U.S. Department of the Interior
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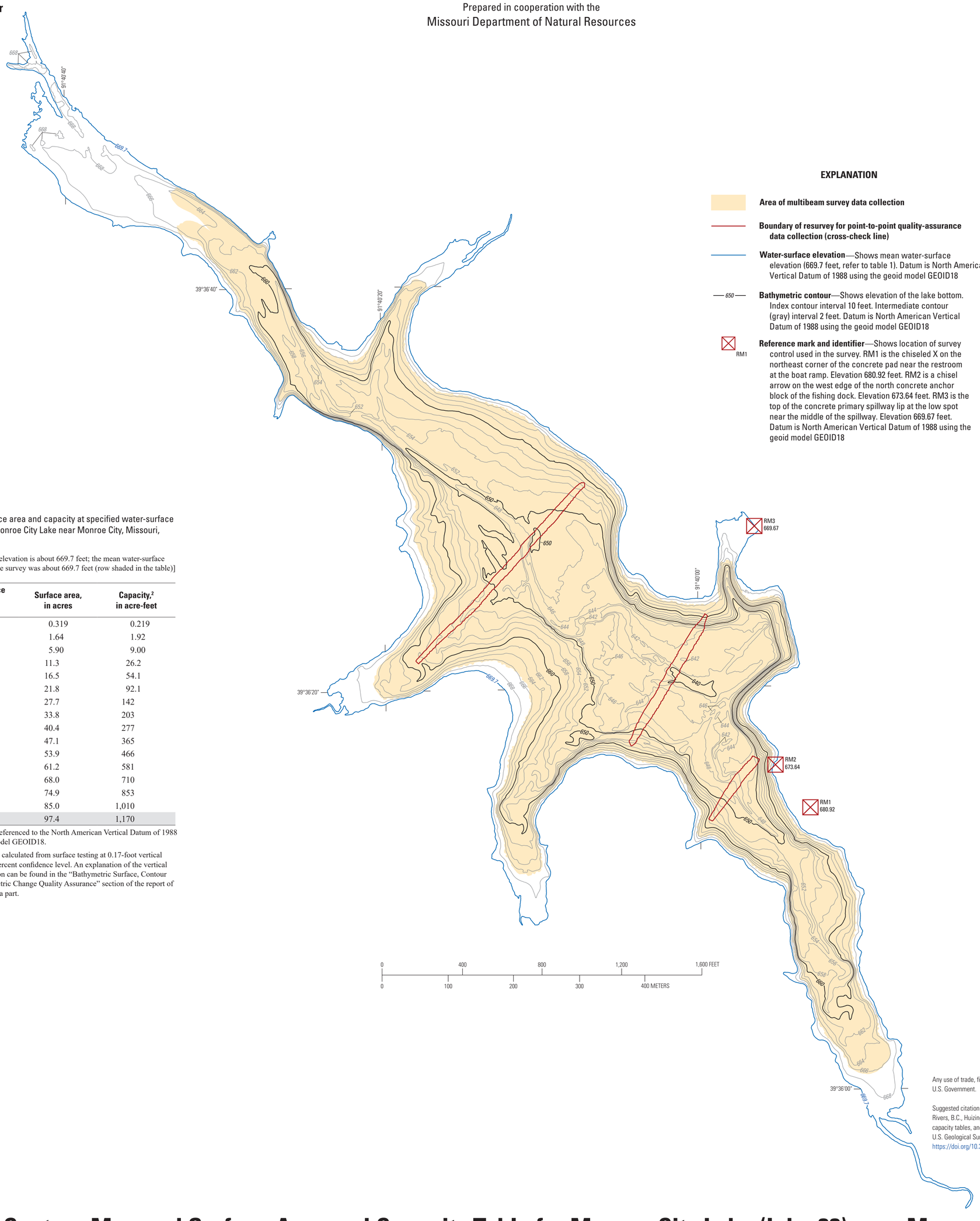
Scientific Investigations Report 2023–5108
Plate 11 of 12



EXPLANATION

Area of multibeam survey data collection

Boundary of resurvey for point-to-point quality-assurance data collection (cross-check line)

Water-surface elevation—Shows mean water-surface elevation (669.7 feet, refer to table 1). Datum is North American Vertical Datum of 1988 using the geoid model GEOID18

650

Bathymetric contour—Shows elevation of the lake bottom. Index contour interval 10 feet. Intermediate contour (gray) interval 2 feet. Datum is North American Vertical Datum of 1988 using the geoid model GEOID18

RM1

Reference mark and identifier—Shows location of survey control used in the survey. RM1 is the chiseled X on the northeast corner of the concrete pad near the restroom at the boat ramp. Elevation 680.92 feet. RM2 is a chisel arrow on the west edge of the north concrete anchor block of the fishing dock. Elevation 673.64 feet. RM3 is the top of the concrete primary spillway lip at the low spot near the middle of the spillway. Elevation 669.67 feet. Datum is North American Vertical Datum of 1988 using the geoid model GEOID18

Table 1. Surface area and capacity at specified water-surface elevations for Monroe City Lake near Monroe City, Missouri, April 27, 2021.

[Primary spillway elevation is about 669.7 feet; the mean water-surface elevation during the survey was about 669.7 feet (row shaded in the table)]

Water-surface elevation,[1] in feet	Surface area, in acres	Capacity,[2] in acre-feet
640.0	0.319	0.219
642.0	1.64	1.92
644.0	5.90	9.00
646.0	11.3	26.2
648.0	16.5	54.1
650.0	21.8	92.1
652.0	27.7	142
654.0	33.8	203
656.0	40.4	277
658.0	47.1	365
660.0	53.9	466
662.0	61.2	581
664.0	68.0	710
666.0	74.9	853
668.0	85.0	1,010
669.7	97.4	1,170

[1]Elevations are referenced to the North American Vertical Datum of 1988 using the geoid model GEOID18.

[2]Capacities were calculated from surface testing at 0.17-foot vertical accuracy at a 95-percent confidence level. An explanation of the vertical accuracy calculation can be found in the "Bathymetric Surface, Contour Map, and Bathymetric Change Quality Assurance" section of the report of which this plate is a part.

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Bathymetric Contour Map and Surface Area and Capacity Table for Monroe City Lake (lake 33) near Monroe City, Missouri, 2021

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