DEPARTMENT OF THE ARMY — CORPS OF ENGINEERS

RESERVOIR SEDIMENTATION DATA SUMMARY

Hansen Flood-Control Basin (NAME OF RESERVOIR) — 70-18 a (DATA SHEET NO.)

DAM

1. OWNER Dept of Army, C. of E.	2. RIVER Tujunga Creek	3. STATE California
4. SEC. 18 TWP. 2N RANGE 14W	5. NEAREST TOWN San Fernando	6. COUNTY Los Angeles
7. STREAM BED ELEV. 990,0	8. TOP OF DAM ELEV. 1,087	9. SPILLWAY CREST ELEV. 1,060

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	1,060	794	35,800	35,800	
b. POWER					19 Feb. 1941
c. WATER SUPPLY					
d. IRRIGATION					16. DATE NORMAL OPER. BEGAN
e. CONSERVATION					
f. INACTIVE	990	132 1/	1,529 1/	1,529 1/	5 Sept. 1940

17. LENGTH OF RESERVOIR 1.3 MILES — AV. WIDTH OF RESERVOIR 1.0 MILES

WATERSHED

18. TOTAL DRAINAGE AREA	147 SQ.MI.	22. MEAN ANNUAL PRECIPITATION	24.9 INCHES
19. NET SEDIMENT CONTRIBUTING AREA	146 2/ SQ.MI.	23. MEAN ANNUAL RUNOFF	3.8 INCHES
20. LENGTH 24 MILES — AV. WIDTH	6 MILES	24. MEAN ANNUAL RUNOFF	30,000* AC.-FT.
21. MAX. ELEV. 6,500 — MIN. ELEV.	990	25. CLIMATIC CLASSIFICATION	Sub-humid

SURVEY DATA

26. DATE OF SURVEY	27. PERIOD YEARS 3/	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.
Sept. 1940	Original	Survey	Contour	5 feet	794	35,800	244
July 1941	0.8	0.8	"	"	786	35,200	239
Oct. 1943	2.3	3.1	"	"	789	34,100	232
Nov. 1945	2.1	5.2	"	"	786	33,500	228

26. DATE OF SURVEY	34. PERIOD ANNUAL PRECIPITATION	35. PERIOD WATER INFLOW ACRE-FEET a. MEAN ANNUAL	b. MAX. ANNUAL	c. PERIOD TOTAL	36. WATER INFL. TO DATE AC.-FT. a. MEAN ANNUAL	b. TOTAL TO DATE
July 1941	48.03			91,040		91,040
Oct. 1943	27.03	38,900	75,930	89,430	58,200	180,470
Nov. 1945	26.22	35,400	59,720	74,340	49,000	254,810

26. DATE OF SURVEY	37. PERIOD SEDIMENT DEPOSITS ACRE-FEET a. PERIOD TOTAL	b. AV. ANNUAL	c. PER SQ.MI.-YR.	38. TOTAL SED. DEPOSITS TO DATE ACRE-FEET a. TOTAL TO DATE	b. AV. ANNUAL	c. PER SQ.MI.-YR.
July 1941	600			600		
Oct. 1943	1,100	325	1.14	1,700	549	3.7
Nov. 1945	600	286	1.36	2,300	443	3.0

26. DATE OF SURVEY	39. AV. DRY WGT. LBS. PER CU.FT.	40. SED. DEP. TONS PER SQ.MI.-YR. a. PERIOD	b. TOTAL TO DATE	41. STORAGE LOSS PCT. a. AV. ANNUAL	b. TO DATE	42. SED. INFLOW PPM a. PERIOD	b. TO DATE
July 1941	—	—	—		1.68	—	—
Oct. 1943	—	—	—	1.54	4.75	—	—
Nov. 1945	—	—	—	1.24	6.43	—	—

*Assumed

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26. DATE OF SURVEY	43. DEPTH DESIGNATION — RANGE IN FEET ABOVE, AND BELOW, CREST ELEVATION											
	-70	70-50	50-30	30-Crest								
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION											
July 1941	65	35	0	0								
Oct. 1943	51	49	0	0								
Nov. 1945	37	48	10	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														

45. RANGE IN RESERVOIR OPERATION

WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW AC.-FT.
1940-41	1,016.2	dry	93,800				
1941-42	992.4	981.8	9,870				
1942-43	1,036.5	979.5	75,930				
1943-44	1,022.3	984.7	59,720				
1944-45	1,004.1	990.9	14,310				

46. ELEVATION-AREA-CAPACITY DATA (Nov 1945)

ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
990	132	1,529	1,020	436	9,992	1,050	663	26,275
995	175	2,291	1,025	474	12,268	1,055	724	29,740
1,000	232	3,308	1,030	509	14,728	1,060	786	33,514
1,005	285	4,601	1,035	543	17,359			
1,010	334	6,150	1,040	571	20,145			
1,015	383	7,940	1,045	611	23,094			

47. REMARKS AND REFERENCES

1/ In November 1945

2/ Item 19 includes 82 sq. mi. above Big Tujunga Dam; however, practically all sediment inflow is passed downstream by sluicing operations.

3/ Periods include first month, but not the last month.

48. AGENCY SUPPLYING DATA
Dept of Army, CE, Los Angeles District

49. DATE Revised June 1962

RESERVOIR SEDIMENT
DATA SUMMARY

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS

HANSEN FLOOD CONTROL BASIN
NAME OF RESERVOIR

70-18c
DATA SHEET NO.

DAM

1. OWNER Corps of Engineers	2. STREAM Tujunga Creek	3. STATE California
4. SEC. Land TWP. Grant RANGE	5. NEAREST P O Pacoima	6. COUNTY Los Angeles
7. LAT. 34° 15' 37" LONG 118° 23 04 "	8. TOP OF DAM ELEVATION 1,087	9. SPILLWAY CREST ELEV. 1,060

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	1,060	794	33,100	33,100	
b. MULTIPLE USE				35,800	Sep 40
c. POWER					
d. WATER SUPPLY					16. DATE NORMAL OPER. BEGAN
e. IRRIGATION					
f. CONSERVATION					Sep 40
g. INACTIVE	990	198	2,700	2,700	

WATERSHED

17. LENGTH OF RESERVOIR 1.3 MILES		AV. WIDTH OF RESERVOIR 1.0 MILES	
18. TOTAL DRAINAGE AREA 147 SQ. MI.		22. MEAN ANNUAL PRECIPITATION 24.9 INCHES	
19. NET SEDIMENT-CONTRIBUTING AREA 146 SQ. MI.		23. MEAN ANNUAL RUNOFF 2.22 INCHES	
20. LENGTH 24 MILES	AV. WIDTH 6 MILES	24. MEAN ANNUAL RUNOFF 17,410 (21) AC.-FT.	
21. MAX. ELEV. 6,500	MIN. ELEV. 990	25. ANNUAL TEMP MEAN 62.2° RANGE 48.8°-75.6°	

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.
Sep 40	Orig survey		Contour	5'	794	35,800	2.06
Jul 41	0.8	0.8	Contour	5'	786	35,200	2.02
Oct 43	2.3	3.1	Contour	5'	789	34,100	1.96
Nov 45	2.1	5.2	Contour	5'	786	33,500	1.92
Jan 62	16.2	21.4	Contour	2'	780	33,265	1.91
Aug 69	7.58	28.91	Contour	2'	782	29,700	1.71

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
Sep 40	Original survey					
Jul 41	48.03			91,040	93,800	91,040
Oct 43	27.03	38,880	75,930	89,430	59,870	180,470
Nov 45	26.22	35,400	59,720	74,340	50,720	254,810
Jan 62	18.54	6,855	34,250	111,051	17,096	365,861
Aug 69	27.58	41,997	180,372	318,336	23,666	684,197

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
Sep 40	Original survey					
Jul 41	600	[illegible]	4.1	600	600	4.1
Oct 43	1,100	550	3.78	1,700	570	3.9
Nov 45	600	300	2.06	2,300	460	3.2
Jan 62	235	14.5	.01 [illegible]	2,535	118	0.8
Aug 69	3,565	470	3.22	6,100	211	1.45

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
Sep 40	Original survey						
Jul 41				1.8	1.7		
Oct 43				1.7	4.8		
Nov 45				1.4	6.4		
Jan 62				0.33	7.1		
Aug 69				0.59	17.0		

26. DATE OF SURVEY	43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION										
	-70	70-50	50-30	30-Crest							
	PERCENT OF TOTAL SEDIMENT LOCATED WITHIN DEPTH DESIGNATION										
Sep 40	Original survey										
Jul 41	65	35	0	0							
Oct 43	51	49	0	0							
Nov 45	37	48	10	5							
Jan 62	56	44	0	0							
Aug 69	25	45	25	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													

45. RANGE IN RESERVOIR OPERATION

WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW, AC.-FT.	WATER YEAR	MAX. ELEV.	MIN. ELEV.	INFLOW, AC.-FT.
1945-46	1010.63	989.76	12,206	1957-58	1012.55	975.60	34,133
1946-47	998.41	989.17	17,160	1958-59	997.50	982.75	2,166
1947-48	993.29	986.77	1,722	1959-60	983.52	981.69	330
1948-49	991.86	977.76	93	1960-61	985.30	982.16	486
1949-50	992.97	973.24	250	1961-62	1011.19	981.82	25,153
1950-51	998.71	968.15	34	1962-63	988.70	982.44	765
1951-52	1023.78	Dry	32,175	1963-64	985.35	982.32	645
1952-53	999.27	979.32	1,430	1964-65	992.83	981.71	1,484
1953-54	996.37	982.22	5,090	1965-66	1017.57	982.29	57,363
1954-55	985.79	977.68	712	1966-67	1013.58	990.42	41,175
1955-56	999.00	975.61	2,100	1967-68	1007.33	988.92	16,581
1956-57	992.98	976.55	495	1968-69	1003.78	986.81	180,372

46. ELEVATION-AREA-CAPACITY DATA

ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY	ELEVATION	AREA	CAPACITY
990	72	477	1030	492	11,071			
995	97	891	1035	540	13,636			
1000	143	1512	1040	567	16,391			
1005	182	2309	1045	610	19,330			
1010	243	3362	1050	660	22,504			
1015	320	4774	1055	720	25,951			
1020	397	6570	1060	782	29,700			
1025	455	8704						

47. REMARKS AND REFERENCES

1/ Item 19 - Includes 82 sq. mi. above Big Tujunga Dam; however, practically all sediment inflow is passed downstream by sluicing operations.

2/ Item 25 - Temperatures taken at Pasadena, California.

48. AGENCY MAKING SURVEY Corps of Engineers, Los Angeles, Ca

49. AGENCY SUPPLYING DATA Corps of Engineers, Los Angeles, Ca 50. DATE 5 Feb 70