3,319	64,190	2480	11,690	503,722			
From 1966 capacity tables								

47. REMARKS AND REFERENCES

1/ These figures include period for life of reservoir only (1928-1966).

2/ 1969 data

1935 Soil Conservation Service, Dept. of Agric.
1947 Corps of Engineers, U.S. Army
1966 U.S. Geol. Survey, Dept. of Interior

48. AGENCY MAKING SURVEY U.S. Geological Survey
49. AGENCY SUPPLYING DATA U.S. Geological Survey
50. DATE Sept. 28, 1971