

RESERVOIR SEDIMENTATION
DATA SUMMARY

Sawpit Flood Control Basin

70-33a

NAME OF RESERVOIR

DATA SHEET NO.

| DAM | | 1. OWNER LACFCD | | 2. RIVER Sawpit Creek | | 3. STATE California | |
|---|---|--|-----------------------------------|---|--|--------------------------------------|------------------------|
| | | 4. SEC. TWP. RANGE | | 5. NEAREST TOWN Monrovia | | 6. COUNTY Los Angeles | |
| | | 7. STREAM BED ELEV. 1,302 | | 8. TOP OF DAM ELEV. 1,375 | | 9. SPILLWAY CREST ELEV. 1,360 | |
| 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 | 1,360 | 8.8 | 476 | 476 | 1926-27 | |
| | b. POWER | | | | | | |
| | c. WATER SUPPLY | | | | | | |
| | d. IRRIGATION | | | | | 16. DATE NORMAL OPER. BEGAN | |
| | e. CONSERVATION | | | | | Jun 1927 | |
| f. INACTIVE | 1/ 1,302 | 2.3 | 43.6 | 43.6 | | | |
| 17. LENGTH OF RESERVOIR 0.35 MILES | | | | AV. WIDTH OF RESERVOIR 0.04 MILES | | | |
| WATERSHED | 18. TOTAL DRAINAGE AREA 3.3 SQ. MI. | | | 22. MEAN ANNUAL PRECIPITATION 29.74 INCHES | | | |
| | 19. NET SEDIMENT CONTRIBUTING AREA 3.3 SQ. MI. | | | 23. MEAN ANNUAL RUNOFF 2.76 INCHES | | | |
| | 20. LENGTH 2.8 MILES | | AV. WIDTH 1.2 MILES | | 24. MEAN ANNUAL RUNOFF 493 (38) AC.-FT. | | |
| | 21. MAX. ELEV. 5,376 | | MIN. ELEV. 1,360 | | 25. CLIMATIC CLASSIFICATION Subhumid | | |
| | 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 |
| 1923 | | Original | | | 8.8 | 476 | 144 |
| Oct 1935 | 8.3 | 8.3 | Contour | 5' | 9.4 | 389 | 118 |
| May 1938 | 2.6 | 10.9 | " | 5' | 7.9 | 320 | 97 |
| May 1941 | 3.0 | 13.9 | " | 5' | 8.0 | 342 | 104 |
| Dec 1943 | 2.6 | 16.5 | " | 5' | 8.7 | 322 | 98 |
| Mar 1954 | 10.2 | 26.7 | " | 5' | 8.7 | 305 | 92 |
| Sep 1959 | 5.5 | 32.2 | " | 5' | 8.7 | 289 | 88 |
| 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 |
| | Oct 1935 | 22.1 | 283 | 710 | 2,350 | 284 | 2,350 |
| | May 1938 | 40.5 | 1,870 | 2,910 | 4,860 | 662 | 7,210 |
| | May 1941 | 37.6 | 890 | 2,180 | 2,670 | 710 | 9,880 |
| | Dec 1943 | 22.0 | 1,220 | 2,970 | 3,170 | 791 | 13,050 |
| | Mar 1954 | 25.3 | 321 | 1,110 | 3,270 | 612 | 16,320 |
| | Sep 1959 | 21.1 | 643 | 1,371 | 3,535 | 617 | 19,860 |
| | 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.-YR. | a. TOTAL TO DATE | b. AV. ANNUAL | c. PER SQ. MI.-YR. |
| Oct 1935 | 87 | 10.5 | 3.18 | 87 | 10.5 | 3.18 | |
| May 1938 | 69 | 26.5 | 8.03 | 156 | 14.3 | 4.33 | |
| May 1941 | 2/ 29 | 9.7 | 2.94 | 185 | 13.3 | 4.03 | |
| Dec 1943 | 2/ 26 | 10.0 | 3.03 | 211 | 12.8 | 3.88 | |
| Mar 1954 | 17 | 1.7 | .51 | 228 | 8.5 | 2.58 | |
| Sep 1959 | 55 | 10.0 | 3.03 | 283 | 8.8 | 2.67 | |
| 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. TO DATE | a. PERIOD | b. TO DATE |
| Oct 1935 | | | | 3/ 2.21 | 4/ 18.3 | | |
| May 1938 | | | | 3.00 | 32.8 | | |
| May 1941 | | | | 2.80 | 28.2 | | |
| Dec 1943 | | | | 2.69 | 32.4 | | |
| Mar 1954 | | | | 1.79 | 35.9 | | |
| Sep 1959 | | | | 1.85 | 39.2 | | |

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

| | | | | | | | | | | | | | | |
|-----------------------|---|-------|-------|-------|-------|-------|-------|-------|-------|--------|------|------|------|------|
| 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. |
| 1927-28 | | | 26 | 1943-44 | 1,330.3 | 1,261.0 | 745 |
| 1928-29 | | | 96 | 1944-45 | 1,310.8 | 1,287.4 | 316 |
| 1929-30 | | | 219 | 1945-46 | 1,315.4 | 1,280.1 | 254 |
| 1930-31 | | | 97 | 1946-47 | 1,311.2 | 1,267.7 | 362 |
| 1931-32 | NR | NR | 710 | 1947-48 | 1,310.0 | 1,302.8 | 23 |
| 1932-33 | 1,298.3 | Dry | 184 | 1948-49 | 1,310.0 | 1,303.8 | 42 |
| 1933-34 | 1,309.7 | 1,256.1 | 468 | 1949-50 | 1,310.1 | 1,306.8 | 86 |
| 1934-35 | 1,309.8 | Dry | 548 | 1950-51 | 1,307.1 | 1,291.7 | 32 |
| 1935-36 | 1,310.8 | Dry | 574 | 1951-52 | 1,327.2 | 1,299.7 | 1,112 |
| 1936-37 | 1,311.5 | Dry | 1,434 | 1952-53 | 1,310.0 | 1,262.0 | 88 |
| 1937-38 | 1,366.1 | Dry | 2,909 | 1953-54 | 1,316.7 | 1,306.5 | 274 |
| 1938-39 | 1,311.2 | 1,275.0 | 232 | 1954-55 | 1,311.6 | 1,309.8 | 142 |
| 1939-40 | 1,311.8 | 1,289.2 | 264 | 1955-56 | 1,321.9 | 1,303.4 | 204 |
| 1940-41 | 1,320.6 | 1,352.0 | 2,180 | 1956-57 | 1,310.3 | 1,305.0 | 80 |
| 1941-42 | 1,310.2 | Dry | 107 | 1957-58 | 1,317.2 | 1,303.5 | 1,371 |
| 1942-43 | 1,354.3 | 1,257.0 | 2,966 | 1958-59 | 1,336.6 | Dry | 815 |

| 46. ELEVATION-AREA-CAPACITY DATA (Sep 1959) | | | | | | | | |
|---|------|----------|-----------|------|----------|-----------|------|----------|
| ELEVATION | AREA | CAPACITY | ELEVATION | AREA | CAPACITY | ELEVATION | AREA | CAPACITY |
| 1,249 | 0 | 0 | 1,330 | 4.3 | 98.7 | | | |
| 1,250 | .005 | .005 | 1,340 | 6.0 | 148.6 | | | |
| 1,260 | .20 | 1.20 | 1,350 | 7.0 | 212.9 | | | |
| 1,270 | .36 | 3.81 | 1,360 | 8.7 | 289.2 | | | |
| 1,280 | .52 | 8.04 | 1,370 | 10.3 | 383.6 | | | |
| 1,290 | .90 | 14.8 | 1,380 | 12.2 | 495.1 | | | |
| 1,300 | 1.4 | 26.0 | | | | | | |
| 1,310 | 1.7 | 41.5 | | | | | | |
| 1,320 | 2.9 | 63.1 | | | | | | |

47. REMARKS AND REFERENCES

- 1/ Item 11f - the uncontrolled outlet and standpipe determines the elevation of ponded water.
- 2/ Item 37a - Includes 51 and 6 acre-feet, respectively, of sluiced sediment.
- 3/ Item 41a - Based on summation of deposits in item 37a.
- 4/ Item 41b - Based on data in item 32.

48. AGENCY SUPPLYING DATA LACFCD & C of E

49. DATE Revised July 1962

**RESERVOIR SEDIMENT
DATA SUMMARY**

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS

Sawpit Flood Control Basin

NAME OF RESERVOIR

70-33b

DATA SHEET NO.

| | | | | | | | | | |
|---|--|---|---|-------------------------------------|--|-----------------------------|----------------------------------|-------------------------------------|-----------------|
| DAM | 1. OWNER LACPCD | | 2. STREAM Sawpit Creek | | 3. STATE California | | | | |
| | 4. SEC. 13 TWP. IN RANGE 11W | | 5. NEAREST P.O. Monrovia | | 6. COUNTY Los Angeles | | | | |
| | 7. LAT 34° 10' 27" LONG 117° 59' 10" | | 8. TOP OF DAM ELEVATION 1,375 | | 9. SPILLWAY CREST ELEV. 1,360 | | | | |
| 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 | 1,360 | 8.8 | 476 | 476 | 1926-27 | | | |
| | b. MULTIPLE USE | | | | | | | | |
| | c. POWER | | | | | | | | |
| | d. WATER SUPPLY | | | | | | | | |
| | e. IRRIGATION | | | | | 16. DATE NORMAL OPER. BEGAN | | | |
| | f. CONSERVATION | | | | | Jun 27 | | | |
| g. INACTIVE <u>1/</u> | 1,302 | 2.3 | 43.6 | 43.6 | | | | | |
| 17. LENGTH OF RESERVOIR 0.35 MILES | | | AV. WIDTH OF RESERVOIR 0.04 MILES | | | | | | |
| 18. TOTAL DRAINAGE AREA 3.3 SQ. MI. | | | 22. MEAN ANNUAL PRECIPITATION 29.74 INCHES | | | | | | |
| 19. NET SEDIMENT CONTRIBUTING AREA 3.3 SQ. MI. | | | 23. MEAN ANNUAL RUNOFF 4.71 INCHES | | | | | | |
| 20. LENGTH 2.8 MILES | | | 24. MEAN ANNUAL RUNOFF 829 (49) AC.-FT. | | | | | | |
| 21. MAX. ELEV. 5,376 | | | 25. ANNUAL TEMP. MEAN 62.2° RANGE 48.8°-75.6° | | | | | | |
| 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. | |
| May 62 | | 2.7 | 34.9 | Contour | 5' | 8.8 | 271.8 | 0.52 | |
| Aug 64 | | 2.2 | 37.1 | Contour | 5' | 8.8 | 308.5 | 0.61 | |
| Jul 66 | | 1.9 | 39.0 | Contour | 5' | 8.5 | 284.3 | 0.55 | |
| May 67 | | .7 | 39.7 | Contour | 5' | 8.5 | 269.2 | 0.48 | |
| Nov 69 | | 2.7 | 42.4 | Contour | 5' | 8.7 | 391.0 | 0.47 | |
| 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 | |
| May 62 | | 19.64 | | 550 | 1,173 | 1,486 | 612 | 21,346 | |
| Aug 64 | | 12.03 | | 220 | 256 | 483 | 588 | 21,829 | |
| Jul 66 | | 34.40 | | 1214 | 1,914 | 2,307 | 619 | 24,136 | |
| Mar 67 | | -- | | -- | -- | 2,364 | 667 | 26,500 | |
| Nov 69 | | 27.35 | | 4823 | 9,557 | 13,022 | 932 | 39,522 | |
| 26. DATE OF SURVEY | | 37. <u>3/</u> 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 | | |
| May 62 | | 17 | 6.3 | 1.91 | 300 | 8.60 | 2.61 | | |
| Aug 64 | | 37 | 16.8 | 5.09 | 337 | 9.09 | 2.75 | | |
| Jul 66 | | 24 | 12.6 | 3.82 | 361 | 9.26 | 2.81 | | |
| Mar 67 | | 15 | -- | --- | 376 | 9.47 | 2.87 | | |
| Nov 69 | | 146. | 54.1 | 16.39 | 522 | 12.3 | 3.73 | | |
| 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 |
| May 62 | | | | | | 1.23 | 42.9 | | |
| Aug 64 | | | | | | .95 | 35.2 | | |
| Jul 66 | | | | | | 1.03 | 40.3 | | |
| Mar 67 | | | | | | 1.10 | 43.5 | | |
| Nov 69 | | | | | | 42 | 17.9 | | |

| 26. DATE OF SURVEY | 43. DEPTH DESIGNATION RANGE IN FEET BELOW, AND ABOVE, CREST ELEVATION | | | | | | | | | | | |
|--------------------|---|---------|--------|-------|-------|-------|-------|-------|-------|-------|-------|----------|
| | 110-100 | 110-100 | 100-90 | 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 | | | | | | | | | | | |
| May 62 | 1 | 2 | 3 | 4 | 5 | 8 | 10 | 12 | 16 | 20 | 19 | |
| Aug 64 | Excavation of 36.8 acre-feet increased storage capacity. | | | | | | | | | | | |
| Jul 66 | 2 | 12 | 12 | 11 | 15 | 21 | 16 | 9 | 0 | -1 | 5 | |
| Mar 67 | | | 15 | 20 | 24 | 30 | 27 | 1 | -11 | -5 | -1 | |
| Nov 69 | Excavation of 268 ac ft | | | | | | | | | | | |

| 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. |
| 1957-58 | 1317.2 | 1,303.5 | 1,371 | | | | |
| 1958-59 | 1336.6 | Dry | 815 | | | | |
| 1959-60 | 1311.5 | 1,267.4 | 201 | | | | |
| 1960-61 | 1310.3 | 1,281.0 | 111 | | | | |
| 1961-62 | 1341.8 | 1,249.5 | 1,269 | | | | |
| 1962-63 | 1313.1 | 1,309.9 | 256 | | | | |
| 1963-64 | 1310.4 | 1,255.0 | 271 | | | | |
| 1964-65 | 1310.7 | 1,280.0 | 405 | | | | |
| 1965-66 | 1342.3 | 1,309.9 | 2,224 | | | | |
| 1966-67 | 1336.8 | 1,307.6 | 3,985 | | | | |
| 1967-68 | 1311.7 | 1,302.2 | 1,511 | | | | |
| 1968-69 | 1367.8 | 1,305.0 | 9,557 | | | | |

| 46. ELEVATION-AREA-CAPACITY DATA | | | | | | | | |
|----------------------------------|------|----------|-----------|------|----------|-----------|------|----------|
| ELEVATION | AREA | CAPACITY | ELEVATION | AREA | CAPACITY | ELEVATION | AREA | CAPACITY |
| 1259 | 0 | 0 | 1320 | 4.6 | 129 | | | |
| 1260 | .06 | .06 | 1330 | 5.4 | 179 | | | |
| 1270 | .73 | 4.07 | 1340 | 6.4 | 239 | | | |
| 1280 | 1.4 | 15.7 | 1350 | 7.6 | 309 | | | |
| 1290 | 2.0 | 33.5 | 1360 | 8.7 | 391 | | | |
| 1300 | 2.6 | 56.8 | 1370 | 9.9 | 484 | | | |
| 1310 | 3.5 | 88.1 | 1380 | 12.0 | 593 | | | |

47. REMARKS AND REFERENCES

1/ Item 11g - The uncontrolled outlet and standpipe determines the elevation of ponded water.

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

3/ Item 37 - Sediment removed by excavation and sluicing at various times.

48. AGENCY MAKING SURVEY **LACFCD**

49. AGENCY SUPPLYING DATA **C of E**

50. DATE 11 Feb 71