U.S. Department of the Interior
U.S. Geological Survey

Prepared in cooperation with the
U.S. Army Corps of Engineers, Southwestern Division, Little Rock District

Scientific Investigations Map 3499
Sheet 3 of 3

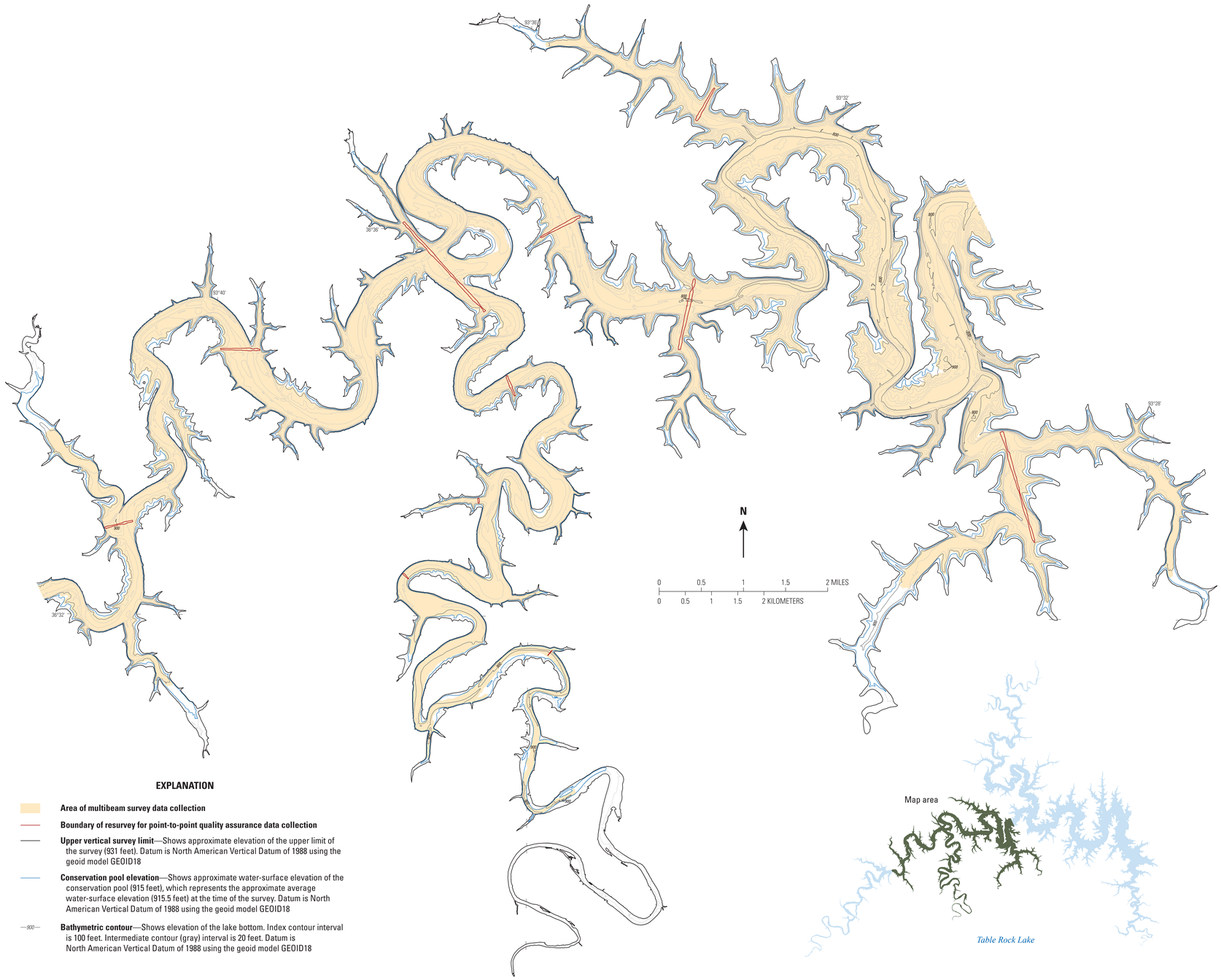

Figure 2. Bathymetric contours for Table Rock Lake near Branson, Missouri, resulting from a survey on October 13 to November 11, 2020.—Continued

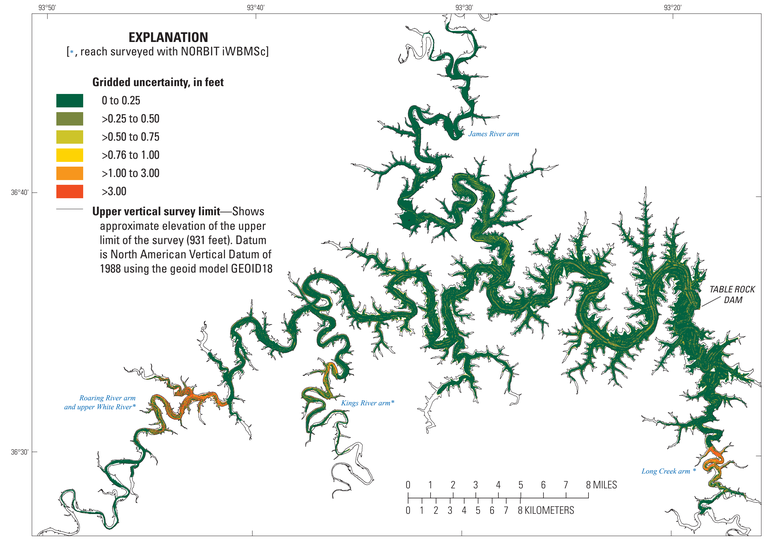

Figure 3. Gridded uncertainty of bathymetric data from the survey of Table Rock Lake near Branson, Missouri, 2020.

Figure 4. Vertical accuracy of the bathymetric surface of Table Rock Lake near Branson, Missouri, 2020.

Acknowledgments

The data collection and processing of the survey information for Table Rock Lake was a large group effort, and the authors wish to gratefully acknowledge colleagues at the U.S. Geological Survey Central Midwest, Lower Mississippi-Gulf, and Oklahoma-Texas Water Science Centers for their assistance in collecting and processing the data for this project. Daniel V. Grant, David J. Fazio, Evan M. Lindroth, and Aaron L. Walsh from the Central Midwest Water Science Center; Kevin M. Hubbs and Amanda R. Whaling from the Lower Mississippi-Gulf Water Science Center; and Stephen C. Bradford, Kyle R. Cothren, Shelby L. Hunter, Marty L. Phillips, Kevin A. Smith, and Zachary S. Bordovsky (former employee) from the Oklahoma-Texas Water Science Center helped collect the data for the surveys detailed in this report. Amanda R. Whaling and Kevin A. Smith also were instrumental in preliminary processing of the survey data.

References Cited

Applanix Corporation, 2017, POS MV OceanMaster specifications: Richmond Hill, Ontario, Canada, Applanix Corporation, 2 p., accessed June 28, 2022, at https://www.applanix.com/downloads/products/specs/posmv/POSMV_OCEANMASTER.pdf.

Applanix Corporation, 2021, POSPac MMS GNSS-inertial tools software, rev. 17: Richmond Hill, Ontario, Canada, Applanix Corporation, PUBS–MAN–001768, 239 p.

Calder, B.R., and Mayer, L.A., 2003, Automatic processing of high-rate, high-density multibeam echosounder data: Geochemistry, Geophysics, Geosystems (G3), v. 4, no. 6, 22 p. [Also available at https://doi.org/10.1029/2002GC000486.]

Huizinga, R.J., 2010, Bathymetric surveys at highway bridges crossing the Missouri River in Kansas City, Missouri, using a multibeam echo sounder, 2010: U.S. Geological Survey Scientific Investigations Report 2010–5207, 61 p., accessed August 29, 2022, at https://doi.org/10.3133/sir20105207.

Huizinga, R.J., 2022, Bathymetric and velocimetric surveys at highway bridges crossing the Missouri River near Kansas City, Missouri, August 2019, August 2020, and October 2020: U.S. Geological Survey Scientific Investigations Report 2021–5098, 112 p., accessed August 29, 2022, at https://doi.org/10.3133/sir20215098.

Huizinga, R.J., Elliott, C.M., and Jacobson, R.B., 2010, Bathymetric and velocimetric survey and assessment of habitat for pallid sturgeon on the Mississippi River in the vicinity of the proposed Interstate 70 Bridge at St. Louis, Missouri: U.S. Geological Survey Scientific Investigations Report 2010–5017, 28 p., accessed August 29, 2022, at https://doi.org/10.3133/sir20105017.

Huizinga, R.J., Oyler, L.D., and Rivers, B.C., 2022, Bathymetric contour maps, surface area and capacity tables, and bathymetric change maps for selected water-supply lakes in northwestern Missouri, 2019 and 2020: U.S. Geological Survey Scientific Investigations Map 3486, 12 sheets, includes 21-p. pamphlet, accessed August 29, 2022, at https://doi.org/10.3133/sim3486.

HYPACK, Inc., 2020, HYPACK user manual: Middletown, Conn., HYPACK, Inc., 2,602 p., accessed June 28, 2022, at https://www.hypack.com/File%20Library/Resource%20Library/Manuals/2020/2020-HYPACK-User-Manual.pdf.

International Hydrographic Organization, 2020, International Hydrographic Organization standards for hydrographic surveys (6th ed.): Monaco, International Hydrographic Bureau, Special publication no. 44, 41 p., accessed January 2022 at https://iho.int/uploads/user/pubs/standards/s-44/S-44_Edition_6.0.0_EN.pdf.

NORBIT, 2020, User and technical manual TN–140075–11, WMBS bathy manual: Trondheim, Norway, NORBIT Subsea AS, 103 p.

NovAtel, 2019, Inertial Explorer 8.80 user manual, ver. 7: Calgary, Alberta, Canada, OM–20000166, 216 p., accessed June 28, 2022, at https://hexagondownloads.blob.core.windows.net/public/Novatel/assets/Documents/Manuals/Waypoint-Software-User-Manual-OM-20000166/Waypoint_8.80_Software_User_Manual_OM-20000166.pdf.

NovAtel, 2021, OEM–IMU–STIM300 product sheet: Calgary, Alberta, Canada, 2 p., accessed June 28, 2022, at https://hexagondownloads.blob.core.windows.net/public/Novatel/assets/Documents/Papers/OEM-STIM300-PS/OEM-STIM300-PS.pdf.

R2Sonic LLC, 2014, Sonic 2020/2024 user guide version 5.0, rev. r002: Austin, Texas, 210 p.

Richards, J.M., Huizinga, R.J., and Ellis, J.T., 2019, Bathymetric contour map, surface area and capacity table, and bathymetric change map for Sugar Creek Lake near Moberly, Missouri, 2018: U.S. Geological Survey Scientific Investigations Map 3431, 1 sheet, accessed August 29, 2022, at https://doi.org/10.3133/sim3431.

Rivers, B.C., Huizinga, R.J., and Richards, J.M., 2022, Bathymetric and supporting data for Table Rock Lake near Branson, Missouri, 2020: U.S. Geological Survey data release, https://doi.org/10.5066/P9FAFJZG.

Rydlund, P.H., Jr., and Densmore, B.K., 2012, Methods of practice and guidelines for using survey-grade global navigation satellite systems (GNSS) to establish vertical datum in the United States Geological Survey: U.S. Geological Survey Techniques and Methods, book 11, chap. D1, 102 p., with appendixes. [Also available at https://doi.org/10.3133/tm11D1.]

U.S. Army Corps of Engineers, 2013, Engineering and design—Hydrographic surveying: Washington D.C., U.S. Army Corps of Engineers, manual no. EM 1110–2–1003, 560 p. [Also available at https://www.publications.usace.army.mil/Portals/76/Publications/EngineerManuals/EM_1110-2-1003.pdf?ver=gDGVUj_0XR2sXHilpQZv2Q%3d%3d.]

U.S. Army Corps of Engineers, 2022, Table Rock Lake / Dam and lake information: U.S. Army Corps of Engineers web page, accessed June 27, 2022, at https://www.swl.usace.army.mil/Missions/Recreation/Lakes/Table-Rock-Lake/Dam-and-Lake-Information/.

U.S. Geological Survey, 2017, Lidar Point Cloud—USGS National Map 3DEP downloadable data collection: U.S. Geological Survey digital data, accessed August 29, 2022, at https://www.sciencebase.gov/catalog/item/4f70ab64e4b058caae3f8def.

Wilson, G.L., and Richards, J.M., 2006, Procedural documentation and accuracy assessment of bathymetric maps and area/capacity tables for small reservoirs: U.S. Geological Survey Scientific Investigations Report 2006–5208, 24 p, accessed August 29, 2022, at https://doi.org/10.3133/sir20065208.

Suggested citation:
Huizinga, R.J., Rivers, B.C., and Richards, J.M., 2022, Bathymetric map and surface area and capacity table for Table Rock Lake near Branson, Missouri, 2020: U.S. Geological Survey Scientific Investigations Map 3499, 3 sheets, https://doi.org/10.3133/sim3499.

Associated data for this publication:
Rivers, B.C., Huizinga, R.J., and Richards, J.M., 2022, Bathymetric and supporting data for Table Rock Lake near Branson, Missouri, 2020: U.S. Geological Survey data release, https://doi.org/10.5066/P9FAFJZG.

Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

For more information about this publication, contact
Director, USGS Central Midwest Water Science Center
1400 Independence Road
Rolla, MO 65401
(573) 308–3667

For additional information visit
https://www.usgs.gov/centers/cm-water

Publishing support provided by the
Rolla Publishing Service Center

ISSN 2329-132X (online)
https://doi.org/10.3133/sim3499

Bathymetric Map and Surface Area and Capacity Table for Table Rock Lake near Branson, Missouri, 2020

By
Richard J. Huizinga, Benjamin C. Rivers, and Joseph M. Richards

2022