Volumetric and Sedimentation Survey of LAKE TYLER

May 2025

TEXAS WATER DEVELOPMENT BOARD

May 2026

Texas Water Development Board

Prepared for:

City of Tyler, Texas

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Executive summary

In January 2025, the Texas Water Development Board (TWDB) entered into an agreement with the City of Tyler, Texas, to perform a volumetric and sedimentation survey of Lake Tyler (Smith County, Texas). Surveying was performed using a multi-frequency (200 kHz, 50 kHz, and 12 kHz), sub-bottom profiling depth sounder. Sediment core samples were collected and correlated with sub-bottom acoustic profiles to estimate sediment accumulation thicknesses and sedimentation rates.

Lake Tyler was constructed as two individual reservoirs later connected by canal to create one system. Whitehouse Dam is located on Prairie Creek and impounded the original Lake Tyler on the west. Mud Creek Dam is located on Mud Creek impounding Lake Tyler East. Lake Tyler is in Smith County approximately 12 miles southeast of the City of Tyler, Texas. The conservation pool elevation of Lake Tyler is 375.38 feet NGVD29. TWDB collected bathymetric data for Lake Tyler on May 20-24, 2025, while daily average water surface elevations ranged from 375.56 to 375.51 feet NGVD29. Additional data were collected on October 6, 2025, while the daily average water surface elevation measured 374.30 feet NGVD29.

The 2025 TWDB volumetric survey indicates Lake Tyler has a total reservoir capacity of 79,453 acre-feet and encompasses 4,992 acres at conservation pool elevation (375.38 feet NGVD29). Previous capacity estimates at elevation 375.38 feet include an area-capacity table from the U.S. Geological Survey dated 1967 indicating a capacity of 80,900 acre-feet, a re-calculated 1997 TWDB volumetric survey estimate of 83,433 acre-feet, and a re-calculated 2013 TWDB volumetric survey estimate of 78,399 acre-feet. Differences in reservoir conditions as well as differences in the methodologies used among surveys can affect area and volume calculations. For this reason, the TWDB does not recommend comparing between volumetric surveys to determine loss of area or capacity. Information from past surveys is thus presented for informational purposes only.

The 2025 TWDB sedimentation survey measured 4,845 acre-feet of sediment below elevation 375.38 feet. The sedimentation survey indicates sediment accumulation is greater in the submerged river channels throughout the reservoir. The TWDB recommends that reservoirs be resurveyed approximately every 10 years or following a major event that results in increased sedimentation or scouring within the reservoir.

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Note: References to brand names throughout this report do not imply endorsement by the Texas Water Development Board

Introduction

The Hydrographic Survey Program of the Texas Water Development Board (TWDB) was authorized by the 72nd Texas State Legislature in 1991. Texas Water Code Section 15.804 authorizes the TWDB to perform surveys to determine reservoir storage capacity, sedimentation levels, rates of sedimentation, and projected water supply availability.

In January 2025, the TWDB entered into an agreement with the City of Tyler, Texas, to perform a volumetric and sedimentation survey of Lake Tyler (Smith County, Texas) (Texas Water Development Board, 2025). This report provides an overview of the survey methods, analysis techniques, and associated results. Also included are the following contract deliverables: (1) an elevation-area-capacity table of the reservoir acceptable to the Texas Commission on Environmental Quality (Appendices A, B, E, and F), (2) a bottom contour map (Figure 6), (3) a shaded relief plot of the reservoir bottom (Figure 4), and (4) an estimate of sediment accumulation and location (Figure 9).

Lake Tyler general information

Lake Tyler was constructed as two individual reservoirs later connected by canal to create one system. Whitehouse Dam is located on Prairie Creek and impounded the original Lake Tyler on the west. Mud Creek Dam is located on Mud Creek impounding Lake Tyler East. Lake Tyler is in Smith County approximately 12 miles southeast of Tyler, Texas (Figure 1). Lake Tyler is owned and operated by the City of Tyler primarily as a water supply reservoir for the City of Tyler (City of Tyler, 2026). Construction on Whitehouse Dam began on April 30, 1948, and was completed on May 13, 1949. Construction on Mud Creek Dam began on February 11, 1966, and was completed in January 1967. The impoundment of Lake Tyler East began on November 22, 1966. The canal connecting the two reservoirs was completed on May 29, 1968. Additional pertinent data about White House Dam can be found in Table 1, Mud Creek Dam in Table 2, and Lake Tyler in Table 3.

Water rights for Lake Tyler have been appropriated to the City of Tyler through Certificate of Adjudication No. 06-4853 (Texas Commission on Environmental Quality, 1987). The complete certificates and permits are on file at the Texas Commission on Environmental Quality (TCEQ).

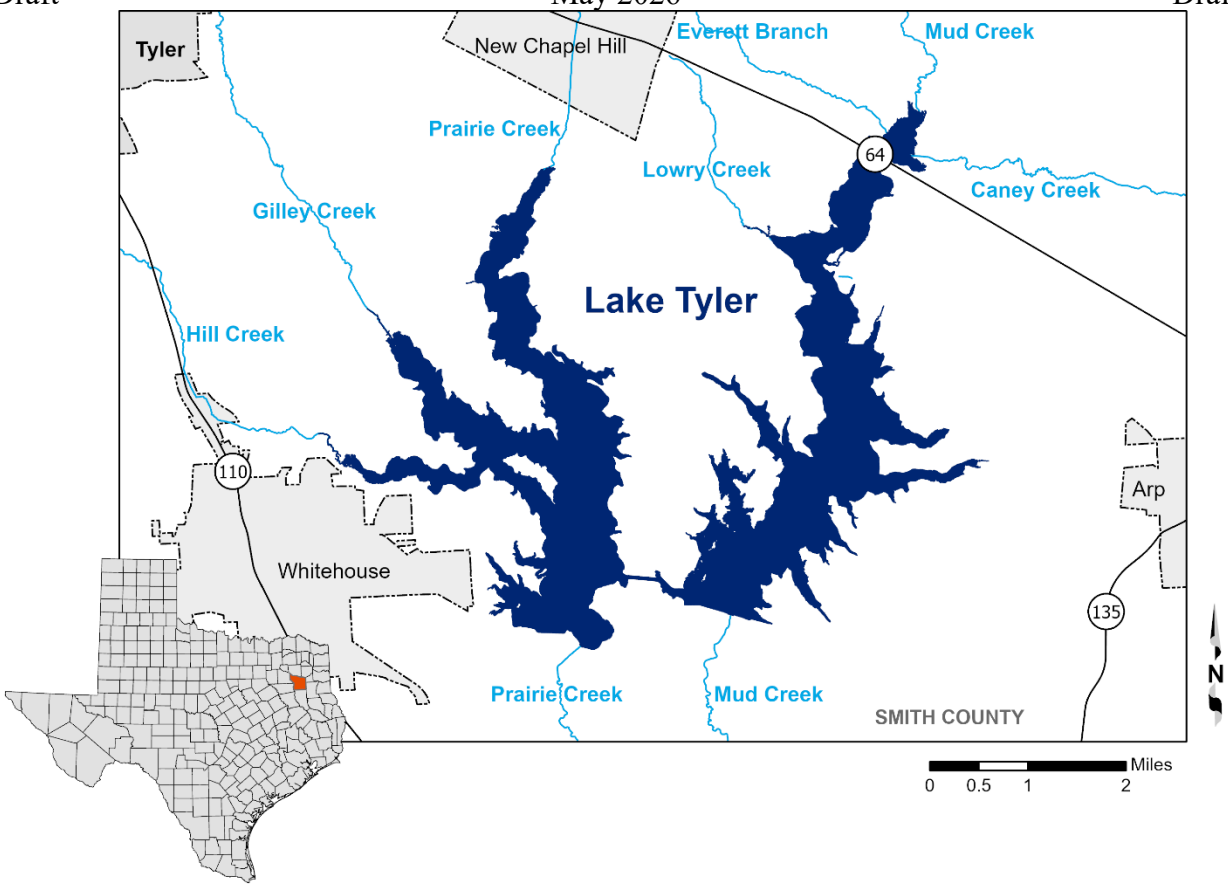


Figure 1. Location map.

Table 1. Pertinent Data for Whitehouse Dam	
Owner(s)	
City of Tyler	
Engineer (design)	
T.C. Forrest (Now Forrest and Cotton, Inc.)	
General contractor	
Caruth Construction Company	
Location	
On Prairie Creek in Smith County, approximately12 miles southeast of Tyler, Texas.	
Drainage Area	
Total Drainage Area	45 square miles
Dam	
Type	Earthfill
Length	4,708 feet
Maximum height	50 feet ±
Width	20 feet ±
Spillway (service)	
Type	Concrete chute
Crest length	200 feet
Crest elevation	375.38 feet
Control	None
Outlet Works (city pumping plant)	
Type	Intake tower 2 miles upstream
Control	3 sluice gates
Invert of middle sluice gate	356.0 feet
Low invert elevation/ gate intake tower	350.0 feet

Source: Texas Water Development Board, 1974; Texas Water Development Board, 2003.

Table 2. Pertinent Data for Mud Creek Dam	
Owner(s)	
City of Tyler	
Engineer (design)	
Wisenbaker, Fix, and Associates	
General contractor	
Vilbig Construction Company	
Location	
On Mud Creek in Smith County, approximately12 miles southeast of Tyler, Texas.	
Drainage Area	
Total Drainage Area	62 square miles
Dam	
Type	Earthfill
Length	4,700 feet
Maximum height	50 feet
Width	20 feet
Top elevation	390.0 to 391.5 feet
Spillway	
Type	Concrete weir
Crest length	300 feet
Crest elevation	375.38 feet
Control	None
Outlet Works (at the dam)	
Type	Inlet box and concrete pipe, 18-inch diameter
Control	Slide valve
Invert of upper sluice gate	362.0 feet
Top of box elevation/ invert low outlet	350.0 feet

Source: Texas Water Development Board, 1974; Texas Water Development Board, 2003

Table 3. Reservoir data for Lake Tyler

Feature	Elevation (feet NGVD29[a])	TWDB 2025 Capacity (acre-feet)	TWDB 2025 Area (acres)
Top of Dam	390.0	174,931	8,205
Crest of spillway, top of conservation pool elevation	375.38	79,453	4,992
Invert low outlet/ top of dead pool elevation	350.0	5,308	1,090
Conservation storage capacity[b]	—	74,145	—

a. National Geodetic Vertical Datum 1929 (NGVD29). The datum conversion from NGVD29 to NAVD88 (North American Vertical Datum 1988) is: NGVD29 + 0.31 feet = NAVD88 (U.S. Geological Survey, 2026).

b. Usable conservation storage space equals total capacity at conservation pool elevation minus dead pool capacity. Dead pool refers to water that cannot be drained by gravity through a dam's outlet works.

Volumetric and sedimentation survey of Lake Tyler

Datum

Water surface elevations during the TWDB survey were obtained from the United States Geological Survey (USGS) gage USGS 08034000 *Lk Tyler nr Whitehouse, TX* (U.S. Geological Survey, 2026). These data were used to convert survey depths to elevations. Elevations herein are reported in feet relative to the National Geodetic Vertical Datum 1929 (NGVD29). The horizontal datum used for this report is NGVD29, and the horizontal coordinate system is State Plane Texas North Central Zone (feet).

TWDB bathymetric and sedimentation data collection

The TWDB collected bathymetric data for Lake Tyler on May 20-24, 2025, while daily average water surface elevations measured ranged from 375.56 to 375.51 feet NGVD29. Additional data were collected on October 6, 2025, while the daily average water surface elevation measured 374.30 feet NGVD29 (U.S. Geological Survey, 2026). For data collection, the TWDB used a Specialty Devices, Inc. (SDI), single-beam, multi-frequency (200 kHz, 50 kHz, and 12 kHz) sub-bottom profiling depth sounder integrated with differential global positioning system (DGPS) equipment. Data were collected along pre-planned survey lines oriented perpendicular to the assumed location of the original river channels and spaced approximately 500 feet apart. Many of the same lines were also used by the TWDB for the *Volumetric and Sedimentation Survey of Lake Tyler, January 2013 Survey* (Texas Water Development Board, 2013). The depth sounder was calibrated daily using a velocity profiler to measure the speed of sound in the water column and a weighted tape or stadia rod for depth reading verification. Each speed of sound profile, or velocity cast, is saved for further data processing. Figure 2 shows the data collection locations for the 2025 TWDB survey.

All sounding data were collected and reviewed before sediment core sampling sites were selected. Sediment core samples are collected throughout the reservoir to assist with interpretation of the sub-bottom acoustic profiles. After analyzing the sounding data, the TWDB selected 18 locations to collect sediment core samples (Figure 2). Sediment cores were collected October 7-8, 2025, with a custom-coring boat and an SDI VibeCore system.

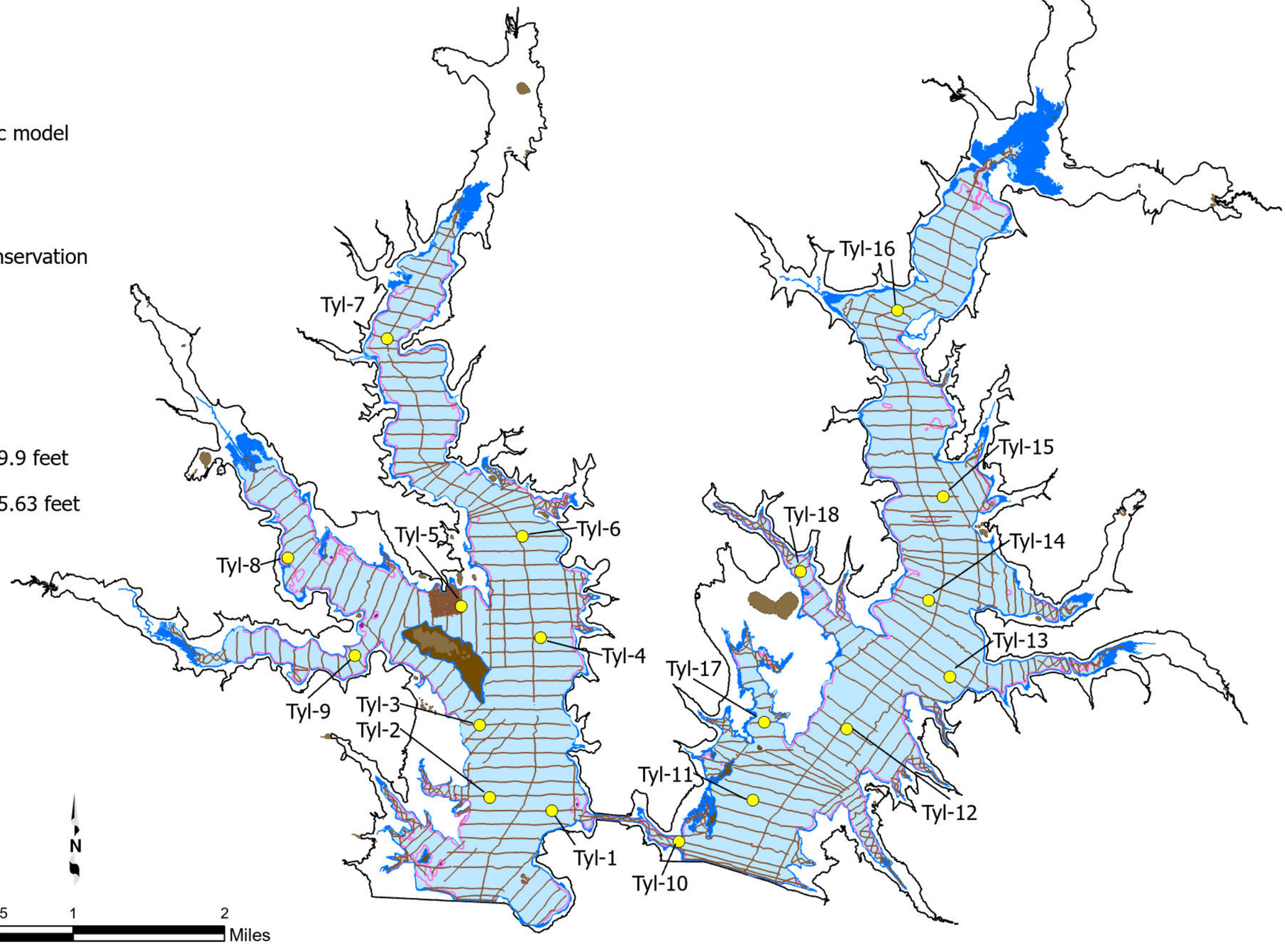
Sediment cores are collected in 3-inch diameter aluminum tubes. A sediment core extends from the current reservoir-bottom surface, through the accumulated sediment, and into the pre-impoundment surface. After the sample is retrieved, the core tube is cut to the level of the sediment core. The tube is capped, labeled, and either transported to TWDB headquarters for further analysis or analyzed onsite at the reservoir.

Figure 2

Lake Tyler

2025 TWDB sounding data and sediment coring locations

- 2025 sediment core sites
- 2025 survey data points
- 2024 lidar data points within bathymetric model extent
- Islands elevation 375.38 feet
- Lake Tyler bathymetric model extent/conservation pool elevation 375.38 feet
- Islands elevation 390.0 feet
- Lake Tyler topographic model extent/ top of dam elevation 390.0 feet
- Shoreline 2013 aerial photos elevation 369.9 feet
- Shoreline 2023 aerial photos elevation 375.63 feet



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May 2025 Survey

Data processing

Model boundary

The bathymetric and topographic model boundaries of the reservoir were generated with Light Detection and Ranging (lidar) data available from the Texas Geographic Information Office (TxGIO), formerly known as the Texas Natural Resource Information System (TNRIS) (Strategic Mapping Program, 2024). These data were collected on January 18-20, 2024, while the daily average water surface elevation of the reservoir measured between 372.70 and 372.71 feet NGVD29. The lidar data files (.las) were imported into an LAS Dataset and the dataset was converted to a raster using a cell size of 1.0 meter by 1.0 meter. The horizontal datum of the lidar data is North American Datum 1983 (NAD83; meters) and the projection is Universal Transverse Mercator (UTM) Zone 15. The vertical datum is North American Vertical Datum 1988 (NAVD88; meters). A contour representing the conservation pool elevation of 114.510312 meters NAVD88, equivalent to 375.38 feet NGVD29 and a contour representing the top of the dam elevation of 118.966488 meters NAVD88, equivalent to 390.0 feet NGVD29 were extracted from the raster. The vertical datum transformation of 0.31 feet was used to convert from feet NAVD88 to feet NGVD29. The vertical datum transformation offset for the conversion from NAVD88 to NGVD29 is the same transformation value the USGS uses (U.S. Geological Survey, 2026). The topographic model contour was edited to close the contour across the dam and remove other artifacts.

Lidar data points

To utilize the lidar data in the reservoir topographic model, the lidar data files (.las) were converted to a multipoint feature class in an Environmental Systems Research Institute's ArcGIS file geodatabase filtered to include only data classified as ground points. A topographical model of the data was generated. The ArcGIS tool Terrain to Points was used to extract points from the terrain, or topographical model, of the reservoir. The terrain was created using the z-tolerance pyramid type. Points were extracted from the terrain at the z-tolerance level of 0.0625 meters to model both the bathymetric surface and the topographic surface. New attribute fields were added to convert the elevations from meters NAVD88 to feet NAVD88, then feet NGVD29 for compatibility with the bathymetric survey data. Lidar data points inside the bathymetric model boundary with elevations greater than 375.38 feet appeared to be misclassified vegetation and were deleted. The bathymetric and topographic lidar data points were separated, and both feature classes were projected to NAD83 State Plane Texas North Central Zone (feet).

Triangulated Irregular Network model

Following completion of data collection, the raw data files collected by the TWDB were edited to remove data anomalies. The current bottom surface of the reservoir is automatically determined by the data acquisition software. Hydropick software, developed by TWDB staff, was used to display, interpret, and edit the multi-frequency data by manually removing data anomalies in the current bottom surface and to manually edit the pre-impoundment surfaces. The speed of sound profiles, also known as velocity casts, were used to further refine the measured depths. For each location velocity casts are collected, the harmonic mean sound speed of all the casts is calculated. From this, depths collected using one average speed of sound are corrected with an overall optimum speed of sound for each specific depth (Specialty Devices, Inc., 2018).

All data were exported into a single file, including the current reservoir bottom surface, pre-impoundment surface, and sediment thickness at each sounding location. The water surface elevation at the time of each sounding was used to convert each sounding depth to a corresponding reservoir-bottom elevation. This survey point dataset was then preconditioned by inserting a uniform grid of artificial survey points between the actual survey lines. Bathymetric elevations at these artificial points were determined using an anisotropic spatial interpolation algorithm described in the next section. This technique creates a high resolution, uniform grid of interpolated bathymetric elevation points throughout a majority of the reservoir (McEwen, Brock, and others, 2011). The resulting point file was used in conjunction with sounding and boundary data to create volumetric and sediment Triangulated Irregular Network (TIN) models utilizing the 3D Analyst Extension of ArcGIS. The 3D Analyst algorithm uses Delaunay's criteria for triangulation to create a grid composed of triangles from non-uniformly spaced points, including the boundary vertices (Environmental Systems Research Institute, 1995).

Spatial interpolation of reservoir bathymetry

Isotropic spatial interpolation techniques such as the Delaunay triangulation used by the 3D Analyst extension of ArcGIS are, in many instances, unable to suitably interpolate bathymetry between survey lines common to reservoir surveys. Reservoirs and stream channels are anisotropic morphological features where bathymetry at any particular location is more similar to upstream and downstream locations than to transverse locations. Interpolation schemes that do not consider this anisotropy lead to the creation of several types of artifacts in the final representation of the reservoir bottom surface and hence to errors in volume. These artifacts may include artificially curved contour lines extending into the reservoir where the reservoir walls are

steep or the reservoir is relatively narrow, intermittent representation of submerged stream channel connectivity, and oscillations of contour lines in between survey lines. These artifacts reduce the accuracy of the resulting volumetric and sediment TIN models in areas between actual survey data.

To improve the accuracy of bathymetric representation between survey lines, the TWDB developed various anisotropic spatial interpolation techniques. Generally, the directionality of interpolation at different locations of a reservoir can be determined from external data sources. A basic assumption is that the reservoir profile in the vicinity of a particular location has upstream and downstream similarity. In addition, the sinuosity and directionality of submerged stream channels can be determined by directly examining the survey data, or more robustly by examining scanned USGS 7.5-minute quadrangle maps (DRGs), hypsography files (the vector format of USGS 7.5-minute quadrangle map contours), and historical aerial photographs, when available. Using the survey data, polygons are created to partition the reservoir into segments with centerlines defining the directionality of interpolation within each segment. Using the interpolation definition files and survey data, the current reservoir-bottom elevation, pre-impoundment elevation, and sediment thickness are calculated for each point in the high-resolution uniform grid of artificial survey points. The reservoir boundary, artificial survey points grid, and survey data points are used to create volumetric and sediment TIN models representing reservoir bathymetry and sediment accumulation throughout the reservoir. Specific details of this interpolation technique can be found in the HydroTools manual (McEwen, Brock, and others, 2011) and in associated literature (McEwen, Pothina, and Negusse, 2011).

In areas inaccessible to survey data collection, such as small coves and shallow upstream areas of the reservoir, linear interpolation is used for volumetric and sediment accumulation estimations (McEwen, Brock, and others, 2011). Although lidar was utilized, linear interpolation was necessary to accurately model features in the areas between survey data and lidar data. Linear interpolation results in improved elevation-capacity and elevation-area calculations.

Figure 3 illustrates typical results from application of anisotropic interpolation as applied to Lake Tyler. In Figure 3A, deeper channels and steep slopes indicated by surveyed cross-sections are not continuously represented in areas between survey cross-sections. This is an artifact of the TIN generation routine rather than an accurate representation of the physical bathymetric surface. Inclusion of interpolation points in creation of the volumetric TIN model, represented in Figure 3B, directs Delaunay triangulation to better represent the reservoir bathymetry between survey cross-sections. The bathymetry shown in Figure 3C was used in

computing reservoir elevation-capacity (Appendices A and E) and elevation-area (Appendices B and F) tables.

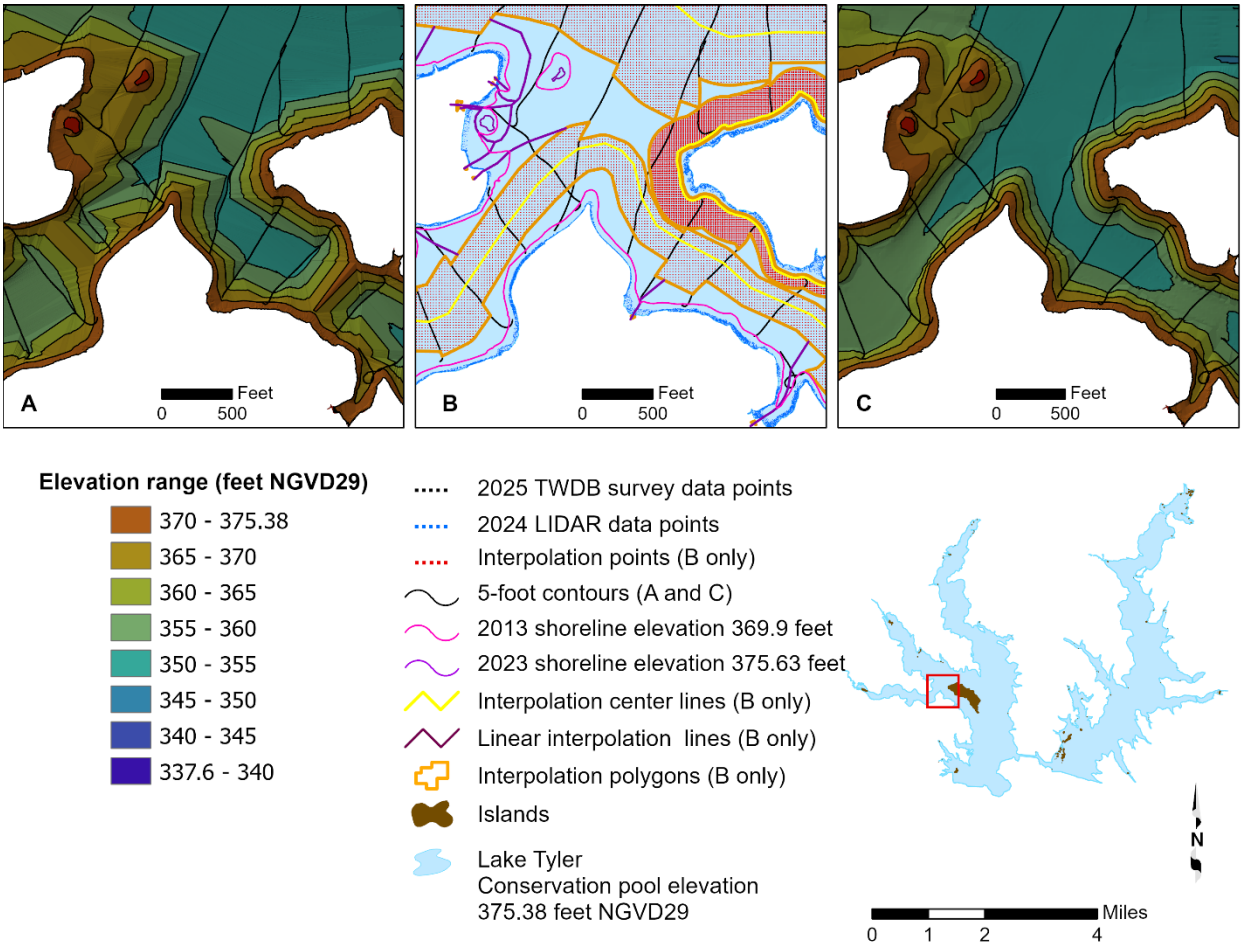

Figure 3. **Anisotropic spatial interpolation as applied to Lake Tyler sounding data: A) bathymetric contours without interpolated points; B) sounding points (*black*), lidar data points within bathymetric model elevation 375.38 feet (*pink*), and interpolated points (*red*); C) bathymetric contours with interpolated points.**

To improve prior survey capacity estimates and improve comparability between surveys, anisotropic spatial interpolation was applied to the TWDB survey data collected in 1997. The original 1997 survey model used a boundary digitized from 7.5-minute USGS quadrangle maps that could not be located, therefore, a new model boundary was digitized from aerial photographs taken on February 1, 1995, while the daily average water surface elevation measured 375.8 feet (Greg Morgan, written commun., 2013). Because linear interpolation lines do not remove all flat triangles and flat triangles lead to anomalous area and volume calculations, linear interpolation between the computed areas from elevation 372.4 to 375.8 feet was applied, and capacities were calculated from the corrected areas (Texas Water Development Board, 2016).

Additionally, the 2013 TWDB capacity estimate was adjusted by linearly interpolating between the computed areas from elevation 367.0 to 375.6 feet and calculating capacities from

the corrected areas (Texas Water Development Board, 2016). Re-adjusted total capacities for both the 1997 and 2013 surveys are compared alongside those of this survey in Table 5.

Area, volume, and contour calculation

Volumes and areas were computed for the entire reservoir at 0.01-foot intervals, from 337.60 to 375.38 feet for the bathymetric TIN model, and from 337.60 to 390.00 feet for the bathymetric and topographic TIN model, and are reported herein at 0.1-foot intervals. The bathymetric elevation-capacity table and bathymetric elevation-area table, based on the 2025 survey and analysis, are presented in Appendices A and B, respectively. The bathymetric capacity curve is presented in Appendix C, and the bathymetric area curve is presented in Appendix D. The topographic elevation-capacity table and topographic elevation-area table developed from the 2025 survey and analysis are presented in Appendices E and F, respectively. The topographic capacity curve is presented in Appendix G, and the topographic area curve is presented in Appendix H.

The topographic and bathymetric volumetric TIN models were converted to a raster representation using a cell size of 2 feet by 2 feet. The raster data then were used to produce three figures: (1) an elevation relief map representing the topography of the reservoir bottom (Figure 4); (2) a depth range map showing depth ranges for Lake Tyler (Figure 5); and (3) a 5-foot contour map (Figure 6).

Figure 4

Lake Tyler

Elevation relief map

Bathymetric elevations (feet NGVD29)

- 337.6 - 338
- 338 - 340
- 340 - 342
- 342 - 344
- 344 - 346
- 346 - 348
- 348 - 350
- 350 - 352
- 352 - 354
- 354 - 356
- 356 - 358
- 358 - 360
- 360 - 362
- 362 - 364
- 364 - 366
- 366 - 368
- 368 - 370
- 370 - 372
- 372 - 374
- 374 - 375.38

Topographic elevations (feet NGVD29)

- 375.38 - 378
- 378 - 380
- 380 - 382
- 382 - 384
- 384 - 386
- 386 - 388
- 388 - 390

Projection: NAD83 State Plane Texas North Central Zone (feet)

- Islands elevation 375.38 feet
- Islands elevation 390.0 feet
- Lake Tyler elevation 390.0 feet

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N

0 0.5 1 2 Miles

2970000 2980000 2990000 3000000 3010000 3020000

6810000 6800000 6790000 6780000

Figure 5

Lake Tyler

Depth range map

2980000 2990000 3000000 3010000 3020000

6800000

6790000

6780000

Depth ranges
(feet)

- 0 - 5
- 5 - 10
- 10 - 15
- 15 - 20
- 20 - 25
- 25 - 30
- 30 - 35
- 35 - 40
- > 40

Islands

Lake Tyler
conservation pool
elevation 375.38 feet

Projection: NAD83 State Plane
Texas North Central Zone (feet)

N

0 0.5 1 2
Miles

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Analysis of sediment data from Lake Tyler

Sedimentation in Lake Tyler was determined by analyzing the acoustic signal returns of all three depth sounder frequencies using customized software called Hydropick. The 200 kilohertz (kHz) signal is used to determine the current bathymetric surface. The 200 kHz, 50 kHz, and 12 kHz are analyzed to determine the reservoir bathymetric surface at the time of initial impoundment, *i.e.*, pre-impoundment surface. Sediment core samples collected in the reservoir are correlated with the acoustic signals in each frequency to assist in identifying the pre-impoundment surface. The difference between the current surface bathymetry and the pre-impoundment surface bathymetry yields a sediment thickness value at each sounding location.

Sediment cores were split longitudinally and analyzed to identify the location of the pre-impoundment surface. The pre-impoundment surface was identified within the sediment core using the following methods: (1) a visual examination of the sediment core for terrestrial materials, such as leaf litter, tree bark, twigs, intact roots, *etc.*, concentrations of which tend to occur on or just below the pre-impoundment surface; (2) recording changes in texture from well sorted, relatively fine-grained sediment to poorly sorted mixtures of coarse and fine-grained materials; and, (3) identifying variations in the physical properties of the sediment, particularly sediment water content and penetration resistance with depth (Van Metre and others, 2004). Total sediment core length, post impoundment sediment thickness, and pre-impoundment thickness were recorded. Physical characteristics of the sediment core, such as Munsell (2018) soil color, texture, relative water content, and presence of organic materials are presented in Table 4.

Table 4. Sediment core sample analysis data.

Sediment core sample	Easting[a] (feet)	Northing[a] (feet)	Total core sample / post-impoundment sediment length (inches)	Sediment core description[b]		Munsell soil color
TYL-1	2999668.89	6779141.44	32.0 / 16.0	post-impoundment	0.0−1.0″ very high water content, fine silt, smooth, soupy, uniform consistency and texture	10Y-5GY 10Y 3/2 very dark grayish olive
					1.0–6.0″ high water content, fine silt, pudding like, fine to coarse granular bits of clay mixed throughout the layer	GLEY 1 2.5/10Y greenish black
					6.0–7.0″ high water content, organics and clay bits, organic material present (stems, roots, and woody debris)	2.5Y 2.5/1 black
					7.0–16.0″ moderate water content, clay, loosely packed, peanut butter consistency, organic material present throughout (fibrous roots, woody debris).	2.5Y 4/1 dark gray
				pre-impoundment	16.0–30.0″ moderate water content, sandy clay, uniform consistency and texture throughout, organic material present (fibrous roots, woody debris)	2.5Y 4/1 dark gray
					30.0–32.0″ low water content, clay, malleable, not very dense, organic material present (fibrous roots)	5Y 4/1 dark gray
TYL-2	2997503.82	6779603.74	64.0 / 11.0	post-impoundment	0.0–1.0″ very high water content, fine silt, soupy	10Y-5GY 10y 3/2 very dark grayish olive
					1.0–7.0″ high water content, fine silt, pudding like, uniform consistency and texture	GLEY 1 2.5/10Y greenish black
					7.0–11.0″ high to moderate water content, water content decreases with depth, silty sand, organic material present throughout (roots, terrestrial vegetation, woody debris)	2.5Y 3/1 very dark gray
				pre-impoundment	11.0–15.0″ low water content, silty sand, organic material present - sparse (roots)	2.5Y 4/2 dark grayish brown

a. Coordinates are based on NAD83 State Plane Texas North Central System (feet).
b. Sediment core samples are measured in inches with zero representing the current bottom surface.

Table 4 (continued). Sediment core sample analysis data.

Sediment core sample	Easting[a] (feet)	Northing[a] (feet)	Total core sample / post-impoundment sediment length (inches)	Sediment core description[b]		Munsell soil color
TYL-2	2997503.82	6779603.74	64.0 / 11.0	pre-impoundment	15.0–42.0″ moderate water content, clay, sticky, peanut butter consistency, uniform consistency and texture throughout, organic material present throughout (fibrous roots)	2.5Y 4/2 dark grayish brown with blotches of red
					42.0–64.0″ low water content, sandy clay, blotches of red crumbly clay, very dry, uniform consistency and texture throughout, organic material present (roots)	2.5Y 5/2 grayish brown clay blotches 10YR 3/6 dark yellowish brown
TYL-3	2997154.38	6782129.25	63.0 / 35.0	post-impoundment	0.0–2.0″ very high water content, fine silt, soupy, smooth,	10Y-5GY 10y 3/2 very dark grayish olive
					2.0–15.0″ high water content, fine silt, pudding like, uniform consistency and texture	GLEY 1 2.5/10Y greenish black
					15.0–18.0″ high water content, silty clay, fine to medium size clay bits present, organic material present throughout (woody debris, roots)	GLEY 1 2.5N black
					18.0–35.0″ high water content, silty clay, sticky, uniform texture, organic material present throughout (roots, woody debris)	GLEY 1 2.5N black
				pre-impoundment	35.0–58.0″ high to moderate water content, water content decreases with depth, silty clay, fine clay bits present, more dense than previous layer, organic material present throughout (roots, woody debris)	5Y 3/2 dark olive gray
					58.0–63.0″ low water content, clay, malleable, smooth, uniform texture, mottled coloration, organic material present throughout (fibrous and dendritic roots)	10YR 4/4 dark yellowish brown 5Y 3/2 dark olive gray
TYL-4	2999278.72	6785177.29	36.0 / 11.0	post-impoundment	0.0–3.0″ very high water content, fine silt, soupy, smooth, uniform consistency and texture	10Y-5GY 10Y3/2 very dark grayish olive
					3.0–7.0″ high water content, fine silt, very fine clay bits present, organic material present (roots)	GLEY 1 2.5/10Y greenish black

a. Coordinates are based on NAD83 State Plane Texas North Central System (feet).
b. Sediment core samples are measured in inches with zero representing the current bottom surface.

Table 4 (continued). Sediment core sample analysis data.

Sediment core sample	Easting[a] (feet)	Northing[a] (feet)	Total core sample / post-impoundment sediment length (inches)	Sediment core description[b]		Munsell soil color
TYL-4	2999278.72	6785177.29	34.0 / NA	post-impoundment	7.0–11.0″ high water content, clay, poorly mixed, organic material present (charcoal, woody debris)	5Y 3/1 very dark gray
					11.0–34.0″ moderate water content, water content decreases with depth, clay, sticky, peanut butter like, organic material present throughout (fibrous roots, terrestrial vegetation)	2.5Y 4/1 dark gray
TYL-5	2996510.47	6786275.4	36.0 / 24.0	post-impoundment	0.0–1.0″ very high water content, fine silt, soupy, smooth, uniform consistency and texture	10Y-5GY 10Y 3/2 very dark grayish olive
					1.0–9.0″ high water content, fine silt, smooth, pudding like, uniform consistency and texture	GLEY 1 2.5/10Y greenish black
					9.0–24.0″ moderate water content, clay, sticky, peanut butter like, consistency and texture not uniform, organic material present throughout (roots, leaf litter, and twigs)	5Y 4/2 olive gray
				pre-impoundment	24.0–36.0″ low water content, clay, sticky, crumbles, uniform consistency and texture, organic material present throughout (fibrous roots)	2.5Y 4/1 dark gray
TYL-6	2998642.74	6788714.13	40.0 / 25.0	post-impoundment	0.0–2.0″ very high water content, fine silt, soupy, uniform consistency and texture	10Y-5GY 10Y 3/2 very dark grayish olive
					2.0–6.0″ high water content, fine silt, pudding like	GLEY 1 2.5/10Y greenish black
					6.0–25.0″ moderate water content, silty clay, sticky, peanut butter like, uniform consistency and texture, organic material present throughout (roots, leaf litter, twigs at top)	2.5Y 4/1 dark gray
				pre-impoundment	25.0–40.0″ low water content, clay, smooth, malleable, dense, easily fractures, mottled coloration, uniform consistency and texture throughout, organic materials present (roots throughout and woody debris)	GLEY 1 3/10Y very dark grayish gray 2.5Y 5/6 light olive brown
TYL-7	2993924.96	6795607.25	31.0 /11.0	post-impoundment	0.0–9.0″ high water content, silt, smooth, pudding like, uniform consistency and texture	GLEY 1 2.5/10Y greenish black

a. Coordinates are based on NAD83 State Plane Texas North Central System (feet).
b. Sediment core samples are measured in inches with zero representing the current bottom surface.

Table 4 (continued). Sediment core sample analysis data.

Sediment core sample	Easting[a] (feet)	Northing[a] (feet)	Total core sample / post-impoundment sediment length (inches)	Sediment core description[b]		Munsell soil color
TYL-7 (cont.)	2993924.96	6795607.25	31.0 /11.0	post-impoundment	9.0–11.0″ moderate to low water content, water content decrease with depth, silty clay, sticky, peanut butter like, uniform texture, variable consistency, organic material present throughout (fibrous roots, woody debris)	2.5Y 4/1 dark gray
				pre-impoundment	11.0–15.0″ low water content, sandy clay, crumbles, uniform consistency and texture throughout, organic material present (roots)	2.5Y 4/2 dark grayish brown
					15.0–31.0″ low water content, clay, density increases with depth, clay crumbles more with depth, organic material present throughout (fibrous and dendritic roots)	2.5Y 3/1 very dark gray
TYL-8	2990465.76	6787962.19	30.0 / 10.0	post-impoundment	0.0–10.0″ high water content, silty, smooth, pudding like, uniform consistency and texture	10Y-5GY 10Y 3/2 very dark grayish olive
				pre-impoundment	10.0–28.0″ low water content, silty clay, dense, more crumbly with depth, organic material present throughout (roots, leaf litter, terrestrial vegetation, woody debris)	2.5Y 4/2 dark grayish brown
					28.0–30.0″ low water content, silty clay, dense, crumbles, organic material present (fibrous roots)	2.5Y 3/2 very dark gray
TYL-9	2992802.2	6784552.17	35.0 / 21.0	post-impoundment	0.0–16.0″ high water content, fine silt, smooth, pudding like, uniform consistency, bands of black sediment at 9, 10, 12, and 14 inches	10Y-5GY 10Y 3/2 very dark grayish olive
					16.0–21.0″ moderate water content, silty clay, clay bits at top of layer, organic material present throughout (twigs, terrestrial vegetation, detritus)	2.5Y 4/1 dark gray
				pre-impoundment	21.0–31.0″ low water content, clay, very dense, crumbles, organic material present throughout (fibrous roots)	2.5Y 4/1 dark gray
					31.0–35.0″ low water content, clay, very dense, crumbles, dry to the touch, organic material present throughout (fibrous roots)	2.5Y 2.5/1 black

a. Coordinates are based on NAD83 State Plane Texas North Central System (feet).

b. Sediment core samples are measured in inches with zero representing the current bottom surface.

Table 4 (continued). Sediment core sample analysis data.

Sediment core sample	Easting[a] (feet)	Northing[a] (feet)	Total core sample / post-impoundment sediment length (inches)	Sediment core description[b]		Munsell soil color
TYL-10	3004098.97	6778064.89	47.0 / 5.0	post-impoundment	0.0–1.0″ very high water content, fine silt, soupy, smooth	10Y-5GY 10Y 3/2 very dark grayish olive
					1.0–5.0″ high water content, fine silt, pudding like, uniform consistency and texture	GLEY 1 2.5/10y greenish black
				pre-impoundment	5.0–23.0″ low water content, fine sand, dense, easily fractures, organic material present (woody debris at 18 inches, roots sparsely spaced)	10YR 4/2 dark grayish brown 2.5Y 5/2 grayish brown
					23.0–37.0″ low water content, fine sand, dense, easily fractures, very dry to touch, organic material present (dendritic roots)	2.5Y 6/3 light yellowish brown
					37.0–47.0″ low water content, fine sand, more dense than previous layer, easily fractures	2.5Y 7/1 light gray
TYL-11	3006678.49	6779511.6	77.0 / 15.0	post-impoundment	0.0–1.0″ high water content, sandy silt, uniform consistency and texture	2.5Y 4/1 dark gray
					1.0–15.0″ high water content, sandy silt, mottled coloration, organic material present (bark, rocks, and twigs, roots found at bottom of layer)	10Y-5GY 10Y 3/2 very dark grayish olive 2.5Y 4/2 dark grayish brown
				pre-impoundment	15.0–45.0″ low water content, sand, densely packed, fractures, organic material present (roots [sparse], twig)	10YR 4/2 dark grayish brown
					45.0–57.0″ low water content, sandy clay, densely packed, fractures, uniform consistency and texture, mottled coloration	10YR 5/3 brown 10YR 4/2 dark grayish brown
					57.0–77.0″ low water content, sandy clay, uniform texture, red clay content increases with depth, crumbles, coarse dry bits with sand, mottled coloration, gray clay is sandy, sticky, dense, crumbles, organic material present (roots)	10YR 4/2 dark grayish brown 10YR 5/3 brown 2.5Y 5/1 gray

a. Coordinates are based on NAD83 State Plane Texas North Central System (feet).

b. Sediment core samples are measured in inches with zero representing the current bottom surface.

Table 4 (continued). Sediment core sample analysis data.

Sediment core sample	Easting[a] (feet)	Northing[a] (feet)	Total core sample / post-impoundment sediment length (inches)	Sediment core description[b]		Munsell soil color
TYL-12	3009952.3	6781993.32	35.0 / 21.0	post-impoundment	0.0–4.0″ high water content, fine silt, milkshake like, uniform consistency and texture	10Y-5GY 10Y 3/2 very dark grayish olive
					4.0–21.0″ high to moderate water content, water content decreases with depth, silty clay, gritty, density increases with depth, blotches of brownish clay bits, organic material present throughout (fibrous roots, twigs)	2.5Y 5/1 gray
				pre-impoundment	21.0–35.0″ high to low water content, water content decreases with depth, silty clay, gritty, density increases with depth, blotches of brownish clay bits, organic material present throughout (fibrous roots, twigs)	2.5Y 5/1 gray 2.5Y 6/5 light olive brown
TYL-13	3013549.07	6783813.08	86.0 / 27.0	post-impoundment	0.0–9.0″ very high water content, fine silt, soupy, smooth, coarse bits of clay present	10Y-5GY 10Y 3/2 very dark grayish olive
					9.0–27.0″ moderate water content, clay, smooth, sticky, uniform consistency and texture, organic materials present throughout (fibrous roots)	2.5Y 4/2 dark grayish brown
				pre-impoundment	27.0–35.0″ moderate water content, clay, sticky, peanut butter like, organic materials present throughout (fibrous roots)	2.5Y 5/1 gray
					35.0–78.0″ moderate water content, silty clay, smooth, sticky, mottled coloration, coarse bits of brown/red clay,	10YR 3/6 dark yellowish brown 2.5Y 5/1 gray
					78.0–86.0″ low water content, clay, dry to touch, crumbles, mottled coloration	10YR 3/6 dark yellowish brown 2.5Y 5/1 gray
TYL-14	3012808.41	6786476.99	22.0 / 7.0	post-impoundment	0.0–4.0″ moderate water content, water content decreases with depth, sandy silt, soupy, very fine silt layer on top, dense	2.5Y 4/1 dark gray

a. Coordinates are based on NAD83 State Plane Texas North Central System (feet).

b. Sediment core samples are measured in inches with zero representing the current bottom surface.

Table 4 (continued). Sediment core sample analysis data.

Sediment core sample	Easting[a] (feet)	Northing[a] (feet)	Total core sample / post-impoundment sediment length (inches)	Sediment core description[b]		Munsell soil color
TYL-14 (cont.)	3012808.41	6786476.99	22.0 / 7.0	post-impoundment	4.0–7.0″ moderate to low water content, sandy silt, dense, uniform consistency and texture, organic materials present (fibrous roots)	2.5Y 5/1 gray
				pre-impoundment	7.0–13.0″ moderate to low water content, sandy clay, dense, uniform consistency and texture, organic materials present (fibrous roots)	2.5Y 5/1 gray
					13.0–22.0″ low water content, clay, easily fractures, malleable, mottled coloration, uniform consistency and texture, organic material present (detritus, fibrous roots	2.5Y 5/2 grayish brown 2.5Y 5/4 light olive brown
TYL-15	3013312.65	6790097.06	52.0 / 16.0	post-impoundment	0.0–2.0″ very high water content, fine silt, soupy, smooth	10Y-5GY 10Y 3/2 very dark grayish olive
					2.0–5.0″ very high water content, fine silt, smooth, pudding like, uniform consistency and texture	GLEY 1 2.5/10Y grayish black
					5.0–7.0″ high water content, silty clay, sticky, organic material present throughout	2.5Y 3/1 dark gray
					7.0–16.0″ moderate water content, silty clay, organic material present throughout (roots)	2.5Y 4/1 dark gray
				pre-impoundment	16.0–24.0″ moderate water content, sandy clay, organic material present (roots at 24 inches, woody debris, bark)	2.5Y 4/1 dark gray
					24.0–40.0″ moderate water content, sandy clay peanut butter like, density increases with depth, organic material present (roots)	2.5Y 4/1 dark gray
					40.0–52.0″ low water content, sandy clay, crumbles, fractures, organic material present throughout (roots)	2.5Y 4/1 dark gray
TYL-16	3011719.9	6796593.99	57.0 / 14.0	post-impoundment	0.0–2.0″ very high water content, fine silt, soupy, smooth	10Y-5GY 10Y 3/2 very dark grayish olive

a. Coordinates are based on NAD83 State Plane Texas North Central System (feet).

b. Sediment core samples are measured in inches with zero representing the current bottom surface.

Table 4 (continued). Sediment core sample analysis data.

Sediment core sample	Easting[a] (feet)	Northing[a] (feet)	Total core sample / post-impoundment sediment length (inches)	Sediment core description[b]		Munsell soil color
TYL-16 (cont.)	3011719.9	6796593.99	57.0 / 14.0	post-impoundment	2.0–9.0″ high water content, fine silt, smooth, pudding like,	GLEY 1 2.5/10Y greenish black
					9.0–14.0″ high water content, silty clay, sticky, peanut butter like, organic material present (roots)	2.5Y 4/1 dark gray
				pre-impoundment	14.0–45.0″ moderate water content, sandy clay, sticky, peanut butter like, uniform consistency and texture, organic material present (roots [sparse], woody debris)	2.5Y 4/1 dark gray
					45.0–57.0″ low water content, sandy clay, crumbles, easily fractures, dense, mottled coloration, uniform consistency and texture	2.5Y 4/1 dark gray 10YR 5/4 yellowish brown
TYL-17	3007076.84	6782229.71	71.0 / 12.0	post-impoundment	0.0–4.0″ very high water content, fine silt, soupy, smooth, uniform consistency and texture	10Y-5GY 10Y 3/2 very dark grayish olive
					4.0–7.0″ high water content, fine silt, smooth, pudding like	GLEY 1 2.5/10Y greenish black
					7.0–12.0″ moderate water content, silty sand, organic material present (fibrous roots)	2.5Y 3/1 very dark gray
				pre-impoundment	12.0–17.0″ moderate water content, water content less than previous layer, sand, sticky, organic material present (roots)	2.5Y 4/1 dark gray
					17.0–19.0″ moderate water content, sandy clay	2.5Y 4/1 dark gray
					19.0–24.0″ moderate water content, sand, density increases with depth, organic material present (roots)	2.5Y 4/1 dark gray
					24.0–35.0″ moderate water content, sand, organic material present (roots)	2.5Y 3/2 very dark grayish brown

a. Coordinates are based on NAD83 State Plane Texas North Central System (feet).

b. Sediment core samples are measured in inches with zero representing the current bottom surface.

Table 4 (continued). Sediment core sample analysis data.

Sediment core sample	Easting[a] (feet)	Northing[a] (feet)	Total core sample / post-impoundment sediment length (inches)	Sediment core description[b]		Munsell soil color
TYL-17 (cont.)	3007076.84	6782229.71	71.0 / 12.0	pre-impoundment	35.0–37.0″ low water content, sandy clay, organic material present (roots)	2.5Y 4/1 dark gray
					37.0–50.0″ low water content, sand, densely packed	2.5Y 3/2 very dark grayish brown
					50.0–71.0″ low water content, fine sand, organic material present (charred wood at 56 inches)	2.5Y 6/1 gray
TYL-18	3008339.15	6787488.39	39.0 / 6.0	post-impoundment	0.0–6.0″ high water content, fine silt with a very fine silt layer on top, smooth, milkshake like	10YR 2/1 black 10YR 3/4 dark yellowish brown (very fine silt)
				pre-impoundment	6.0–16.0″ low water content, silty clay, sticky, malleable but easily fractures, uniform consistency and texture, organic material present throughout (fibrous roots)	2.5Y 3/1 very dark gray
					16.0–28.0″ low water content, water content less than previous layer, sandy clay, less dense than previous layer, blotches of brown, organic material present throughout (detritus, fibrous roots)	2.5Y 4/1 dark gray 2.5Y 5/4 light olive brown
					28.0–39.0″ low water content, water content less than previous layer, clay, sticky, more dense than previous layers, blotches of brown, medium sized rocks present, uniform consistency and texture, organic material present throughout (fibrous roots)	2.5Y 4/1 dark gray 2.5Y 5/4 light olive brown

a. Coordinates are based on NAD83 State Plane Texas North Central System (feet).

b. Sediment core samples are measured in inches with zero representing the current bottom surface.

Sediment core locations are dispersed throughout the reservoir, selected to represent the various acoustic signatures seen in the data, and chosen to represent various depths and topographical features such as the submerged river channels, floodplains, shallow slopes, and deep basins. The pre-impoundment surface is identified by matching each sediment core with the acoustic signal returns. This information then serves as a guide for identifying the pre-impoundment surface along cross-sections where sediment core samples were not collected.

A photograph of sediment core 5 (for location, refer to Figure 2) is shown in Figure 7A. The base, or deepest part of the sample, is denoted by the blue line. The pre-impoundment boundary (yellow line closest to the base) was evident within this sediment core sample at 24 inches and identified by the change in color, texture, moisture, porosity, and structure. A photograph of sediment core 11 (for location, refer to Figure 2) is shown in Figure 7B. The base, or deepest part of the sample, is denoted by the blue line. The pre-impoundment boundary (yellow line closest to the base) was evident within this sediment core sample at 15 inches and identified by the change in color, texture, moisture, porosity, and structure. Identification of the pre-impoundment surface for each sediment core followed a similar procedure.

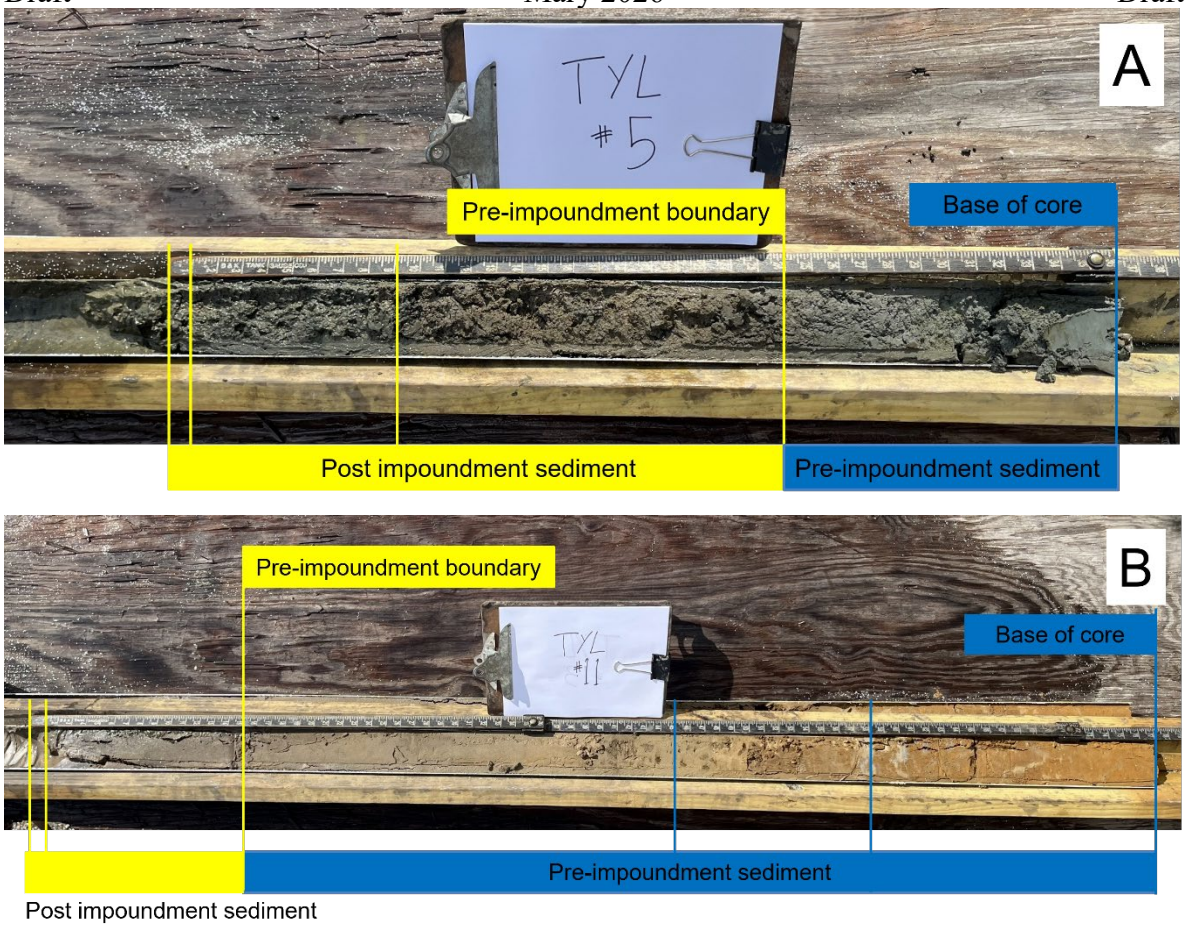


Figure 7. **Sediment cores: (A) TYL-5. Post-impoundment sediment layers occur in the top 24 inches of this sediment core (identified by the yellow box). Pre-impoundment sediment layers were identified and are defined by the blue box. (B) TYL-11. Post-impoundment sediment layers occur in the top 15 inches of this sediment core (identified by the yellow box). Pre-impoundment sediment layers were identified and are defined by the blue box.**

Figures 8 and 9 illustrate the relationship between acoustic signal returns and the depositional layering seen in sediment cores. In this example, sediment cores TYL-5 and TYL-11 are shown correlated with each frequency: 200 kHz, 50 kHz, and 12 kHz. The current bathymetric surface is determined based on signal returns from the 200 kHz transducer as represented by the top red line in the figures. The pre-impoundment surface is identified by comparing boundaries observed in the 200 kHz, 50 kHz, and 12 kHz signals to the location of the pre-impoundment surface of the sediment core sample. Many layers of sediment may be identified during analysis based on changes in observed characteristics such as water content, organic matter content, and sediment particle size, and each layer is classified as either post-impoundment or pre-impoundment. Yellow boxes represent post-impoundment sediments identified in the sediment core. Blue boxes indicate pre-impoundment sediments. In this example, the pre-impoundment boundary in sediment cores

TYL-5 and TYL-11 most closely aligned with the top of the bottom layer visible in the 50 kHz acoustic returns (Figures 8 and 9).

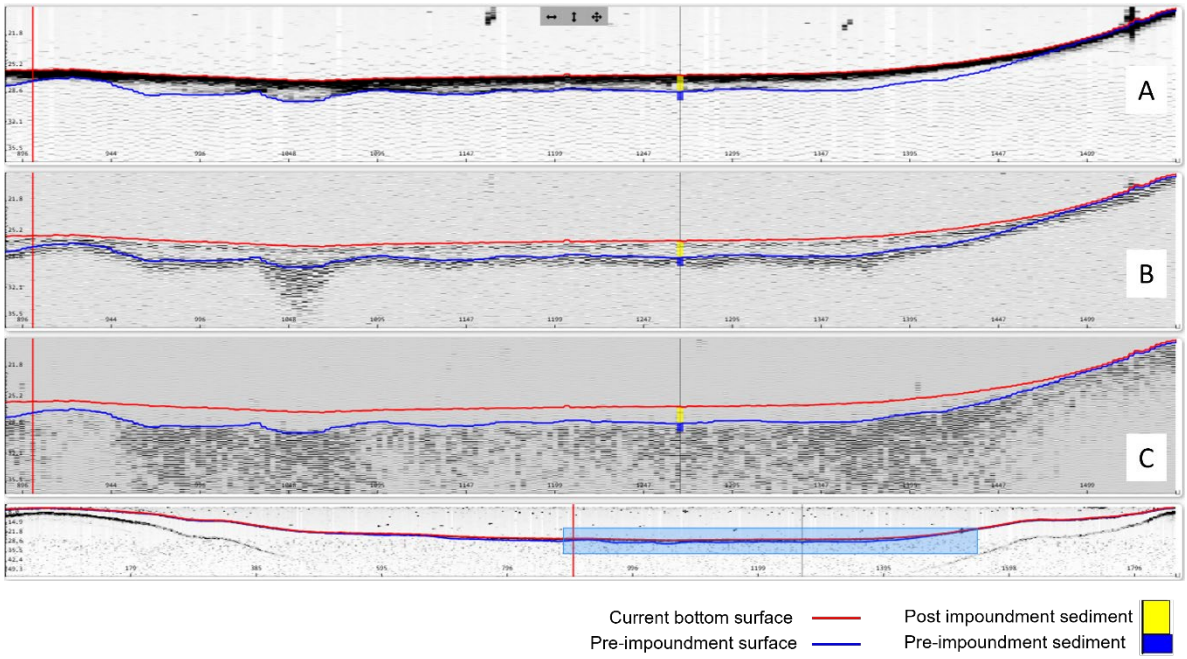


Figure 8. **Sediment core sample TYL-5 compared with acoustic signal returns: A) 200 kHz frequency, B) 50 kHz frequency, and C) 12 kHz frequency.**

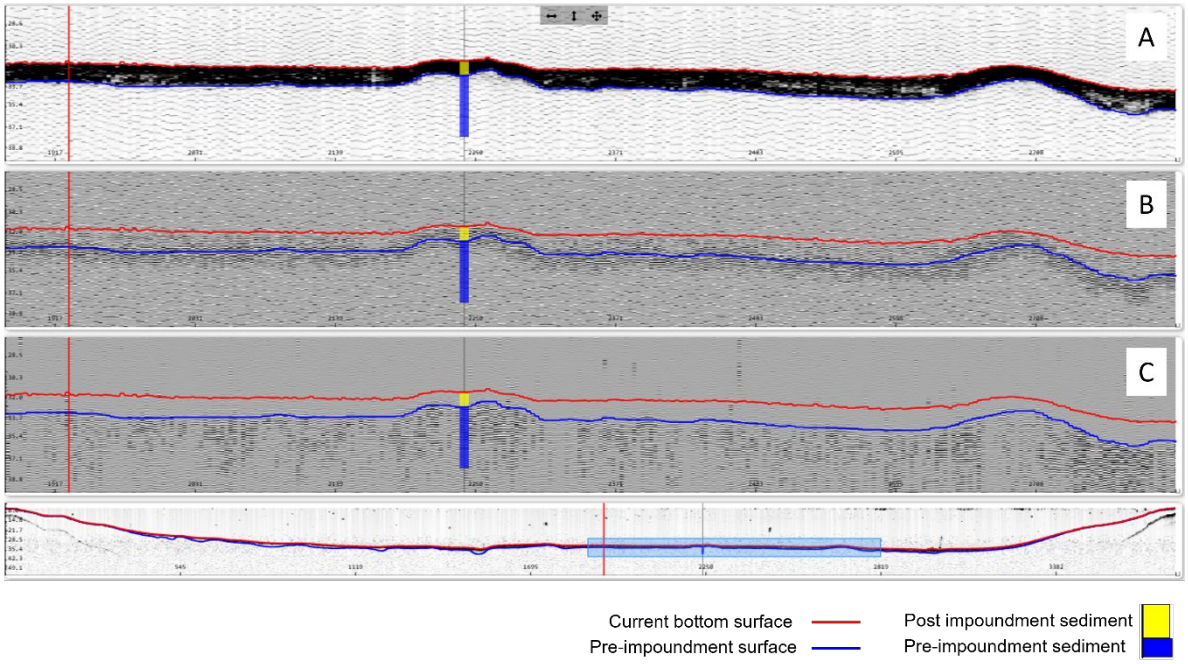


Figure 9. **Sediment core sample TYL-11 compared with acoustic signal returns: A) 200 kHz frequency, B) 50 kHz frequency, and C) 12 kHz frequency.**

After the pre-impoundment surface for all cross-sections is identified, a pre-impoundment TIN model and a sediment thickness TIN model are created. Pre-

impoundment elevations and sediment thicknesses are interpolated between surveyed cross-sections using HydroTools with the same interpolation definition file used for bathymetric interpolation. For the purposes of TIN model creation, the TWDB assumed the sediment thickness for each lidar point, 2013 and 2023 shoreline contours at elevation 369.9 and 375.63 feet, and the reservoir boundary was zero feet (defined as the 375.38-foot elevation contour). The sediment thickness TIN model was converted to a raster representation using a cell size of 2 feet by 2 feet and was used to produce a sediment thickness map (Figure 10). Elevation-capacity and elevation-area tables were computed from the pre-impoundment TIN model for the purpose of calculating the total volume of accumulated sediment.

Figure 10

Lake Tyler

Sediment thickness map

Sediment thickness (feet)

- 0.00 - 0.25
- 0.25 - 0.50
- 0.50 - 0.75
- 0.75 - 1.00
- 1.00 - 1.25
- 1.25 - 1.50
- 1.50 - 1.75
- 1.75 - 2.00
- 2.00 - 2.25
- 2.25 - 2.50
- 2.50 - 2.75
- 2.75 - 3.00
- 3.00 - 3.25
- 3.25 - 3.50
- 3.50 - 3.75
- 3.75 - 4.00
- 4.00 - 4.25
- 4.25 - 4.50
- 4.50 - 4.75
- 4.75 - 5.00
- 5.00 - 5.25
- 5.25 - 5.50
- 5.50 - 5.75
- 5.75 - 6.00
- 6.00 - 6.25
- 6.25 - 6.50
- 6.50 - 6.75
- 6.75 - 7.00
- 7.00 - 7.25
- 7.25 - 7.50
- 7.50 - 7.75
- 7.75 - 8.00
- 8.00 - 8.25

Islands

Lake Tyler conservation pool elevation 375.38 feet

Projection: NAD83 State Plane Texas North Central Zone (feet)

TEXAS WATER DEVELOPMENT BOARD

May 2025 Survey

N

0 0.5 1 2 Miles

2980000 2990000 3000000 3010000 3020000

6800000 6790000 6780000

Survey results

Volumetric survey

The 2025 TWDB volumetric survey indicates Lake Tyler has a total reservoir capacity of 79,453 acre-feet and encompasses 4,992 acres at conservation pool elevation (375.38 feet NGVD29). Current area and capacity survey estimates are presented along with previous survey estimates of area and capacity at conservation pool elevation in Table 5. Because differences in reservoir conditions as well as differences in the methodologies used among surveys can affect area and volume calculations, the TWDB does not recommend comparing between volumetric surveys to determine loss of area or capacity. Information from past surveys is thus presented for informational purposes only.

Certificate of Adjudication No. 06-4853 authorizes the City of Tyler, Texas, to maintain an existing dam and reservoir on Prairie Creek (Lake Tyler) and impound therein not to exceed 43,100 acre-feet of water and to maintain an existing dam and reservoir on Mud Creek (Lake Tyler East) and impound therein not to exceed 44,000 acre-feet of water for a combined total storage of 87,100 acre-feet (Texas Commission on Environmental Quality, 1987).

Table 5. Current and previous survey capacity and surface area estimates at conservation pool elevation.

Survey	Surface Area (acres)	Total Capacity (acre-feet)	Conservation Pool Elevation[a]	Source
TWDB 2025 pre-impoundment	4,992	84,298	375.38	
U.S. Geological Survey 1967[b]	4,880	80,900	375.38	Texas Water Development Board, 1974
TWDB 1997[c]	4,734	80,103	375.38	Texas Water Development Board, 2013
TWDB 1997 re-calculated	4,940	83,443	375.38	Texas Water Development Board, 2016
TWDB 2013	4,714	77,284	375.38	Texas Water Development Board, 2013
TWDB 2013 re-calculated	4,817	78,399	375.38	Texas Water Development Board, 2016
TWDB 2025	4,992	79,453	375.38	

a. Feet National Geodetic Vertical Datum 1929 (NGVD29).
b. Combined capacities based on 1966-67 survey by the city of Tyler, calculated by the U.S. Geological Survey (Texas Water Development Board, 1974).
c. Note: In 1997, the conservation pool elevation was rounded to 375.4 feet and total reservoir capacity was reported as 80,198 acre-feet encompassing 4,737 acres. To report the area and capacity at 375.38 feet for comparative purposes, the reported areas and capacities between elevations 375.3 and 375.4 feet were linearly interpolated (Texas Water Development Board, 2003).

Sedimentation survey

The 2025 TWDB sedimentation survey measured 4,845 acre-feet of sediment below elevation 375.38 feet. The sedimentation survey indicates sediment accumulation is greatest within the submerged river channels throughout the reservoir. Comparison of annual capacity loss estimates of Lake Tyler derived using differing methodologies are provided in Table 6 for sedimentation rate calculation.

Any changes to the hydrologic system that contributes runoff to the reservoir, including changes in vegetative cover, land use, or frequency and intensity of rainfall events, can impact the local rate of sedimentation. Because methodological and technological changes from one survey to the next yield inconsistencies in estimates of capacity loss rates, long term capacity calculations, computed by plotting all capacity estimates and calculating a linear regression line, reduces the effect of individual survey error. As illustrated in Figure 11, long-term trends indicate Lake Tyler loses capacity at an average of 73 acre-feet per year since impoundment due to sedimentation below conservation pool elevation (375.38 feet NGVD29).

Table 6. Average annual capacity loss comparisons at conservation pool elevation 375.38 feet[a]

Previous surveys	U.S. Geological Survey 1967	TWDB 1997[a]	TWDB 2013[a]	TWDB 2025 pre-impoundment
Volume difference versus TWDB 2025 survey (acre-feet)	1,447	3,990	-1,054	4,845
Percent change	1.8	4.8	-1.3	5.7
Number of years	57[b]	28	12	57[b]
Capacity loss rate (acre-feet/year)	25.4	142.5	-87.8	85
Capacity loss rate (acre-feet/square mile of drainage area of 107 square miles/year	0.24	1.33	-0.82	0.79

a. Comparisons using re-calculated capacity estimates (Texas Water Development Board, 2016).

b. Note: The original Lake Tyler was impounded by Whitehouse Dam on January 8, 1949, and the original Lake Tyler East was impounded by Mud Creek Dam on November 22, 1966. The two lakes were joined by a canal on May 29, 1968, and the combined lakes designated Lake Tyler. Therefore, the number of years between the current 2025 TWDB survey and pre-impoundment date represents the difference between the current system operation of 2025 and 1968.

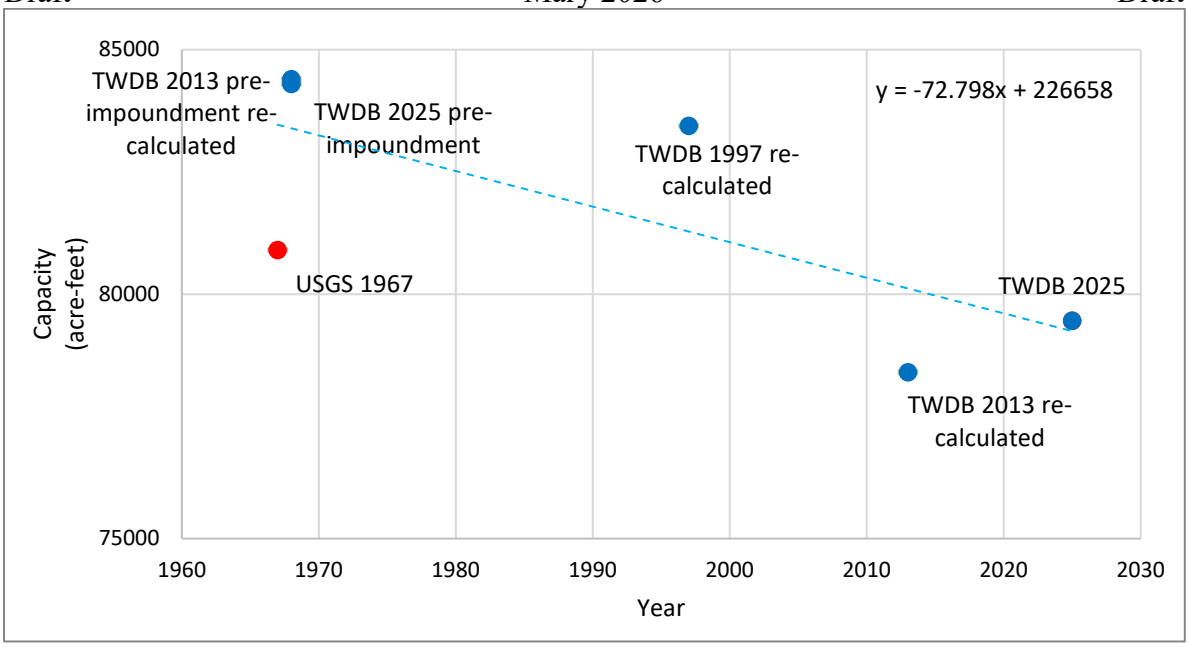


Figure 11. **Plot of current and previous capacity estimates (acre-feet) at conservation pool elevation. Capacity estimates for each TWDB survey plotted as blue dots and other surveys as red dots. The blue trend line illustrates the total average loss of capacity from 1967 through 2025.**

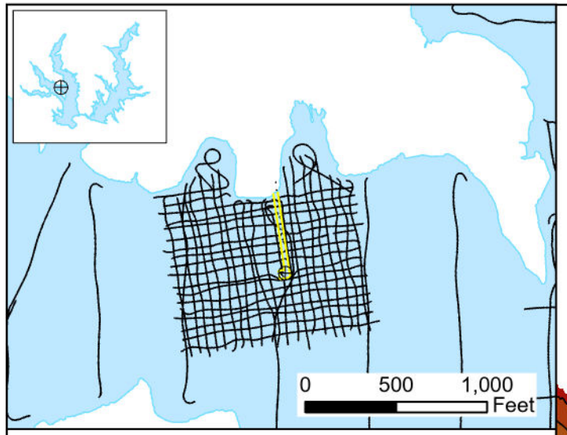
Intake structure

Survey data were collected around the intake structure following planned survey lines oriented parallel to and perpendicular to the intake structure in a 50-foot grid pattern extending approximately 500 feet on all sides of the intake. The structure is located at Latitude 32.24º N and Longitude 95.176º W approximately two miles north of Whitehouse Dam. Figure 12 shows the elevation relief of the area in detail, and Figure 13 shows the sediment thicknesses of the area in detail.

Figure 12

Lake Tyler West Reservoir

Elevation relief near intake structure



Elevations
(feet NGVD29)

- 374 - 375.38
- 372 - 374
- 370 - 372
- 368 - 370
- 366 - 368
- 364 - 366
- 362 - 364
- 360 - 362
- 358 - 360
- 356 - 358
- 354 - 356
- 352 - 354
- 350 - 352
- 348 - 350
- 346 - 348

Intake site
Intake platform
2-foot contours
Lake Tyler West Reservoir conservation pool elevation: 375.38 feet NGVD29

N

Projection: NAD83 State Plane Texas North Central Zone (feet)

0 140 280 560 Feet

Langley Island

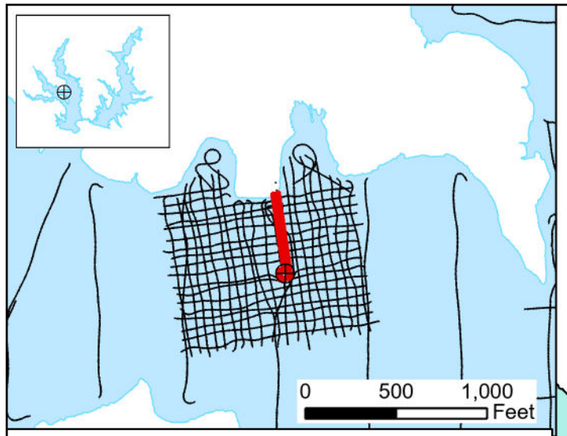
TEXAS WATER DEVELOPMENT BOARD

May 2025 Survey

Figure 13

Lake Tyler West Reservoir

Sediment thickness near intake structure



Sediment thickness

(feet)

- 0.00 - 0.25
- 0.25 - 0.50
- 0.50 - 0.75
- 0.75 - 1.00
- 1.00 - 1.25
- 1.25 - 1.50
- 1.50 - 1.75
- 1.75 - 2.00
- 2.00 - 2.25
- 2.25 - 2.50
- 2.50 - 2.75
- 2.75 - 3.00
- 3.00 - 3.25
- 3.25 - 3.50
- 3.50 - 3.75
- 3.75 - 4.00
- 4.00 - 4.25
- 4.25 - 4.50
- 4.50 - 4.75
- 4.75 - 5.00
- 5.00 - 5.25
- 5.25 - 5.50
- 5.50 - 5.75

Intake site

Intake platform

Lake Tyler West Reservoir
conservation pool
elevation: 375.38 feet NGVD29

N

Projection: NAD83 State Plane
Texas North Central Zone (feet)

0 140 280 560
Feet

Langley Island

TEXAS WATER DEVELOPMENT BOARD

May 2025 Survey

Recommendations

Sedimentation processes tend to be slow, with changes accumulating over the time frame of years—unless there is a high flow event. For these reasons, we recommend reservoir sedimentation surveys be conducted every 10 years or after a major event. Closely monitoring changes in the reservoir provides information needed to plan for a secure water supply for the future.

TWDB contact information

For more information about the TWDB Hydrographic Survey Program, visit www.twdb.texas.gov/surfacewater/surveys. Any questions regarding the TWDB Hydrographic Survey Program or this report may be addressed to: Hydrosurvey@twdb.texas.gov.

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Appendix A

Lake Tyler

RESERVOIR BATHYMETRIC CAPACITY TABLE

TEXAS WATER DEVELOPMENT BOARD — May 2025 Survey

CAPACITY IN ACRE-FEET — Conservation Pool Elevation 375.38 feet NGVD29

ELEVATION INCREMENT IS ONE TENTH FOOT

ELEVATION (Feet NGVD29)	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
337	0	0	0	0	0	0	0	0	0	0
338	0	0	0	0	0	0	1	1	2	2
339	4	5	6	8	11	13	16	19	23	27
340	32	37	43	50	57	66	75	86	97	109
341	122	135	150	165	181	197	214	233	252	272
342	293	315	338	363	389	416	444	473	503	534
343	566	600	634	669	705	742	780	819	858	899
344	940	983	1,026	1,071	1,117	1,163	1,210	1,258	1,307	1,356
345	1,407	1,458	1,510	1,562	1,616	1,670	1,725	1,782	1,839	1,897
346	1,957	2,018	2,080	2,144	2,208	2,274	2,340	2,408	2,476	2,546
347	2,616	2,688	2,761	2,834	2,909	2,985	3,062	3,140	3,219	3,299
348	3,381	3,463	3,548	3,633	3,720	3,809	3,899	3,991	4,084	4,178
349	4,274	4,372	4,471	4,572	4,674	4,776	4,881	4,986	5,092	5,199
350	5,308	5,417	5,528	5,640	5,752	5,865	5,980	6,095	6,211	6,329
351	6,447	6,566	6,687	6,808	6,931	7,056	7,182	7,309	7,437	7,567
352	7,698	7,831	7,965	8,100	8,237	8,374	8,513	8,654	8,796	8,939
353	9,083	9,229	9,376	9,524	9,674	9,825	9,978	10,132	10,289	10,446
354	10,606	10,767	10,929	11,093	11,258	11,424	11,592	11,761	11,931	12,103
355	12,275	12,449	12,625	12,801	12,979	13,159	13,339	13,521	13,704	13,889
356	14,075	14,263	14,452	14,643	14,835	15,029	15,224	15,420	15,619	15,818
357	16,020	16,223	16,428	16,634	16,842	17,052	17,263	17,477	17,691	17,908
358	18,126	18,346	18,567	18,790	19,014	19,239	19,466	19,695	19,924	20,156
359	20,388	20,622	20,858	21,094	21,332	21,571	21,811	22,053	22,296	22,540
360	22,786	23,033	23,282	23,531	23,782	24,035	24,289	24,544	24,801	25,059
361	25,319	25,580	25,842	26,105	26,370	26,636	26,904	27,173	27,444	27,716
362	27,989	28,264	28,540	28,817	29,096	29,377	29,658	29,942	30,226	30,513
363	30,800	31,090	31,380	31,673	31,966	32,261	32,558	32,855	33,155	33,456
364	33,758	34,062	34,367	34,673	34,981	35,290	35,601	35,913	36,227	36,543
365	36,860	37,178	37,499	37,821	38,145	38,471	38,798	39,127	39,458	39,791
366	40,125	40,461	40,799	41,139	41,480	41,824	42,169	42,515	42,863	43,213
367	43,565	43,918	44,273	44,630	44,989	45,350	45,712	46,077	46,443	46,811
368	47,181	47,552	47,925	48,301	48,678	49,056	49,437	49,819	50,203	50,589
369	50,976	51,365	51,757	52,150	52,545	52,941	53,340	53,741	54,144	54,549
370	54,957	55,368	55,779	56,193	56,609	57,026	57,444	57,865	58,287	58,711
371	59,137	59,564	59,993	60,424	60,856	61,290	61,726	62,163	62,602	63,043
372	63,486	63,930	64,376	64,824	65,274	65,726	66,180	66,637	67,095	67,555
373	68,017	68,480	68,945	69,411	69,878	70,347	70,817	71,288	71,762	72,236
374	72,713	73,190	73,670	74,151	74,634	75,118	75,604	76,092	76,582	77,073
375	77,566	78,061	78,557	79,054						

Appendix B

Lake Tyler

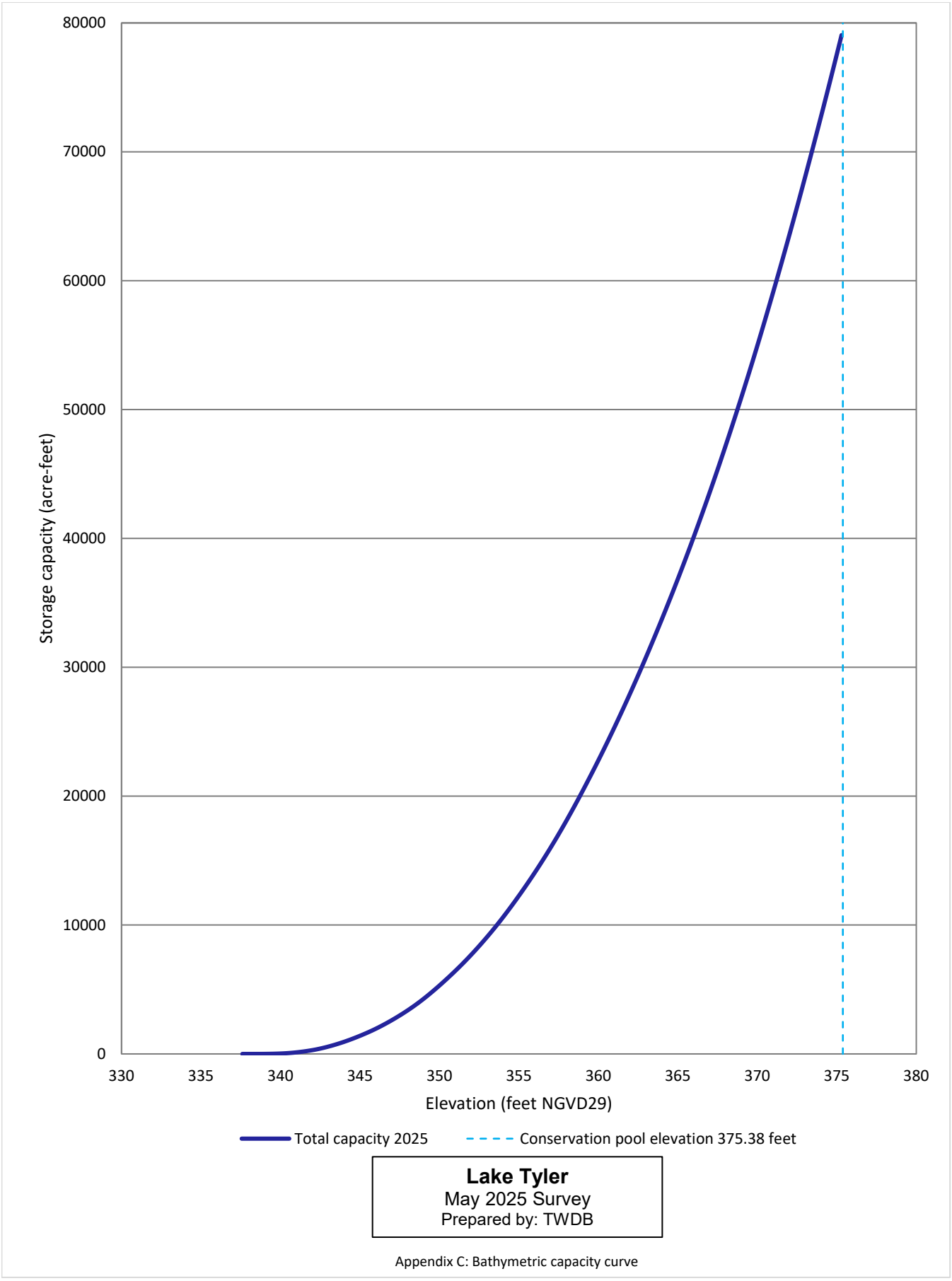
RESERVOIR BATHYMETRIC AREA TABLE

TEXAS WATER DEVELOPMENT BOARD — May 2025 Survey

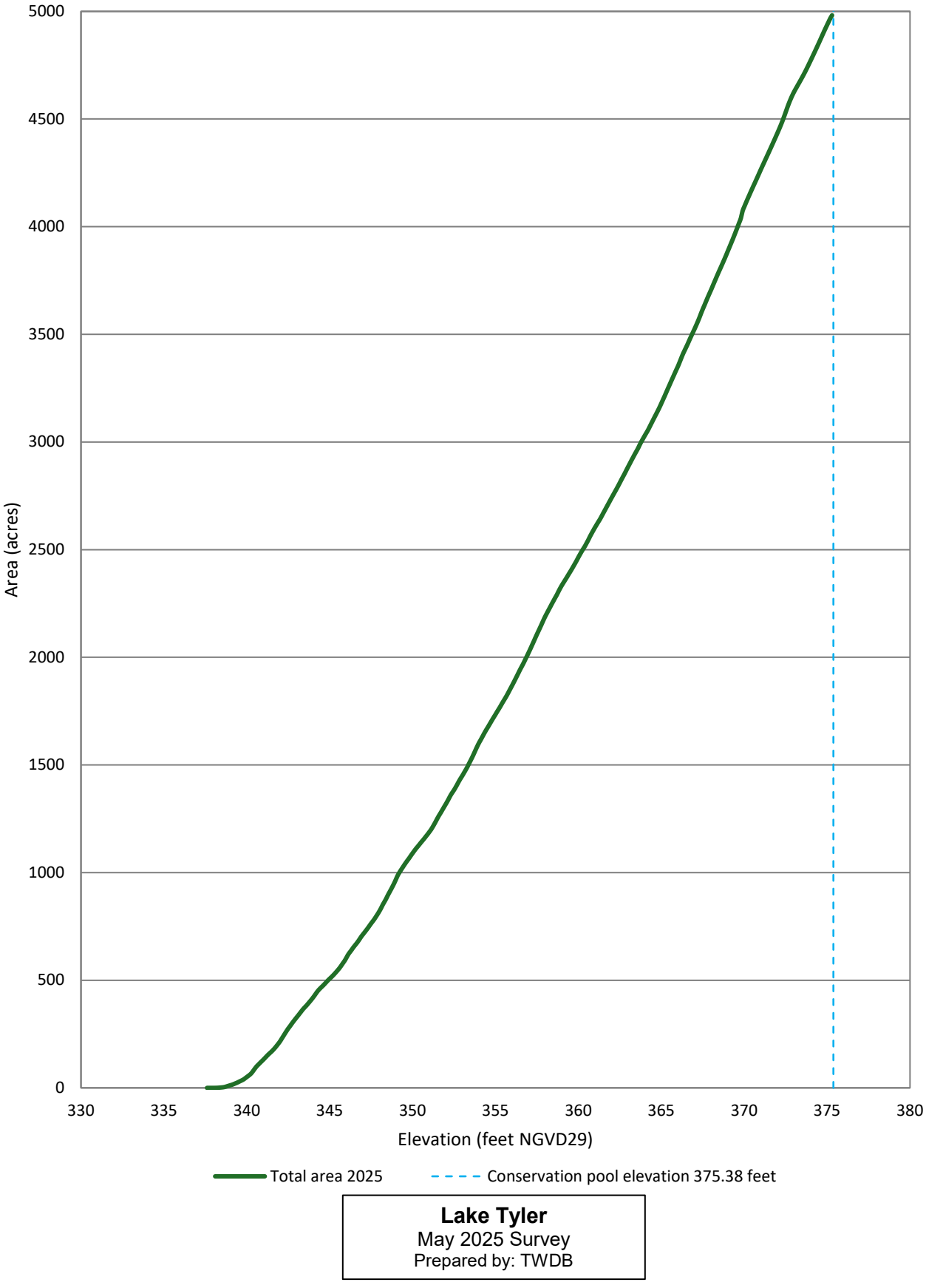
AREA IN ACRES — Conservation Pool Elevation 375.38 feet NGVD29

ELEVATION INCREMENT IS ONE TENTH FOOT

ELEVATION (Feet NGVD29)	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
337	0	0	0	0	0	0	0	0	0	0
338	0	0	0	1	1	2	3	5	7	10
339	12	14	17	20	24	27	31	35	39	45
340	50	56	62	70	80	91	101	108	116	124
341	131	139	147	155	162	169	177	186	195	205
342	215	228	240	252	264	276	286	297	307	317
343	327	336	346	356	366	374	383	392	401	410
344	420	430	442	452	460	468	475	483	491	500
345	507	514	522	530	539	548	557	568	579	590
346	603	617	628	638	649	659	669	679	690	702
347	712	722	732	742	753	764	774	784	796	808
348	821	835	851	864	878	894	908	922	937	952
349	969	986	1,000	1,012	1,024	1,035	1,047	1,057	1,068	1,079
350	1,090	1,101	1,111	1,120	1,129	1,139	1,148	1,158	1,168	1,177
351	1,188	1,198	1,210	1,224	1,238	1,252	1,266	1,278	1,292	1,305
352	1,318	1,331	1,346	1,360	1,372	1,384	1,397	1,410	1,425	1,438
353	1,450	1,463	1,477	1,490	1,506	1,521	1,536	1,553	1,570	1,586
354	1,602	1,615	1,629	1,644	1,658	1,670	1,683	1,696	1,709	1,722
355	1,734	1,748	1,760	1,773	1,786	1,799	1,812	1,825	1,840	1,854
356	1,869	1,884	1,899	1,914	1,930	1,945	1,959	1,974	1,990	2,006
357	2,022	2,038	2,055	2,072	2,090	2,107	2,123	2,140	2,157	2,174
358	2,190	2,205	2,219	2,234	2,248	2,262	2,277	2,290	2,306	2,320
359	2,334	2,347	2,359	2,371	2,384	2,397	2,409	2,423	2,436	2,450
360	2,465	2,478	2,492	2,505	2,517	2,531	2,545	2,561	2,576	2,589
361	2,603	2,616	2,629	2,641	2,655	2,669	2,684	2,698	2,712	2,726
362	2,740	2,754	2,768	2,782	2,796	2,811	2,826	2,840	2,855	2,870
363	2,885	2,900	2,915	2,929	2,943	2,957	2,971	2,987	3,002	3,016
364	3,029	3,042	3,056	3,071	3,086	3,101	3,116	3,131	3,146	3,162
365	3,179	3,196	3,213	3,231	3,248	3,266	3,283	3,300	3,317	3,334
366	3,351	3,370	3,389	3,408	3,424	3,440	3,457	3,474	3,491	3,508
367	3,524	3,541	3,559	3,578	3,598	3,617	3,635	3,653	3,672	3,689
368	3,706	3,724	3,743	3,761	3,779	3,796	3,813	3,830	3,848	3,866
369	3,884	3,903	3,921	3,940	3,959	3,979	3,999	4,019	4,040	4,072
370	4,092	4,110	4,128	4,145	4,163	4,180	4,197	4,213	4,230	4,248
371	4,265	4,282	4,298	4,315	4,332	4,349	4,366	4,382	4,400	4,417
372	4,434	4,452	4,470	4,490	4,510	4,531	4,553	4,574	4,592	4,610
373	4,625	4,639	4,653	4,667	4,680	4,694	4,709	4,723	4,739	4,755
374	4,771	4,787	4,803	4,820	4,836	4,853	4,870	4,887	4,904	4,921
375	4,937	4,953	4,969	4,982						



Appendix C: Bathymetric capacity curve



Appendix D: Bathymetric area curve

Appendix E

Lake Tyler

RESERVOIR BATHYMETRIC AND TOPOGRAPHIC CAPACITY TABLE

TEXAS WATER DEVELOPMENT BOARD
CAPACITY IN ACRE-FEET
ELEVATION INCREMENT IS ONE TENTH FOOT

May 2025 Survey
Conservation Pool Elevation 375.38 feet NGVD29
Top of dam elevation 390.00 feet NGVD29

ELEVATION (Feet NGVD29)	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
337	0	0	0	0	0	0	0	0	0	0
338	0	0	0	0	0	0	1	1	2	2
339	4	5	6	8	11	13	16	19	23	27
340	32	37	43	50	57	66	75	86	97	109
341	122	135	150	165	181	197	214	233	252	272
342	293	315	338	363	389	416	444	473	503	534
343	566	600	634	669	705	742	780	819	858	899
344	940	983	1,026	1,071	1,117	1,163	1,210	1,258	1,307	1,356
345	1,407	1,458	1,510	1,562	1,616	1,670	1,725	1,782	1,839	1,897
346	1,957	2,018	2,080	2,144	2,208	2,274	2,340	2,408	2,476	2,546
347	2,616	2,688	2,761	2,834	2,909	2,985	3,062	3,140	3,219	3,299
348	3,381	3,463	3,548	3,633	3,720	3,809	3,899	3,991	4,084	4,178
349	4,274	4,372	4,471	4,572	4,674	4,776	4,881	4,986	5,092	5,199
350	5,308	5,417	5,528	5,640	5,752	5,865	5,980	6,095	6,211	6,329
351	6,447	6,566	6,687	6,808	6,931	7,056	7,182	7,309	7,437	7,567
352	7,698	7,831	7,965	8,100	8,237	8,374	8,513	8,654	8,796	8,939
353	9,083	9,229	9,376	9,524	9,674	9,825	9,978	10,132	10,289	10,446
354	10,606	10,767	10,929	11,093	11,258	11,424	11,592	11,761	11,931	12,103
355	12,275	12,449	12,625	12,801	12,979	13,159	13,339	13,521	13,704	13,889
356	14,075	14,263	14,452	14,643	14,835	15,029	15,224	15,420	15,619	15,818
357	16,020	16,223	16,428	16,634	16,842	17,052	17,263	17,477	17,691	17,908
358	18,126	18,346	18,567	18,790	19,014	19,239	19,466	19,695	19,924	20,156
359	20,388	20,622	20,858	21,094	21,332	21,571	21,811	22,053	22,296	22,540
360	22,786	23,033	23,282	23,531	23,782	24,035	24,289	24,544	24,801	25,059
361	25,319	25,580	25,842	26,105	26,370	26,636	26,904	27,173	27,444	27,716
362	27,989	28,264	28,540	28,817	29,096	29,377	29,658	29,942	30,226	30,513
363	30,800	31,090	31,380	31,673	31,966	32,261	32,558	32,855	33,155	33,456
364	33,758	34,062	34,367	34,673	34,981	35,290	35,601	35,913	36,227	36,543
365	36,860	37,178	37,499	37,821	38,145	38,471	38,798	39,127	39,458	39,791
366	40,125	40,461	40,799	41,139	41,480	41,824	42,169	42,515	42,863	43,213
367	43,565	43,918	44,273	44,630	44,989	45,350	45,712	46,077	46,443	46,811
368	47,181	47,552	47,925	48,301	48,678	49,056	49,437	49,819	50,203	50,589
369	50,976	51,365	51,757	52,150	52,545	52,941	53,340	53,741	54,144	54,549
370	54,957	55,368	55,779	56,193	56,609	57,026	57,445	57,865	58,287	58,711
371	59,137	59,564	59,993	60,424	60,856	61,291	61,726	62,164	62,603	63,044
372	63,487	63,931	64,377	64,825	65,275	65,728	66,182	66,638	67,097	67,557
373	68,019	68,482	68,947	69,413	69,880	70,349	70,819	71,291	71,764	72,239
374	72,715	73,193	73,673	74,154	74,637	75,122	75,608	76,096	76,586	77,077
375	77,570	78,065	78,561	79,060	79,559	80,059	80,561	81,064	81,569	82,075
376	82,583	83,092	83,602	84,115	84,629	85,145	85,662	86,182	86,703	87,227
377	87,752	88,279	88,809	89,340	89,873	90,408	90,946	91,485	92,027	92,571
378	93,117	93,665	94,215	94,767	95,322	95,878	96,437	96,998	97,561	98,126
379	98,694	99,263	99,835	100,409	100,985	101,563	102,144	102,727	103,312	103,899
380	104,488	105,080	105,675	106,271	106,870	107,471	108,074	108,680	109,288	109,899
381	110,511	111,127	111,744	112,364	112,986	113,610	114,236	114,865	115,495	116,128
382	116,763	117,400	118,039	118,681	119,324	119,970	120,618	121,267	121,919	122,574
383	123,230	123,889	124,549	125,212	125,878	126,545	127,215	127,887	128,561	129,238
384	129,917	130,598	131,281	131,967	132,655	133,345	134,038	134,732	135,429	136,128
385	136,830	137,533	138,239	138,947	139,658	140,371	141,087	141,805	142,525	143,248
386	143,974	144,702	145,432	146,165	146,900	147,638	148,378	149,120	149,865	150,612
387	151,362	152,114	152,868	153,625	154,384	155,145	155,908	156,674	157,442	158,212
388	158,985	159,759	160,536	161,316	162,097	162,881	163,668	164,457	165,249	166,043
389	166,839	167,638	168,439	169,242	170,048	170,856	171,667	172,479	173,294	174,111
390	174,931									

Appendix F

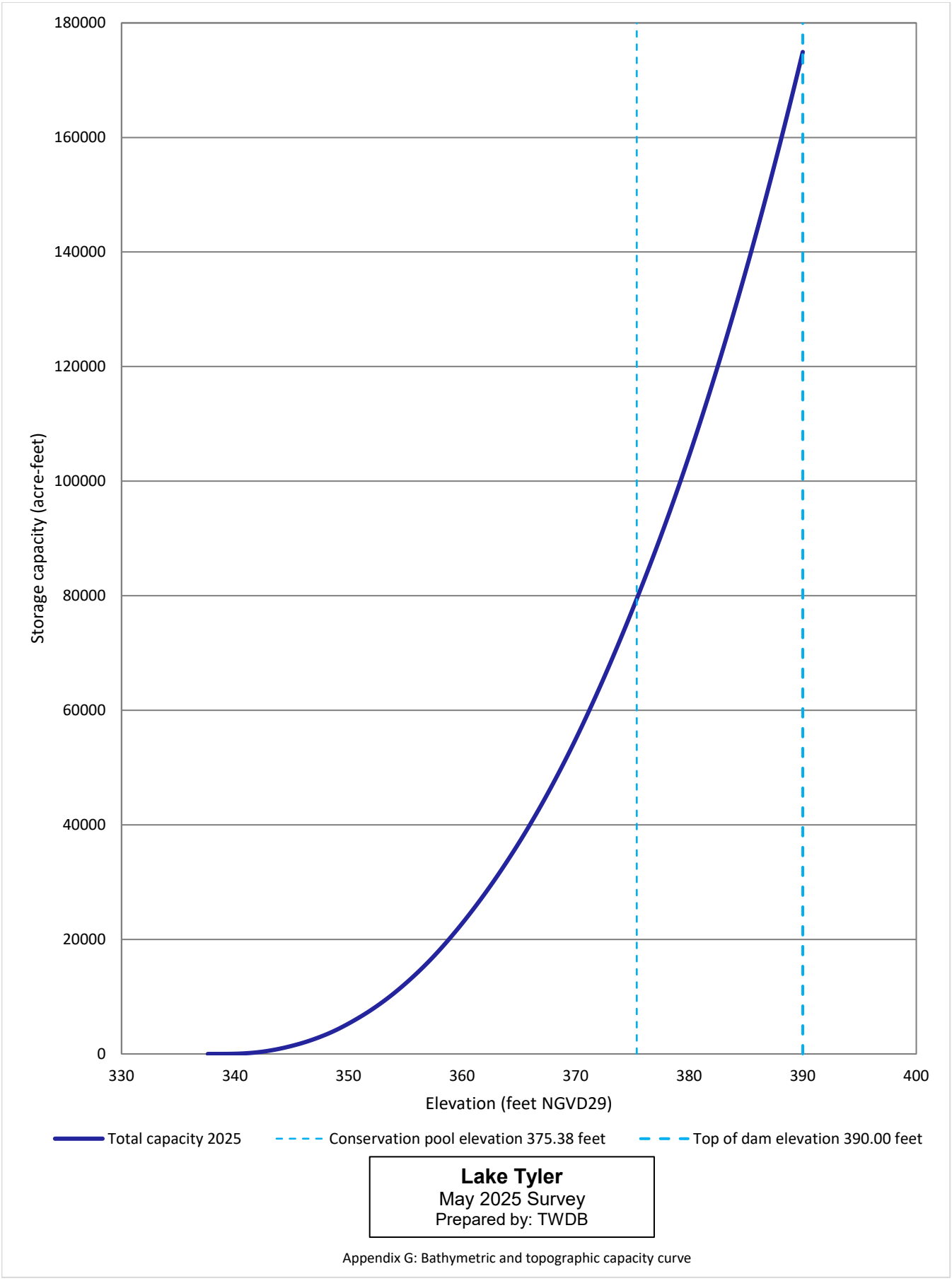
Lake Tyler

RESERVOIR BATHYMETRIC AND TOPOGRAPHIC AREA TABLE

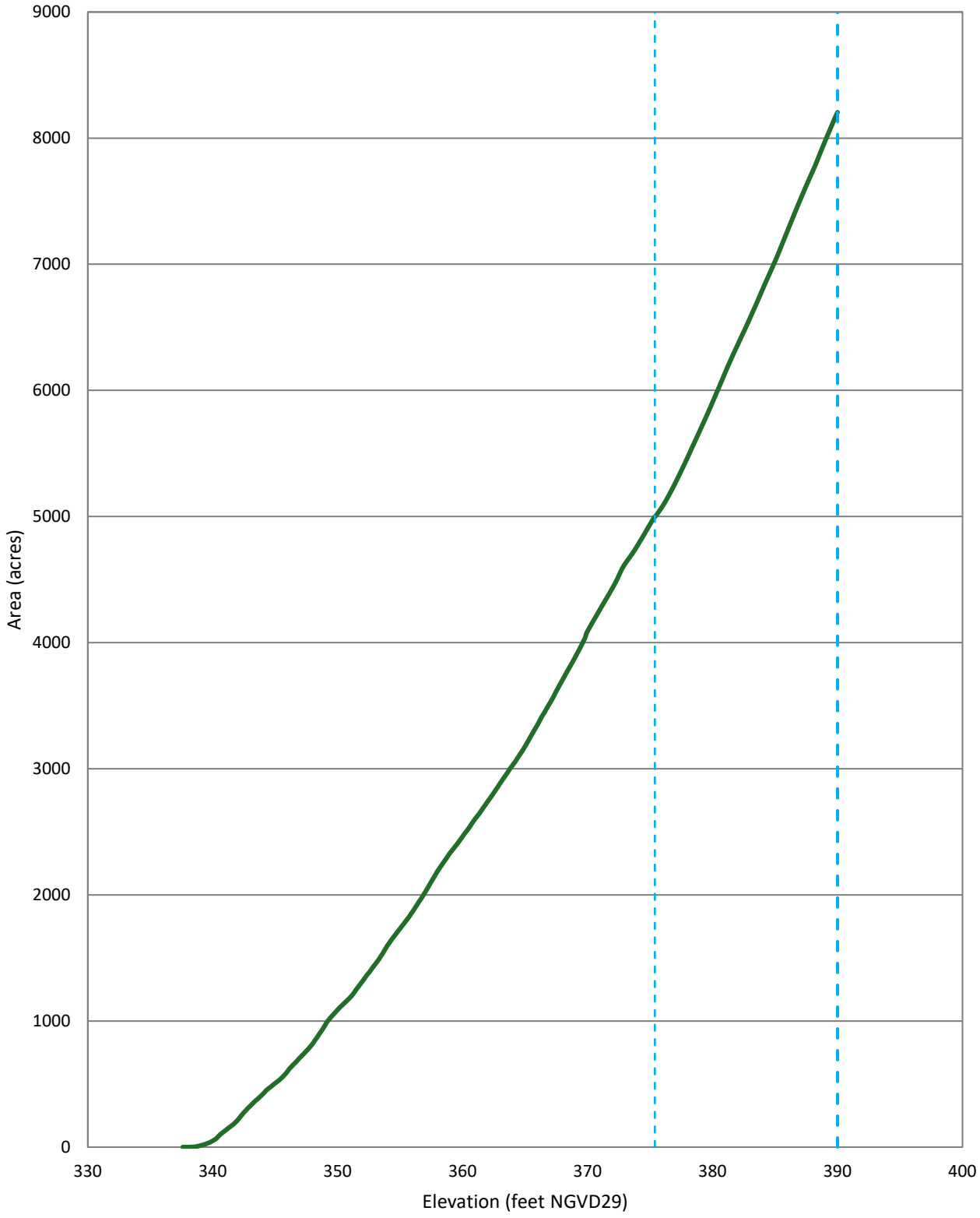
TEXAS WATER DEVELOPMENT BOARD
AREA IN ACRES
ELEVATION INCREMENT IS ONE TENTH FOOT

May 2025 Survey
Conservation Pool Elevation 375.38 feet NGVD29
Top of dam elevation 390.00 feet NGVD29

ELEVATION (Feet NGVD29)	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
337	0	0	0	0	0	0	0	0	0	0
338	0	0	0	1	1	2	3	5	7	10
339	12	14	17	20	24	27	31	35	39	45
340	50	56	62	70	80	91	101	108	116	124
341	131	139	147	155	162	169	177	186	195	205
342	215	228	240	252	264	276	286	297	307	317
343	327	336	346	356	366	374	383	392	401	410
344	420	430	442	452	460	468	475	483	491	500
345	507	514	522	530	539	548	557	568	579	590
346	603	617	628	638	649	659	669	679	690	702
347	712	722	732	742	753	764	774	784	796	808
348	821	835	851	864	878	894	908	922	937	952
349	969	986	1,000	1,012	1,024	1,035	1,047	1,057	1,068	1,079
350	1,090	1,101	1,111	1,120	1,129	1,139	1,148	1,158	1,168	1,177
351	1,188	1,198	1,210	1,224	1,238	1,252	1,266	1,278	1,292	1,305
352	1,318	1,331	1,346	1,360	1,372	1,384	1,397	1,410	1,425	1,438
353	1,450	1,463	1,477	1,490	1,506	1,521	1,536	1,553	1,570	1,586
354	1,602	1,615	1,629	1,644	1,658	1,670	1,683	1,696	1,709	1,722
355	1,734	1,748	1,760	1,773	1,786	1,799	1,812	1,825	1,840	1,854
356	1,869	1,884	1,899	1,914	1,930	1,945	1,959	1,974	1,990	2,006
357	2,022	2,038	2,055	2,072	2,090	2,107	2,123	2,140	2,157	2,174
358	2,190	2,205	2,219	2,234	2,248	2,262	2,277	2,290	2,306	2,320
359	2,334	2,347	2,359	2,371	2,384	2,397	2,409	2,423	2,436	2,450
360	2,465	2,478	2,492	2,505	2,517	2,531	2,545	2,561	2,576	2,589
361	2,603	2,616	2,629	2,641	2,655	2,669	2,684	2,698	2,712	2,726
362	2,740	2,754	2,768	2,782	2,796	2,811	2,826	2,840	2,855	2,870
363	2,885	2,900	2,915	2,929	2,943	2,957	2,971	2,987	3,002	3,016
364	3,029	3,042	3,056	3,071	3,086	3,101	3,116	3,131	3,146	3,162
365	3,179	3,196	3,213	3,231	3,248	3,266	3,283	3,300	3,317	3,334
366	3,351	3,370	3,389	3,408	3,424	3,440	3,457	3,474	3,491	3,508
367	3,524	3,541	3,559	3,578	3,598	3,617	3,635	3,653	3,672	3,689
368	3,706	3,724	3,743	3,761	3,779	3,796	3,813	3,830	3,848	3,866
369	3,884	3,903	3,921	3,940	3,959	3,979	3,999	4,019	4,040	4,072
370	4,092	4,110	4,128	4,145	4,163	4,180	4,197	4,214	4,231	4,248
371	4,265	4,282	4,299	4,316	4,333	4,350	4,366	4,383	4,401	4,418
372	4,435	4,453	4,471	4,491	4,511	4,532	4,554	4,575	4,593	4,610
373	4,626	4,640	4,654	4,667	4,681	4,695	4,709	4,724	4,740	4,756
374	4,772	4,788	4,804	4,821	4,837	4,854	4,871	4,889	4,906	4,923
375	4,939	4,956	4,973	4,988	4,999	5,011	5,024	5,039	5,053	5,068
376	5,083	5,098	5,115	5,132	5,150	5,168	5,186	5,205	5,224	5,243
377	5,263	5,282	5,302	5,323	5,343	5,364	5,385	5,405	5,426	5,448
378	5,469	5,491	5,512	5,534	5,556	5,577	5,599	5,620	5,642	5,663
379	5,685	5,707	5,728	5,750	5,772	5,794	5,816	5,839	5,861	5,884
380	5,907	5,930	5,953	5,976	5,999	6,023	6,046	6,069	6,093	6,116
381	6,139	6,163	6,186	6,208	6,231	6,253	6,274	6,296	6,318	6,339
382	6,360	6,382	6,403	6,425	6,445	6,466	6,487	6,509	6,531	6,553
383	6,575	6,597	6,620	6,642	6,664	6,686	6,709	6,732	6,754	6,777
384	6,801	6,823	6,846	6,869	6,891	6,913	6,935	6,957	6,979	7,002
385	7,024	7,047	7,071	7,095	7,119	7,144	7,169	7,193	7,218	7,242
386	7,266	7,291	7,315	7,340	7,364	7,389	7,413	7,436	7,460	7,484
387	7,508	7,531	7,555	7,578	7,601	7,624	7,646	7,669	7,691	7,714
388	7,736	7,758	7,781	7,804	7,829	7,854	7,879	7,903	7,928	7,952
389	7,976	7,999	8,023	8,046	8,069	8,092	8,115	8,139	8,162	8,183
390	8,212									



Appendix G: Bathymetric and topographic capacity curve



Lake Tyler
May 2025 Survey
Prepared by: TWDB

Appendix H: Bathymetric and topographic area curve

Figure 6

Lake Tyler

5' - contour map

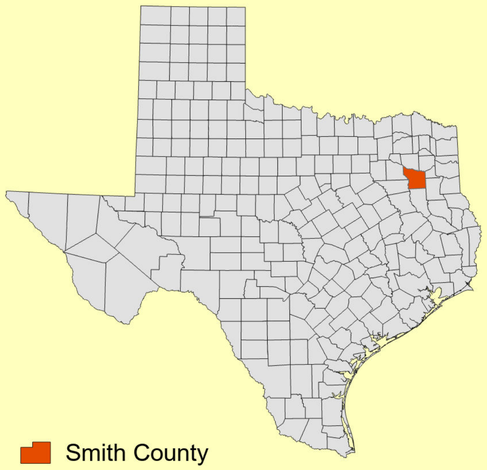
CONTOURS
(feet NGVD29)

- 375
- 370
- 365
- 360
- 355
- 350
- 345
- 340

Islands

Lake Tyler
Conservation pool
elevation 375.38 feet

Projection: NAD83 State Plane
Texas North Central Zone (feet)



Smith County

This map is the product of a survey conducted by the Texas Water Development Board's Hydrographic Survey Program to determine the capacity of Lake Tyler. The Texas Water Development Board makes no representations nor assumes any liability.

N

3000000 3010000 3020000

6800000 6790000 6780000

0 1 2 Miles

TEXAS WATER DEVELOPMENT BOARD

May 2025 Survey