

KEY STORAGE FACILITIES

Reservoir: BETTY NO. 1

Date: 22 Feb. 2001

Location: SESW 35, T40N, R72W

Owner: RANCH CO.
(STEVE DILTS)

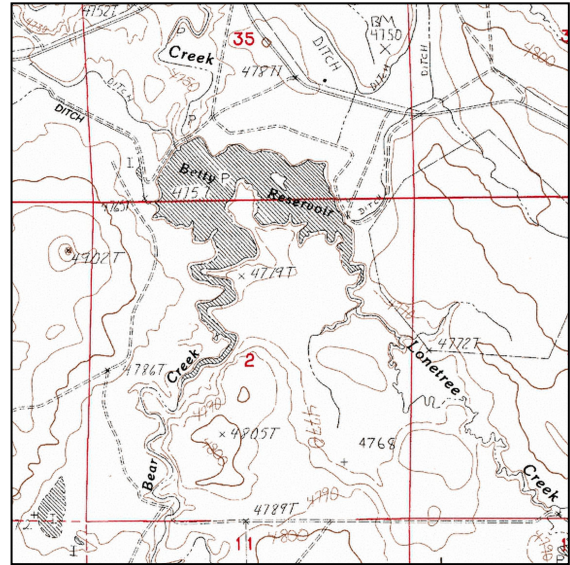
Year of Construction: 1954

Enlargement History: 1956

Total Storage: 2029 acre-feet

Active Storage: 1345 acre-feet

Dead Storage: 28.30 acre-feet



Area/Capacity Data: *(Source: "Map to Accompany Applications for First Enlargement, Betty No. 1 Reservoir, Betty No. 2 Ditch, and Betty No. 3 Ditch," on file in Safety of Dams office, SEO, Cheyenne, Wyoming.)*

| Contour | Area (acres) | Average | Capacity (af) |
|----------------------------|-------------------------|---------|---------------|
| 80 | 1.8 | | |
| | | 5.66 | 28.30 |
| 85 | 9.52 | | |
| | | 16.29 | 81.45 |
| 90 | 23.06 | | |
| | | 35.39 | 176.95 |
| 95 | 47.72 | | |
| | | 74.92 | 374.60 |
| 100 | 102.12 | | |
| PRESENT AVAILABLE CAPACITY | | | 661.30 |
| 100 | 102.12 | | |
| | | 136.75 | 683.75 |
| 105 | 171.38 | | |
| | Proposed Enlargement | | 683.75 |
| | Proposed Total Capacity | | 1345.05 |

Dam Construction Type: Earth Fill

Outlet: Eight-inch welded steel pipe in dam;
Twelve-inch welded steel pipe in dike to east of dam

Spillway: East (dam) spillway:
100 feet wide at base, 140 feet wide at dam crest, walls at 3:1 slope. Max flow: 1778.40 cfs

West (dike) spillway:
515-foot-wide notch cut at approx. 3:1 slope, 5 feet deep at deepest point. Max flow: 11,553.65 cfs

End-of-Month Storage Records: No

Water Rights: *(Source: Tabulation of Adjudicated Surface Water Rights of the State of Wyoming, Water Division Number Two, Oct. 1999)*

| Reservoir | Permit Number | Permitted Use | Priority Date | Volume (af) | Headgate Location (S-T-R) |
|------------------------|---------------|---------------|---------------|-------------|---------------------------|
| Betty No. 1 Res. | 6124R | I,S | 03-18-1954 | 661.3 | 35-40-072 |
| First Enl. Betty No. 1 | 6322R | I,S | 04-24-1956 | 683.75 | 35-40-072 |

Designated Use: Irrigation

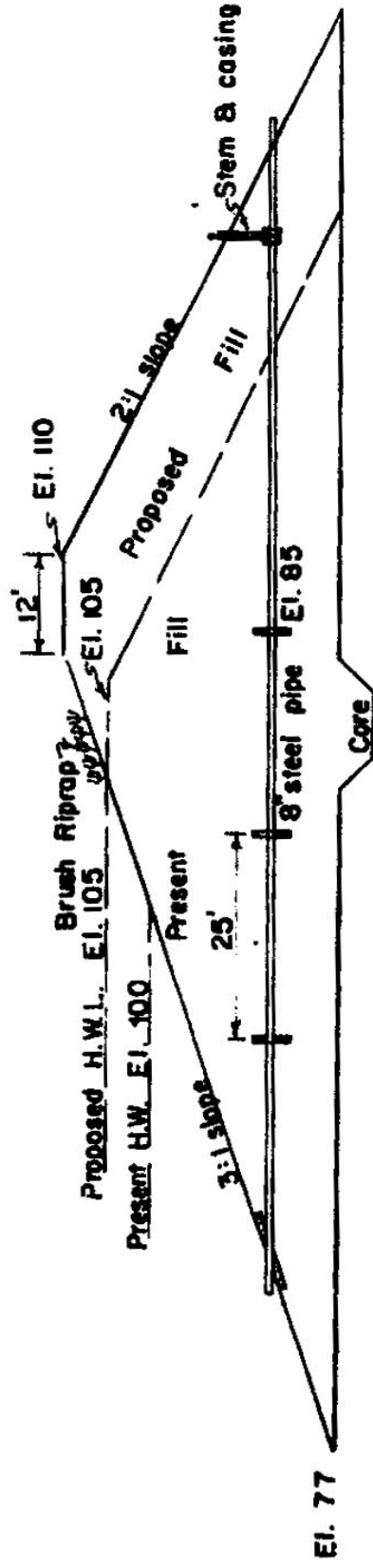
Associated Irrigation Diversions: Betty No. 2 and Betty No. 3 ditches

Associated Industrial Diversions: None

Operational Discussion: Betty No. 1 Reservoir receives water from Bear and Lonetree Creeks, and according to the permit that accompanies its first enlargement petition, two centrifugal pumps pull water from the reservoir to water the ditches on either side of the headgates.

References: *Map to Accompany Applications for First Enlargement Betty No. 1 Reservoir, Betty No. 2 Ditch, and Betty No. 3 Ditch*, John C. Dilts, Douglas, Wyoming, 25 Sept. 1956.

Betty No. 1 Dam cross section (Source: "Map to Accompany Applications for First Enlargement, Betty No. 1 Reservoir, Betty No. 2 Ditch, and Betty No. 3 Ditch," on file in Safety of Dams office, SEO, Cheyenne, Wyoming.):



MAXIMUM CROSS-SECTION OF DAM
Scale: 1" = 20'

Net Evaporation from Betty No. 1 Reservoir:

Lewis Annual Evaporation (in.) 45
 Total Storage (acre-feet) 2,029

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|-------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Average percent of storage | 52.1 | 55.7 | 63.8 | 67.0 | 73.3 | 74.9 | 73.5 | 71.3 | 69.2 | 51.6 | 51.3 | 51.5 |
| Generated storage (acre-feet) | 1057 | 1129 | 1294 | 1359 | 1488 | 1519 | 1491 | 1447 | 1405 | 1046 | 1041 | 1044 |
| Corresponding area (acres) | 121.3 | 125.1 | 133.6 | 136.9 | 143.5 | 145.1 | 143.7 | 141.4 | 139.3 | 120.8 | 120.5 | 120.7 |

Calculations:

| | | | | | | | | | | | | |
|--|-------|-------|-------|------|-------|-------|-------|------|-------|------|-------|------------|
| Monthly Lewis Evap. (inches) | 1.215 | 1.125 | 1.755 | 3.6 | 5.175 | 5.895 | 7.695 | 7.02 | 5.175 | 3.42 | 1.755 | 1.17 |
| Monthly Precipitation (inches) | 0.25 | 0.25 | 0.75 | 1.75 | 2.75 | 2.25 | 1.75 | 1.25 | 1.25 | 0.75 | 0.75 | 0.25 |
| Net Evaporation (inches) | 0.965 | 0.875 | 1.005 | 1.85 | 2.425 | 3.645 | 5.945 | 5.77 | 3.925 | 2.67 | 1.005 | 0.92 |
| Total Net Evaporation (acre-feet) | 10 | 9 | 11 | 21 | 29 | 44 | 71 | 68 | 46 | 27 | 10 | 9 |
| | | | | | | | | | | | | 355 |