

**Volumetric and  
Sedimentation Survey  
of  
LAKE BRIDGEPORT**

**September – October 2020**



*April 2022*

# Texas Water Development Board

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Prepared for:

## **Tarrant Regional Water District**

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## **Executive summary**

In February 2020, the Texas Water Development Board (TWDB) entered into an agreement with the Tarrant Regional Water District to perform a volumetric and sedimentation survey of Lake Bridgeport (Jack and Wise counties, Texas). Surveying was performed using a multi-frequency (208 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.

Bridgeport Dam, impounding Lake Bridgeport, is located on the West Fork Trinity River in Wise County, approximately four miles west of Bridgeport, Texas. The conservation pool elevation of Lake Bridgeport is 836.0 feet NAVD88. The TWDB collected bathymetric data for Lake Bridgeport between September 29 and October 7, 2020, while daily average water surface elevations ranged between 833.58 and 833.97 feet NAVD88.

**The 2020 TWDB volumetric survey indicates Lake Bridgeport has a total reservoir capacity of 372,183 acre-feet and encompasses 12,338 acres at conservation pool elevation (836.0 feet NAVD88).** The vertical datum of the U.S. Geological Survey gage changed from feet National Geodetic Vertical Datum 1929 (NGVD29) to feet North American Vertical Datum 1988 (NAVD88) on October 1, 2016. The new datum is 0.44 feet below the previous datum. Conservation pool elevation changed from 836.0 feet NGVD29 to 836.0 feet NAVD88. Surveys prior to 2016 estimate total reservoir capacity at elevation 836.0 feet NGVD29 or 835.56 feet NAVD88. Previous capacity estimates include Freese and Nichols studies in 1959 of 386,420 acre-feet, in 1968 of 386,559 acre-feet, and in 1988 of 374,836 acre-feet. Previous TWDB capacity estimates include a re-calculated 2000 survey estimate of 369,251 acre-feet, and a re-calculated 2010 survey estimate of 363,271 acre-feet. At elevation 836.0 feet NGVD29 equivalent to 835.56 feet NAVD88, the 2020 TWDB survey indicates a capacity of 366,782 acre-feet. Because of differences in past and present survey methodologies, direct comparison of volumetric surveys to others to estimate loss of area and capacity can be unreliable. Information from past surveys is presented here for informational purposes only.

**The 2020 TWDB sedimentation survey measured 23,439 acre-feet of sediment below conservation pool elevation 836.0 feet NAVD88.** The sedimentation survey indicates sediment accumulation is greatest in the river channels with heavy accumulation in the submerged floodplains of the main channel and tributaries. The TWDB recommends that a similar methodology be used to resurvey Lake Bridgeport in 10 years or after a major high flow event.

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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 February 2020, the TWDB entered into an agreement with the Tarrant Regional Water District (TRWD), to perform a volumetric and sedimentation survey of Lake Bridgeport (Texas Water Development Board, 2020). 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 I and J), (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 10).

## **Lake Bridgeport general information**

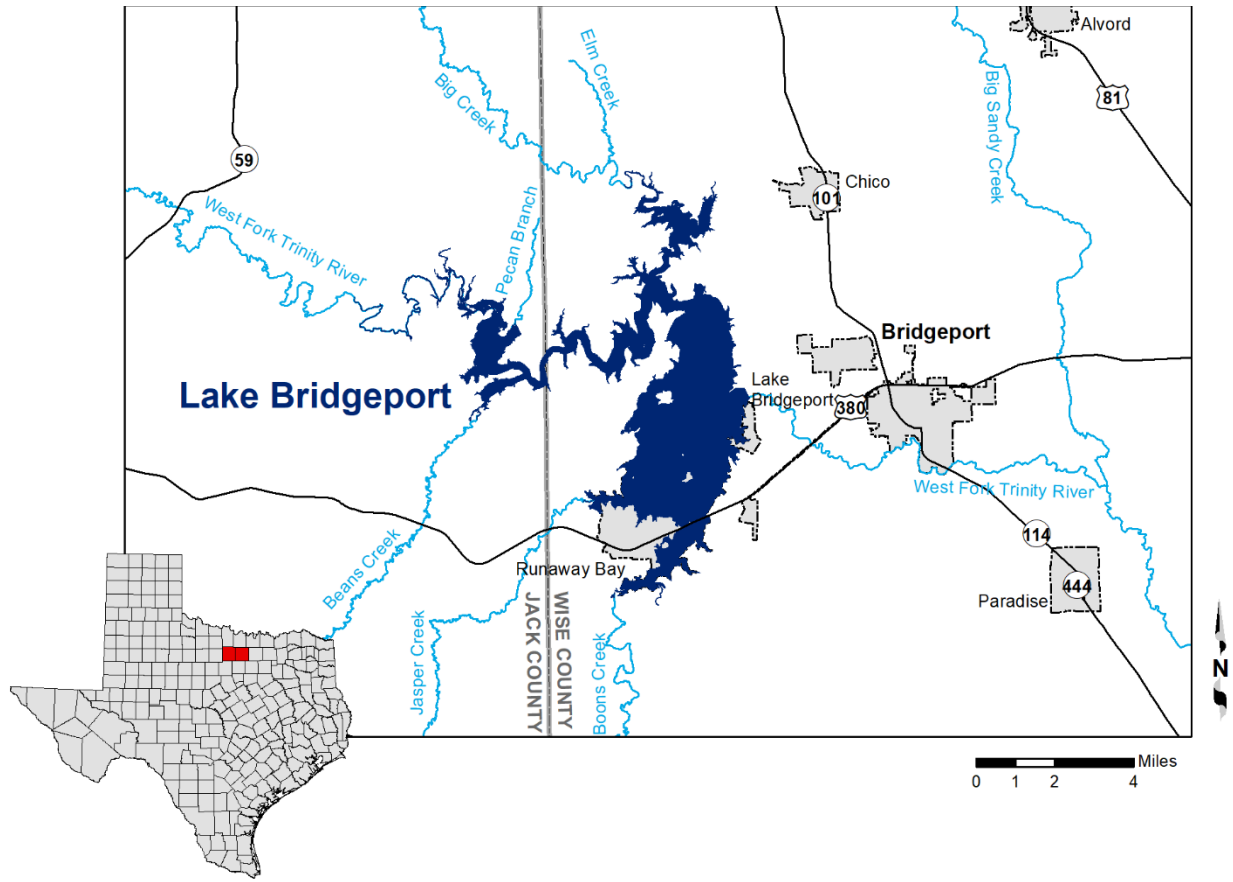
Bridgeport Dam, impounding Lake Bridgeport, is located on the West Fork Trinity River in Jack and Wise counties, approximately four miles west of Bridgeport, Texas (Figure 1). The lake was authorized by the State Board of Water Engineers by Water Rights Permit No. 1074 (Application No. 1145) to the Tarrant County Water Control and Improvement District No. 1 (TRWD) on May 1, 1928. Construction of the original Bridgeport Dam began on January 23, 1930, and the dam was completed on December 15, 1931. Deliberate impoundment of water began on April 1, 1932 (Texas Water Development Board, 1973). The design engineer for the project was Hawley, Freese and Nichols. The general contractor was McKenzie and Uvalde Construction Companies. Lake Bridgeport Dam was initially constructed to an elevation of 863.0 feet above mean sea level with a normal pool elevation of 826.0 feet above mean sea level. Two additional embankments were constructed to the southwest: the Saddle Gap Levee and the Berkshire Levee. These levees were also constructed to an elevation of 863.0 feet.

In the early 1970s modifications were made at Lake Bridgeport to increase storage and discharge capacities. The main dam, Berkshire Levee, and Saddle Gap Levee were raised to elevation of 874 feet. The original four-bay spillway was sealed and covered when the dam embankment was raised, though the original structure can still be seen from the lake. A new spillway was constructed approximately 3,000 feet north of the main dam. The new spillway is controlled by 8 vertical gates with a top elevation of 841.52 feet when the gates are in the closed

position. New outlet works were also added as part of the modification. A 60-inch diameter steel pipe with entrance elbow is located in part of the spillway wall. The new invert elevation of the elbow is 810.00 feet and is controlled by a slide gate at the discharge end of the pipe. A 700-foot-wide natural ground emergency spillway with a crest elevation of 866.00 feet is located in the right overbank of the service spillway discharge channel, just downstream of the spillway. With modifications to the dam and spillway complete, elevation 836.00 feet NGVD29 became the new conservation pool level beginning in Water Year 1973. Beginning on October 1, 2016, the conservation pool elevation was changed to 836.00 feet NAVD88 (U.S. Geological Survey, 2021; C. Ottman, written commun(s), 2021). Maximum design water surface may reach to 871.22 feet, while the top of flood easement, used for temporary impoundment of flood water, is at elevation of 851.00 feet. Additional pertinent data about Bridgeport Dam and Lake Bridgeport can be found in Table 1.

Lake Bridgeport is owned by the TRWD and is operated in conjunction with Eagle Mountain Lake (also owned by TRWD) and Lake Worth (owned by the City of Fort Worth) as a system. Authorized usage of the impoundment includes municipal, irrigation, mining, industrial, transport (to Eagle Mountain Lake) and recreational purposes. The TRWD provides “raw water” to more than 30 wholesale customers in 11 North Texas counties (Tarrant Regional Water District, 2021).

Water rights for Lake Bridgeport have been appropriated to the TRWD through Certificate of Adjudication No. 08-3808 and Amendment to Certificate of Adjudication Nos. 08-3808A, 08-3808B, and 08-3808C (Texas Commission on Environmental Quality, 2021). The complete certificates are on file at the Texas Commission on Environmental Quality (TCEQ).



**Figure 1. Location map.**

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**Table 1. Pertinent Data for Bridgeport Dam and Lake Bridgeport**

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<b>Owner</b>	Tarrant Regional Water District (TRWD)
<b>Engineer (Design)</b>	Hawley, Freese, and Nichols (original) Freese, Nichols, and Endress (1971 enlargement)
<b>Location</b>	West Fork Trinity River in Wise and Jack counties
<b>Drainage Area</b>	Total drainage area 1,111 square miles
<b>Dam</b>	Type Earth filled Length 2,040 feet Maximum height 130 feet Top width 16 feet Top of dam elevation 874.0 feet NAVD88
<b>Spillway (emergency)</b>	Type Natural ground Location Left (north) of the dam Length 700 feet Crest elevation 866.0 feet NAVD88
<b>Spillway (new service)</b>	Type Excavated channel from lake to concrete ogee section Location Approximately ½ mile left (north) of the dam Effective crest length 90 feet Control 8 vertical gates Crest elevation 819.52 feet NAVD88 Top of gate elevation (closed) 841.52 feet NAVD88
<b>Outlet Works (modified original)</b>	Type Pipes installed in conduits to pass water during original construction Size 18- and 48-inch steel cylinder concrete pipes Control Valves operated from top of tower Invert of pipe 752.0 feet NAVD88
<b>Outlet Works (new)</b>	Type 60-inch pipe with entrance elbow Location Part of service spillway wall Control 42-inch sluice gate at discharge Invert of elbow 810.0 feet NAVD88 Discharge control To spillway discharge basin at elevation 810.0 feet NAVD88

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**Table 1. Pertinent Data for Bridgeport Dam and Lake Bridgeport (continued)****Reservoir Data (Based on 2020 TWDB survey)**

<b>Feature</b>	<b>Elevation (Feet NAVD88<sup>a</sup>)</b>	<b>Capacity (acre-feet)</b>	<b>Area (acres)</b>
Top of dam	874.00	1,069,223	25,534
Maximum design elevation	871.22	1,000,142	24,257
Emergency spillway crest	866.00	879,263	22,075
Top of temporary flood easement	851.00	590,513	16,689
Top of service spillway/ flood gates (closed position)	841.52	445,295	13,993
Top of conservation pool	836.00	372,183	12,338
Service spillway crest elevation	819.52	200,331	8,652
Invert of 42-inch sluice gate	810.00	127,244	6,782
Invert of 48-inch valves /dead pool elevation	752.00	0	0
Conservation storage capacity <sup>b</sup>	—	372,183	—

Sources: C. Ottman, written commun(s)., 2021; C. Ottman, written commun(s)., 2022; Texas Water Development Board, 1973

<sup>a</sup>. Datum of gage changed from feet National Geodetic Vertical Datum 1929 (NGVD29) to feet North American Vertical Datum 1988 (NAVD88) on October 1, 2016. The new datum is 0.44 feet below previous datum (U.S. Geological Survey, 2021). Conservation pool elevation changed from 836.0 feet NGVD29 to 836.0 feet NAVD88 (C. Ottman, written commun(s)., 2021).

<sup>b</sup>. Usable conservation storage 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 Bridgeport**

## **Datum**

The vertical datum used during this survey is North American Vertical Datum 1988 (NAVD88). This datum is utilized by the United States Geological Survey (USGS) for the reservoir elevation gage *USGS 08043000 Bridgeport Res abv Bridgeport, TX* (U.S. Geological Survey, 2021). This datum became effective October 1, 2016, and is 0.44 feet below the previous datum National Geodetic Vertical Datum 1929 (NGVD29) (U.S. Geological Survey, 2021). Prior to 2016, conservation pool elevation was 836.0 feet National Geodetic Vertical Datum 1929 (NGVD29). Conservation pool elevation is now 836.0 feet NAVD88 (C. Ottman, written commun(s), 2021). Elevations herein are reported in feet relative to the NAVD88 datum. Volume and area calculations in this report are referenced to water levels reported by the USGS gage. The horizontal datum used for this report is North American Datum 1983 (NAD83), 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 Bridgeport between September 29 and October 7, 2020, while daily water surface elevations ranged from 833.58 and 833.97 feet NAVD88. For data collection, the TWDB used a Specialty Devices, Inc. (SDI), single-beam, multi-frequency (208 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 survey lines also were used by the TWDB for the *Volumetric Survey of Lake Bridgeport, April 2000 Survey* (Texas Water Development Board, 2001) and the *Volumetric and Sedimentation Survey of Lake Bridgeport, October-December 2010 Survey* (Texas Water Development Board, 2012). 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 2020 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 16 locations to collect sediment core samples (Figure 2). Sediment cores were collected on April 21-22, 2021, 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 transported to TWDB headquarters for further analysis.



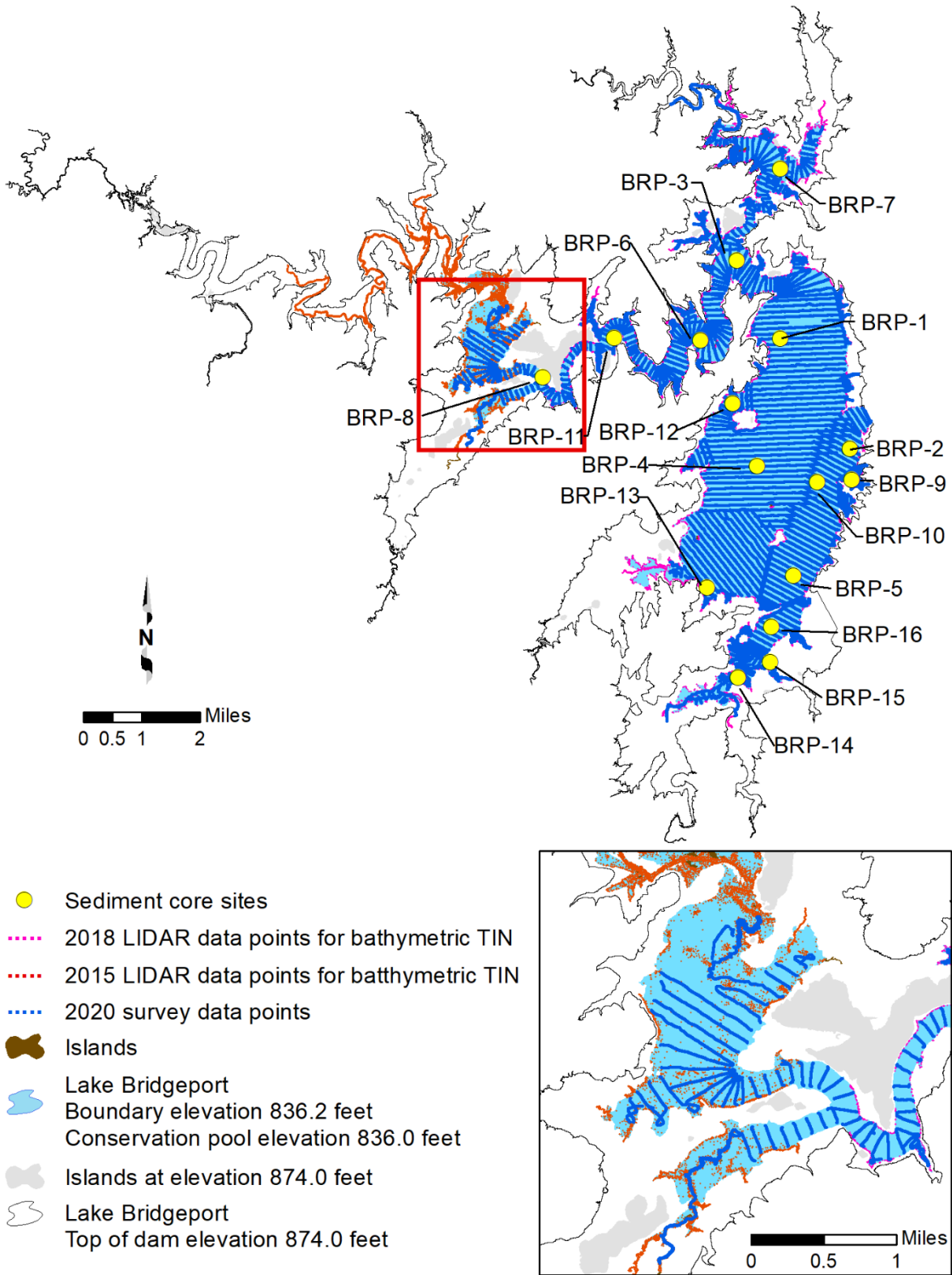


Figure 2. 2020 TWDB sounding data (blue dots), sediment coring locations (yellow circles), 2015 LIDAR data for bathymetric model (red dots), and 2018 LIDAR data for bathymetric model (pink dots).

## **Data processing**

### **Model boundary**

The bathymetric model boundary of the reservoir was digitized from aerial photographs, also known as digital orthophoto quarter-quadrangle images (DOQQs), obtained through the Texas Imagery Service. The Texas Natural Resources Information System manages the Texas Imagery Service, allowing public organizations in the State of Texas to access high resolution imagery as a service using Environmental Systems Research Institute's ArcGIS software (Texas Natural Resources Information System, 2020a, Texas Natural Resources Information System, 2020b). DOQQs photographed on January 28, 2017, while the daily average water surface elevation measured 836.22 feet, were used to digitize a model boundary at the land-water interface. For modeling purposes, the boundary was assigned an elevation of 836.2 feet.

The upper reaches (Beans Creek and the West Fork Trinity River area) of the bathymetric model boundary of the reservoir were generated with Light Detection and Ranging (LIDAR) data available from the Texas Natural Resource Information System (TNRIS). LIDAR data were acquired between January 4 and January 16, 2015, and March 11-12, 2015, while the daily average water surface elevation of the reservoir measured between 811.79 and 811.91 feet and 811.97 and 811.98 feet. The topographic model boundary of the reservoir was generated with LIDAR data available from the Texas Natural Resource Information System (TNRIS). For the area of the reservoir downstream of Beans Creek, LIDAR data acquired between February 1 and May 27, 2018, while the daily average water surface elevation of the reservoir measured between 831.51 feet and 835.35 feet were used (Figure 2). All LIDAR data were imported into an Environmental Systems Research Institute's ArcGIS file geodatabase. The LIDAR data .las files 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 14. The vertical datum is North American Vertical Datum 1988 (NAVD88; meters). A contour representing the top of dam elevation of 266.395 meters NAVD88, equivalent to 874.0 feet NAVD88 was extracted from the raster. The topographic model contour was edited to close the contour across the dam and remove other artifacts. Horizontal coordinate transformations to NAD83 State Plane Texas North Central Zone (feet) coordinates were applied using the ArcGIS Project tool.

## **LIDAR data points**

To utilize the LIDAR data in the reservoir topographic model, the LIDAR data .las files 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 0.5 meters. New attribute fields were added to convert the elevations from meters to feet NAVD88 for compatibility with the bathymetric survey data. LIDAR data outside of the 874.00-foot contour were deleted and the feature class projected to NAD83 State Plane Texas Central Zone (feet). Where 2015 LIDAR data points and survey data points did not agree, LIDAR data were removed from the model.

## **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 *et al.* 2011a). 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**

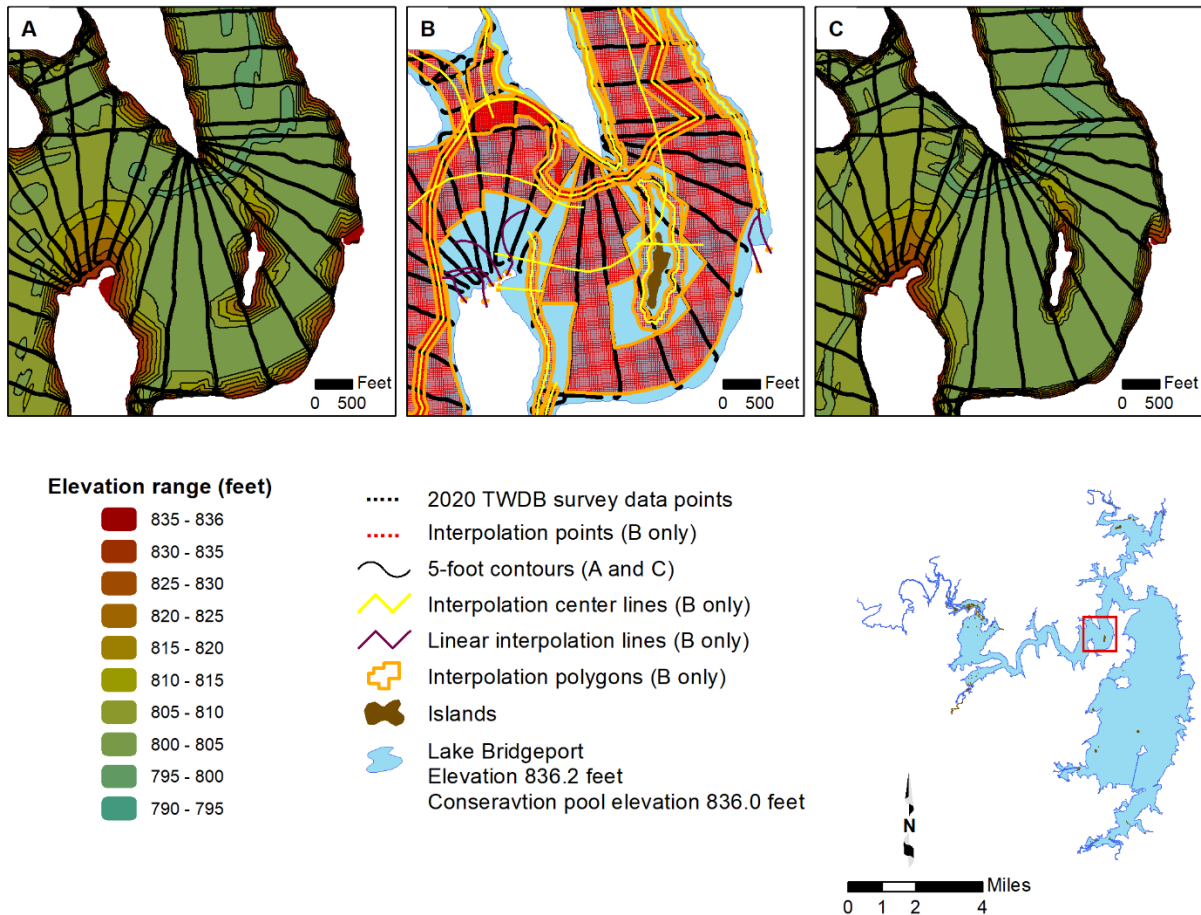
Isotropic spatial interpolation techniques such as the Delaunay triangulation used by the 3D Analyst extension of ArcGIS are, in many instances, unable to suitably interpolate bathymetry between survey lines common to reservoir surveys. Reservoirs and stream channels are anisotropic morphological features 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 and others, 2011a) and in McEwen and others (2011b).

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 and others, 2011a). 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 the anisotropic interpolation as applied to Lake Bridgeport. 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 (Appendix I, M) and elevation-area (Appendix J, N) tables.



**Figure 3.** Anisotropic spatial interpolation as applied to Lake Bridgeport sounding data; A) bathymetric contours without interpolated points, B) sounding points (*black*) and interpolated points (*red*), C) bathymetric contours with interpolated points.

To properly compare results from the 2000 TWDB survey of Lake Bridgeport, the TWDB applied anisotropic spatial interpolation to the survey data collected in 2000. The 2000 survey boundary was digitized from DOQQs photographed on February 2, 1995, while the daily average water surface elevation measured 836.04 feet NGVD29 (Texas Water Development Board, 2000). While linear interpolation was used to estimate the topography in areas without data, flat triangles led to anomalous area and volume calculations at the assigned boundary elevation of 836.00 feet. Therefore, areas between 831.50 feet and 836.00 feet were linearly interpolated between the computed values, and volumes above 831.50 feet were calculated based on the corrected areas (Texas Water Development Board, 2016). Areas above elevation 836.00

feet NGVD29 were linearly extrapolated up to elevation 836.44 feet NGVD29, equivalent to 836.00 feet NAVD88. Capacities were calculated from the extrapolated areas using the formula:

$$Capacity_1 = Capacity_0 + \left( \frac{Area_0 + Area_1}{2} \right) \times (Elevation_1 - Elevation_0)$$

Where:

*Area<sub>0</sub>* = area corresponding to *Elevation<sub>0</sub>*

*Area<sub>1</sub>* = area corresponding to *Elevation<sub>1</sub>*

*Capacity<sub>0</sub>* = capacity corresponding to *Elevation<sub>0</sub>*

*Capacity<sub>1</sub>* = capacity corresponding to *Elevation<sub>1</sub>*

The 2000 re-calculated elevation-capacity table and elevation-area table are presented in Appendices A and B, respectively. The re-calculated capacity curve is presented in Appendix C, and the re-calculated area curve is presented in Appendix D.

Although anisotropic spatial interpolation and linear interpolation were originally applied to the 2010 TWDB survey, in 2022, the 2010 TWDB survey of Lake Bridgeport was updated to account for flat triangles. Between the computed area at elevation 829.00 feet and the area of the model boundary at 836.00 feet, areas were linearly interpolated, and volumes above 829.00 feet were calculated based on the corrected areas. To properly compare results from the 2010 TWDB survey of Lake Bridgeport, areas above elevation 836.00 feet NGVD29 were linearly extrapolated up to elevation 836.44 feet NGVD29, equivalent to 836.00 feet NAVD88. Capacities were calculated from the extrapolated areas using the same formula as above. The 2010 elevation-capacity table and elevation-area table are presented in Appendices E and F, respectively. The capacity curve is presented in Appendix G, and the area curve is presented in Appendix H.

### **Area, volume, and contour calculation**

Volumes and areas were computed for the entire reservoir at 0.1-foot intervals, from 760.7 to 836.2 feet for the bathymetric TIN model, from 760.7 to 874.0 feet for the bathymetric and topographic TIN model, and from 753.0 to 836.2 feet for the pre-impoundment TIN. While linear interpolation was used to estimate the topography in areas without data, flat triangles led to anomalous area and volume calculations at the boundary elevations of 836.2 feet. Therefore, between the computed area at elevation 834.5 feet and the area of the model boundary at 836.2 feet, areas were linearly interpolated, and volumes above 834.5 feet were calculated based on the corrected areas. The bathymetric elevation-capacity table and bathymetric elevation-area table, based on the 2020 survey and analysis, are presented in Appendices I and J, respectively. The bathymetric capacity curve is presented in Appendix K, and the bathymetric area curve is

presented in Appendix L. The topographic elevation-capacity table and topographic elevation-area table developed from the 2020 survey and analysis are presented in Appendices M and N, respectively. The topographic capacity curve is presented in Appendix O, and the topographic area curve is presented in Appendix P. The pre-impoundment elevation-capacity table and pre-impoundment elevation-area table, based on the 2020 survey and analysis, are presented in Appendices Q and R, respectively. The pre-impoundment capacity curve is presented in Appendix S, and the pre-impoundment area curve is presented in Appendix T.

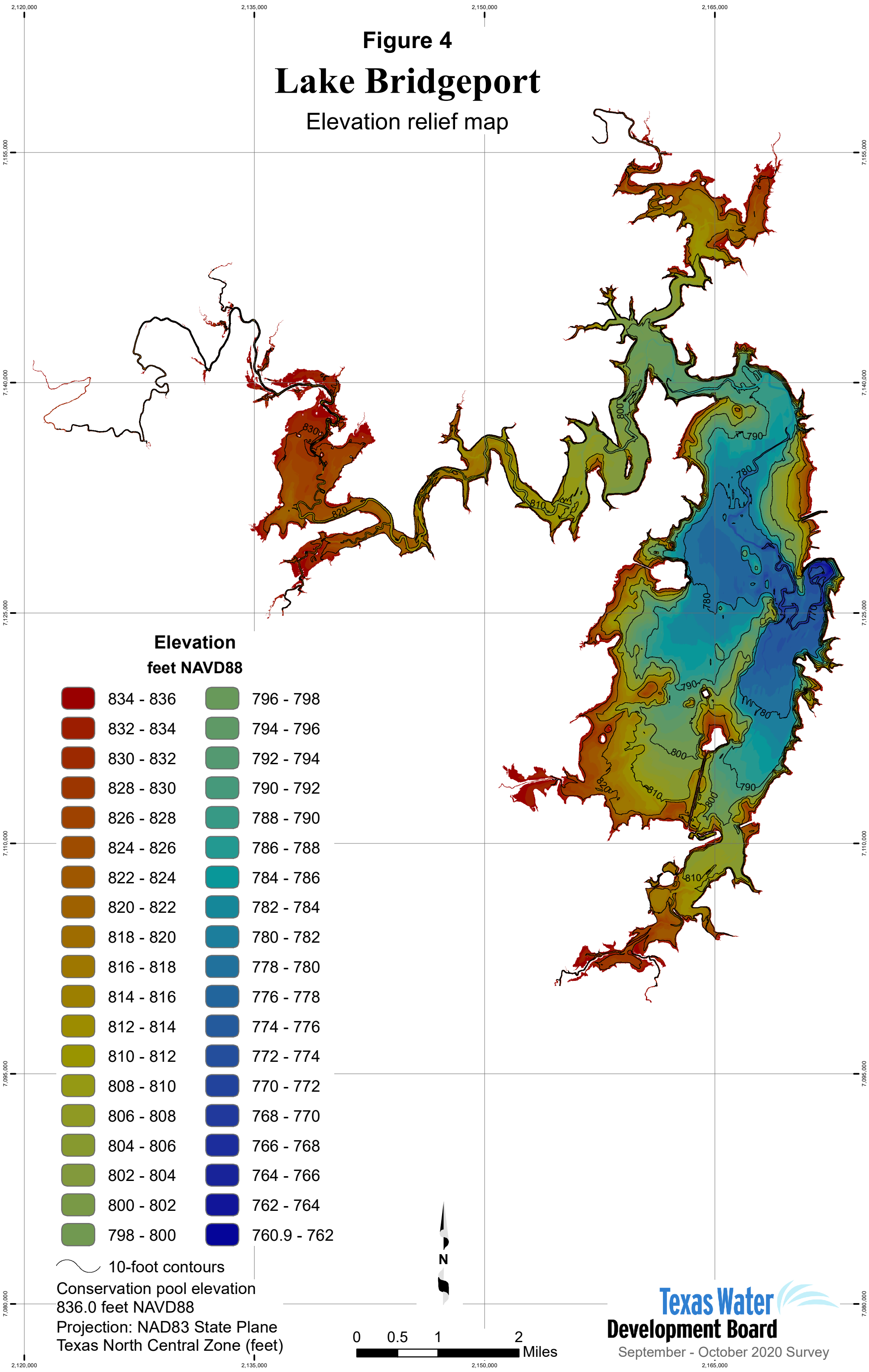
The bathymetric volumetric TIN model was converted to a raster representation using a cell size of 2 feet by 2 feet. The raster data then were used to produce three figures: (1) an elevation relief map representing the topography of the reservoir bottom (Figure 4); (2) a depth range map showing depth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



# Figure 4


## Lake Bridgeport

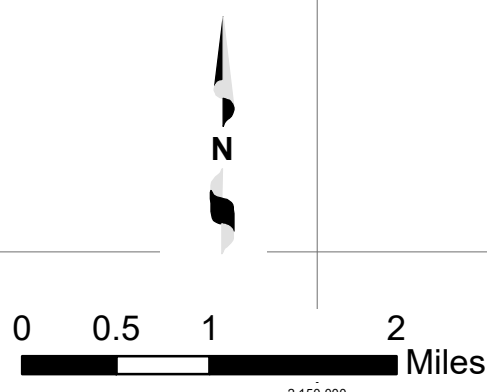
### Elevation relief map



**Elevation  
feet NAVD88**

834 - 836	796 - 798
832 - 834	794 - 796
830 - 832	792 - 794
828 - 830	790 - 792
826 - 828	788 - 790
824 - 826	786 - 788
822 - 824	784 - 786
820 - 822	782 - 784
818 - 820	780 - 782
816 - 818	778 - 780
814 - 816	776 - 778
812 - 814	774 - 776
810 - 812	772 - 774
808 - 810	770 - 772
806 - 808	768 - 770
804 - 806	766 - 768
802 - 804	764 - 766
800 - 802	762 - 764
798 - 800	760.9 - 762

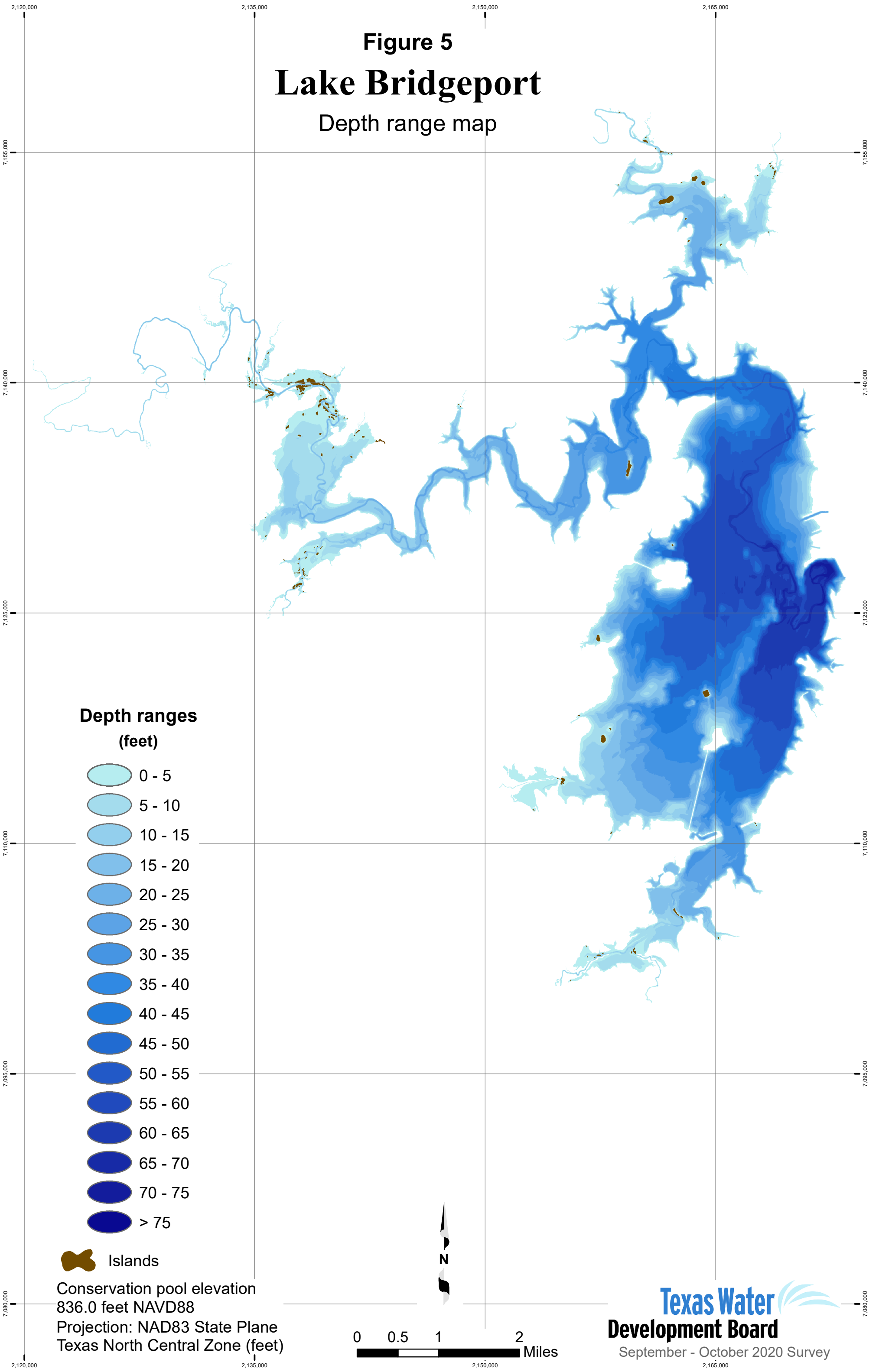
 10-foot contours  
 Conservation pool elevation  
 836.0 feet NAVD88  
 Projection: NAD83 State Plane  
 Texas North Central Zone (feet)



# Figure 5

## Lake Bridgeport

### Depth range map



#### Depth ranges (feet)

- 0 - 5
- 5 - 10
- 10 - 15
- 15 - 20
- 20 - 25
- 25 - 30
- 30 - 35
- 35 - 40
- 40 - 45
- 45 - 50
- 50 - 55
- 55 - 60
- 60 - 65
- 65 - 70
- 70 - 75
- > 75

Islands

Conservation pool elevation  
836.0 feet NAVD88  
Projection: NAD83 State Plane  
Texas North Central Zone (feet)

0 0.5 1 2 Miles

**Texas Water**  
**Development Board**  
September - October 2020 Survey

## **Analysis of sediment data from Lake Bridgeport**

Sedimentation in Lake Bridgeport was determined by analyzing the acoustic signal returns of all three depth sounder frequencies using customized software called Hydropick. While the 208 kHz signal is used to determine the current bathymetric surface, the 208 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 analyzed at TWDB headquarters in Austin. Each core was 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 soil color, texture, relative water content, and presence of organic materials are presented in Table 2.

**Table 2. Sediment core sample analysis data.**

Sediment core sample	Easting <sup>a</sup> (feet)	Northing <sup>a</sup> (feet)	Total core sample / post-impoundment sediment length (inches)	Sediment core description <sup>b</sup>		Munsell soil color
BRP-1	2165221.96	7134821.45	59.0 / 45.0	post-impoundment	0.0–1.0” high water content, fine silt, soupy, smooth	2.5Y 4/3 olive brown
					1.0–36.0” moderate water content, water content decreases with depth, silty clay, pudding like, organic matter present (macroinvertebrates and stem-like vegetation at 22 inches), mottled coloration	2.5Y 4/3 olive brown 10YR 3/2 very dark grayish brown
					36.0–45.0” low water content, silty clay, peanut butter like, uniform consistency throughout	2.5Y 3/2 very dark grayish brown
				pre-impoundment	45.0–59.0” very low water content, silty clay, dense, malleable, sticky, play dough consistency, organic material present throughout (fibrous roots)	2.5Y 3/1 very dark gray
BRP-2	2171539.86	7124815.62	78.0 / 64.0	post-impoundment	0.0–3.0” high water content, fine silt, soupy, smooth	2.5Y 4/3 olive brown
					3.0–38.0” high to moderate water content, water content decreases with depth, silty clay, pudding like, sticky, uniform texture throughout	2.5Y 4/2 dark grayish brown
					38.0–64.0” moderate to low water content, water content decreases with depth, silty clay, pudding like, sticky, uniform texture throughout	2.5Y 5/2 grayish brown
				pre-impoundment	64.0–78.0” very low water content, silty clay, dense, malleable, organic material present throughout (dendritic roots, woody debris, vegetation)	2.5Y 3/1 very dark gray
BRB-3	2161283.52	7141874.08	31.0 / 29.0	post-impoundment	0.0–2.0” high water content, silt, soupy, smooth	2.5Y 4/3 olive brown
					2.0–29.0” high to moderate water content, water content decreasing with depth, silty clay, pudding like, sticky, density increases with depth	2.5Y 4/2 dark grayish brown
				pre-impoundment	29.0–31.0” low water content, clay, loosely pack with bits of clay, malleable, sticky, organic material present throughout (fibrous roots, terrestrial vegetation)	2.5Y 3/2 very dark grayish brown

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

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

**Table 2 (continued). Sediment core sample analysis data.**

Sediment core sample	Easting <sup>a</sup> (feet)	Northing <sup>a</sup> (feet)	Total core sample / post-impoundment sediment length (inches)	Sediment core description <sup>b</sup>		Munsell soil color
BRP-4	2163117.25	7123270.98	57.0 / 45.0	post-impoundment	0.0–7.0” very high water content, silt, soupy, smooth	2.5Y 4/1 dark gray
					7.0–45.0” moderate water content, silty clay, puddinglike, smooth, uniform texture throughout	2.5Y 4/1 dark gray
				pre-impoundment	45.0–57.0” low to very low water content, water content decreasing with depth, silty clay, loosely packed at top with bits of clay, density increases with depth, malleable, organic material present (fibrous roots)	2.5Y 4/1 dark gray
BRP-5	2166428.50	7113384.20	31.0 / 25.0	post-impoundment	0.0–2.0” very high water content, silt, soupy, smooth	2.5Y 5/2 grayish brown
					2.0–25.0” high to moderate water content, water content decreases with depth, silty clay, sticky, pudding like, uniform texture throughout	2.5Y 4/2 dark grayish brown
				pre-impoundment	25.0–31.0” very low water content, silty clay, loosely packed at top with small bits of clay, density increases with depth, organic material present (fibrous roots)	2.5 4/1 dark gray
BRP-6	2157986.57	7134655.70	27.0 / 15.0	post-impoundment	0.0–2.0” very high water content, silt, soupy, smooth	2.5Y 5/2 grayish brown
					2.0–15.0” high to moderate water content, water content decreasing with depth, silty clay with bits of clay at bottom of layer, smooth, pudding like, uniform texture throughout, piece of shell at top of layer	2.5Y 4/2 dark grayish brown
				pre-impoundment	15.0–27.0” low to very low water content, water content decreases with depth, silty clay, bits of clay at top of layer, density increases with depth, organic material present (fibrous roots, terrestrial vegetation)	2.5Y 4/1 dark gray
BRP-7	2165244.63	7150142.82	31.0 / 10.0	post-impoundment	0.0–1.0” very high water content, silt, soupy, smooth	2.5Y 5/3 light olive brown
					1.0–10.0” high water content, silty clay, small bits of clay at bottom of layer, organic material present (woody debris)	2.5Y 4/1 dark gray

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

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

**Table 2 (continued). Sediment core sample analysis data.**

Sediment core sample	Easting <sup>a</sup> (feet)	Northing <sup>a</sup> (feet)	Total core sample / post-impoundment sediment length (inches)	Sediment core description <sup>b</sup>		Munsell soil color
BRP-7 (continued)	2165244.63	7150142.82	31.0 / 10.0	pre-impoundment	10.0–20.0” low water content, clay, smooth, dense, malleable, tightly packed, organic material present throughout (fibrous roots)	2.5Y 4/1 dark gray
					20.0–31.0” low water content, clay, malleable, dense, tightly packed, organic material present throughout (fibrous roots)	2.5Y 3/3 dark olive brown
BRP-8	2143712.01	7131297.73	12.0 / 3.0	post-impoundment	0.0–3.0” high water content, silty clay, smooth, pudding like	2.5Y 4/3 olive brown
				pre-impoundment	3.0–12.0” very low water content, clay, malleable, dense, pungent odor, organic material present throughout (fibrous roots)	2.5Y 4/1 dark gray
BRP-9	2171694.44	7122057.32	38.0 / N/A	post-impoundment	0.0–4.0” high water content, silt, smooth, pudding like	2.5Y 4/2 dark grayish brown
					4.0–38.0” moderate water content, silty clay, peanut butter consistency, sticky, uniform texture and consistency throughout	5Y 5/1 gray
BRP-10	2168595.56	7121827.34	76.0 / 64.0	post-impoundment	0.0–3.0” very high water content, silt, soupy, smooth	2.5Y 4/3 olive brown
				pre-impoundment	3.0–64.0” high to low water content, water content decreasing with depth, silt, peanut butter consistency, density increases with depth, mottled coloration	2.5Y 5/1 gray 2.5Y 5/2 grayish brown
BRP-11	2150213.28	7134841.95	120.0 / N/A	post-impoundment	64.0–76.0” low water content, clay, dense, sticky, bits of clay present, organic material present throughout (fibrous roots, leaf litter, large woody debris)	2.5Y 5/2 grayish brown
					0.0–2.0” high water content, silty clay, smooth	2.5Y 4/2 dark grayish brown
					2.0–16.0” moderate water content, silty clay, smooth, sticky, peanut butter consistency, uniform texture and consistency throughout	2.5Y 3/2 very dark grayish brown
					16.0–17.0” moderate water content, sandy silt, sticky, peanut butter consistency	2.5Y 3/2 very dark grayish brown

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

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

**Table 2 (continued). Sediment core sample analysis data.**

Sediment core sample	Easting <sup>a</sup> (feet)	Northing <sup>a</sup> (feet)	Total core sample / post-impoundment sediment length (inches)	Sediment core description <sup>b</sup>		Munsell soil color
BRP-11 (continued)	2150213.28	7134841.95	120.0 / N/A	post-impoundment	17.0–96.0” moderate to low water content, water content decreases with depth, silty clay with small bits of clay present, smooth, peanut butter consistency, uniform texture throughout	2.5Y 4/1 dark gray
					96.0–108.0” low water content, clay, smooth, malleable, dense, thin layer of sand at 106 inches	2.5Y 4/1 dark gray
					108.0–120.0” low water content, clay, smooth, malleable, less dense than previous layer	2.5 4/1 dark gray
BRP-12	2160940.85	7128918.65	39.0 / 22.0	post-impoundment	0.0–1.0” very high water content, silt, soupy, smooth	2.5Y 4/2 dark grayish brown
					1.0–14.0” moderate water content, silty sand, peanut butter consistency	2.5Y 3/1 very dark gray
					14.0–22.0” moderate water content, silty clay, peanut butter consistency, uniform texture, not very dense, organic material present (woody debris at bottom of layer)	2.5Y 3/1 very dark gray
				pre-impoundment	22.0–39.0” low water content, sandy clay, dense, malleable, uniform texture throughout, organic material present (fibrous roots, woody debris at 22 inches)	2.5Y 3/2 very dark grayish brown
BRP-13	2158582.49	7112276.78	14.0 / 5.0	post-impoundment	0.0–5.0” high water content, silty clay with bits of clay, smooth, pudding like, organic material present (woody debris)	2.5Y 4/2 dark grayish brown
				pre-impoundment	5.0–14.0” low water content, silty clay with large bits of clay throughout, smooth, malleable, organic material present throughout (fibrous/dendritic roots)	2.5Y 3/3 dark olive brown
BRP-14	2161392.68	7104161.79	15.0 / 12.0	post-impoundment	0.0–1.0” very high water content, silt, smooth, soupy	2.5Y 4/3 olive brown
					1.0–12.0” moderate water content, silty clay, peanut butter like, uniform texture and consistency throughout	2.5Y 3/2 grayish brown
				pre-impoundment	12.0–15.0” low water content, silty clay, dense, malleable, uniform texture throughout	2.5Y 4/1 dark gray

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

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

**Table 2 (continued). Sediment core sample analysis data.**

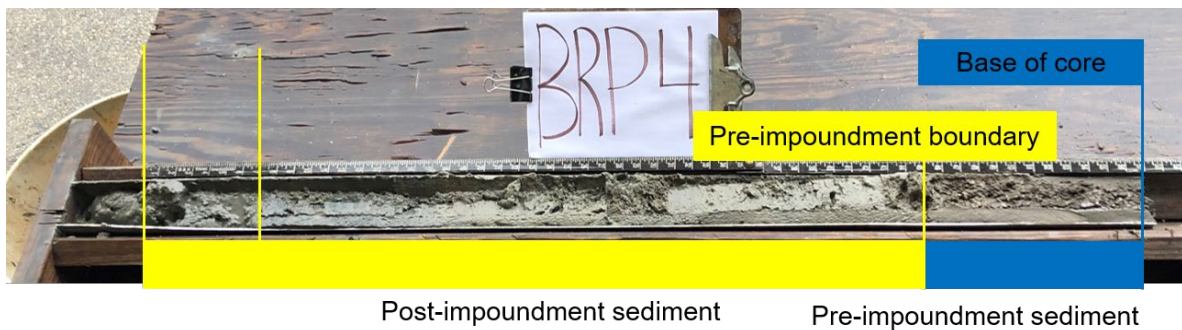
Sediment core sample	Easting <sup>a</sup> (feet)	Northing <sup>a</sup> (feet)	Total core sample / post-impoundment sediment length (inches)	Sediment core description <sup>b</sup>		Munsell soil color
BRP-15	2164338.46	7105572.15	21.0 / 14.0	post-impoundment	0.0–2.0” very high water content, silt, soupy, smooth	2.5Y 4/3 olive brown
					2.0–14.0” high water content, silty clay, pudding like, smooth, uniform texture throughout	2.5Y 4/2 dark grayish brown
				pre-impoundment	14.0–21.0” moderate water content, clay, loosely packed, organic material throughout (fibrous roots)	2.5Y 4/1 dark gray
BRP-16	2164416.36	7108754.33	39.0 / 33.0	post-impoundment	0.0–3.0” very high water content, silt, soupy, smooth	2.5Y 4/3 olive brown
					3.0–33.0” high to moderate water content, water content decreases with depth, silty clay, smooth, pudding like, uniform texture throughout, density increases with depth	2.5Y 4/1 dark gray
				pre-impoundment	33.0 – 39.0” low water content, clay, dense, malleable, smooth	2.5Y 4/1 dark gray

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

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

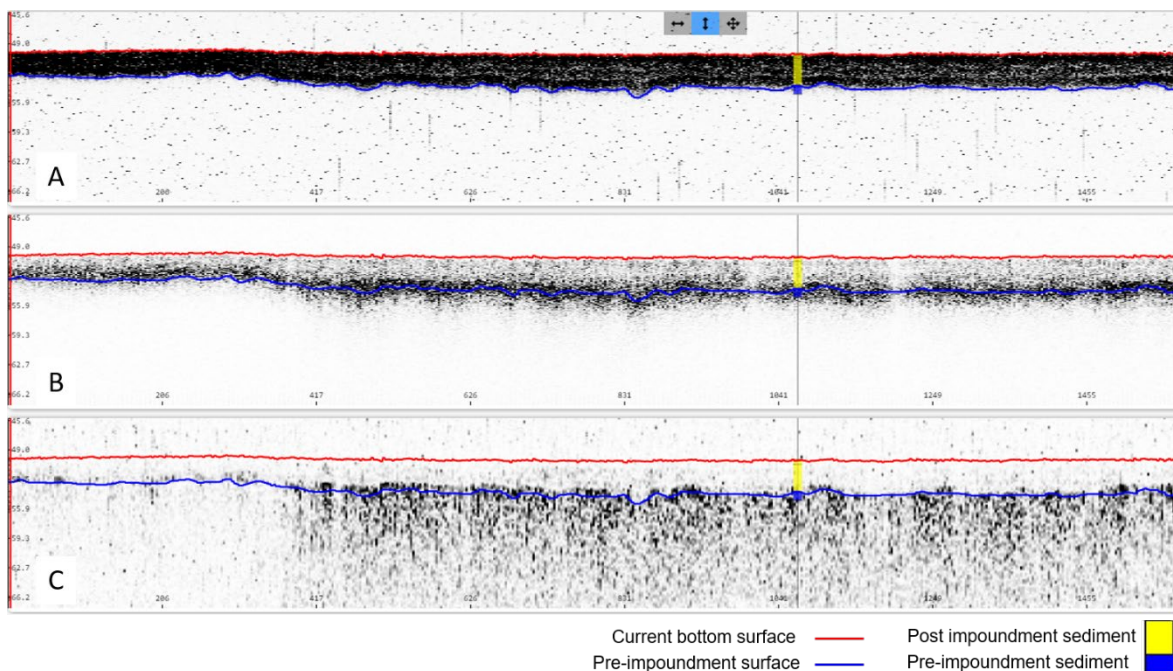


A photograph of sediment core BRP-4 (for location, refer to Figure 2) is shown in Figure 7. The base, or deepest part of the sample is denoted by the blue line. The pre-impoundment boundary (yellow line closest to the base) was evident within this sediment core sample at 45.0 inches and identified by 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 core BRP-4. Post-impoundment sediment layers occur in the top 45 inches of this sediment core (identified by the yellow box). Pre-impoundment sediment layers were identified and are defined by the blue box.**

Figure 8 illustrates the relationships between acoustic signal returns and the depositional layering seen in sediment cores. In this example, sediment core BRP-4 is shown correlated with each frequency: 208 kHz, 50 kHz, and 12 kHz. The current bathymetric surface is determined based on signal returns from the 208 kHz transducer as represented by the top red line in Figure 8. The pre-impoundment surface is identified by comparing boundaries observed in the 208 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.



**Figure 8. Sediment core sample BRP-4 compared with acoustic signal returns. A) 208 kHz frequency, B) 50 kHz frequency, and C) 12 kHz frequency.**

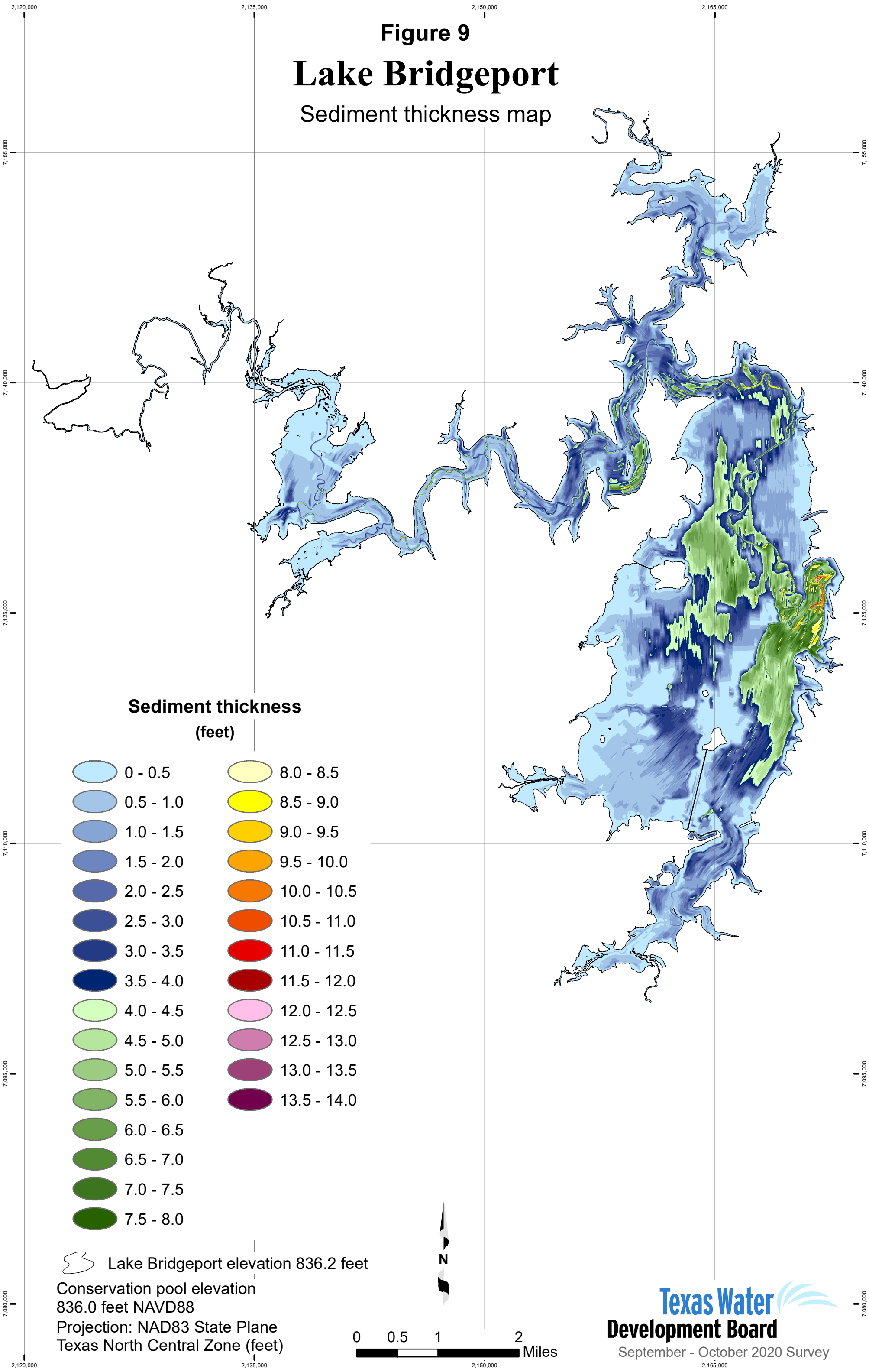
The pre-impoundment boundary in sediment core BRP-4 most closely aligned with the different layers picked up by the 208 kHz acoustic returns (Figure 8). The pre-impoundment surface is first identified along cross-sections for which sediment core samples were collected. This information then is used as a guide for identifying the pre-impoundment surface along cross-sections where sediment core samples were not collected.

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 and the reservoir boundary was zero feet (defined as the 836.2-foot elevation contour). The sediment thickness TIN model was converted to a raster representation using a cell size of 5 feet by 5 feet and was used to produce a sediment thickness map (Figure 9). 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 9


## Lake Bridgeport

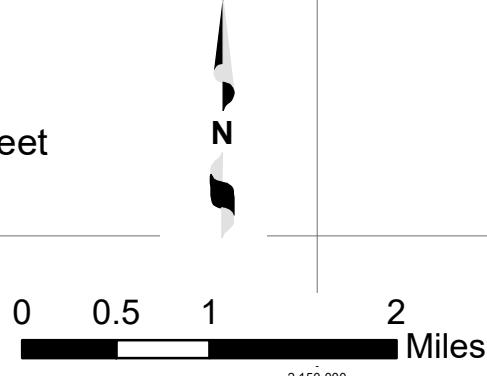
### Sediment thickness map



#### Sediment thickness (feet)

0 - 0.5	8.0 - 8.5
0.5 - 1.0	8.5 - 9.0
1.0 - 1.5	9.0 - 9.5
1.5 - 2.0	9.5 - 10.0
2.0 - 2.5	10.0 - 10.5
2.5 - 3.0	10.5 - 11.0
3.0 - 3.5	11.0 - 11.5
3.5 - 4.0	11.5 - 12.0
4.0 - 4.5	12.0 - 12.5
4.5 - 5.0	12.5 - 13.0
5.0 - 5.5	13.0 - 13.5
5.5 - 6.0	13.5 - 14.0
6.0 - 6.5	
6.5 - 7.0	
7.0 - 7.5	
7.5 - 8.0	

 Lake Bridgeport elevation 836.2 feet  
 Conservation pool elevation 836.0 feet NAVD88  
 Projection: NAD83 State Plane Texas North Central Zone (feet)



## Survey results

### Volumetric survey

The 2020 TWDB volumetric survey indicates that Lake Bridgeport has a total reservoir capacity of 372,183 acre-feet and encompasses 12,338 acres at conservation pool elevation (836.0 feet NAVD88). Current area and capacity estimates are compared to previous area and capacity estimates in Tables 3 and 4. Because of differences in past and present survey methodologies, direct comparison of volumetric surveys to others to estimate loss of area and capacity can be unreliable.

**Table 3. Surface area and total capacity at conservation pool elevation prior to October 1, 2016.**

Survey	Surface Area (acres)	Total Capacity (acre-feet)	Conservation Pool Elevation NGVD29 <sup>a</sup>	Conservation Pool Elevation NAVD88 <sup>a</sup>	Source
Freese and Nichols 1959	13,000	386,420	836.00	835.56	Texas Water Development Board, 1973
Freese and Nichols 1968	12,941	386,559	836.00	835.56	Freese and Nichols, 1988
Freese and Nichols 1988	12,900	374,836	836.00	835.56	Freese and Nichols, 1988
TWDB 2000	11,954	366,236	836.00	835.56	Texas Water Development Board, 2001
TWDB 2000 re-calculated	11,952	369,251	836.00	835.56	Texas Water Development Board, 2016
TWDB 2010	11,712	361,875	836.00	835.56	Texas Water Development Board, 2012
TWDB 2010 re-calculated	12,010	363,271	836.00	835.56	
TWDB 2020	12,213	366,782	836.00	835.56	

<sup>a</sup>. Datum of gage changed from feet National Geodetic Vertical Datum 1929 (NGVD29) to feet North American Vertical Datum 1988 (NAVD88) on October 1, 2016. The new datum is 0.44 feet below previous datum (U.S. Geological Survey, 2021). Conservation pool elevation changed from 836.0 feet NGVD29 to 836.0 feet NAVD88 (C. Ottman, written commun(s), 2021).

**Table 4. Surface area and total capacity at conservation pool elevation after October 1, 2016.**

Survey	Surface Area (acres)	Total Capacity (acre-feet)	Conservation Pool Elevation NGVD29 <sup>b</sup>	Conservation Pool Elevation NAVD88 <sup>b</sup>	Source
<b>TWDB 2000 re-calculated</b>	12,036	374,528	836.44	836.00	
<b>TWDB 2010 re-calculated</b>	12,108	368,576	836.44	836.00	
<b>TWDB 2020</b>	12,338	372,183	836.44	836.00	

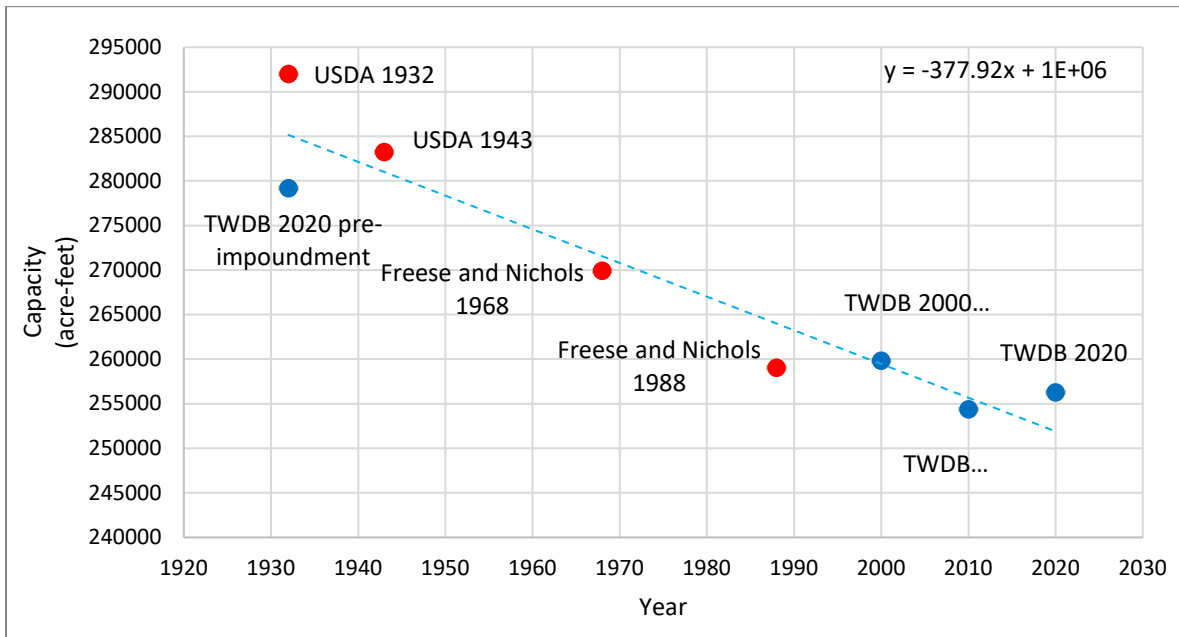
<sup>b</sup>. Datum of gage changed from feet National Geodetic Vertical Datum 1929 (NGVD29) to feet North American Vertical Datum 1988 (NAVD88) on October 1, 2016. The new datum is 0.44 feet below previous datum (U.S. Geological Survey, 2021). Conservation pool elevation changed from 836.0 feet NGVD29 to 836.0 feet NAVD88 (C. Ottman, written commun(s)., 2021).

### **Sedimentation survey**

**The 2020 TWDB sedimentation survey measured 23,439 acre-feet of sediment below conservation pool elevation 836.0 feet NAVD88.** The sedimentation survey indicates sediment accumulation is greatest in the river channels and floodplains. The TWDB 2020 pre-impoundment surface is difficult to identify. The original Bridgeport Dam impounded water at a normal operating level of 826.0 feet until the dam was enlarged in 1973. Lake Bridgeport has periodically experienced low water levels leading to the desiccation of any exposed sediment, for instance, between June 2012 and May 2015, the water surface elevation of the reservoir measured as low as 811.73 feet NGVD29. Upon inundation and re-saturation, exposed sediment will not return to its original high level of water content (Dunbar and Allen, 2003). Drying of sediment in exposed areas create hard surfaces that cannot be penetrated with gravity coring techniques, and compressive stresses on the sediments may also increase sediment density, inhibiting the measurement of the original, pre-impoundment surface. Density stratification in the sediment layers can also scatter and attenuate acoustic return signals of the multi-frequency depth sounder (U.S. Army Corps of Engineers, 2013).

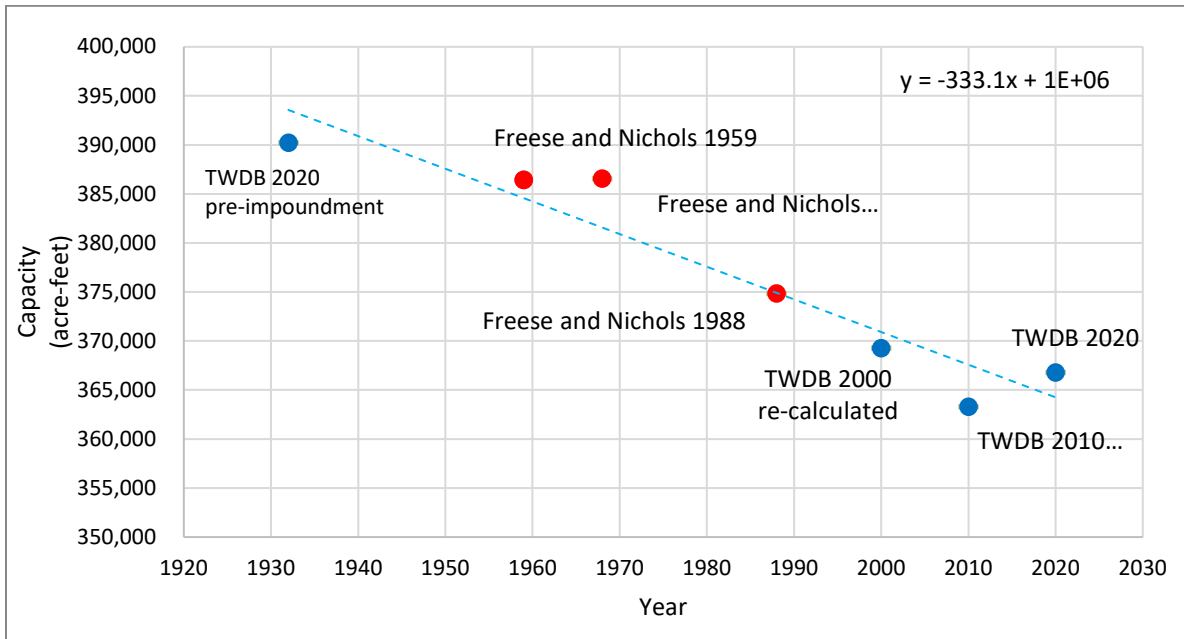
Comparisons of capacity estimates of Lake Bridgeport at conservation pool elevation prior to October 1, 2016, and at the original conservation pool elevation 826.0 feet NGVD29, derived using differing methodologies are provided in Tables 5 and 6, respectively, for sedimentation rate calculation. Of sediment measured in the 2020 TWDB survey, 23,437 acre-feet of the total sediment was measured below elevation 835.56 feet NAVD88 (Table 5) and 22,942 acre-feet of the total sediment was measured below elevation 825.56 feet NAVD88 (Table 6). The 2020 TWDB sedimentation survey indicates

Lake Bridgeport has lost capacity at an average of 266 acre-feet per year since impoundment due to sedimentation below conservation pool elevation (836.0 feet NAVD88). Long-term trends indicate Lake Bridgeport loses capacity below elevation 826.0 feet NGVD29/825.56 feet NAVD88 at an average rate of 378 acre-feet per year since impoundment due to sedimentation (Figure 10) and loses capacity below elevation 836.0 feet NGVD29/835.56 feet NAVD88 at an average of 333 acre-feet per year since impoundment due to sedimentation (Figure 11).



**Figure 10.** Plot of current and previous capacity estimates at elevation 826.00 feet NGVD29/825.56 feet NAVD88 (acre-feet). 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 through 2020.





**Figure 11.** Plot of current and previous capacity estimates at elevation 836.00 feet NGVD29/ 835.56 feet NAVD88 (acre-feet). 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 through 2020.

**Table 5.** Average annual capacity loss comparisons at conservation pool elevation prior to October 1, 2016.

Survey	Comparisons at elevation 836.00 feet NGVD29 = 835.56 feet NAVD88 <sup>a</sup>					
Freese and Nichols 1959	386,420	<	<	<	<	<
Freese and Nichols 1968	<	386,559	<	<	<	<
Freese and Nichols 1988	<	<	374,836	<	<	<
TWDB 2000 re-calculated	<	<	<	369,251	<	<
TWDB 2010 re-calculated	<	<	<	<	363,271	<
TWDB pre-impoundment estimate based on 2020 survey	<	<	<	<	<	390,219
TWDB 2020	366,782	366,782	366,782	366,782	366,782	366,782
Volume difference (acre-feet)	19,638	19,777	8,054	2,469	-3,511	23,437
Percent change	5.1	5.1	2.1	0.7	-1.0	6.0
Number of years	61	52	32	20	10	88 <sup>b</sup>
Capacity loss rate (acre-feet/year)	322	380	252	123	-351	266
Capacity loss rate (acre-feet/square mile of drainage area of 1,111 square miles /year)	0.29	0.34	0.23	0.11	-0.32	0.24

<sup>a</sup>. Datum of gage changed from feet National Geodetic Vertical Datum 1929 (NGVD29) to feet North American Vertical Datum 1988 (NAVD88) on October 1, 2016. The new datum is 0.44 feet below previous datum (U.S. Geological Survey, 2021). Conservation pool elevation changed from 836.0 feet NGVD29 to 836.0 feet NAVD88 (C. Ottman, written commun(s)., 2021).

<sup>b</sup>. Bridgeport Dam was completed, and deliberate impoundment began in April 1932. The original conservation pool elevation was 826.0 feet NGVD29 (Texas Water Development Board, 1973).

**Table 6. Average annual capacity loss comparisons at the original conservation pool elevation**

Survey	Comparisons at elevation 826.00 feet NGVD29 = 825.56 feet NAVD88 <sup>c</sup>				
USDA 1932	292,000	◇	◇	◇	◇
USDA 1943	◇	283,240	◇	◇	◇
TWDB 2000 re-calculated	◇	◇	259,841	◇	◇
TWDB 2010	◇	◇	◇	254,383	◇
TWDB pre-impoundment estimate based on 2020 survey	◇	◇	◇	◇	279,170
TWDB 2020	256,282	256,282	256,282	256,282	256,282
Volume difference (acre-feet)	31,346	22,586	-813	-6,271	22,942
Percent change	10.7	8.0	-0.3	-2.5	8.1
Number of years	88 <sup>b</sup>	77	20	10	88 <sup>d</sup>
Capacity loss rate (acre-feet/year)	356	293	-41	-627	261
Capacity loss rate (acre-feet/square mile of drainage area of 1,111 square miles /year)	0.32	0.26	-0.04	-0.56	0.23

<sup>c</sup>. Datum of gage changed from feet National Geodetic Vertical Datum 1929 (NGVD29) to feet North American Vertical Datum 1988 (NAVD88) on October 1, 2016. The new datum is 0.44 feet below previous datum (U.S. Geological Survey, 2021). Conservation pool elevation changed from 836.0 feet NGVD29 to 836.0 feet NAVD88 (C. Ottman, written commun(s)., 2021).

<sup>d</sup>. Bridgeport Dam was completed, and deliberate impoundment began in April 1932. The original conservation pool elevation was 826.0 feet NGVD29 (Texas Water Development Board, 1973).



## **Recommendations**

The TWDB recommends a detailed analysis of sediment deposits in the areas where exposure of the lake bottom may have led to identification of a false pre-impoundment using augured-coring techniques, as well as a volumetric and sedimentation survey in 10 years or after a major high flow event to further improve estimates of sediment accumulation rates.

## **TWDB contact information**

For more information about the TWDB Hydrographic Survey Program, visit [www.twdb.texas.gov/surfacewater/surveys](http://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](mailto:Hydrosurvey@twdb.texas.gov).

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## Appendix A

**Lake Bridgeport**  
**RESERVOIR CAPACITY TABLE**

TEXAS WATER DEVELOPMENT BOARD

April 2000 Survey re-calculated November 2016

CAPACITY IN ACRE-FEET

Conservation pool elevation\*

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
759					0	0	0	0	0	0
760	0	0	0	0	0	0	0	0	0	0
761	0	0	0	0	0	0	0	0	0	0
762	0	0	0	0	0	0	0	0	0	0
763	0	0	0	0	0	0	0	1	1	1
764	1	1	1	1	1	1	2	2	2	2
765	3	3	3	4	4	4	5	5	6	6
766	7	7	8	8	9	10	11	12	13	14
767	15	16	17	18	20	21	23	25	27	29
768	31	33	35	38	40	43	46	49	52	56
769	59	63	66	70	74	78	83	87	91	96
770	101	106	111	116	122	127	133	139	145	152
771	158	165	172	179	186	194	202	210	219	228
772	237	246	257	267	278	289	301	313	326	340
773	354	368	383	399	416	433	451	471	491	512
774	535	559	585	613	642	672	705	739	775	812
775	852	893	935	979	1,025	1,072	1,120	1,169	1,220	1,272
776	1,325	1,380	1,436	1,493	1,552	1,613	1,676	1,741	1,809	1,879
777	1,952	2,029	2,108	2,190	2,275	2,362	2,453	2,546	2,642	2,740
778	2,842	2,946	3,053	3,163	3,276	3,391	3,508	3,628	3,750	3,875
779	4,001	4,130	4,262	4,395	4,531	4,668	4,808	4,949	5,093	5,239
780	5,386	5,535	5,687	5,840	5,995	6,152	6,311	6,471	6,633	6,797
781	6,963	7,131	7,301	7,472	7,646	7,821	7,999	8,179	8,361	8,545
782	8,731	8,918	9,108	9,300	9,493	9,689	9,886	10,085	10,286	10,489
783	10,694	10,900	11,109	11,319	11,531	11,744	11,960	12,177	12,396	12,617
784	12,839	13,064	13,290	13,518	13,748	13,980	14,214	14,449	14,687	14,926
785	15,167	15,409	15,654	15,900	16,147	16,397	16,647	16,900	17,154	17,410
786	17,667	17,926	18,187	18,450	18,714	18,980	19,248	19,517	19,788	20,061
787	20,335	20,612	20,890	21,170	21,451	21,734	22,018	22,305	22,592	22,882
788	23,172	23,465	23,759	24,054	24,351	24,649	24,949	25,251	25,554	25,859
789	26,165	26,473	26,782	27,093	27,405	27,719	28,034	28,351	28,670	28,990
790	29,311	29,633	29,958	30,283	30,610	30,939	31,269	31,600	31,933	32,267
791	32,602	32,938	33,276	33,615	33,956	34,298	34,642	34,987	35,333	35,682
792	36,031	36,383	36,736	37,090	37,447	37,805	38,164	38,525	38,888	39,253
793	39,619	39,986	40,355	40,726	41,098	41,471	41,846	42,223	42,601	42,981
794	43,362	43,745	44,129	44,515	44,902	45,290	45,680	46,071	46,464	46,858
795	47,253	47,650	48,049	48,449	48,851	49,254	49,658	50,064	50,472	50,881
796	51,291	51,703	52,116	52,531	52,948	53,365	53,784	54,205	54,627	55,051
797	55,476	55,903	56,332	56,763	57,197	57,632	58,068	58,507	58,948	59,391
798	59,836	60,284	60,733	61,183	61,635	62,089	62,544	63,001	63,460	63,920
799	64,382	64,846	65,311	65,779	66,248	66,719	67,191	67,667	68,143	68,622
800	69,102	69,585	70,069	70,556	71,044	71,535	72,027	72,522	73,019	73,518
801	74,020	74,524	75,031	75,539	76,050	76,562	77,076	77,593	78,111	78,632
802	79,155	79,679	80,205	80,734	81,264	81,797	82,331	82,868	83,406	83,947
803	84,489	85,032	85,578	86,126	86,676	87,227	87,780	88,335	88,893	89,452
804	90,013	90,576	91,141	91,707	92,276	92,847	93,419	93,993	94,569	95,147
805	95,726	96,307	96,891	97,476	98,063	98,652	99,243	99,836	100,431	101,030
806	101,630	102,232	102,836	103,443	104,052	104,663	105,276	105,892	106,509	107,129
807	107,750	108,374	108,999	109,626	110,255	110,886	111,518	112,152	112,788	113,426
808	114,066	114,707	115,350	115,995	116,642	117,291	117,941	118,593	119,246	119,902
809	120,558	121,217	121,877	122,539	123,203	123,868	124,535	125,204	125,874	126,547
810	127,221	127,896	128,574	129,252	129,933	130,615	131,298	131,984	132,671	133,360
811	134,050	134,742	135,435	136,130	136,827	137,525	138,225	138,926	139,629	140,334
812	141,041	141,749	142,459	143,171	143,886	144,601	145,319	146,038	146,759	147,482
813	148,206	148,931	149,659	150,389	151,121	151,854	152,589	153,326	154,065	154,806
814	155,548	156,292	157,038	157,786	158,535	159,286	160,038	160,793	161,549	162,307

Appendix A

**Lake Bridgeport**

**RESERVOIR CAPACITY TABLE (Continued)**

TEXAS WATER DEVELOPMENT BOARD

April 2000 Survey re-calculated November 2016

CAPACITY IN ACRE-FEET

Conservation pool elevation\*

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
815	163,067	163,829	164,593	165,359	166,128	166,898	167,671	168,446	169,224	170,004
816	170,786	171,570	172,356	173,145	173,936	174,729	175,525	176,323	177,123	177,926
817	178,730	179,537	180,346	181,158	181,972	182,789	183,609	184,431	185,256	186,085
818	186,916	187,749	188,587	189,426	190,268	191,113	191,959	192,809	193,661	194,515
819	195,372	196,231	197,093	197,957	198,824	199,692	200,563	201,436	202,311	203,188
820	204,067	204,947	205,830	206,713	207,599	208,486	209,375	210,266	211,158	212,051
821	212,946	213,843	214,741	215,640	216,542	217,444	218,349	219,255	220,163	221,072
822	221,983	222,896	223,810	224,727	225,645	226,565	227,486	228,410	229,335	230,261
823	231,189	232,119	233,051	233,984	234,919	235,856	236,794	237,734	238,676	239,620
824	240,564	241,511	242,460	243,411	244,363	245,317	246,273	247,231	248,190	249,151
825	250,113	251,078	252,044	253,012	253,982	254,954	255,927	256,903	257,880	258,860
826	259,841	260,825	261,811	262,798	263,788	264,779	265,773	266,769	267,766	268,767
827	269,769	270,773	271,779	272,788	273,799	274,812	275,827	276,845	277,865	278,888
828	279,913	280,940	281,971	283,003	284,040	285,078	286,119	287,163	288,210	289,260
829	290,311	291,366	292,423	293,483	294,546	295,610	296,678	297,748	298,821	299,896
830	300,974	302,054	303,137	304,222	305,310	306,399	307,491	308,585	309,681	310,779
831	311,879	312,980	314,084	315,188	316,296	317,404	318,514	319,626	320,740	321,856
832	322,973	324,093	325,214	326,338	327,463	328,591	329,720	330,851	331,984	333,119
833	334,256	335,395	336,535	337,678	338,822	339,969	341,117	342,268	343,420	344,574
834	345,730	346,888	348,047	349,209	350,373	351,538	352,706	353,875	355,047	356,220
835	357,395	358,572	359,751	360,932	362,114	363,299	364,486	365,674	366,865	368,057
836	369,251	370,447	371,645	372,845	374,047					

Note: Capacities above elevation 831.5 feet calculated from interpolated areas and capacities above 836.0 feet calculated from extrapolated areas

\*Datum of gage changed from feet National Geodetic Vertical Datum 1929 (NGVD29) to feet North American Vertical Datum 1988 (NAVD88) on October 1, 2016. The new datum is 0.44 feet below previous datum (U.S. Geological Survey, 2021). Conservation pool elevation changed from 836.0 feet NGVD29 to 836.0 feet NAVD88 (equivalent to 836.44 feet NGVD29) (C. Ottman, written commun(s), 2021).

## Appendix B

**Lake Bridgeport**  
**RESERVOIR AREA TABLE**

TEXAS WATER DEVELOPMENT BOARD

April 2000 Survey re-calculated November 2016

AREA IN ACRES

Conservation pool elevation\*

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
759					0	0	0	0	0	0
760	0	0	0	0	0	0	0	0	0	0
761	0	0	0	0	0	0	0	0	0	0
762	0	0	0	0	0	0	0	0	0	0
763	0	0	0	0	0	1	1	1	1	1
764	1	1	1	1	1	2	2	2	2	3
765	3	3	3	4	4	4	4	5	5	5
766	5	6	6	7	7	8	8	9	10	10
767	11	12	13	14	15	16	17	18	19	20
768	22	23	24	26	27	29	30	31	32	34
769	35	36	38	39	40	42	43	44	46	47
770	49	50	52	54	55	57	59	61	63	65
771	67	69	71	73	76	78	81	84	87	90
772	94	98	103	107	111	116	121	126	131	137
773	142	148	154	161	169	179	188	197	208	221
774	234	251	267	282	298	315	332	350	368	385
775	401	416	433	449	463	475	487	501	514	527
776	540	552	566	580	598	618	643	667	690	714
777	747	778	805	833	863	891	919	946	972	999
778	1,029	1,057	1,084	1,112	1,138	1,163	1,186	1,210	1,233	1,256
779	1,279	1,301	1,323	1,344	1,365	1,386	1,406	1,427	1,446	1,465
780	1,485	1,505	1,524	1,542	1,560	1,578	1,595	1,612	1,630	1,649
781	1,669	1,687	1,705	1,725	1,746	1,767	1,788	1,809	1,829	1,848
782	1,868	1,888	1,907	1,925	1,945	1,963	1,982	2,000	2,019	2,039
783	2,057	2,075	2,092	2,110	2,128	2,146	2,163	2,181	2,199	2,217
784	2,235	2,253	2,271	2,289	2,310	2,330	2,348	2,365	2,383	2,400
785	2,417	2,435	2,452	2,468	2,484	2,500	2,516	2,532	2,549	2,567
786	2,584	2,601	2,618	2,635	2,652	2,669	2,685	2,702	2,718	2,736
787	2,755	2,772	2,789	2,805	2,822	2,838	2,854	2,869	2,885	2,900
788	2,916	2,931	2,946	2,962	2,977	2,992	3,008	3,024	3,039	3,055
789	3,069	3,084	3,100	3,115	3,132	3,147	3,162	3,177	3,191	3,205
790	3,220	3,234	3,248	3,263	3,278	3,292	3,306	3,320	3,333	3,346
791	3,359	3,372	3,385	3,399	3,413	3,428	3,443	3,458	3,474	3,490
792	3,506	3,522	3,538	3,554	3,572	3,588	3,604	3,620	3,636	3,652
793	3,668	3,683	3,698	3,713	3,728	3,743	3,758	3,774	3,790	3,805
794	3,820	3,834	3,848	3,863	3,877	3,891	3,905	3,919	3,934	3,948
795	3,963	3,978	3,993	4,008	4,023	4,038	4,053	4,067	4,082	4,097
796	4,112	4,126	4,141	4,155	4,169	4,184	4,198	4,213	4,229	4,246
797	4,263	4,282	4,301	4,321	4,341	4,360	4,378	4,398	4,419	4,442
798	4,463	4,481	4,497	4,513	4,529	4,545	4,562	4,578	4,594	4,611
799	4,629	4,647	4,664	4,681	4,700	4,720	4,740	4,758	4,777	4,795
800	4,814	4,834	4,854	4,874	4,895	4,916	4,936	4,958	4,982	5,007
801	5,031	5,053	5,074	5,094	5,114	5,134	5,155	5,176	5,197	5,215
802	5,234	5,253	5,274	5,295	5,317	5,336	5,355	5,374	5,393	5,411
803	5,430	5,449	5,468	5,486	5,504	5,523	5,543	5,562	5,581	5,600
804	5,620	5,641	5,660	5,678	5,696	5,714	5,732	5,750	5,768	5,785
805	5,804	5,822	5,841	5,860	5,880	5,900	5,921	5,944	5,968	5,990
806	6,012	6,033	6,056	6,078	6,100	6,122	6,143	6,165	6,186	6,206
807	6,225	6,244	6,262	6,280	6,297	6,316	6,334	6,352	6,369	6,387
808	6,405	6,423	6,441	6,459	6,477	6,494	6,511	6,527	6,544	6,560
809	6,577	6,594	6,611	6,628	6,645	6,662	6,679	6,696	6,714	6,731
810	6,748	6,764	6,780	6,795	6,811	6,829	6,845	6,863	6,879	6,896
811	6,912	6,927	6,943	6,958	6,974	6,990	7,006	7,022	7,039	7,056
812	7,074	7,093	7,113	7,131	7,149	7,167	7,184	7,200	7,216	7,234
813	7,251	7,268	7,286	7,305	7,324	7,343	7,361	7,379	7,397	7,416
814	7,434	7,451	7,468	7,484	7,501	7,518	7,535	7,553	7,571	7,590

## Appendix B

**Lake Bridgeport**  
**RESERVOIR AREA TABLE (Continued)**

TEXAS WATER DEVELOPMENT BOARD

April 2000 Survey re-calculated November 2016

AREA IN ACRES

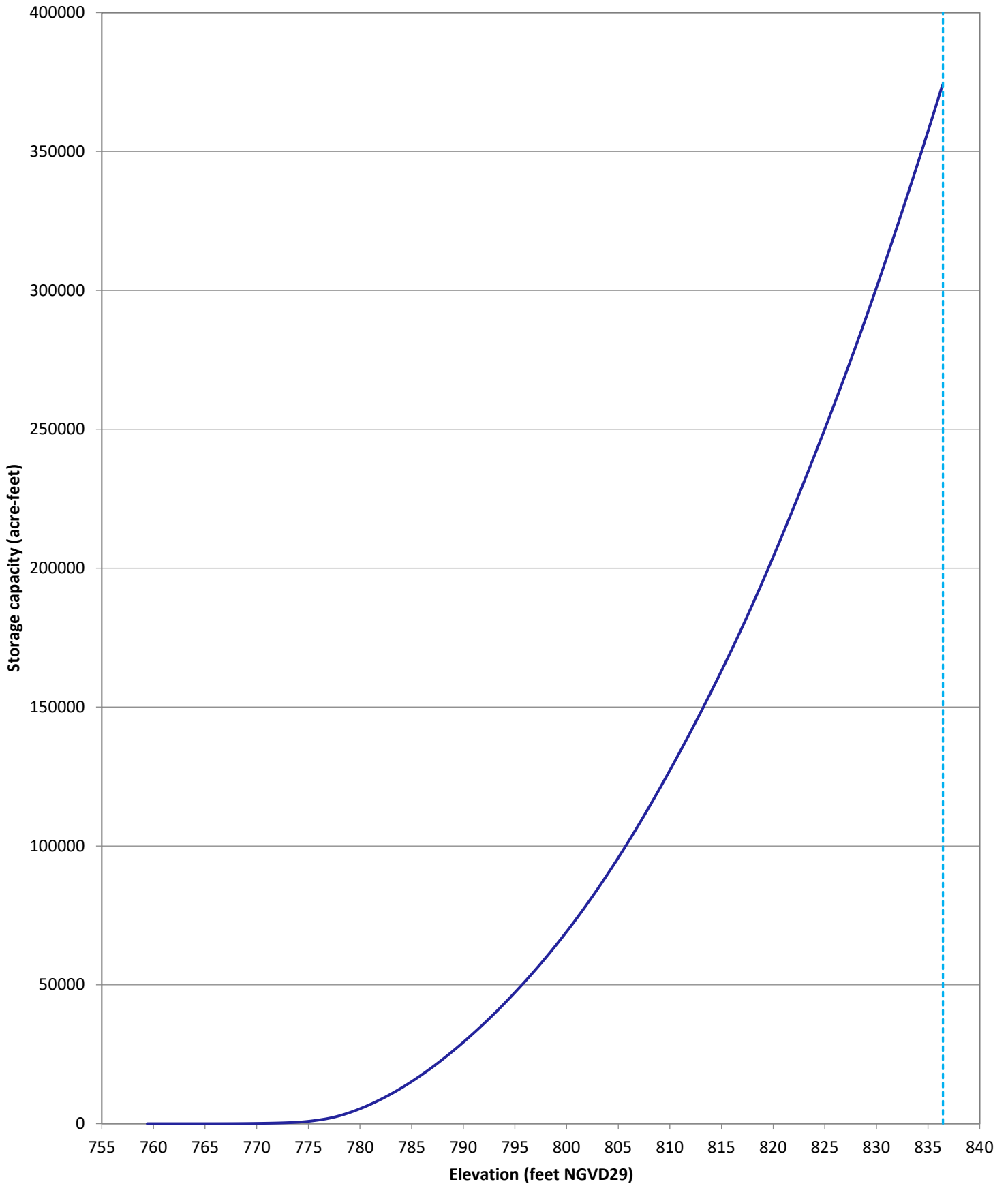
Conservation pool elevation\*

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
815	7,610	7,631	7,651	7,672	7,694	7,717	7,741	7,764	7,787	7,809
816	7,831	7,854	7,877	7,899	7,922	7,944	7,967	7,990	8,012	8,035
817	8,057	8,081	8,106	8,130	8,156	8,183	8,210	8,238	8,266	8,295
818	8,325	8,355	8,383	8,408	8,433	8,457	8,482	8,506	8,531	8,556
819	8,581	8,606	8,629	8,653	8,676	8,698	8,719	8,739	8,759	8,778
820	8,796	8,814	8,832	8,849	8,865	8,881	8,897	8,912	8,927	8,942
821	8,958	8,973	8,988	9,004	9,020	9,036	9,053	9,069	9,086	9,102
822	9,118	9,136	9,156	9,174	9,190	9,207	9,224	9,241	9,257	9,274
823	9,291	9,308	9,324	9,341	9,358	9,375	9,392	9,409	9,426	9,443
824	9,461	9,479	9,497	9,514	9,532	9,549	9,566	9,584	9,601	9,618
825	9,636	9,653	9,671	9,689	9,708	9,726	9,746	9,766	9,786	9,805
826	9,825	9,846	9,866	9,886	9,906	9,926	9,947	9,968	9,989	10,010
827	10,031	10,053	10,075	10,097	10,120	10,143	10,166	10,189	10,213	10,237
828	10,262	10,289	10,316	10,344	10,373	10,400	10,427	10,454	10,480	10,506
829	10,533	10,559	10,587	10,612	10,637	10,663	10,688	10,714	10,740	10,765
830	10,789	10,814	10,840	10,865	10,887	10,909	10,929	10,949	10,969	10,988
831	11,007	11,024	11,042	11,059	11,075	11,091	11,111	11,130	11,149	11,168
832	11,187	11,206	11,225	11,244	11,264	11,283	11,302	11,321	11,340	11,359
833	11,378	11,397	11,416	11,436	11,455	11,474	11,493	11,512	11,531	11,550
834	11,569	11,589	11,608	11,627	11,646	11,665	11,684	11,703	11,722	11,742
835	11,761	11,780	11,799	11,818	11,837	11,856	11,875	11,895	11,914	11,933
836	11,952	11,971	11,990	12,009	12,028					

Note: Areas between elevations 831.5 and 836.0 feet linearly interpolated, areas above 836.0 feet linearly extrapolated

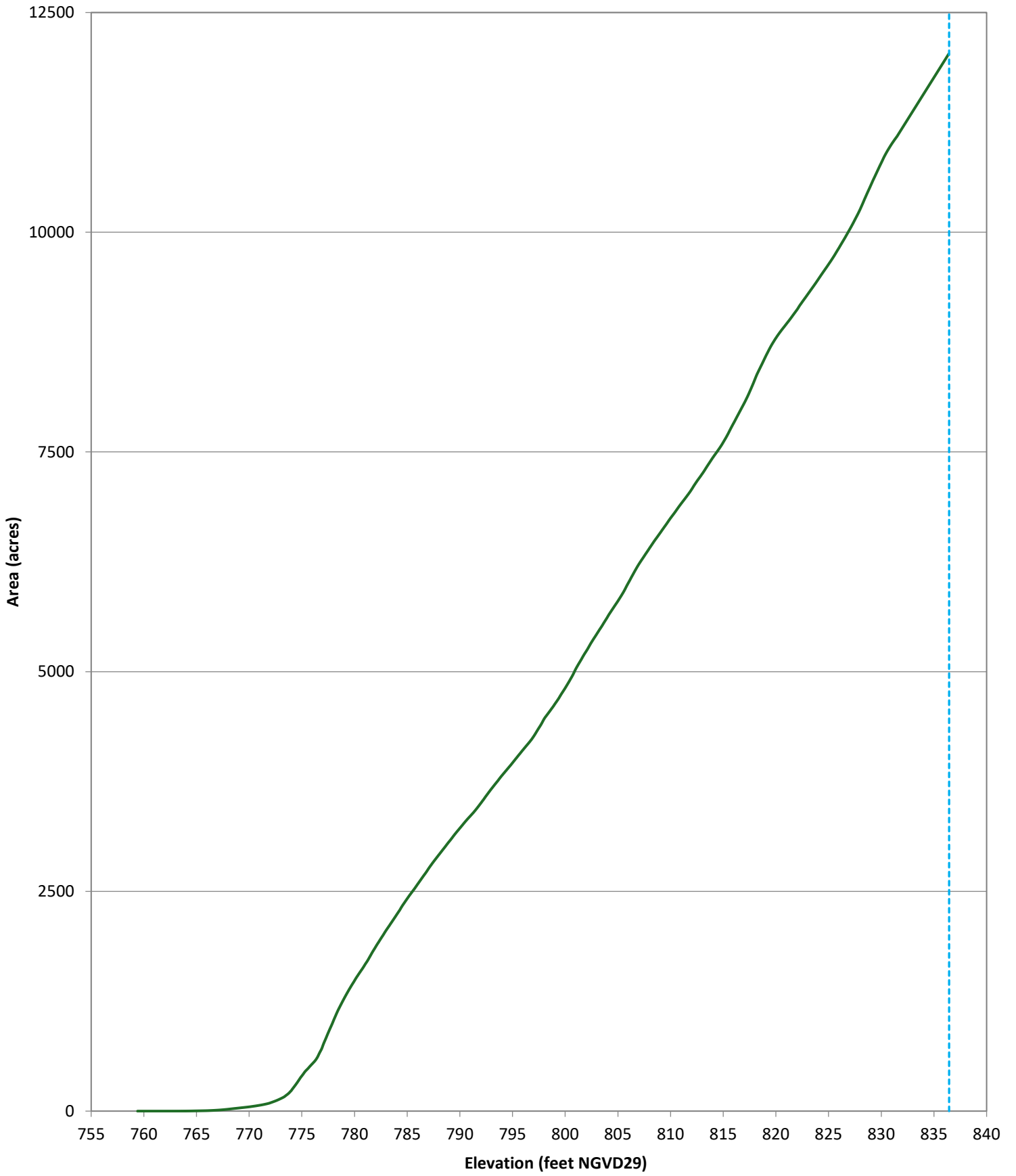
\*Datum of gage changed from feet National Geodetic Vertical Datum 1929 (NGVD29) to feet North American Vertical Datum 1988 (NAVD88) on October 1, 2016. The new datum is 0.44 feet below previous datum (U.S. Geological Survey, 2021). Conservation pool elevation changed from 836.0 feet NGVD29 to 836.0 feet NAVD88 (equivalent to 836.44 feet NGVD29) (C. Ottman, written commun(s)., 2021).



— Total capacity 2000      - - - - Conservation pool elevation 836.44 feet NGVD29

**Lake Bridgeport**  
 April 2000 Survey  
 re-calculated November 2016  
 Prepared by: TWDB





— Total area 2000      - - - - Conservation pool elevation 836.44 feet NGVD29

**Lake Bridgeport**  
 April 2000 Survey  
 re-calculated November 2016  
 Prepared by: TWDB

## Appendix E

**Lake Bridgeport**  
**RESERVOIR CAPACITY TABLE**

TEXAS WATER DEVELOPMENT BOARD

October - December 2010 Survey re-calculated February 2022

CAPACITY IN ACRE-FEET

Conservation pool elevation\*

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
761	0	0	0	0	0	0	0	0	0	0
762	0	0	0	1	1	1	1	2	2	2
763	2	3	3	4	4	4	5	5	6	6
764	7	7	8	8	9	9	10	11	11	12
765	13	13	14	15	16	17	18	18	19	20
766	22	23	24	25	27	28	29	31	33	35
767	36	38	40	43	45	47	50	52	55	58
768	61	64	67	70	73	77	80	84	88	92
769	96	100	104	109	114	118	123	129	134	139
770	145	151	157	163	169	176	182	189	196	204
771	211	219	227	235	243	252	261	270	279	289
772	299	309	320	330	341	353	365	377	389	402
773	415	428	442	457	471	486	502	518	534	551
774	569	588	607	627	647	669	691	715	739	765
775	791	820	850	882	915	950	988	1,027	1,067	1,110
776	1,154	1,200	1,247	1,295	1,345	1,397	1,450	1,505	1,561	1,619
777	1,678	1,739	1,802	1,866	1,932	2,000	2,070	2,143	2,218	2,296
778	2,377	2,461	2,549	2,639	2,733	2,829	2,929	3,031	3,136	3,244
779	3,354	3,467	3,583	3,700	3,820	3,942	4,065	4,191	4,319	4,449
780	4,581	4,715	4,851	4,990	5,130	5,273	5,417	5,564	5,713	5,863
781	6,016	6,170	6,326	6,483	6,643	6,804	6,966	7,131	7,298	7,467
782	7,638	7,811	7,986	8,164	8,346	8,529	8,715	8,903	9,093	9,285
783	9,478	9,673	9,870	10,069	10,269	10,471	10,675	10,881	11,089	11,299
784	11,509	11,722	11,936	12,152	12,371	12,591	12,812	13,036	13,262	13,489
785	13,719	13,950	14,182	14,417	14,653	14,891	15,130	15,372	15,615	15,860
786	16,107	16,355	16,605	16,856	17,109	17,364	17,621	17,879	18,139	18,400
787	18,663	18,928	19,195	19,463	19,733	20,004	20,278	20,553	20,830	21,108
788	21,388	21,669	21,952	22,236	22,522	22,810	23,098	23,389	23,681	23,974
789	24,269	24,565	24,863	25,162	25,463	25,765	26,069	26,375	26,682	26,991
790	27,302	27,614	27,928	28,243	28,560	28,879	29,200	29,523	29,846	30,172
791	30,499	30,828	31,159	31,491	31,825	32,160	32,497	32,835	33,175	33,517
792	33,861	34,207	34,554	34,903	35,254	35,607	35,961	36,317	36,675	37,035
793	37,396	37,758	38,122	38,487	38,854	39,223	39,592	39,963	40,336	40,710
794	41,085	41,462	41,840	42,219	42,601	42,983	43,366	43,752	44,138	44,526
795	44,915	45,305	45,697	46,091	46,486	46,882	47,281	47,681	48,082	48,485
796	48,889	49,295	49,703	50,111	50,522	50,933	51,346	51,760	52,176	52,594
797	53,013	53,434	53,856	54,281	54,707	55,134	55,564	55,995	56,429	56,865
798	57,302	57,741	58,183	58,626	59,071	59,518	59,966	60,417	60,869	61,323
799	61,779	62,237	62,697	63,159	63,622	64,087	64,553	65,021	65,491	65,962
800	66,435	66,909	67,386	67,864	68,344	68,826	69,310	69,795	70,282	70,771
801	71,261	71,753	72,247	72,742	73,240	73,739	74,240	74,743	75,249	75,758
802	76,269	76,781	77,297	77,814	78,333	78,855	79,378	79,904	80,431	80,961
803	81,492	82,026	82,561	83,098	83,638	84,179	84,722	85,267	85,812	86,360
804	86,909	87,459	88,012	88,566	89,122	89,680	90,239	90,801	91,364	91,930
805	92,497	93,066	93,638	94,211	94,786	95,364	95,944	96,526	97,110	97,696
806	98,285	98,875	99,467	100,062	100,659	101,258	101,859	102,463	103,068	103,677
807	104,287	104,899	105,515	106,132	106,751	107,372	107,996	108,621	109,248	109,877
808	110,508	111,140	111,775	112,411	113,049	113,689	114,330	114,973	115,618	116,264
809	116,913	117,563	118,215	118,868	119,524	120,181	120,840	121,500	122,162	122,826
810	123,492	124,159	124,828	125,498	126,171	126,845	127,520	128,198	128,877	129,559
811	130,241	130,926	131,612	132,300	132,991	133,682	134,375	135,070	135,767	136,465
812	137,165	137,867	138,570	139,275	139,983	140,691	141,402	142,115	142,829	143,545
813	144,263	144,982	145,703	146,426	147,152	147,878	148,607	149,337	150,069	150,804
814	151,539	152,277	153,017	153,758	154,501	155,246	155,993	156,742	157,492	158,245
815	159,000	159,756	160,515	161,275	162,038	162,802	163,568	164,337	165,108	165,881
816	166,656	167,434	168,213	168,995	169,778	170,564	171,351	172,140	172,931	173,725

Appendix E

**Lake Bridgeport**

**RESERVOIR CAPACITY TABLE (Continued)**

TEXAS WATER DEVELOPMENT BOARD

October - December 2010 Survey re-calculated February 2022

CAPACITY IN ACRE-FEET

Conservation pool elevation\*

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
817	174,520	175,317	176,116	176,917	177,720	178,525	179,332	180,142	180,954	181,768
818	182,584	183,402	184,223	185,045	185,870	186,696	187,525	188,355	189,188	190,023
819	190,859	191,697	192,538	193,380	194,225	195,071	195,919	196,770	197,622	198,477
820	199,333	200,192	201,053	201,915	202,780	203,646	204,514	205,384	206,256	207,130
821	208,006	208,884	209,765	210,647	211,532	212,419	213,308	214,200	215,093	215,989
822	216,886	217,786	218,688	219,592	220,498	221,405	222,314	223,226	224,139	225,054
823	225,971	226,890	227,811	228,733	229,659	230,586	231,515	232,446	233,379	234,314
824	235,251	236,189	237,130	238,072	239,016	239,962	240,910	241,860	242,811	243,765
825	244,720	245,677	246,637	247,598	248,561	249,526	250,493	251,462	252,433	253,407
826	254,383	255,361	256,342	257,324	258,309	259,296	260,285	261,277	262,270	263,267
827	264,264	265,264	266,267	267,272	268,279	269,288	270,299	271,314	272,329	273,348
828	274,369	275,392	276,418	277,446	278,477	279,509	280,544	281,582	282,621	283,662
829	284,705	285,750	286,797	287,847	288,898	289,952	291,008	292,067	293,127	294,190
830	295,255	296,323	297,392	298,464	299,538	300,614	301,693	302,774	303,857	304,942
831	306,030	307,120	308,212	309,306	310,402	311,501	312,602	313,706	314,811	315,919
832	317,029	318,141	319,256	320,372	321,491	322,613	323,736	324,862	325,990	327,120
833	328,252	329,387	330,524	331,663	332,805	333,949	335,094	336,243	337,393	338,546
834	339,701	340,858	342,017	343,179	344,343	345,509	346,677	347,848	349,021	350,196
835	351,374	352,553	353,735	354,919	356,106	357,294	358,485	359,678	360,873	362,071
836	363,271	364,473	365,677	366,884	368,093					

Note: Capacities above elevation 829.0 feet calculated from interpolated areas and capacities above 836.0 feet calculated from extrapolated areas

\*Datum of gage changed from feet National Geodetic Vertical Datum 1929 (NGVD29) to feet North American Vertical Datum 1988 (NAVD88) on October 1, 2016. The new datum is 0.44 feet below previous datum (U.S. Geological Survey, 2021). Conservation pool elevation changed from 836.0 feet NGVD29 to 836.0 feet NAVD88 (equivalent to 836.44 feet NGVD29) (C. Ottman, written commun(s), 2021).

Appendix F  
**Lake Bridgeport**  
**RESERVOIR AREA TABLE**

TEXAS WATER DEVELOPMENT BOARD

October - December 2010 Survey re-calculated February 2022

AREA IN ACRES

Conservation pool elevation\*

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
761	0	0	0	0	0	0	0	0	0	1
762	1	1	2	2	2	2	2	3	3	3
763	3	3	4	4	4	4	4	4	5	5
764	5	5	5	6	6	6	6	7	7	7
765	7	7	8	8	8	9	9	10	10	11
766	11	12	12	13	14	15	15	16	17	18
767	19	20	21	22	23	24	25	26	27	28
768	30	31	32	33	34	35	36	37	39	40
769	42	43	44	46	48	49	51	53	54	56
770	57	59	60	62	64	66	68	70	72	74
771	76	78	80	83	85	87	90	92	95	98
772	101	103	106	109	112	116	119	122	126	129
773	133	137	141	145	149	153	158	162	167	173
774	181	188	195	203	211	220	229	238	250	263
775	275	292	309	326	344	363	380	400	417	433
776	447	465	479	493	507	523	538	554	570	587
777	603	620	635	652	670	690	711	736	766	797
778	825	853	891	920	953	981	1,008	1,037	1,065	1,092
779	1,117	1,142	1,165	1,187	1,207	1,227	1,247	1,269	1,289	1,310
780	1,330	1,351	1,372	1,394	1,414	1,435	1,457	1,477	1,497	1,515
781	1,533	1,551	1,569	1,586	1,602	1,618	1,637	1,656	1,677	1,699
782	1,721	1,744	1,767	1,797	1,826	1,848	1,871	1,890	1,908	1,924
783	1,942	1,959	1,977	1,995	2,013	2,031	2,050	2,068	2,086	2,102
784	2,118	2,134	2,152	2,170	2,190	2,210	2,229	2,247	2,265	2,283
785	2,302	2,320	2,337	2,353	2,370	2,387	2,405	2,424	2,441	2,457
786	2,473	2,490	2,507	2,523	2,540	2,557	2,574	2,590	2,607	2,623
787	2,639	2,656	2,673	2,691	2,708	2,727	2,744	2,759	2,775	2,790
788	2,805	2,820	2,835	2,851	2,866	2,882	2,896	2,911	2,926	2,940
789	2,955	2,970	2,984	3,000	3,017	3,034	3,050	3,065	3,081	3,096
790	3,112	3,129	3,146	3,164	3,181	3,199	3,216	3,232	3,248	3,264
791	3,281	3,298	3,313	3,329	3,345	3,361	3,376	3,392	3,410	3,429
792	3,448	3,465	3,482	3,500	3,517	3,535	3,553	3,571	3,588	3,603
793	3,617	3,632	3,647	3,661	3,675	3,690	3,704	3,718	3,732	3,746
794	3,760	3,774	3,788	3,803	3,817	3,831	3,844	3,857	3,870	3,884
795	3,897	3,912	3,928	3,943	3,959	3,975	3,991	4,007	4,021	4,036
796	4,051	4,066	4,080	4,094	4,108	4,122	4,137	4,152	4,168	4,185
797	4,200	4,215	4,233	4,251	4,268	4,287	4,306	4,326	4,345	4,364
798	4,384	4,404	4,422	4,440	4,461	4,478	4,495	4,514	4,532	4,550
799	4,570	4,589	4,607	4,624	4,640	4,656	4,672	4,688	4,704	4,720
800	4,736	4,755	4,772	4,793	4,811	4,828	4,846	4,862	4,879	4,894
801	4,911	4,928	4,945	4,965	4,983	5,001	5,021	5,046	5,073	5,096
802	5,118	5,140	5,161	5,183	5,205	5,225	5,246	5,265	5,284	5,304
803	5,325	5,344	5,364	5,384	5,403	5,420	5,437	5,452	5,467	5,482
804	5,498	5,516	5,533	5,550	5,568	5,587	5,607	5,625	5,642	5,662
805	5,682	5,702	5,723	5,744	5,766	5,788	5,809	5,830	5,852	5,873
806	5,894	5,914	5,935	5,956	5,979	6,001	6,024	6,046	6,069	6,092
807	6,115	6,139	6,161	6,183	6,204	6,224	6,243	6,262	6,281	6,299
808	6,317	6,335	6,353	6,370	6,388	6,405	6,422	6,439	6,457	6,475
809	6,493	6,511	6,528	6,545	6,562	6,580	6,597	6,613	6,629	6,645
810	6,662	6,680	6,698	6,715	6,732	6,750	6,768	6,785	6,802	6,819
811	6,837	6,855	6,873	6,891	6,907	6,924	6,940	6,957	6,974	6,992
812	7,009	7,026	7,043	7,061	7,079	7,098	7,117	7,135	7,152	7,168
813	7,186	7,203	7,221	7,240	7,258	7,277	7,295	7,314	7,332	7,350
814	7,367	7,386	7,405	7,423	7,441	7,459	7,479	7,498	7,516	7,535
815	7,555	7,575	7,595	7,616	7,636	7,655	7,674	7,697	7,719	7,742
816	7,764	7,785	7,805	7,825	7,844	7,864	7,883	7,904	7,923	7,942

Appendix F

**Lake Bridgeport**

**RESERVOIR AREA TABLE (Continued)**

TEXAS WATER DEVELOPMENT BOARD

October - December 2010 Survey re-calculated February 2022

AREA IN ACRES

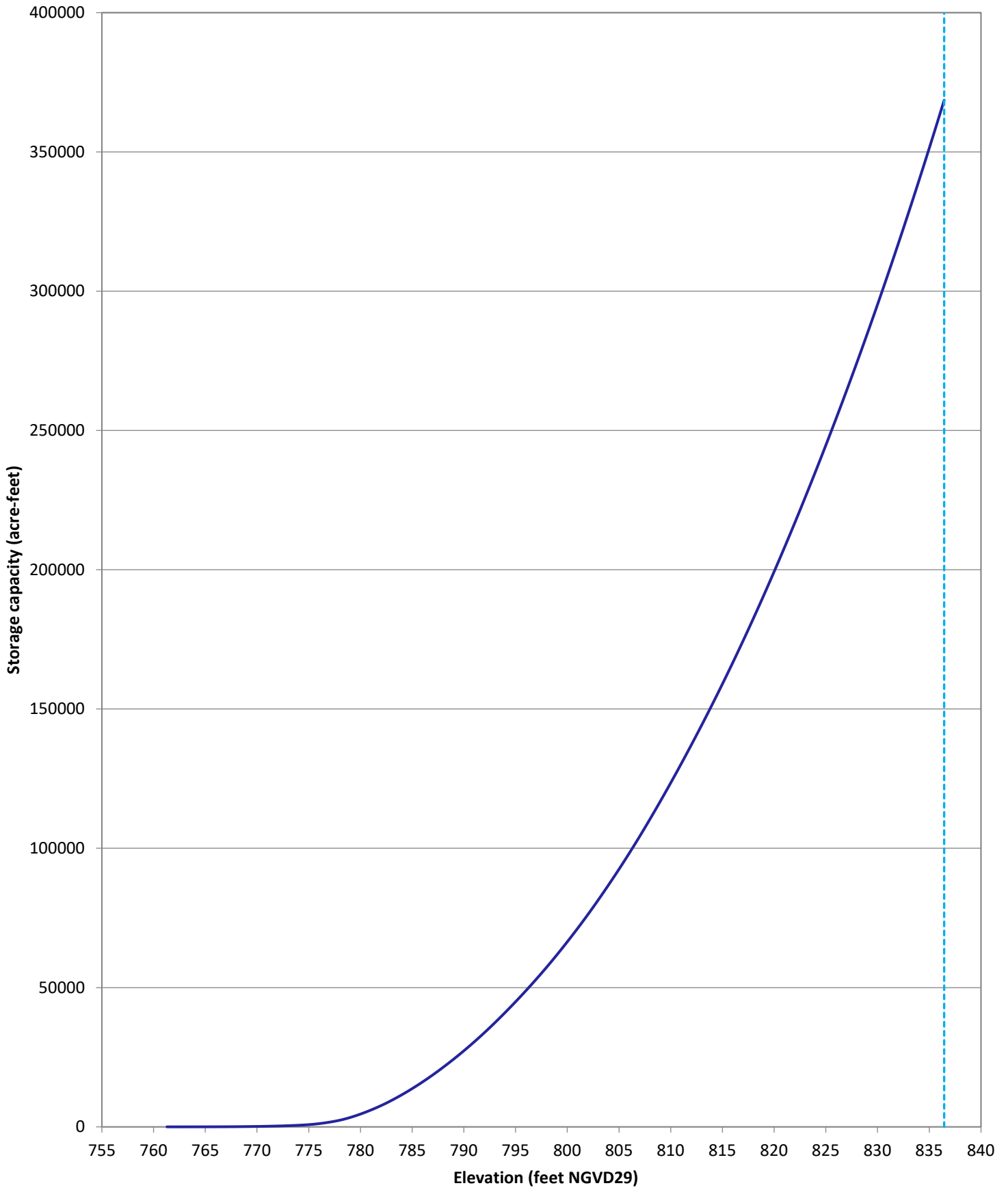
Conservation pool elevation\*

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
817	7,961	7,980	8,000	8,020	8,040	8,062	8,084	8,107	8,129	8,152
818	8,173	8,194	8,215	8,235	8,254	8,275	8,296	8,316	8,335	8,355
819	8,374	8,394	8,415	8,435	8,455	8,475	8,495	8,514	8,534	8,555
820	8,575	8,596	8,616	8,635	8,654	8,672	8,691	8,710	8,731	8,751
821	8,771	8,792	8,813	8,835	8,859	8,881	8,904	8,926	8,946	8,966
822	8,987	9,008	9,028	9,048	9,066	9,085	9,104	9,122	9,141	9,160
823	9,179	9,198	9,218	9,239	9,259	9,282	9,302	9,321	9,340	9,358
824	9,376	9,394	9,413	9,432	9,451	9,470	9,488	9,507	9,526	9,545
825	9,564	9,584	9,603	9,621	9,640	9,660	9,679	9,701	9,725	9,750
826	9,771	9,794	9,815	9,837	9,859	9,881	9,903	9,925	9,948	9,970
827	9,992	10,014	10,036	10,059	10,082	10,104	10,126	10,148	10,171	10,196
828	10,221	10,245	10,270	10,295	10,317	10,340	10,363	10,383	10,402	10,420
829	10,438	10,460	10,483	10,505	10,527	10,550	10,572	10,595	10,617	10,640
830	10,662	10,685	10,707	10,730	10,752	10,775	10,797	10,819	10,842	10,864
831	10,887	10,909	10,932	10,954	10,977	10,999	11,022	11,044	11,066	11,089
832	11,111	11,134	11,156	11,179	11,201	11,224	11,246	11,269	11,291	11,313
833	11,336	11,358	11,381	11,403	11,426	11,448	11,471	11,493	11,516	11,538
834	11,561	11,583	11,605	11,628	11,650	11,673	11,695	11,718	11,740	11,763
835	11,785	11,808	11,830	11,852	11,875	11,897	11,920	11,942	11,965	11,987
836	12,010	12,032	12,055	12,077	12,099					

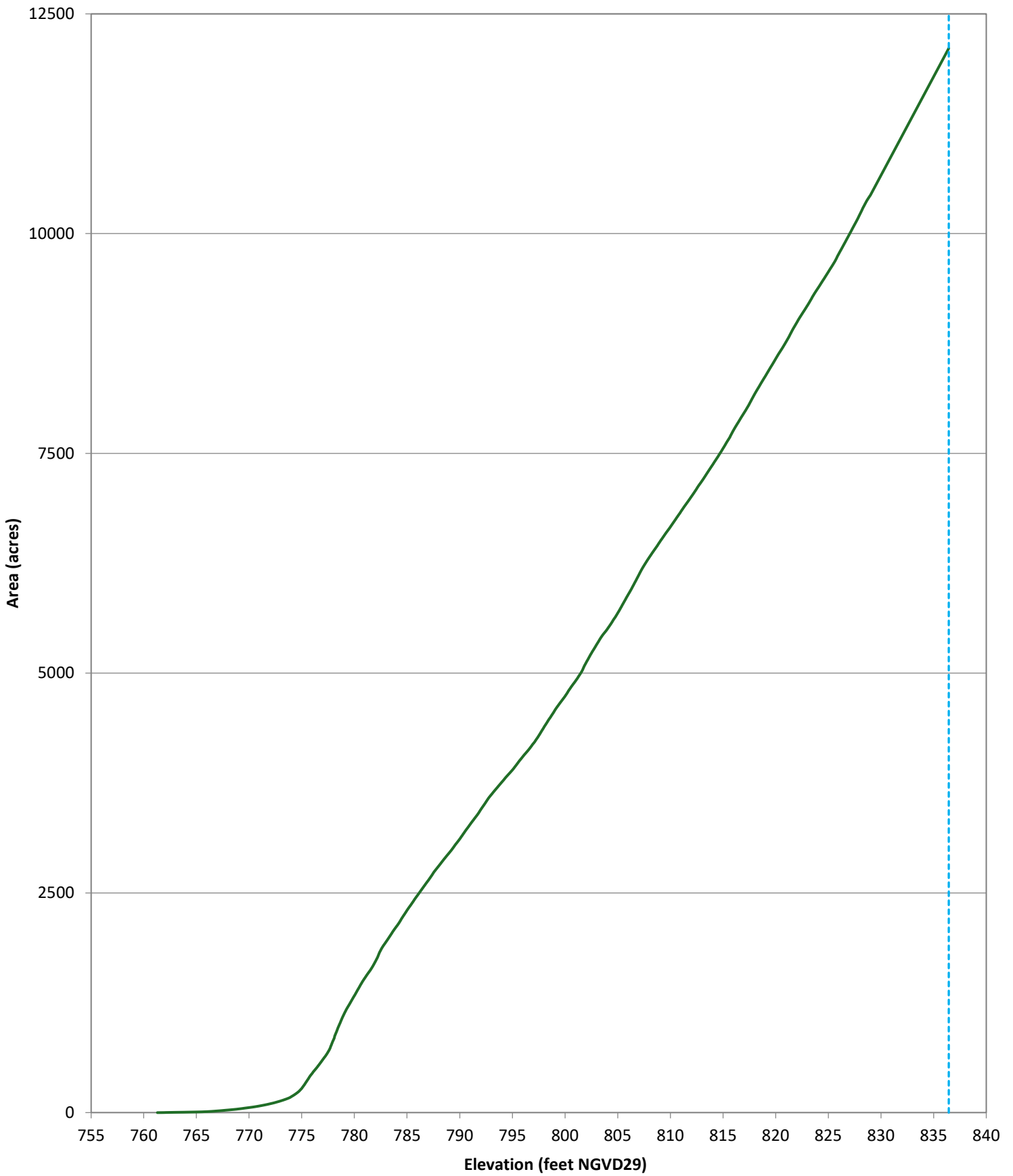
Note: Areas between elevations 829.0 and 836.0 feet linearly interpolated, areas above 836.0 feet linearly extrapolated

\*Datum of gage changed from feet National Geodetic Vertical Datum 1929 (NGVD29) to feet North American Vertical Datum 1988 (NAVD88) on October 1, 2016. The new datum is 0.44 feet below previous datum (U.S. Geological Survey, 2021). Conservation pool elevation changed from 836.0 feet NGVD29 to 836.0 feet NAVD88 (equivalent to 836.44 feet NGVD29) (C. Ottman, written commun(s), 2021).



— Total capacity 2010      - - - - Conservation pool elevation 836.44 feet NGVD29

**Lake Bridgeport**  
 October - December 2010 Survey  
 re-calculated February 2022  
 Prepared by: TWDB



— Total area 2010     
 - - - - Conservation pool elevation 836.44 feet NGVD29

**Lake Bridgeport**  
 October - December 2010 Survey  
 re-calculated February 2022  
 Prepared by: TWDB

Appendix I

**Lake Bridgeport**

**RESERVOIR BATHYMETRIC CAPACITY TABLE**

TEXAS WATER DEVELOPMENT BOARD

September - October 2020 Survey

CAPACITY IN ACRE-FEET

Conservation pool elevation 836.0 feet NAVD88\*

ELEVATION INCREMENT IS ONE TENTH FOOT

ELEVATION (Feet NAVD88)	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
760								0	0	0
761	0	0	0	0	0	0	0	0	0	0
762	0	1	1	1	1	1	1	2	2	2
763	3	3	4	4	5	6	6	7	7	8
764	9	10	10	11	12	13	13	14	15	16
765	17	18	19	20	22	23	24	26	27	29
766	31	32	34	36	38	40	42	44	47	49
767	52	55	58	61	64	68	71	75	78	82
768	86	90	95	99	103	108	113	118	123	128
769	133	139	144	150	156	162	169	175	182	189
770	196	203	210	218	226	233	241	250	258	266
771	275	284	293	302	312	321	331	341	351	362
772	372	383	394	406	418	430	443	455	468	482
773	496	510	525	541	557	573	590	607	625	644
774	664	684	705	728	751	776	802	829	858	889
775	922	957	994	1,034	1,075	1,119	1,163	1,210	1,258	1,308
776	1,359	1,412	1,467	1,523	1,581	1,641	1,701	1,764	1,827	1,893
777	1,960	2,029	2,099	2,172	2,248	2,327	2,409	2,494	2,582	2,674
778	2,769	2,867	2,968	3,072	3,179	3,289	3,401	3,516	3,634	3,753
779	3,875	3,999	4,125	4,253	4,383	4,515	4,648	4,784	4,922	5,062
780	5,203	5,348	5,494	5,642	5,792	5,944	6,097	6,252	6,409	6,567
781	6,728	6,890	7,054	7,220	7,388	7,559	7,732	7,907	8,085	8,266
782	8,449	8,634	8,821	9,009	9,200	9,393	9,587	9,783	9,981	10,181
783	10,382	10,585	10,790	10,997	11,205	11,415	11,628	11,842	12,058	12,276
784	12,496	12,718	12,942	13,168	13,396	13,625	13,856	14,089	14,324	14,561
785	14,799	15,040	15,282	15,526	15,772	16,019	16,268	16,519	16,771	17,025
786	17,281	17,539	17,798	18,059	18,322	18,586	18,853	19,120	19,390	19,661
787	19,934	20,209	20,485	20,763	21,042	21,323	21,605	21,889	22,175	22,462
788	22,750	23,041	23,332	23,626	23,921	24,218	24,516	24,816	25,119	25,422
789	25,728	26,035	26,343	26,654	26,965	27,279	27,593	27,910	28,228	28,548
790	28,870	29,193	29,518	29,845	30,174	30,504	30,836	31,169	31,505	31,842
791	32,180	32,521	32,864	33,208	33,555	33,903	34,253	34,605	34,958	35,313
792	35,670	36,028	36,388	36,748	37,111	37,474	37,839	38,205	38,573	38,942
793	39,312	39,683	40,056	40,430	40,805	41,182	41,560	41,939	42,319	42,701
794	43,084	43,468	43,854	44,241	44,629	45,019	45,410	45,803	46,197	46,593
795	46,990	47,390	47,790	48,192	48,596	49,001	49,408	49,816	50,226	50,637
796	51,049	51,463	51,879	52,296	52,714	53,134	53,556	53,979	54,404	54,831
797	55,260	55,690	56,122	56,556	56,992	57,430	57,870	58,312	58,756	59,201
798	59,649	60,098	60,548	61,001	61,455	61,912	62,370	62,831	63,293	63,758
799	64,224	64,693	65,163	65,634	66,108	66,583	67,059	67,537	68,017	68,499
800	68,982	69,467	69,954	70,442	70,933	71,425	71,918	72,413	72,910	73,409
801	73,909	74,412	74,916	75,423	75,932	76,443	76,958	77,475	77,995	78,516
802	79,040	79,566	80,094	80,624	81,156	81,690	82,226	82,764	83,304	83,845
803	84,388	84,933	85,480	86,028	86,578	87,130	87,683	88,237	88,794	89,352
804	89,912	90,475	91,039	91,606	92,174	92,744	93,316	93,891	94,467	95,046
805	95,628	96,211	96,796	97,384	97,974	98,565	99,159	99,755	100,353	100,953
806	101,555	102,160	102,767	103,376	103,987	104,601	105,217	105,835	106,455	107,077
807	107,701	108,328	108,956	109,586	110,218	110,852	111,487	112,125	112,764	113,405
808	114,048	114,692	115,338	115,985	116,634	117,285	117,937	118,591	119,246	119,903
809	120,561	121,221	121,882	122,545	123,210	123,877	124,547	125,218	125,892	126,567
810	127,244	127,924	128,604	129,287	129,971	130,657	131,344	132,033	132,724	133,416
811	134,109	134,805	135,502	136,200	136,901	137,602	138,306	139,012	139,720	140,429
812	141,141	141,854	142,569	143,286	144,005	144,726	145,448	146,173	146,899	147,628
813	148,358	149,091	149,825	150,561	151,299	152,039	152,781	153,525	154,270	155,018
814	155,767	156,518	157,271	158,026	158,783	159,542	160,303	161,066	161,831	162,599
815	163,369	164,140	164,914	165,691	166,469	167,249	168,032	168,816	169,603	170,391



Appendix I

**Lake Bridgeport**

**RESERVOIR BATHYMETRIC CAPACITY TABLE (Continued)**

TEXAS WATER DEVELOPMENT BOARD

September - October 2020 Survey

CAPACITY IN ACRE-FEET

Conservation pool elevation 836.0 feet NAVD88\*

ELEVATION INCREMENT IS ONE TENTH FOOT

ELEVATION (Feet NAVD88)	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
816	171,181	171,973	172,767	173,563	174,360	175,160	175,961	176,765	177,571	178,379
817	179,190	180,002	180,817	181,635	182,454	183,276	184,100	184,926	185,754	186,584
818	187,416	188,251	189,088	189,927	190,768	191,611	192,457	193,304	194,154	195,005
819	195,859	196,715	197,573	198,432	199,294	200,158	201,024	201,892	202,762	203,633
820	204,507	205,383	206,261	207,141	208,023	208,907	209,793	210,682	211,572	212,464
821	213,358	214,255	215,153	216,054	216,956	217,861	218,768	219,676	220,587	221,500
822	222,414	223,330	224,249	225,169	226,091	227,016	227,942	228,871	229,801	230,734
823	231,668	232,605	233,543	234,484	235,427	236,372	237,318	238,267	239,218	240,170
824	241,125	242,081	243,039	244,000	244,962	245,926	246,893	247,861	248,832	249,805
825	250,780	251,757	252,737	253,719	254,703	255,690	256,678	257,669	258,661	259,657
826	260,654	261,654	262,656	263,661	264,668	265,678	266,689	267,703	268,719	269,738
827	270,759	271,783	272,809	273,839	274,871	275,906	276,944	277,985	279,028	280,073
828	281,122	282,172	283,225	284,281	285,339	286,399	287,462	288,527	289,595	290,665
829	291,737	292,812	293,889	294,968	296,050	297,134	298,220	299,308	300,398	301,491
830	302,585	303,682	304,781	305,882	306,985	308,091	309,198	310,308	311,419	312,533
831	313,649	314,767	315,887	317,009	318,133	319,259	320,388	321,518	322,650	323,784
832	324,920	326,058	327,198	328,340	329,484	330,630	331,778	332,928	334,081	335,235
833	336,391	337,549	338,709	339,872	341,036	342,203	343,372	344,543	345,717	346,893
834	348,071	349,252	350,434	351,619	352,807	353,997	355,189	356,385	357,583	358,784
835	359,988	361,194	362,404	363,616	364,832	366,050	367,271	368,495	369,721	370,951
836	372,183	373,419	374,657							

Note: Capacities above elevation 834.5 feet calculated from interpolated areas

\*Datum of gage changed from feet National Geodetic Vertical Datum 1929 (NGVD29) to feet North American Vertical Datum 1988 (NAVD88) on October 1, 2016. The new datum is 0.44 feet below previous datum (U.S. Geological Survey, 2021). Conservation pool elevation changed from 836.0 feet NGVD29 to 836.0 feet NAVD88 (equivalent to 836.44 feet NGVD29) (C. Ottman, written commun(s)., 2021).

Appendix J

**Lake Bridgeport**

**RESERVOIR BATHYMETRIC AREA TABLE**

TEXAS WATER DEVELOPMENT BOARD

September - October 2020 Survey

AREA IN ACRES

Conservation pool elevation 836.0 feet NAVD88\*

ELEVATION INCREMENT IS ONE TENTH FOOT

ELEVATION (Feet NAVD88)	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
760								0	0	0
761	0	0	0	0	0	0	0	1	1	1
762	1	1	2	2	2	2	3	3	4	4
763	5	5	5	5	6	6	6	6	7	7
764	7	7	7	8	8	8	9	9	9	10
765	10	11	11	12	12	13	14	15	16	17
766	17	18	19	20	20	21	22	23	25	26
767	28	29	31	32	33	34	35	36	38	39
768	41	42	43	44	46	47	48	49	51	53
769	54	56	58	59	61	63	64	66	68	70
770	71	73	74	76	77	79	81	82	84	86
771	88	90	91	93	95	97	99	101	103	105
772	108	112	114	117	120	123	126	129	132	136
773	142	147	152	158	162	167	172	177	183	192
774	200	208	218	228	240	252	266	281	298	323
775	340	360	383	405	424	441	457	473	490	506
776	521	537	556	573	587	601	615	630	645	661
777	679	698	717	743	776	806	834	865	900	932
778	967	995	1,023	1,055	1,083	1,110	1,138	1,163	1,186	1,207
779	1,228	1,248	1,269	1,290	1,310	1,329	1,348	1,367	1,387	1,407
780	1,430	1,453	1,473	1,491	1,508	1,525	1,542	1,559	1,576	1,594
781	1,611	1,630	1,651	1,673	1,694	1,715	1,741	1,768	1,795	1,819
782	1,840	1,859	1,877	1,896	1,916	1,935	1,953	1,971	1,987	2,005
783	2,022	2,039	2,057	2,076	2,095	2,114	2,133	2,153	2,171	2,190
784	2,209	2,230	2,249	2,267	2,285	2,302	2,321	2,339	2,357	2,377
785	2,396	2,415	2,432	2,449	2,465	2,481	2,497	2,514	2,532	2,549
786	2,567	2,585	2,603	2,620	2,637	2,653	2,670	2,688	2,705	2,721
787	2,737	2,753	2,769	2,786	2,801	2,817	2,832	2,847	2,863	2,878
788	2,894	2,911	2,926	2,943	2,960	2,976	2,994	3,012	3,029	3,046
789	3,063	3,079	3,094	3,109	3,125	3,141	3,157	3,174	3,190	3,207
790	3,225	3,242	3,260	3,277	3,293	3,310	3,327	3,344	3,362	3,379
791	3,397	3,415	3,436	3,455	3,475	3,493	3,510	3,526	3,543	3,559
792	3,573	3,588	3,602	3,616	3,629	3,643	3,656	3,669	3,681	3,694
793	3,707	3,720	3,733	3,746	3,760	3,773	3,786	3,798	3,811	3,823
794	3,836	3,849	3,862	3,876	3,891	3,906	3,921	3,935	3,951	3,966
795	3,983	3,998	4,014	4,030	4,045	4,060	4,074	4,088	4,102	4,118
796	4,134	4,148	4,162	4,176	4,191	4,209	4,225	4,242	4,260	4,278
797	4,295	4,313	4,331	4,351	4,370	4,390	4,410	4,428	4,445	4,463
798	4,481	4,498	4,516	4,534	4,554	4,574	4,596	4,616	4,636	4,655
799	4,674	4,692	4,709	4,725	4,741	4,758	4,775	4,791	4,807	4,824
800	4,841	4,859	4,876	4,894	4,911	4,927	4,943	4,960	4,978	4,996
801	5,013	5,034	5,056	5,078	5,102	5,132	5,160	5,184	5,207	5,226
802	5,247	5,268	5,289	5,311	5,332	5,351	5,369	5,388	5,405	5,424
803	5,442	5,459	5,476	5,491	5,507	5,522	5,538	5,555	5,574	5,593
804	5,613	5,634	5,654	5,674	5,693	5,711	5,732	5,757	5,779	5,801
805	5,823	5,844	5,864	5,886	5,907	5,927	5,947	5,968	5,990	6,013
806	6,036	6,059	6,081	6,102	6,124	6,146	6,167	6,191	6,212	6,233
807	6,254	6,273	6,291	6,310	6,329	6,347	6,366	6,384	6,401	6,418
808	6,434	6,450	6,467	6,482	6,499	6,514	6,529	6,545	6,559	6,574
809	6,590	6,606	6,624	6,642	6,660	6,681	6,704	6,725	6,745	6,764
810	6,782	6,799	6,816	6,833	6,849	6,866	6,882	6,898	6,913	6,929
811	6,946	6,962	6,978	6,994	7,010	7,026	7,048	7,068	7,087	7,105
812	7,124	7,143	7,161	7,179	7,199	7,216	7,235	7,254	7,274	7,294
813	7,314	7,334	7,353	7,373	7,392	7,410	7,428	7,446	7,464	7,482
814	7,500	7,518	7,539	7,560	7,580	7,602	7,623	7,643	7,665	7,686
815	7,707	7,728	7,751	7,773	7,794	7,814	7,834	7,854	7,873	7,892

Appendix J

**Lake Bridgeport**

**RESERVOIR BATHYMETRIC AREA TABLE (Continued)**

TEXAS WATER DEVELOPMENT BOARD

September - October 2020 Survey

AREA IN ACRES

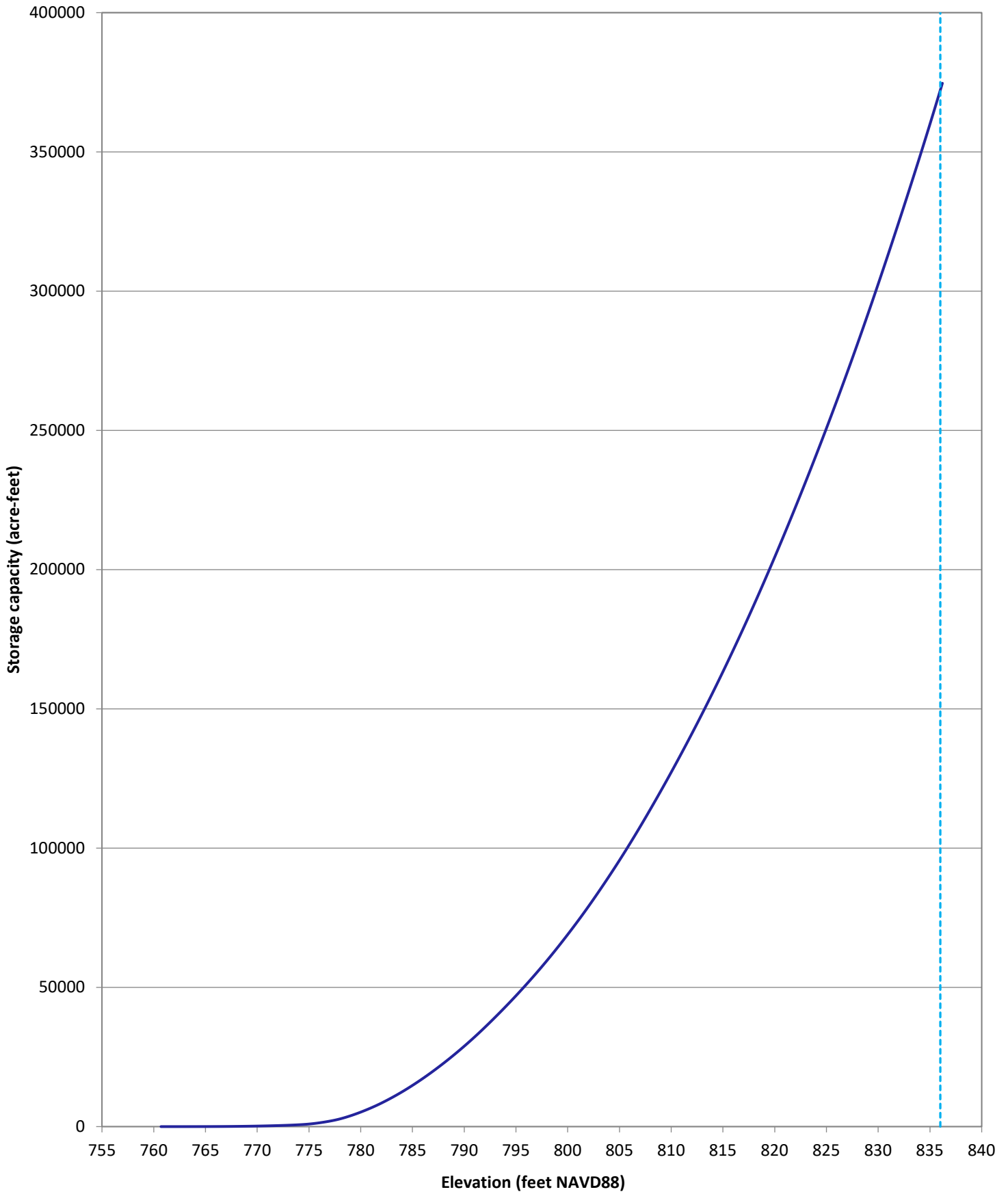
Conservation pool elevation 836.0 feet NAVD88\*

ELEVATION INCREMENT IS ONE TENTH FOOT

ELEVATION (Feet NAVD88)	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
816	7,910	7,929	7,949	7,967	7,986	8,005	8,027	8,049	8,071	8,093
817	8,116	8,139	8,161	8,183	8,206	8,227	8,249	8,270	8,291	8,313
818	8,335	8,356	8,379	8,401	8,423	8,444	8,465	8,485	8,506	8,527
819	8,547	8,567	8,588	8,609	8,629	8,648	8,668	8,688	8,708	8,728
820	8,748	8,769	8,790	8,811	8,831	8,852	8,872	8,892	8,912	8,933
821	8,953	8,973	8,994	9,016	9,037	9,057	9,077	9,097	9,116	9,135
822	9,155	9,174	9,193	9,213	9,233	9,253	9,274	9,295	9,316	9,335
823	9,355	9,376	9,397	9,417	9,437	9,457	9,477	9,497	9,516	9,535
824	9,554	9,573	9,593	9,613	9,634	9,654	9,675	9,696	9,718	9,740
825	9,762	9,786	9,809	9,831	9,852	9,874	9,895	9,917	9,940	9,964
826	9,987	10,011	10,035	10,059	10,083	10,105	10,128	10,151	10,175	10,199
827	10,224	10,250	10,279	10,308	10,337	10,365	10,391	10,418	10,444	10,469
828	10,494	10,518	10,542	10,567	10,591	10,616	10,640	10,665	10,689	10,713
829	10,736	10,759	10,782	10,805	10,827	10,849	10,870	10,892	10,913	10,935
830	10,957	10,979	11,000	11,022	11,043	11,064	11,085	11,106	11,127	11,148
831	11,169	11,190	11,211	11,232	11,252	11,272	11,292	11,312	11,332	11,351
832	11,371	11,391	11,410	11,430	11,450	11,470	11,490	11,510	11,531	11,551
833	11,572	11,593	11,614	11,635	11,657	11,679	11,702	11,724	11,747	11,770
834	11,793	11,816	11,840	11,863	11,887	11,911	11,939	11,968	11,996	12,025
835	12,053	12,082	12,110	12,139	12,167	12,196	12,224	12,253	12,281	12,310
836	12,338	12,367	12,395							

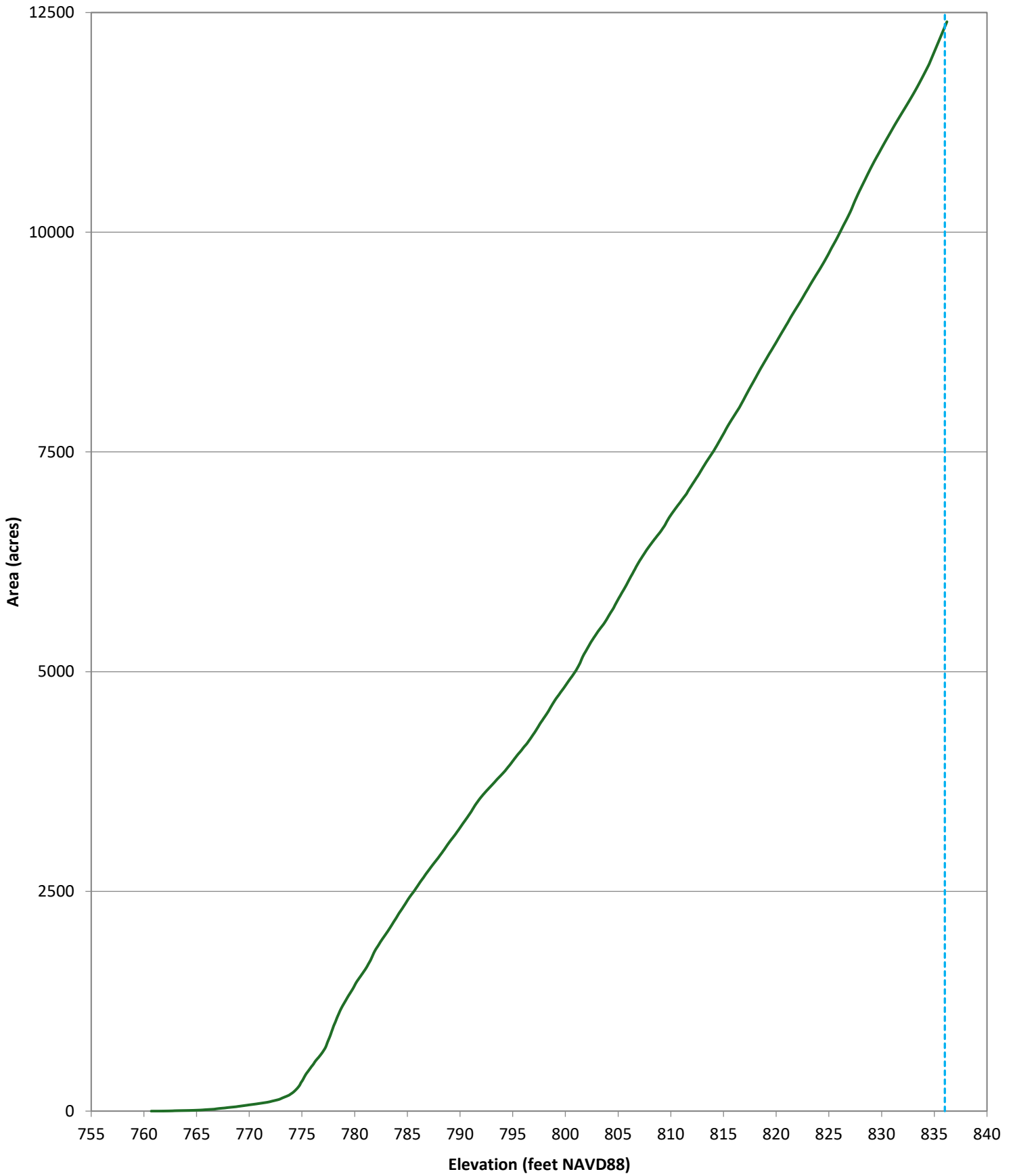
Note: Areas between elevations 834.5 and 836.2 feet linearly interpolated

\*Datum of gage changed from feet National Geodetic Vertical Datum 1929 (NGVD29) to feet North American Vertical Datum 1988 (NAVD88) on October 1, 2016. The new datum is 0.44 feet below previous datum (U.S. Geological Survey, 2021). Conservation pool elevation changed from 836.0 feet NGVD29 to 836.0 feet NAVD88 (equivalent to 836.44 feet NGVD29) (C. Ottman, written commun(s), 2021).



— Total capacity 2020      - - - - Conservation pool elevation 836.0 feet NAVD88

**Lake Bridgeport**  
 September - October 2020 Survey  
 Prepared by: TWDB



— Total area 2020      - - - - Conservation pool elevation 836.0 feet NAVD88

**Lake Bridgeport**  
 September - October 2020 Survey  
 Prepared by: TWDB

Appendix M  
**Lake Bridgeport**

**RESERVOIR BATHYMETRIC AND TOPOGRAPHIC CAPACITY TABLE**

TEXAS WATER DEVELOPMENT BOARD

September - October 2020 Survey

CAPACITY IN ACRE-FEET

Conservation pool elevation 836.0 feet NAVD88\*

ELEVATION INCREMENT IS ONE TENTH FOOT

Top of dam elevation 874.0 feet NAVD88

ELEVATION (Feet NAVD88)	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
760	0	0	0	0	0	0	0	0	0	0
761	0	0	0	0	0	0	0	0	0	0
762	0	1	1	1	1	1	1	2	2	2
763	3	3	4	4	5	6	6	7	7	8
764	9	10	10	11	12	13	13	14	15	16
765	17	18	19	20	22	23	24	26	27	29
766	31	32	34	36	38	40	42	44	47	49
767	52	55	58	61	64	68	71	75	78	82
768	86	90	95	99	103	108	113	118	123	128
769	133	139	144	150	156	162	169	175	182	189
770	196	203	210	218	226	233	241	250	258	266
771	275	284	293	302	312	321	331	341	351	362
772	372	383	394	406	418	430	443	455	468	482
773	496	510	525	541	557	573	590	607	625	644
774	664	684	705	728	751	776	802	829	858	889
775	922	957	994	1,034	1,075	1,119	1,163	1,210	1,258	1,308
776	1,359	1,412	1,467	1,523	1,581	1,641	1,701	1,764	1,827	1,893
777	1,960	2,029	2,099	2,172	2,248	2,327	2,409	2,494	2,582	2,674
778	2,769	2,867	2,968	3,072	3,179	3,289	3,401	3,516	3,634	3,753
779	3,875	3,999	4,125	4,253	4,383	4,515	4,648	4,784	4,922	5,062
780	5,203	5,348	5,494	5,642	5,792	5,944	6,097	6,252	6,409	6,567
781	6,728	6,890	7,054	7,220	7,388	7,559	7,732	7,907	8,085	8,266
782	8,449	8,634	8,821	9,009	9,200	9,393	9,587	9,783	9,981	10,181
783	10,382	10,585	10,790	10,997	11,205	11,415	11,628	11,842	12,058	12,276
784	12,496	12,718	12,942	13,168	13,396	13,625	13,856	14,089	14,324	14,561
785	14,799	15,040	15,282	15,526	15,772	16,019	16,268	16,519	16,771	17,025
786	17,281	17,539	17,798	18,059	18,322	18,586	18,853	19,120	19,390	19,661
787	19,934	20,209	20,485	20,763	21,042	21,323	21,605	21,889	22,175	22,462
788	22,750	23,041	23,332	23,626	23,921	24,218	24,516	24,816	25,119	25,422
789	25,728	26,035	26,343	26,654	26,965	27,279	27,593	27,910	28,228	28,548
790	28,870	29,193	29,518	29,845	30,174	30,504	30,836	31,169	31,505	31,842
791	32,180	32,521	32,864	33,208	33,555	33,903	34,253	34,605	34,958	35,313
792	35,670	36,028	36,388	36,748	37,111	37,474	37,839	38,205	38,573	38,942
793	39,312	39,683	40,056	40,430	40,805	41,182	41,560	41,939	42,319	42,701
794	43,084	43,468	43,854	44,241	44,629	45,019	45,410	45,803	46,197	46,593
795	46,990	47,390	47,790	48,192	48,596	49,001	49,408	49,816	50,226	50,637
796	51,049	51,463	51,879	52,296	52,714	53,134	53,556	53,979	54,404	54,831
797	55,260	55,690	56,122	56,556	56,992	57,430	57,870	58,312	58,756	59,201
798	59,649	60,098	60,548	61,001	61,455	61,912	62,370	62,831	63,293	63,758
799	64,224	64,693	65,163	65,634	66,108	66,583	67,059	67,537	68,017	68,499
800	68,982	69,467	69,954	70,442	70,933	71,425	71,918	72,413	72,910	73,409
801	73,909	74,412	74,916	75,423	75,932	76,443	76,958	77,475	77,995	78,516
802	79,040	79,566	80,094	80,624	81,156	81,690	82,226	82,764	83,304	83,845
803	84,388	84,933	85,480	86,028	86,578	87,130	87,683	88,237	88,794	89,352
804	89,912	90,475	91,039	91,606	92,174	92,744	93,316	93,891	94,467	95,046
805	95,628	96,211	96,796	97,384	97,974	98,565	99,159	99,755	100,353	100,953
806	101,555	102,160	102,767	103,376	103,987	104,601	105,217	105,835	106,455	107,077
807	107,701	108,328	108,956	109,586	110,218	110,852	111,487	112,125	112,764	113,405
808	114,048	114,692	115,338	115,985	116,634	117,285	117,937	118,591	119,246	119,903
809	120,561	121,221	121,882	122,545	123,210	123,877	124,547	125,218	125,892	126,567
810	127,244	127,924	128,604	129,287	129,971	130,657	131,344	132,033	132,724	133,416
811	134,109	134,805	135,502	136,200	136,901	137,602	138,306	139,012	139,720	140,429
812	141,141	141,854	142,569	143,286	144,005	144,726	145,448	146,173	146,899	147,628
813	148,358	149,091	149,825	150,561	151,299	152,039	152,781	153,525	154,270	155,018
814	155,767	156,518	157,271	158,026	158,783	159,542	160,303	161,066	161,831	162,599
815	163,369	164,140	164,914	165,691	166,469	167,249	168,032	168,816	169,603	170,391

## Appendix M

## Lake Bridgeport

## RESERVOIR BATHYMETRIC AND TOPOGRAPHIC CAPACITY TABLE (Continued)

TEXAS WATER DEVELOPMENT BOARD

September - October 2020 Survey

CAPACITY IN ACRE-FEET

Conservation pool elevation 836.0 feet NAVD88\*

ELEVATION INCREMENT IS ONE TENTH FOOT

Top of dam elevation 874.0 feet NAVD88

ELEVATION (Feet NAVD88)	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
816	171,181	171,973	172,767	173,563	174,360	175,160	175,961	176,765	177,571	178,379
817	179,190	180,002	180,817	181,635	182,454	183,276	184,100	184,926	185,754	186,584
818	187,416	188,251	189,088	189,927	190,768	191,611	192,457	193,304	194,154	195,005
819	195,859	196,715	197,573	198,432	199,294	200,158	201,024	201,892	202,762	203,633
820	204,507	205,383	206,261	207,141	208,023	208,907	209,793	210,682	211,572	212,464
821	213,358	214,255	215,153	216,054	216,956	217,861	218,768	219,676	220,587	221,500
822	222,414	223,330	224,249	225,169	226,091	227,016	227,942	228,871	229,801	230,734
823	231,668	232,605	233,543	234,484	235,427	236,372	237,318	238,267	239,218	240,170
824	241,125	242,081	243,039	244,000	244,962	245,926	246,893	247,861	248,832	249,805
825	250,780	251,757	252,737	253,719	254,703	255,690	256,678	257,669	258,661	259,657
826	260,654	261,654	262,656	263,661	264,668	265,678	266,689	267,703	268,720	269,738
827	270,759	271,783	272,810	273,839	274,871	275,906	276,944	277,985	279,028	280,074
828	281,122	282,172	283,225	284,281	285,339	286,399	287,462	288,527	289,595	290,665
829	291,738	292,813	293,890	294,969	296,051	297,135	298,221	299,309	300,399	301,492
830	302,586	303,683	304,782	305,884	306,987	308,092	309,200	310,310	311,421	312,535
831	313,651	314,769	315,890	317,012	318,136	319,263	320,391	321,522	322,654	323,789
832	324,925	326,064	327,204	328,347	329,491	330,638	331,786	332,936	334,089	335,244
833	336,400	337,559	338,720	339,883	341,048	342,215	343,385	344,557	345,731	346,908
834	348,087	349,268	350,452	351,638	352,826	354,017	355,211	356,409	357,610	358,815
835	360,023	361,235	362,449	363,667	364,888	366,112	367,340	368,570	369,804	371,042
836	372,283	373,527	374,776	376,029	377,288	378,549	379,813	381,079	382,349	383,621
837	384,895	386,172	387,452	388,734	390,019	391,306	392,596	393,889	395,184	396,482
838	397,782	399,085	400,391	401,699	403,010	404,324	405,640	406,959	408,281	409,605
839	410,932	412,262	413,594	414,930	416,268	417,609	418,952	420,299	421,648	423,000
840	424,355	425,713	427,073	428,436	429,803	431,171	432,543	433,918	435,295	436,675
841	438,058	439,444	440,832	442,224	443,618	445,015	446,415	447,818	449,224	450,633
842	452,045	453,460	454,878	456,298	457,722	459,148	460,577	462,009	463,444	464,881
843	466,321	467,764	469,209	470,657	472,108	473,562	475,018	476,477	477,939	479,403
844	480,870	482,340	483,812	485,287	486,765	488,246	489,729	491,215	492,704	494,196
845	495,690	497,187	498,686	500,189	501,694	503,202	504,712	506,226	507,742	509,261
846	510,782	512,307	513,834	515,364	516,897	518,433	519,971	521,512	523,056	524,603
847	526,153	527,705	529,260	530,818	532,379	533,942	535,509	537,078	538,650	540,225
848	541,803	543,384	544,968	546,555	548,144	549,737	551,333	552,931	554,533	556,137
849	557,745	559,355	560,968	562,584	564,203	565,825	567,450	569,078	570,708	572,342
850	573,979	575,618	577,261	578,907	580,556	582,207	583,862	585,520	587,181	588,846
851	590,513	592,184	593,857	595,534	597,214	598,897	600,583	602,272	603,965	605,660
852	607,359	609,061	610,767	612,475	614,187	615,902	617,620	619,342	621,066	622,794
853	624,525	626,260	627,997	629,738	631,482	633,229	634,980	636,734	638,491	640,251
854	642,014	643,781	645,551	647,325	649,101	650,881	652,664	654,450	656,240	658,033
855	659,829	661,628	663,431	665,237	667,047	668,859	670,675	672,495	674,317	676,143
856	677,972	679,804	681,640	683,479	685,321	687,167	689,016	690,869	692,725	694,584
857	696,447	698,313	700,183	702,056	703,933	705,813	707,697	709,584	711,475	713,369
858	715,267	717,168	719,072	720,981	722,892	724,808	726,727	728,649	730,575	732,504
859	734,437	736,373	738,313	740,257	742,204	744,155	746,110	748,068	750,030	751,996
860	753,966	755,939	757,916	759,897	761,881	763,869	765,862	767,858	769,857	771,861
861	773,869	775,880	777,895	779,914	781,937	783,963	785,994	788,028	790,067	792,109
862	794,155	796,205	798,259	800,317	802,379	804,445	806,515	808,588	810,666	812,748
863	814,833	816,923	819,017	821,114	823,216	825,321	827,431	829,545	831,662	833,784
864	835,910	838,039	840,173	842,311	844,452	846,598	848,748	850,902	853,059	855,221
865	857,387	859,556	861,730	863,908	866,090	868,275	870,465	872,658	874,856	877,058
866	879,263	881,473	883,686	885,904	888,126	890,352	892,582	894,816	897,055	899,297
867	901,544	903,795	906,049	908,308	910,572	912,839	915,110	917,386	919,665	921,949
868	924,237	926,529	928,825	931,125	933,429	935,738	938,051	940,368	942,689	945,014
869	947,344	949,677	952,015	954,357	956,703	959,053	961,408	963,766	966,129	968,496
870	970,867	973,243	975,622	978,006	980,395	982,787	985,184	987,586	989,991	992,401
871	994,815	997,234	999,656	1,002,083	1,004,515	1,006,950	1,009,390	1,011,834	1,014,282	1,016,735

Appendix M

**Lake Bridgeport**

**RESERVOIR BATHYMETRIC AND TOPOGRAPHIC CAPACITY TABLE (Continued)**

TEXAS WATER DEVELOPMENT BOARD

September - October 2020 Survey

CAPACITY IN ACRE-FEET

Conservation pool elevation 836.0 feet NAVD88\*

ELEVATION INCREMENT IS ONE TENTH FOOT

Top of dam elevation 874.0 feet NAVD88

ELEVATION (Feet NAVD88)	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
872	1,019,191	1,021,652	1,024,117	1,026,587	1,029,061	1,031,539	1,034,021	1,036,507	1,038,998	1,041,492
873	1,043,991	1,046,494	1,049,002	1,051,514	1,054,030	1,056,550	1,059,075	1,061,604	1,064,137	1,066,676
874	1,069,223									

Note: Capacities above elevation 834.5 feet calculated from interpolated and computed areas

\*Datum of gage changed from feet National Geodetic Vertical Datum 1929 (NGVD29) to feet North American Vertical Datum 1988 (NAVD88) on October 1, 2016. The new datum is 0.44 feet below previous datum (U.S. Geological Survey, 2021). Conservation pool elevation changed from 836.0 feet NGVD29 to 836.0 feet NAVD88 (equivalent to 836.44 feet NGVD29) (C. Ottman, written commun(s)., 2021).



Appendix N  
**Lake Bridgeport**

**RESERVOIR BATHYMETRIC AND TOPOGRAPHIC AREA TABLE**

TEXAS WATER DEVELOPMENT BOARD

September - October 2020 Survey

AREA IN ACRES

Conservation pool elevation 836.0 feet NAVD88\*

ELEVATION INCREMENT IS ONE TENTH FOOT

Top of dam elevation 874.0 feet NAVD88

ELEVATION (Feet NAVD88)	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
760	0	0	0	0	0	0	0	0	0	0
761	0	0	0	0	0	0	0	1	1	1
762	1	1	2	2	2	2	3	3	4	4
763	5	5	5	5	6	6	6	6	7	7
764	7	7	7	8	8	8	9	9	9	10
765	10	11	11	12	12	13	14	15	16	17
766	17	18	19	20	20	21	22	23	25	26
767	28	29	31	32	33	34	35	36	38	39
768	41	42	43	44	46	47	48	49	51	53
769	54	56	58	59	61	63	64	66	68	70
770	71	73	74	76	77	79	81	82	84	86
771	88	90	91	93	95	97	99	101	103	105
772	108	112	114	117	120	123	126	129	132	136
773	142	147	152	158	162	167	172	177	183	192
774	200	208	218	228	240	252	266	281	298	323
775	340	360	383	405	424	441	457	473	490	506
776	521	537	556	573	587	601	615	630	645	661
777	679	698	717	743	776	806	834	865	900	932
778	967	995	1,023	1,055	1,083	1,110	1,138	1,163	1,186	1,207
779	1,228	1,248	1,269	1,290	1,310	1,329	1,348	1,367	1,387	1,407
780	1,430	1,453	1,473	1,491	1,508	1,525	1,542	1,559	1,576	1,594
781	1,611	1,630	1,651	1,673	1,694	1,715	1,741	1,768	1,795	1,819
782	1,840	1,859	1,877	1,896	1,916	1,935	1,953	1,971	1,987	2,005
783	2,022	2,039	2,057	2,076	2,095	2,114	2,133	2,153	2,171	2,190
784	2,209	2,230	2,249	2,267	2,285	2,302	2,321	2,339	2,357	2,377
785	2,396	2,415	2,432	2,449	2,465	2,481	2,497	2,514	2,532	2,549
786	2,567	2,585	2,603	2,620	2,637	2,653	2,670	2,688	2,705	2,721
787	2,737	2,753	2,769	2,786	2,801	2,817	2,832	2,847	2,863	2,878
788	2,894	2,911	2,926	2,943	2,960	2,976	2,994	3,012	3,029	3,046
789	3,063	3,079	3,094	3,109	3,125	3,141	3,157	3,174	3,190	3,207
790	3,225	3,242	3,260	3,277	3,293	3,310	3,327	3,344	3,362	3,379
791	3,397	3,415	3,436	3,455	3,475	3,493	3,510	3,526	3,543	3,559
792	3,573	3,588	3,602	3,616	3,629	3,643	3,656	3,669	3,681	3,694
793	3,707	3,720	3,733	3,746	3,760	3,773	3,786	3,798	3,811	3,823
794	3,836	3,849	3,862	3,876	3,891	3,906	3,921	3,935	3,951	3,966
795	3,983	3,998	4,014	4,030	4,045	4,060	4,074	4,088	4,102	4,118
796	4,134	4,148	4,162	4,176	4,191	4,209	4,225	4,242	4,260	4,278
797	4,295	4,313	4,331	4,351	4,370	4,390	4,410	4,428	4,445	4,463
798	4,481	4,498	4,516	4,534	4,554	4,574	4,596	4,616	4,636	4,655
799	4,674	4,692	4,709	4,725	4,741	4,758	4,775	4,791	4,807	4,824
800	4,841	4,859	4,876	4,894	4,911	4,927	4,943	4,960	4,978	4,996
801	5,013	5,034	5,056	5,078	5,102	5,132	5,160	5,184	5,207	5,226
802	5,247	5,268	5,289	5,311	5,332	5,351	5,369	5,388	5,405	5,424
803	5,442	5,459	5,476	5,491	5,507	5,522	5,538	5,555	5,574	5,593
804	5,613	5,634	5,654	5,674	5,693	5,711	5,732	5,757	5,779	5,801
805	5,823	5,844	5,864	5,886	5,907	5,927	5,947	5,968	5,990	6,013
806	6,036	6,059	6,081	6,102	6,124	6,146	6,167	6,191	6,212	6,233
807	6,254	6,273	6,291	6,310	6,329	6,347	6,366	6,384	6,401	6,418
808	6,434	6,450	6,467	6,482	6,499	6,514	6,529	6,545	6,559	6,574
809	6,590	6,606	6,624	6,642	6,660	6,681	6,704	6,725	6,745	6,764
810	6,782	6,799	6,816	6,833	6,849	6,866	6,882	6,898	6,913	6,929
811	6,946	6,962	6,978	6,994	7,010	7,026	7,048	7,068	7,087	7,105
812	7,124	7,143	7,161	7,179	7,199	7,216	7,235	7,254	7,274	7,294
813	7,314	7,334	7,353	7,373	7,392	7,410	7,428	7,446	7,464	7,482
814	7,500	7,518	7,539	7,560	7,580	7,602	7,623	7,643	7,665	7,686
815	7,707	7,728	7,751	7,773	7,794	7,814	7,834	7,854	7,873	7,892

## Appendix N

**Lake Bridgeport****RESERVOIR BATHYMETRIC AND TOPOGRAPHIC AREA TABLE (Continued)**

TEXAS WATER DEVELOPMENT BOARD

September - October 2020 Survey

AREA IN ACRES

Conservation pool elevation 836.0 feet NAVD88\*

ELEVATION INCREMENT IS ONE TENTH FOOT

Top of dam elevation 874.0 feet NAVD88

ELEVATION (Feet NAVD88)	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
816	7,910	7,929	7,949	7,967	7,986	8,005	8,027	8,049	8,071	8,093
817	8,116	8,139	8,161	8,183	8,206	8,227	8,249	8,270	8,291	8,313
818	8,335	8,356	8,379	8,401	8,423	8,444	8,465	8,485	8,506	8,527
819	8,547	8,567	8,588	8,609	8,629	8,648	8,668	8,688	8,708	8,728
820	8,748	8,769	8,790	8,811	8,831	8,852	8,872	8,892	8,912	8,933
821	8,953	8,973	8,994	9,016	9,037	9,057	9,077	9,097	9,116	9,135
822	9,155	9,174	9,193	9,213	9,233	9,253	9,274	9,295	9,316	9,335
823	9,355	9,376	9,397	9,417	9,437	9,457	9,477	9,497	9,516	9,535
824	9,554	9,573	9,593	9,613	9,634	9,654	9,675	9,696	9,718	9,740
825	9,762	9,786	9,809	9,831	9,852	9,874	9,895	9,917	9,940	9,964
826	9,987	10,011	10,035	10,059	10,083	10,105	10,128	10,151	10,175	10,200
827	10,224	10,250	10,279	10,308	10,338	10,365	10,392	10,418	10,444	10,470
828	10,494	10,519	10,543	10,567	10,591	10,616	10,641	10,665	10,689	10,713
829	10,737	10,760	10,783	10,806	10,828	10,850	10,871	10,892	10,914	10,936
830	10,958	10,980	11,001	11,023	11,044	11,065	11,086	11,107	11,128	11,149
831	11,171	11,192	11,213	11,234	11,254	11,275	11,295	11,315	11,335	11,355
832	11,375	11,394	11,414	11,434	11,454	11,474	11,495	11,515	11,535	11,556
833	11,577	11,598	11,619	11,641	11,663	11,686	11,709	11,732	11,755	11,778
834	11,801	11,825	11,848	11,872	11,897	11,923	11,957	11,994	12,032	12,065
835	12,097	12,129	12,162	12,194	12,226	12,258	12,291	12,324	12,357	12,392
836	12,427	12,463	12,503	12,569	12,598	12,626	12,653	12,680	12,706	12,732
837	12,757	12,784	12,810	12,836	12,861	12,887	12,913	12,939	12,965	12,991
838	13,017	13,044	13,070	13,096	13,122	13,149	13,176	13,203	13,230	13,257
839	13,284	13,312	13,339	13,367	13,395	13,423	13,450	13,478	13,506	13,534
840	13,563	13,591	13,619	13,648	13,675	13,703	13,731	13,759	13,787	13,815
841	13,843	13,871	13,900	13,929	13,958	13,987	14,016	14,045	14,075	14,104
842	14,134	14,163	14,192	14,221	14,249	14,277	14,305	14,332	14,359	14,386
843	14,414	14,441	14,468	14,495	14,522	14,549	14,576	14,603	14,629	14,656
844	14,683	14,711	14,738	14,766	14,793	14,820	14,847	14,874	14,901	14,928
845	14,956	14,983	15,011	15,038	15,065	15,092	15,120	15,147	15,175	15,203
846	15,231	15,259	15,287	15,315	15,343	15,370	15,398	15,426	15,454	15,482
847	15,510	15,537	15,565	15,592	15,621	15,649	15,677	15,706	15,736	15,766
848	15,795	15,824	15,853	15,883	15,912	15,942	15,971	16,001	16,030	16,059
849	16,087	16,117	16,146	16,175	16,205	16,234	16,264	16,293	16,322	16,352
850	16,382	16,412	16,442	16,473	16,503	16,534	16,564	16,596	16,627	16,658
851	16,689	16,721	16,752	16,783	16,814	16,846	16,877	16,909	16,940	16,973
852	17,005	17,037	17,070	17,102	17,134	17,166	17,198	17,230	17,262	17,295
853	17,327	17,360	17,392	17,424	17,457	17,489	17,522	17,554	17,586	17,619
854	17,652	17,684	17,716	17,749	17,782	17,814	17,847	17,879	17,912	17,945
855	17,978	18,012	18,045	18,077	18,110	18,144	18,177	18,209	18,242	18,274
856	18,307	18,339	18,373	18,406	18,440	18,475	18,509	18,543	18,577	18,611
857	18,645	18,680	18,715	18,750	18,785	18,820	18,854	18,889	18,924	18,959
858	18,994	19,029	19,065	19,100	19,135	19,170	19,205	19,240	19,276	19,311
859	19,347	19,382	19,418	19,454	19,491	19,529	19,566	19,602	19,639	19,676
860	19,713	19,751	19,788	19,827	19,865	19,903	19,941	19,979	20,017	20,055
861	20,094	20,132	20,170	20,208	20,247	20,286	20,324	20,363	20,402	20,442
862	20,481	20,520	20,560	20,600	20,639	20,679	20,718	20,758	20,797	20,837
863	20,876	20,916	20,955	20,996	21,036	21,076	21,116	21,156	21,197	21,237
864	21,277	21,317	21,357	21,397	21,437	21,477	21,517	21,557	21,597	21,637
865	21,677	21,717	21,757	21,797	21,836	21,877	21,916	21,956	21,996	22,036
866	22,075	22,115	22,156	22,197	22,239	22,281	22,322	22,363	22,404	22,445
867	22,487	22,528	22,570	22,611	22,652	22,693	22,734	22,775	22,816	22,857
868	22,898	22,940	22,981	23,024	23,066	23,107	23,149	23,190	23,232	23,274
869	23,316	23,358	23,399	23,440	23,482	23,523	23,565	23,606	23,648	23,690
870	23,732	23,776	23,819	23,862	23,905	23,948	23,991	24,034	24,077	24,120
871	24,163	24,206	24,249	24,291	24,334	24,376	24,419	24,461	24,503	24,546

Appendix N

**Lake Bridgeport**

**RESERVOIR BATHYMETRIC AND TOPOGRAPHIC AREA TABLE (Continued)**

TEXAS WATER DEVELOPMENT BOARD

September - October 2020 Survey

AREA IN ACRES

Conservation pool elevation 836.0 feet NAVD88\*

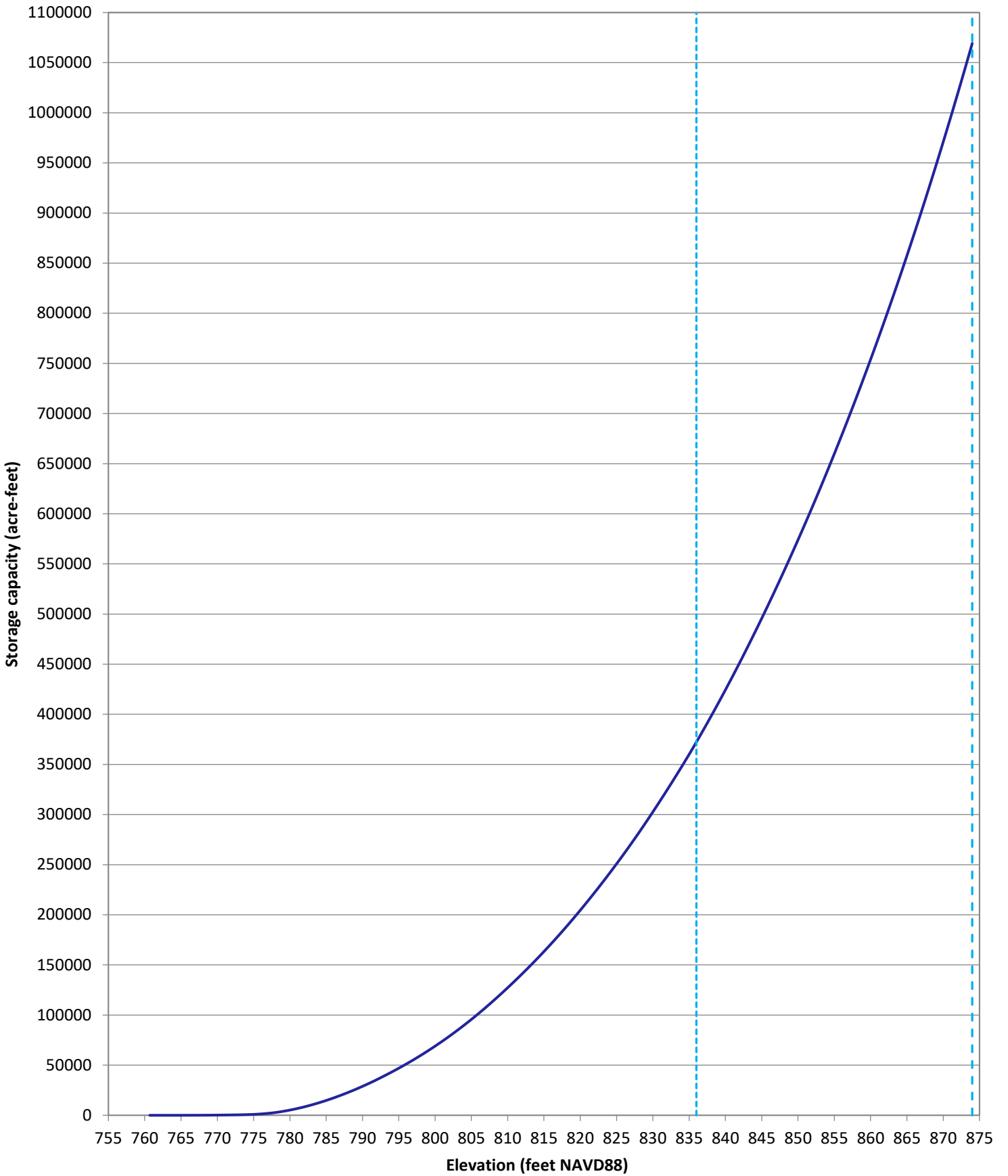
ELEVATION INCREMENT IS ONE TENTH FOOT

Top of dam elevation 874.0 feet NAVD88

ELEVATION (Feet NAVD88)	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
872	24,588	24,631	24,674	24,716	24,758	24,800	24,842	24,884	24,926	24,968
873	25,010	25,053	25,096	25,138	25,182	25,225	25,269	25,314	25,359	25,406
874	25,534									

Note: Areas between elevations 834.5 and 836.2 feet linearly interpolated

\*Datum of gage changed from feet National Geodetic Vertical Datum 1929 (NGVD29) to feet North American Vertical Datum 1988 (NAVD88) on October 1, 2016. The new datum is 0.44 feet below previous datum (U.S. Geological Survey, 2021). Conservation pool elevation changed from 836.0 feet NGVD29 to 836.0 feet NAVD88 (equivalent to 836.44 feet NGVD29) (C. Ottman, written commun(s)., 2021).

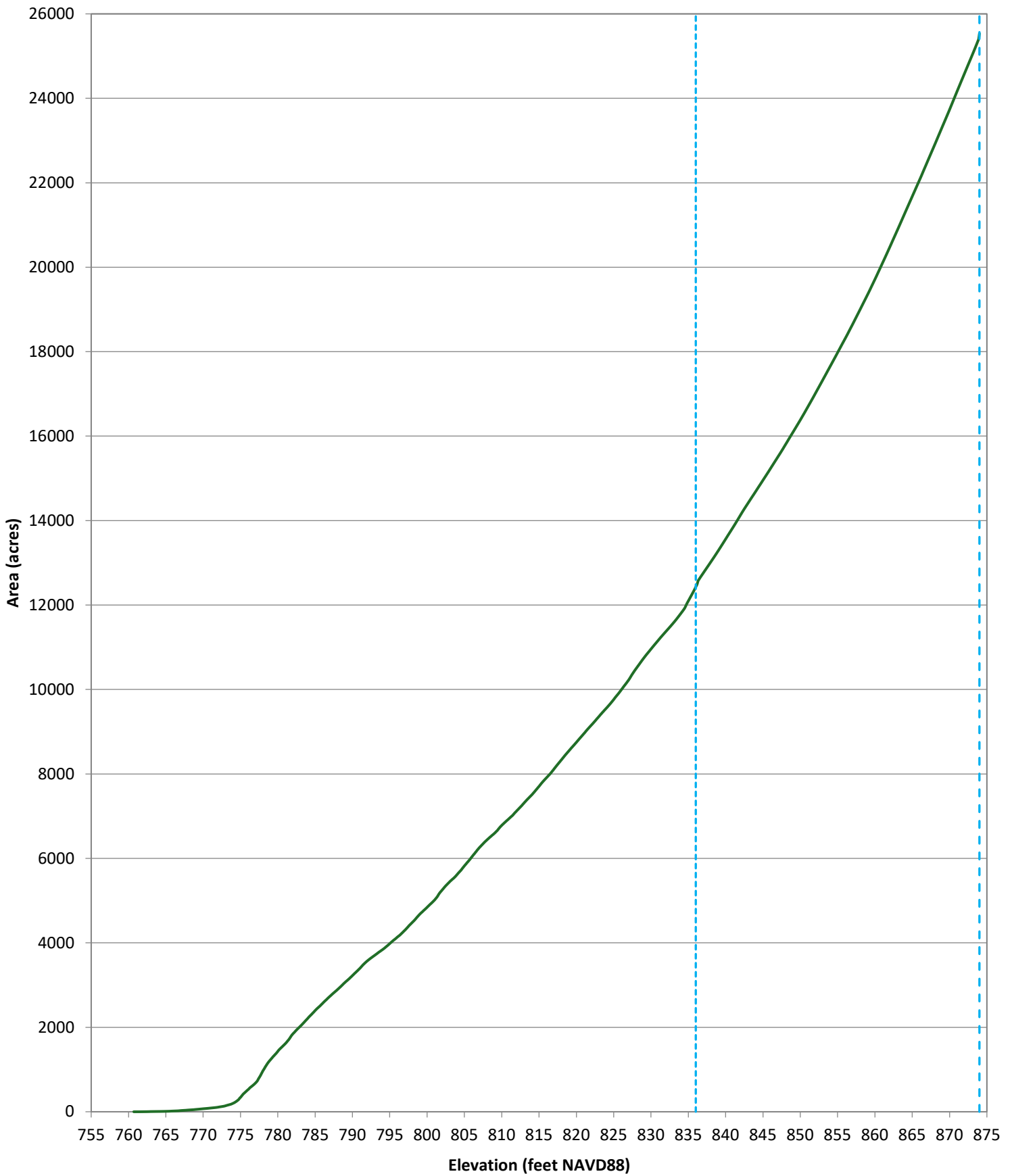


— Total capacity 2020

- - - Conservation pool elevation 836.0 feet NAVD88

- - - Top of dam elevation 874.0 feet NAVD88

**Lake Bridgeport**  
 September - October 2020 Survey  
 Prepared by: TWDB



Total area 2020
  Conservation pool elevation 836.0 feet NAVD88  
 Top of dam elevation 874.0 feet NAVD88

**Lake Bridgeport**  
 September - October 2020 Survey  
 Prepared by: TWDB

## Appendix Q

## Lake Bridgeport

## RESERVOIR PRE-IMPOUNDMENT BATHYMETRIC CAPACITY TABLE

TEXAS WATER DEVELOPMENT BOARD

September - October 2020 Survey

CAPACITY IN ACRE-FEET

Conservation pool elevation 836.0 feet NAVD88\*

ELEVATION INCREMENT IS ONE TENTH FOOT

ELEVATION (Feet NAVD88)	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
753	0	0	0	0	0	0	0	0	0	0
754	0	0	0	0	0	0	0	0	0	1
755	1	1	2	2	2	3	4	4	5	6
756	6	7	8	9	10	12	13	14	16	17
757	18	20	22	23	25	27	29	31	33	35
758	37	39	41	43	46	48	50	53	55	58
759	61	63	66	69	72	75	78	81	84	88
760	91	95	98	102	106	110	114	118	122	126
761	131	135	140	145	150	155	160	165	170	175
762	181	186	192	198	204	210	216	222	229	235
763	242	249	256	263	270	277	285	292	300	308
764	316	324	332	340	349	358	366	375	385	394
765	404	414	424	435	446	457	468	480	493	505
766	518	532	546	560	575	590	605	621	637	654
767	671	688	706	725	744	764	785	807	830	853
768	878	903	929	957	985	1,014	1,045	1,076	1,109	1,143
769	1,177	1,213	1,250	1,288	1,328	1,368	1,409	1,452	1,496	1,541
770	1,588	1,635	1,684	1,735	1,786	1,839	1,893	1,948	2,005	2,063
771	2,122	2,182	2,243	2,306	2,370	2,436	2,503	2,572	2,643	2,716
772	2,792	2,870	2,951	3,034	3,119	3,207	3,296	3,388	3,481	3,577
773	3,674	3,773	3,874	3,977	4,082	4,188	4,296	4,406	4,517	4,630
774	4,745	4,861	4,979	5,098	5,220	5,343	5,467	5,594	5,722	5,852
775	5,984	6,118	6,253	6,389	6,527	6,667	6,809	6,952	7,097	7,244
776	7,392	7,542	7,694	7,848	8,003	8,160	8,319	8,479	8,640	8,803
777	8,968	9,134	9,302	9,472	9,644	9,817	9,992	10,169	10,347	10,527
778	10,709	10,892	11,076	11,262	11,450	11,639	11,829	12,021	12,215	12,410
779	12,606	12,804	13,003	13,204	13,406	13,610	13,815	14,021	14,229	14,438
780	14,649	14,862	15,077	15,293	15,511	15,730	15,951	16,173	16,397	16,623
781	16,850	17,080	17,310	17,543	17,777	18,013	18,250	18,489	18,730	18,972
782	19,216	19,461	19,707	19,955	20,205	20,456	20,708	20,962	21,217	21,474
783	21,732	21,991	22,252	22,514	22,777	23,042	23,308	23,575	23,844	24,114
784	24,386	24,659	24,933	25,209	25,487	25,765	26,045	26,327	26,610	26,894
785	27,180	27,467	27,756	28,046	28,336	28,629	28,922	29,217	29,513	29,810
786	30,109	30,409	30,710	31,013	31,317	31,623	31,930	32,238	32,549	32,860
787	33,174	33,488	33,805	34,123	34,442	34,763	35,085	35,409	35,734	36,060
788	36,388	36,718	37,049	37,381	37,715	38,050	38,387	38,725	39,064	39,405
789	39,747	40,091	40,436	40,782	41,130	41,479	41,830	42,183	42,537	42,893
790	43,250	43,609	43,969	44,331	44,694	45,059	45,425	45,792	46,161	46,531
791	46,903	47,276	47,649	48,025	48,401	48,779	49,158	49,538	49,920	50,303
792	50,687	51,072	51,459	51,847	52,237	52,628	53,020	53,414	53,809	54,205
793	54,603	55,002	55,403	55,805	56,208	56,613	57,019	57,427	57,835	58,246
794	58,657	59,070	59,485	59,901	60,318	60,737	61,158	61,581	62,005	62,430
795	62,858	63,287	63,718	64,152	64,587	65,023	65,462	65,903	66,346	66,791
796	67,238	67,686	68,137	68,590	69,044	69,500	69,959	70,419	70,881	71,345
797	71,811	72,278	72,748	73,219	73,692	74,167	74,643	75,121	75,601	76,082
798	76,565	77,050	77,537	78,025	78,514	79,006	79,499	79,993	80,490	80,988
799	81,488	81,989	82,493	82,998	83,504	84,013	84,523	85,035	85,548	86,064
800	86,581	87,100	87,621	88,143	88,667	89,193	89,721	90,250	90,781	91,313
801	91,848	92,384	92,922	93,461	94,002	94,546	95,091	95,638	96,187	96,737
802	97,290	97,845	98,401	98,959	99,520	100,082	100,647	101,213	101,782	102,353
803	102,925	103,500	104,077	104,656	105,237	105,820	106,405	106,992	107,581	108,172
804	108,765	109,360	109,957	110,556	111,156	111,759	112,364	112,970	113,578	114,189
805	114,801	115,415	116,031	116,649	117,269	117,891	118,514	119,140	119,767	120,396
806	121,027	121,659	122,294	122,930	123,568	124,207	124,849	125,492	126,137	126,784
807	127,432	128,083	128,734	129,388	130,043	130,699	131,358	132,017	132,679	133,342
808	134,007	134,673	135,341	136,010	136,681	137,353	138,027	138,703	139,381	140,060

## Appendix Q

**Lake Bridgeport****RESERVOIR PRE-IMPOUNDMENT BATHYMETRIC CAPACITY TABLE (Continued)**

TEXAS WATER DEVELOPMENT BOARD

September - October 2020 Survey

CAPACITY IN ACRE-FEET

Conservation pool elevation 836.0 feet NAVD88\*

ELEVATION INCREMENT IS ONE TENTH FOOT

ELEVATION (Feet NAVD88)	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
809	140,741	141,424	142,108	142,794	143,481	144,170	144,861	145,553	146,247	146,942
810	147,640	148,338	149,039	149,741	150,444	151,149	151,856	152,564	153,274	153,986
811	154,699	155,415	156,132	156,851	157,572	158,294	159,018	159,744	160,472	161,202
812	161,934	162,667	163,402	164,139	164,878	165,618	166,360	167,104	167,850	168,597
813	169,346	170,097	170,850	171,604	172,361	173,119	173,879	174,641	175,404	176,170
814	176,937	177,707	178,478	179,252	180,027	180,805	181,584	182,366	183,149	183,935
815	184,723	185,512	186,304	187,097	187,893	188,690	189,490	190,291	191,094	191,899
816	192,706	193,515	194,327	195,140	195,955	196,772	197,592	198,413	199,236	200,062
817	200,890	201,719	202,551	203,385	204,222	205,060	205,900	206,742	207,587	208,433
818	209,282	210,132	210,985	211,840	212,697	213,556	214,417	215,280	216,145	217,012
819	217,881	218,751	219,624	220,499	221,377	222,256	223,137	224,020	224,905	225,792
820	226,682	227,573	228,466	229,361	230,258	231,157	232,057	232,960	233,864	234,771
821	235,679	236,589	237,501	238,415	239,330	240,248	241,167	242,089	243,012	243,938
822	244,865	245,795	246,726	247,659	248,595	249,532	250,471	251,412	252,355	253,299
823	254,246	255,194	256,145	257,097	258,051	259,007	259,965	260,925	261,887	262,851
824	263,817	264,786	265,756	266,729	267,704	268,680	269,659	270,641	271,624	272,609
825	273,597	274,587	275,579	276,574	277,570	278,569	279,570	280,573	281,579	282,586
826	283,596	284,608	285,622	286,638	287,657	288,678	289,702	290,729	291,758	292,790
827	293,824	294,861	295,899	296,940	297,983	299,029	300,076	301,127	302,179	303,234
828	304,291	305,351	306,413	307,477	308,543	309,612	310,683	311,755	312,831	313,908
829	314,987	316,068	317,151	318,237	319,324	320,414	321,505	322,598	323,693	324,790
830	325,890	326,991	328,094	329,200	330,307	331,417	332,528	333,642	334,757	335,875
831	336,994	338,115	339,239	340,364	341,491	342,621	343,752	344,885	346,020	347,157
832	348,296	349,436	350,579	351,723	352,870	354,018	355,169	356,321	357,476	358,632
833	359,791	360,951	362,114	363,278	364,445	365,614	366,785	367,958	369,134	370,311
834	371,491	372,673	373,858	375,044	376,233	377,424	378,618	379,815	381,014	382,216
835	383,421	384,628	385,839	387,052	388,268	389,487	390,708	391,932	393,159	394,389
836	395,622	396,857	398,095							

Note: Capacities above elevation 834.5 feet calculated from interpolated areas

\*Datum of gage changed from feet National Geodetic Vertical Datum 1929 (NGVD29) to feet North American Vertical Datum 1988 (NAVD88) on October 1, 2016. The new datum is 0.44 feet below previous datum (U.S. Geological Survey, 2021). Conservation pool elevation changed from 836.0 feet NGVD29 to 836.0 feet NAVD88 (equivalent to 836.44 feet NGVD29) (C. Ottman, written commun(s), 2021).

Appendix R

**Lake Bridgeport**

**RESERVOIR PRE-IMPOUNDMENT BATHYMETRIC AREA TABLE**

TEXAS WATER DEVELOPMENT BOARD

September - October 2020 Survey

AREA IN ACRES

Conservation pool elevation 836.0 feet NAVD88\*

ELEVATION INCREMENT IS ONE TENTH FOOT

ELEVATION (Feet NAVD88)	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
753	0	0	0	0	0	0	0	0	0	0
754	0	0	0	0	0	0	1	1	2	2
755	3	3	4	4	5	6	6	7	7	8
756	9	9	10	11	11	12	13	13	14	14
757	15	16	17	17	18	19	19	20	20	21
758	21	22	22	23	23	24	24	25	25	26
759	27	27	28	29	29	30	31	32	33	34
760	35	36	37	38	39	40	40	41	42	43
761	44	46	47	48	49	50	51	52	53	54
762	55	56	57	58	59	61	63	64	65	66
763	68	69	70	71	72	74	75	76	78	79
764	80	82	83	84	86	87	89	91	93	96
765	99	101	104	107	111	114	118	121	125	129
766	133	137	140	144	148	152	156	160	164	169
767	173	178	184	190	197	205	213	223	231	240
768	249	258	267	277	287	299	310	321	333	343
769	354	364	375	387	397	409	421	433	445	457
770	471	485	496	509	521	535	547	560	572	584
771	596	608	621	634	649	666	682	699	718	742
772	768	795	820	842	865	886	906	926	945	963
773	982	1,001	1,019	1,037	1,055	1,073	1,089	1,106	1,123	1,139
774	1,154	1,170	1,186	1,203	1,221	1,239	1,257	1,275	1,293	1,309
775	1,325	1,342	1,358	1,374	1,390	1,407	1,423	1,440	1,458	1,477
776	1,494	1,511	1,528	1,544	1,561	1,577	1,593	1,608	1,623	1,639
777	1,656	1,672	1,689	1,707	1,725	1,742	1,759	1,776	1,792	1,807
778	1,822	1,837	1,852	1,868	1,883	1,898	1,913	1,928	1,942	1,957
779	1,972	1,987	2,000	2,014	2,028	2,042	2,056	2,071	2,086	2,102
780	2,119	2,137	2,153	2,169	2,185	2,201	2,217	2,233	2,250	2,266
781	2,282	2,300	2,317	2,334	2,351	2,367	2,382	2,397	2,413	2,428
782	2,443	2,458	2,473	2,487	2,502	2,517	2,532	2,546	2,559	2,573
783	2,587	2,601	2,614	2,627	2,640	2,653	2,666	2,680	2,695	2,710
784	2,723	2,737	2,751	2,766	2,780	2,795	2,809	2,823	2,837	2,851
785	2,865	2,878	2,891	2,903	2,916	2,928	2,941	2,954	2,967	2,980
786	2,994	3,007	3,021	3,035	3,049	3,063	3,078	3,093	3,109	3,125
787	3,141	3,157	3,171	3,186	3,200	3,214	3,229	3,244	3,259	3,273
788	3,288	3,303	3,317	3,332	3,345	3,359	3,373	3,386	3,400	3,414
789	3,428	3,442	3,456	3,471	3,486	3,502	3,518	3,534	3,551	3,566
790	3,581	3,596	3,610	3,625	3,640	3,654	3,668	3,682	3,695	3,708
791	3,721	3,733	3,745	3,758	3,771	3,784	3,797	3,810	3,823	3,835
792	3,848	3,861	3,875	3,889	3,903	3,916	3,930	3,944	3,957	3,971
793	3,984	3,998	4,012	4,027	4,041	4,055	4,068	4,082	4,095	4,109
794	4,123	4,137	4,152	4,168	4,184	4,201	4,216	4,232	4,249	4,265
795	4,284	4,303	4,322	4,340	4,360	4,378	4,398	4,418	4,438	4,458
796	4,478	4,497	4,516	4,535	4,554	4,573	4,592	4,611	4,630	4,649
797	4,667	4,685	4,703	4,721	4,739	4,756	4,773	4,789	4,806	4,823
798	4,840	4,856	4,872	4,889	4,906	4,922	4,938	4,955	4,972	4,989
799	5,007	5,024	5,041	5,059	5,076	5,093	5,110	5,128	5,146	5,164
800	5,181	5,198	5,215	5,233	5,250	5,267	5,284	5,301	5,318	5,335
801	5,352	5,369	5,386	5,404	5,424	5,442	5,461	5,480	5,498	5,516
802	5,535	5,554	5,574	5,594	5,614	5,634	5,655	5,676	5,697	5,718
803	5,738	5,758	5,778	5,799	5,819	5,840	5,860	5,881	5,902	5,922
804	5,940	5,959	5,978	5,997	6,017	6,036	6,056	6,075	6,093	6,111
805	6,131	6,151	6,171	6,189	6,208	6,227	6,246	6,264	6,282	6,299
806	6,316	6,334	6,352	6,370	6,388	6,406	6,424	6,442	6,459	6,476
807	6,493	6,510	6,526	6,542	6,558	6,574	6,591	6,607	6,623	6,639
808	6,655	6,670	6,685	6,701	6,716	6,732	6,749	6,769	6,785	6,803



Appendix R

**Lake Bridgeport**

**RESERVOIR PRE-IMPOUNDMENT BATHYMETRIC AREA TABLE (Continued)**

TEXAS WATER DEVELOPMENT BOARD

September - October 2020 Survey

AREA IN ACRES

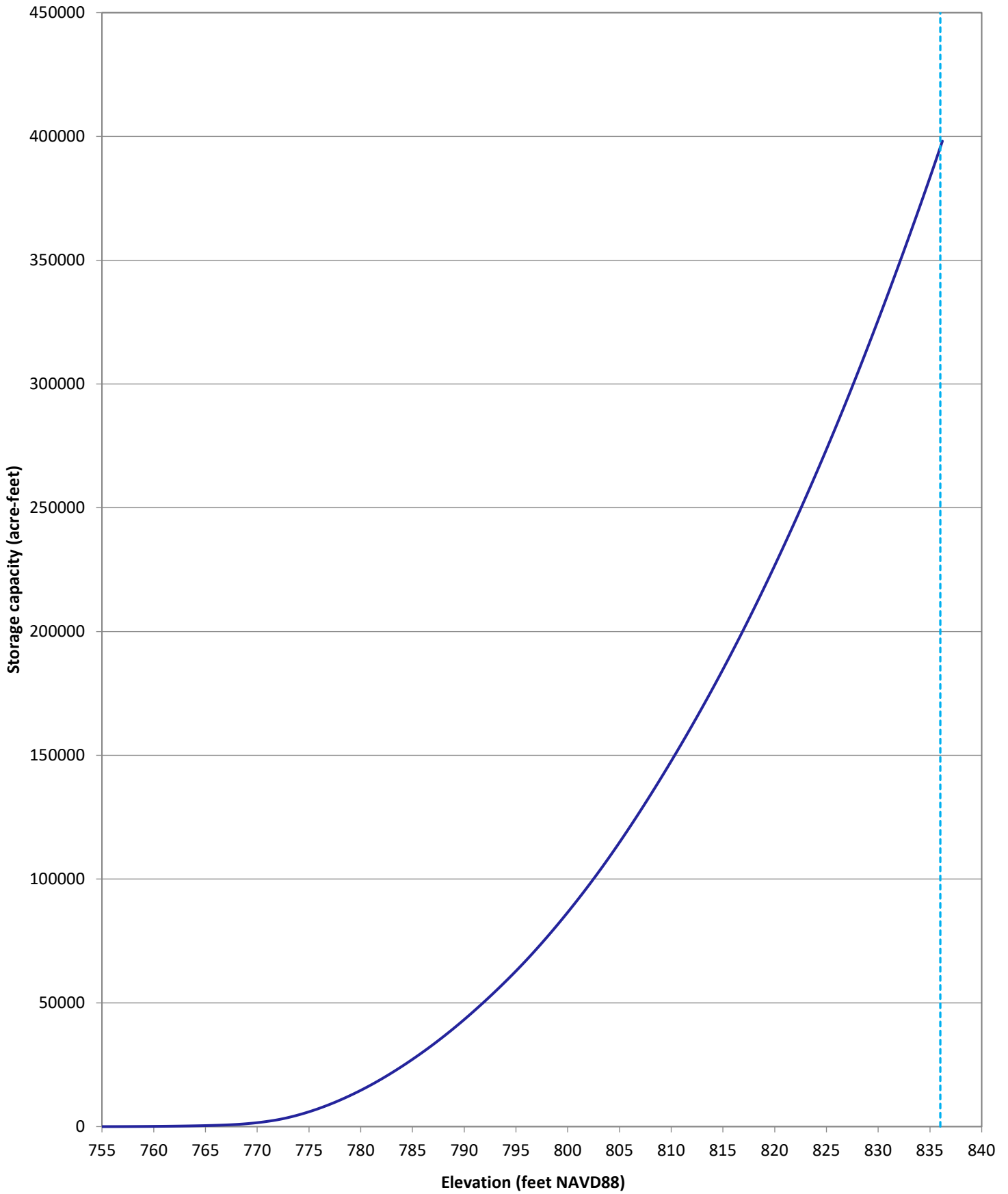
Conservation pool elevation 836.0 feet NAVD88\*

ELEVATION INCREMENT IS ONE TENTH FOOT

ELEVATION (Feet NAVD88)	0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
809	6,819	6,834	6,850	6,866	6,881	6,897	6,913	6,930	6,946	6,964
810	6,980	6,996	7,012	7,027	7,042	7,058	7,073	7,092	7,111	7,128
811	7,145	7,163	7,180	7,198	7,216	7,234	7,252	7,270	7,289	7,306
812	7,325	7,343	7,360	7,377	7,395	7,412	7,430	7,447	7,465	7,483
813	7,502	7,519	7,537	7,555	7,573	7,590	7,608	7,626	7,645	7,665
814	7,685	7,705	7,725	7,745	7,765	7,786	7,806	7,826	7,846	7,866
815	7,887	7,906	7,926	7,945	7,964	7,983	8,003	8,022	8,041	8,061
816	8,082	8,101	8,122	8,142	8,163	8,183	8,203	8,224	8,245	8,266
817	8,287	8,309	8,330	8,351	8,372	8,392	8,413	8,433	8,454	8,475
818	8,496	8,517	8,538	8,559	8,579	8,599	8,620	8,640	8,660	8,679
819	8,699	8,719	8,740	8,760	8,781	8,802	8,822	8,841	8,862	8,882
820	8,903	8,922	8,941	8,960	8,979	8,997	9,015	9,034	9,053	9,072
821	9,092	9,111	9,129	9,148	9,166	9,185	9,205	9,225	9,245	9,265
822	9,284	9,304	9,323	9,342	9,362	9,381	9,401	9,420	9,438	9,456
823	9,475	9,494	9,513	9,532	9,551	9,570	9,590	9,609	9,629	9,650
824	9,673	9,695	9,716	9,737	9,758	9,779	9,801	9,822	9,844	9,866
825	9,888	9,911	9,933	9,955	9,978	10,000	10,021	10,043	10,064	10,085
826	10,107	10,129	10,153	10,176	10,201	10,226	10,253	10,280	10,306	10,330
827	10,353	10,376	10,397	10,420	10,443	10,466	10,489	10,513	10,537	10,561
828	10,584	10,607	10,630	10,653	10,675	10,697	10,719	10,740	10,761	10,781
829	10,802	10,823	10,844	10,864	10,884	10,903	10,923	10,942	10,962	10,982
830	11,003	11,024	11,044	11,064	11,085	11,105	11,125	11,145	11,164	11,184
831	11,204	11,224	11,244	11,263	11,282	11,302	11,321	11,340	11,359	11,379
832	11,398	11,417	11,436	11,456	11,475	11,494	11,514	11,534	11,554	11,574
833	11,594	11,615	11,636	11,657	11,679	11,700	11,722	11,744	11,766	11,788
834	11,810	11,832	11,855	11,878	11,900	11,923	11,951	11,979	12,007	12,034
835	12,062	12,090	12,118	12,145	12,173	12,201	12,229	12,256	12,284	12,312
836	12,340	12,367	12,395							

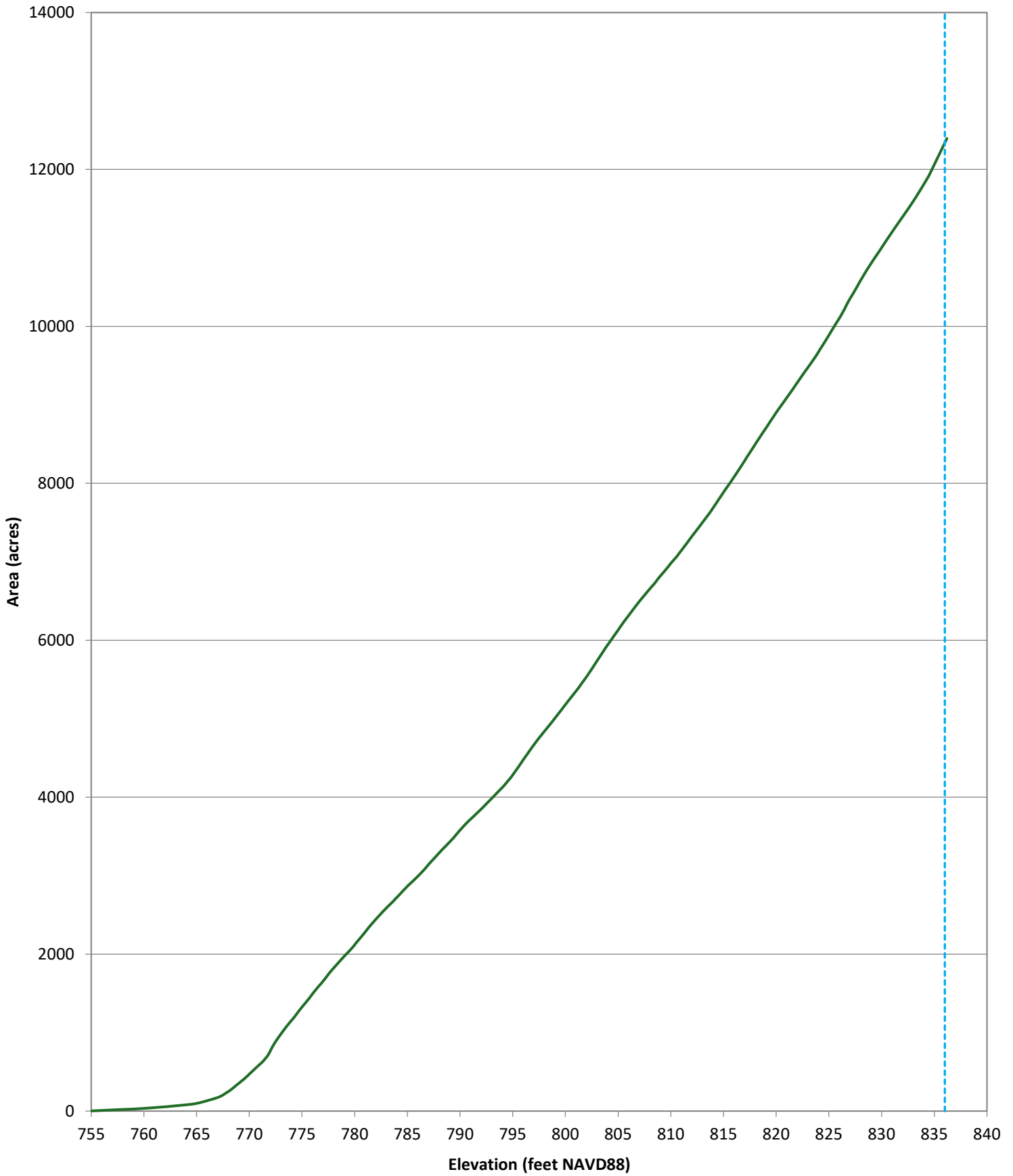
Note: Areas between elevations 834.5 and 836.2 feet linearly interpolated

\*Datum of gage changed from feet National Geodetic Vertical Datum 1929 (NGVD29) to feet North American Vertical Datum 1988 (NAVD88) on October 1, 2016. The new datum is 0.44 feet below previous datum (U.S. Geological Survey, 2021). Conservation pool elevation changed from 836.0 feet NGVD29 to 836.0 feet NAVD88 (equivalent to 836.44 feet NGVD29) (C. Ottman, written commun(s)., 2021).



— Total capacity 2020      - - - - Conservation pool elevation 836.0 feet NAVD88

**Lake Bridgeport**  
 September - October 2020 Survey  
 Prepared by: TWDB



Total area 2020
  Conservation pool elevation 836.0 feet NAVD88

**Lake Bridgeport**  
 September - October 2020 Survey  
 Prepared by: TWDB



# Figure 6

Lake Bridgeport  
elevation 836.2 feet NAVD88

Conservation Pool Elevation  
836.0 feet NAVD88

Islands

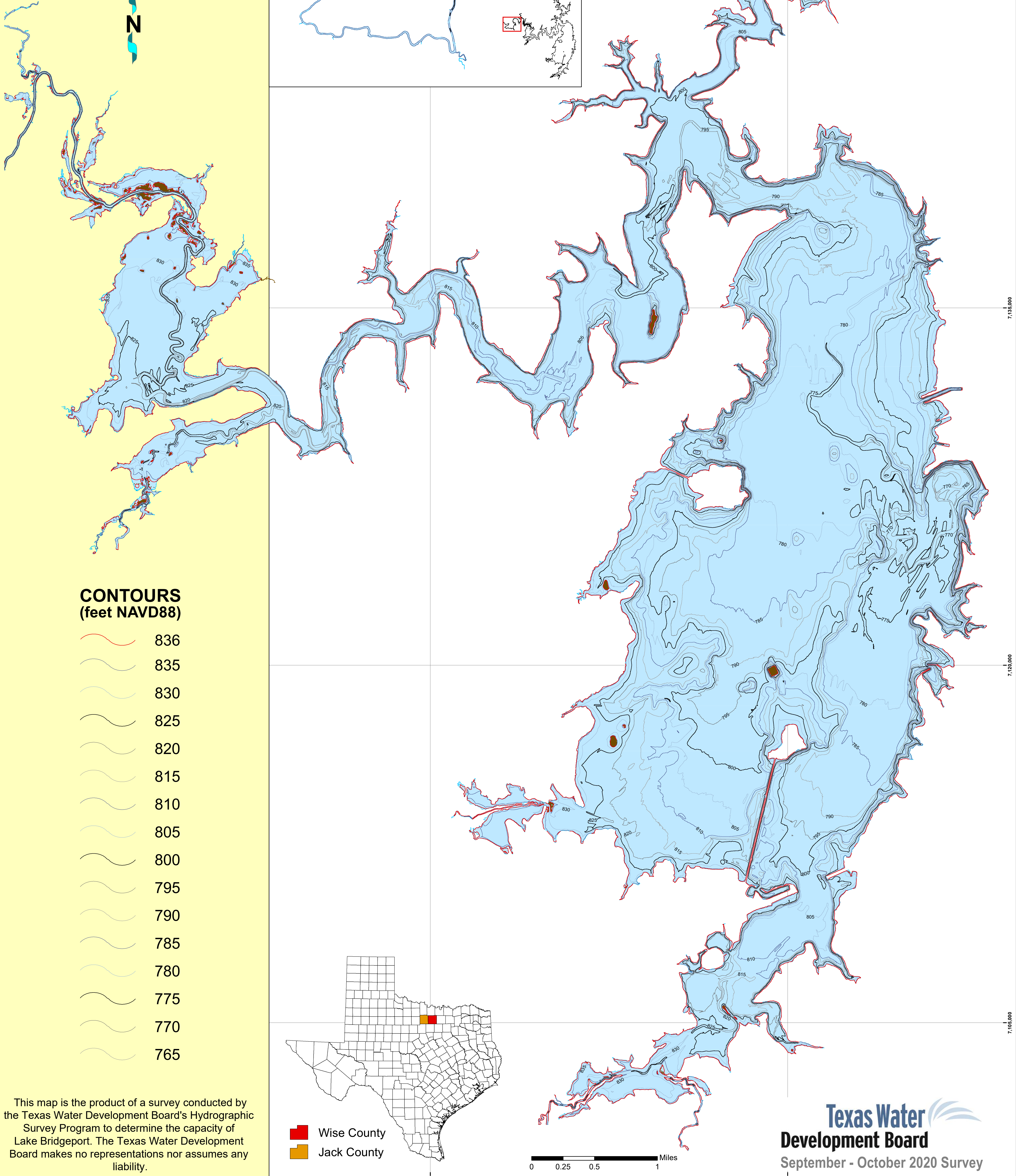
Projection: NAD83  
State Plane

Texas North Central Zone (feet)

N

# Lake Bridgeport

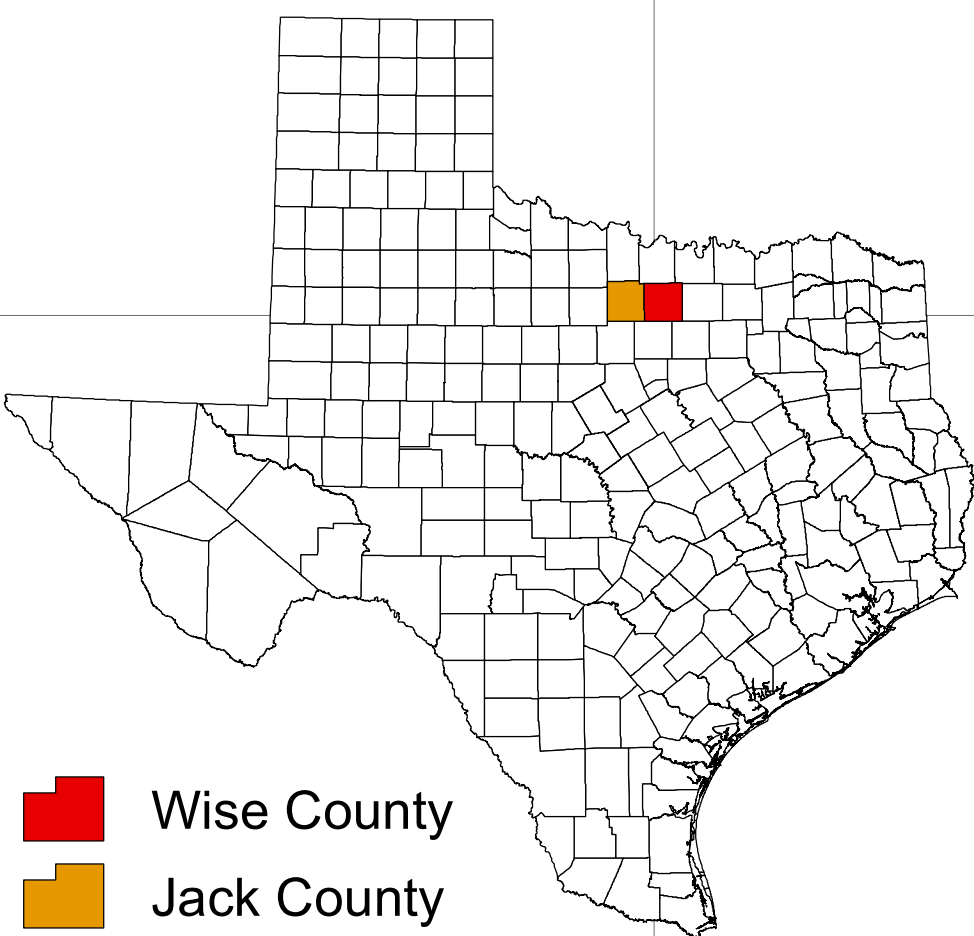
## 5' - Contour Map



### CONTOURS (feet NAVD88)

- 836
- 835
- 830
- 825
- 820
- 815
- 810
- 805
- 800
- 795
- 790
- 785
- 780
- 775
- 770
- 765

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 Bridgeport. The Texas Water Development Board makes no representations nor assumes any liability.



Wise County  
Jack County

