

Figure 5. Bathymetric elevations from multibeam bathymetric survey (Smith and others, 2026) and lidar point-cloud data (U.S. Geological Survey, 2022a) for Council Grove Lake, Kansas, 2024.

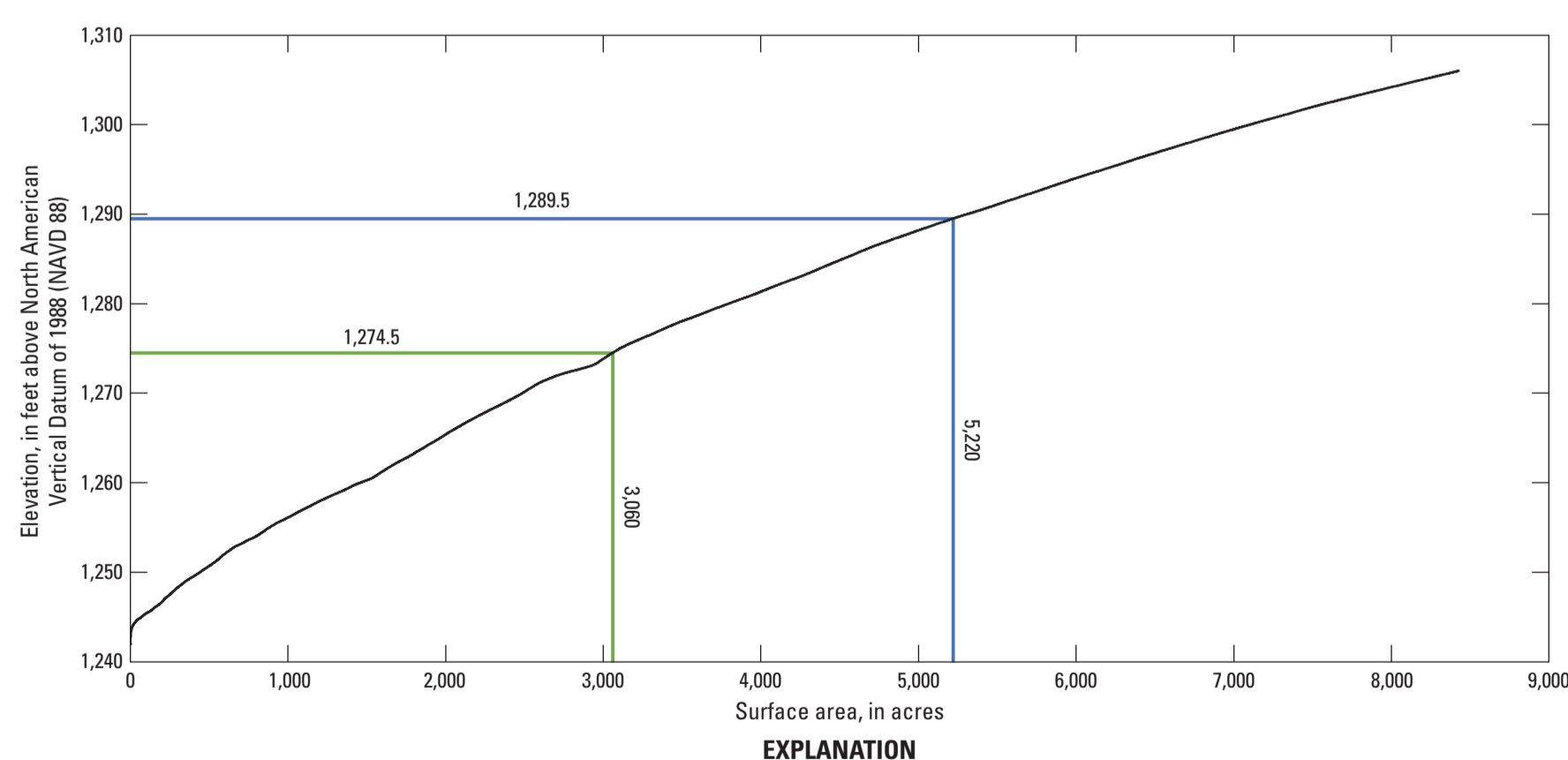


Figure 6. Relation between elevation and surface area generated from combined multibeam bathymetric survey data (Smith and others, 2026) and lidar point-cloud data (U.S. Geological Survey, 2022a) for Council Grove Lake, Kansas, 2024.

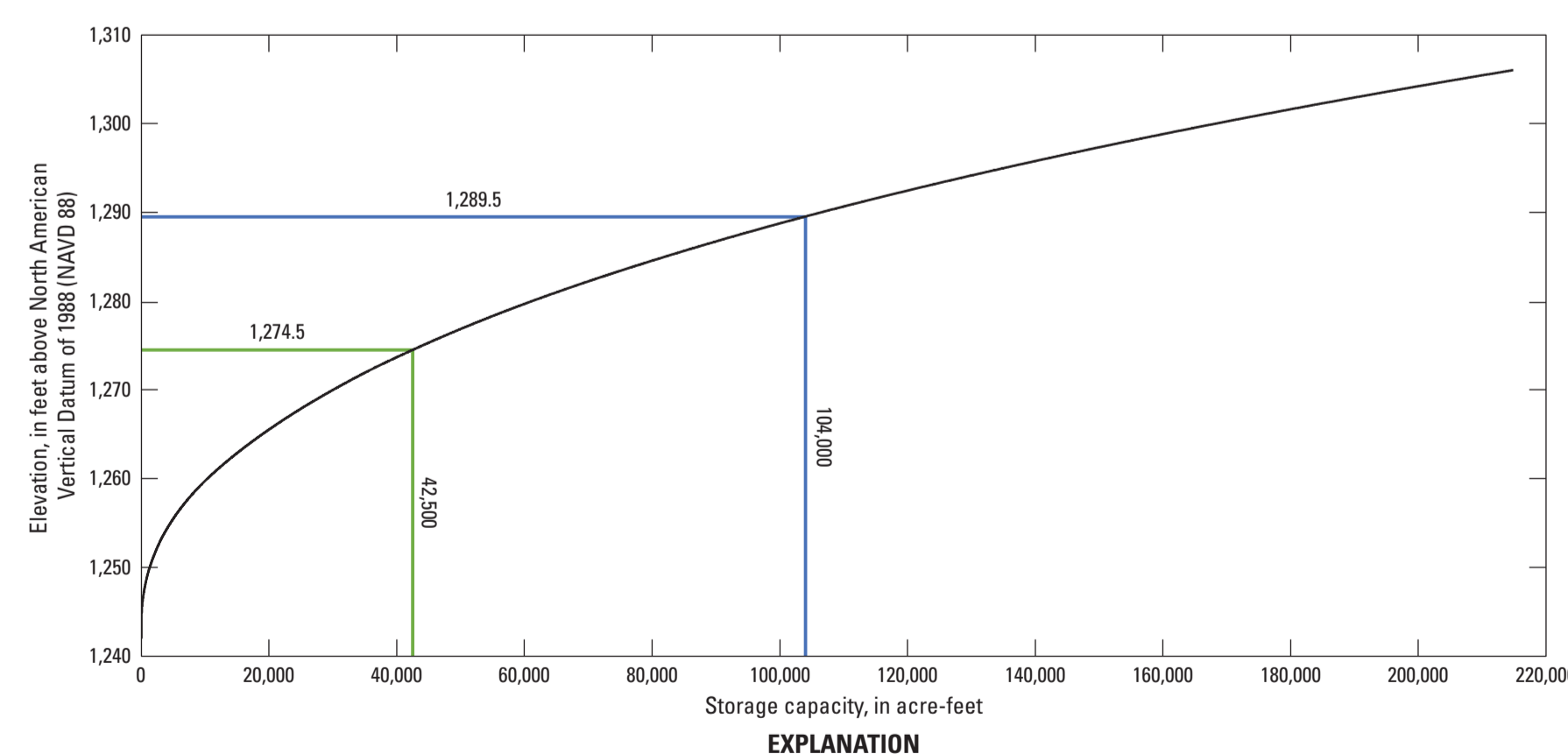


Figure 7. Relation between elevation and storage capacity generated from combined multibeam bathymetric survey data (Smith and others, 2026) and lidar point-cloud data (U.S. Geological Survey, 2022a) for Council Grove Lake, Kansas, 2024.

Table 2. Storage capacity and surface area at selected elevations, Council Grove Lake, Kansas, 2024 (Smith and others, 2026).

(NGVD 29, National Geodetic Vertical Datum of 1929; NAVD 88, North American Vertical Datum of 1988; NOAA, National Oceanic and Atmospheric Administration; USACE, U.S. Army Corps of Engineers. An offset of 0.5 foot was added to convert NOAA 29 elevations to NAVD 88 elevations at Council Grove Lake (NOAA, 2025). Water-surface elevation values in the final row correspond to the upper limit of the bathymetric surface digital terrain model.)

Water-surface elevation (feet above NGVD 29)	Water-surface elevation (feet above NAVD 88)	Storage capacity (acre-feet)	Surface area (acres)	Water-surface elevation (feet above NGVD 29)	Water-surface elevation (feet above NAVD 88)	Storage capacity (acre-feet)	Surface area (acres)
1,242.0	1,242.5	2.47	1.20	1,275.0	1,275.5	45,600	3,170
1,243.0	1,243.5	4.95	5.17	1,276.0	1,276.5	48,800	3,290
1,244.0	1,244.5	21.3	24.7	1,277.0	1,277.5	52,200	3,430
1,245.0	1,245.5	89.4	107.0	1,278.0	1,278.5	55,700	3,570
1,246.0	1,246.5	239	188	1,279.0	1,279.5	59,300	3,720
1,247.0	1,247.5	456	248	1,280.0	1,280.5	63,100	3,870
1,248.0	1,248.5	736	315	1,281.0	1,281.5	67,100	4,000
1,249.0	1,249.5	1,090	395	1,282.0	1,282.5	71,200	4,170
1,250.0	1,250.5	1,530	483	1,283.0	1,283.5	75,400	4,320
1,251.0	1,251.5	2,050	560	1,284.0	1,284.5	79,800	4,450
1,252.0	1,252.5	2,650	634	1,285.0	1,285.5	84,300	4,590
1,253.0	1,253.5	3,330	735	1,286.0	1,286.5	89,000	4,730
1,254.0	1,254.5	4,120	840	1,287.0	1,287.5	93,800	4,880
1,255.0	1,255.5	5,000	928	1,288.0	1,288.5	98,800	5,050
1,256.0	1,256.5	5,990	1,040	1,289.0	1,289.5	104,000	5,220
1,257.0	1,257.5	7,080	1,150	1,290.0	1,290.5	109,000	5,400
1,258.0	1,258.5	8,290	1,270	1,291.0	1,291.5	115,000	5,570
1,259.0	1,259.5	9,620	1,390	1,292.0	1,292.5	120,000	5,750
1,260.0	1,260.5	11,100	1,520	1,293.0	1,293.5	126,000	5,910
1,261.0	1,261.5	12,700	1,620	1,294.0	1,294.5	132,000	6,090
1,262.0	1,262.5	14,300	1,720	1,295.0	1,295.5	138,000	6,270
1,263.0	1,263.5	16,100	1,820	1,296.0	1,296.5	145,000	6,440
1,264.0	1,264.5	18,000	1,910	1,297.0	1,297.5	151,000	6,610
1,265.0	1,265.5	19,900	2,010	1,298.0	1,298.5	158,000	6,820
1,266.0	1,266.5	22,000	2,110	1,299.0	1,299.5	165,000	7,000
1,267.0	1,267.5	24,100	2,210	1,300.0	1,300.5	172,000	7,210
1,268.0	1,268.5	26,400	2,320	1,301.0	1,301.5	179,000	7,410
1,269.0	1,269.5	28,800	2,440	1,302.0	1,302.5	187,000	7,620
1,270.0	1,270.5	31,300	2,550	1,303.0	1,303.5	195,000	7,840
1,271.0	1,271.5	33,900	2,640	1,304.0	1,304.5	202,000	8,080
1,272.0	1,272.5	36,600	2,810	1,305.0	1,305.5	211,000	8,310
1,273.0	1,273.5	39,500	2,970	1,305.5	1,306.0	215,000	8,430
1,274.0	1,274.5	42,500	3,060				

^aConservation pool elevation (USACE, 2024a).
^bFlood control pool elevation (USACE, 2024a).

Bathymetric Map, Surface Area, and Storage Capacity for Council Grove Lake, Kansas, 2024

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Associated data files: Smith, K.A., Pierson, N.W., and Trevisan, A.R., 2026, Bathymetric maps, surface area, and capacity of three selected lakes in central Kansas and southeastern Oklahoma, 2024: U.S. Geological Survey data release. <https://doi.org/10.5067/10.2133/sim3549>
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