







Quick Reference Guide

Page 1 of 2

Application Support Email:

WDI-Support@twdb.texas.gov








How to...	Tool(s)	Steps
Find a well by State number or Track ID		<p>Using the Find Tool, start typing a well number (<i>Groundwater Well Number or Driller Tracking Number</i>). Matching numbers will begin to appear; you can then select or continue to type the complete number. Searchable well numbers results can include:</p> <ul style="list-style-type: none"> • <i>Brackish Groundwater</i> • <i>Submitted Driller's Plugging Report</i> • <i>Submitted Driller's Well Report</i> • <i>TWDB Groundwater Database</i>
Display the X,Y coordinate value of any location on the map	  	<p>Select the Measurement Tool, then select XY.</p> <ul style="list-style-type: none"> • <i>Coordinates are displayed for both cursor location and cursor click.</i> <p>_____ or _____</p> <p>Select the Identify tool, then click anywhere on the map.</p> <ul style="list-style-type: none"> • <i>Coordinates are displayed along with general location information</i> <p><i>note: Latitudes and Longitudes on the map are displayed in WGS 1984 coordinates</i></p>
Enter a X,Y coordinate value (<i>Longitude/Latitude</i>) and zoom to it		<p>Using the Find tool, enter coordinates:</p> <ul style="list-style-type: none"> • <i>'Negative Longitude' 'comma or space' 'Latitude'</i> • <i>Values must be in decimal format. • Example: -97.739734 30.27472</i> <p><i>note: Latitudes and Longitudes on the map are displayed in WGS 1984</i></p>
Identify general information about any location on the map		<p>Using the Identify Tool, click any position on the map to reveal basic location information: <i>Geology, Major Aquifer, Minor Aquifer, RWPA, GMA, GCD, River Basin, 7.5' USGS Grid, 2.5' State Grid, County, Latitude, Longitude, Land Elevation</i></p>

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Page 2 of 2

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How to...	Tool(s)	Steps
Select and Buffer		<p>Choose Select: <input type="button" value="Select"/> <input type="button" value="Buffer"/></p> <ul style="list-style-type: none"> Choose selection method  Make selection. Note: all selections are cumulative until 'Clear Selection' is pressed. <p>Choose Buffer: <input type="button" value="Select"/> <input type="button" value="Buffer"/></p> <ul style="list-style-type: none"> Set the Distance and Units or Latitude and Longitude point, then choose graphic selection method for the buffer.  <p><i>Warning: The selection return limit is 1000 records per select or buffer action.</i></p>
Export well information to CSV file format. (Microsoft Excel readable)	 → 	<p>Use the Selection Tool:</p> <ul style="list-style-type: none"> Select Wells Export from the Tool Window Export from the result table 
Print a map		<p>Using the Print Tool: <input type="button" value="Print Preview"/> → Download Map</p> <ul style="list-style-type: none"> Enter a map title Select page size;

User Guide: This document provides an overview of the Groundwater Data Viewer and highlights a few of the primary navigation and tool areas users will most likely want to interact with.

Table of Contents

SECTION 1. GENERAL INFORMATION..... 4

SECTION 2. GROUNDWATER DATA 5

SECTION 3. MAP LAYERS 6

SECTION 4. BASE MAPS 7

SECTION 5. GROUNDWATER FILTERS & LABELS 8

SECTION 6. GENERAL NAVIGATION 9

SECTION 7. TOOLS..... 10

7.1 Print Tool 10

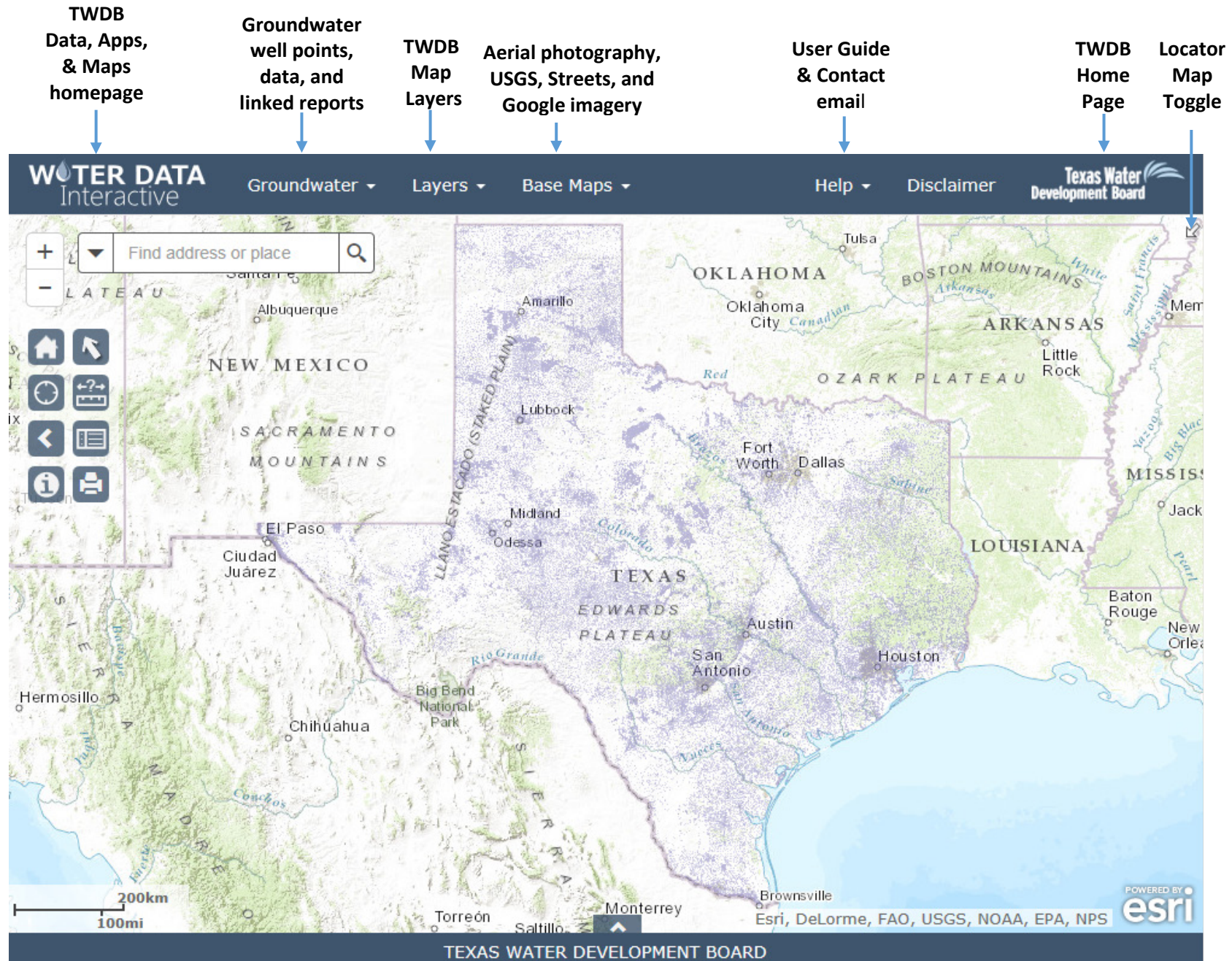
7.2 Identify Tool 10

7.3 Legend Tool..... 10

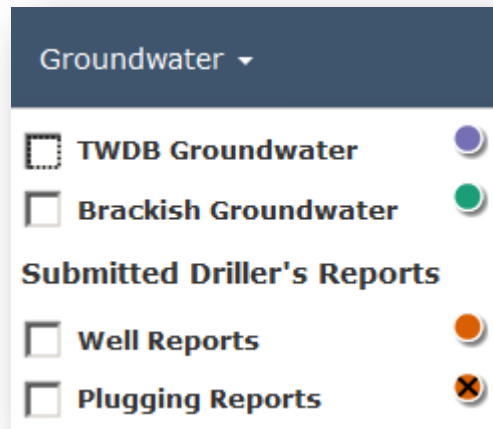
7.4 Measurement Tool 11

7.5 Select & Buffer Tool..... 12

Section 1. General Information



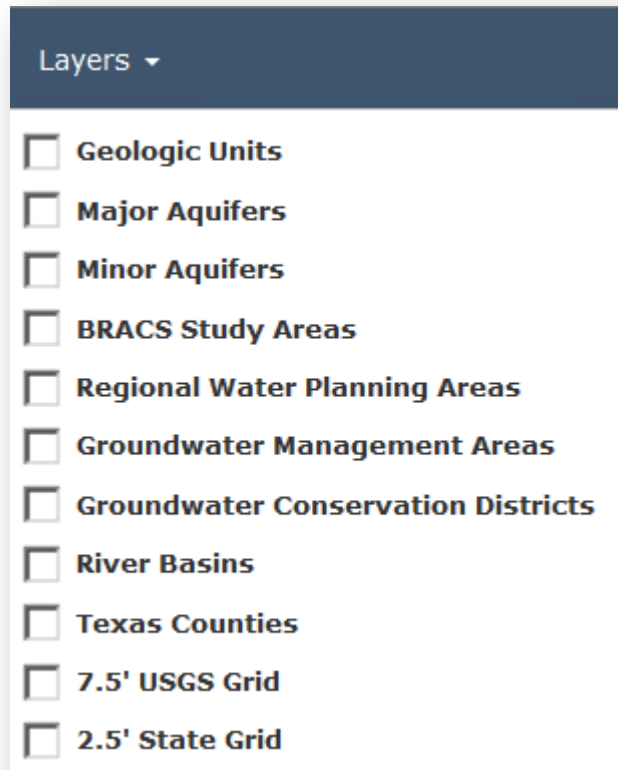
Section 2. Groundwater Data



Groundwater Data: *Coordinate system is WGS 1984*

TWDB Groundwater Data	Texas Water Development Board's (TWDB) Groundwater Database. This database contains information on selected water wells, springs, oil/gas tests, water levels and water quality.
Brackish Groundwater	The Brackish Resources Aquifer Characterization System (BRACS) Database stores well and geology information to help characterize the brackish groundwater resources of Texas. This database contains all types of wells (not just brackish water wells) including those in fresh water zones with linked geophysical well logs, aquifer test information, lithology and stratigraphic picks.
Well Reports	Texas Department of Licensing and Regulation's (TDLR) Submitted Driller's Report Database. This database contains water well reports submitted to TDLR from February 2001 to present.
Plugging Reports	Texas Department of Licensing and Regulation's (TDLR) Submitted Driller's Report Database. This database contains plugged water well reports submitted to TDLR from February 2001 to present.

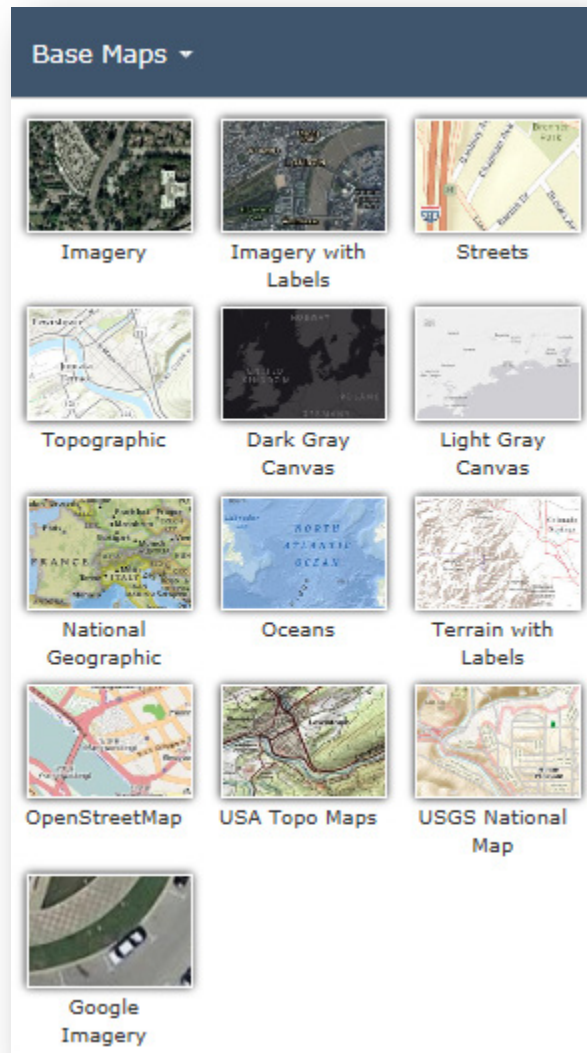
Section 3. Map Layers



Layers: *Coordinate system is WGS 1984 Web Mercator (auxiliary sphere)*

Geologic Units	The Geologic atlas of Texas (GAT). This data set was jointly created by USGS, TNRIS, and the Bureau of Economic Geology. The data includes rock units, members, and structures (faults).
Major Aquifers	The 9 major aquifers of Texas as defined by the TWDB, updated December 2006.
Minor Aquifers	The 21 minor aquifers of Texas as defined by the TWDB, updated December 2006.
BRACS Study Areas	TWDB's Brackish Resources Aquifer Characterization System (BRACS) designed to map and characterize the brackish aquifers of Texas in greater detail than previous studies.
Regional Water Planning Areas	The 16 Water Planning Regions in Texas, created by TWDB, updated November 2014.
Groundwater Management Areas	Groundwater Management Area Boundaries, created by TWDB
Groundwater Conservation Districts	Groundwater conservation districts in Texas. Original data is sourced from TCEQ.
River Basins	The 23 major USGS river basins of Texas
Texas Counties	Texas county boundaries
7.5' USGS Grid	The USGS 7.5-minute map series grid index. The index grid covers the geographic extent of USGS 1:24,000 topographic maps (7.5- by 7.5-minute quadrangles) for Texas.
2.5' State Grid	TWDB well location grid. 2.5 minute grid that covers the state of Texas; meant to be used in conjunction with the USGS and other products that display data based upon this type of grid.

Section 4. Base Maps



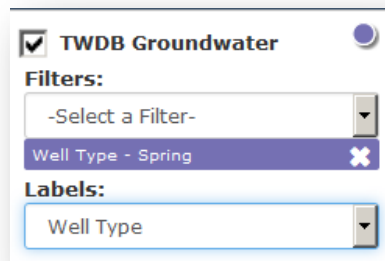
Base Maps: *Coordinate system is WGS 1984 Web Mercator (auxiliary sphere)*

Imagery	The World Imagery map is a detailed imagery map layer that is designed to be used as a basemap for various maps and applications.
Imagery with Labels	The World Imagery map is a detailed imagery map layer and labels that is designed to be used as a basemap for various maps and applications.
Streets	The Streets basemap presents a multiscale street map for the world.
Topographic	The Topographic map includes boundaries, cities, water features, physiographic features, parks, landmarks, transportation, and buildings.
Dark-Gray Canvas	The Dark Gray Canvas basemap is designed to be used as a soothing background map for overlaying and focus attention on other map layers.
Light Gray Canvas	The Light Gray Canvas basemap is designed to be used as a neutral background map for overlaying and emphasizing other map layers.
National-Geographic	The National Geographic basemap is designed to be used as a general reference map for informational and educational purposes.
Oceans	The Ocean Basemap is designed to be used as a basemap by marine GIS professionals and as a reference map by anyone interested in ocean data.
Terrain with Labels	The Terrain with Labels basemap is designed to be used to overlay and emphasize other thematic map layers.
Open Street Map	The OpenStreetMap is a community map layer that is designed to be used as a basemap for various maps and applications.
USA Topo Maps	The USA topographic map presents land cover and detailed topographic maps of the United States. The maps are seamless, scanned images of the USGS paper topographic maps.
USGS National Map	This Web Map combines the various base map services (Boundaries, Names, Transportation, Elevation, Hydrography, Land Cover and others) that make up The National Map planimetric base map.
Google Imagery	The Texas Google imagery service is high resolution imagery showing the entire state of Texas. The service provides continuous 6-inch natural color imagery for the entire state.

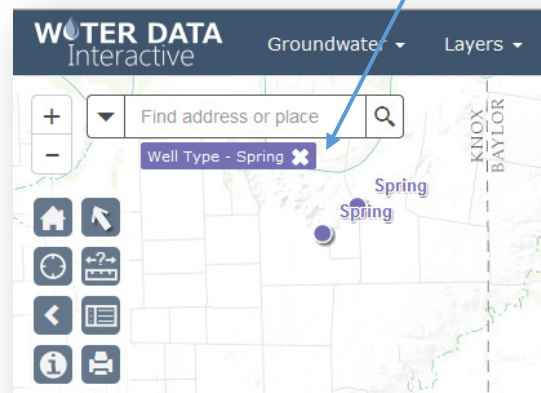
Section 5. Groundwater Filters & Labels

Groundwater Data Filtering and Labeling

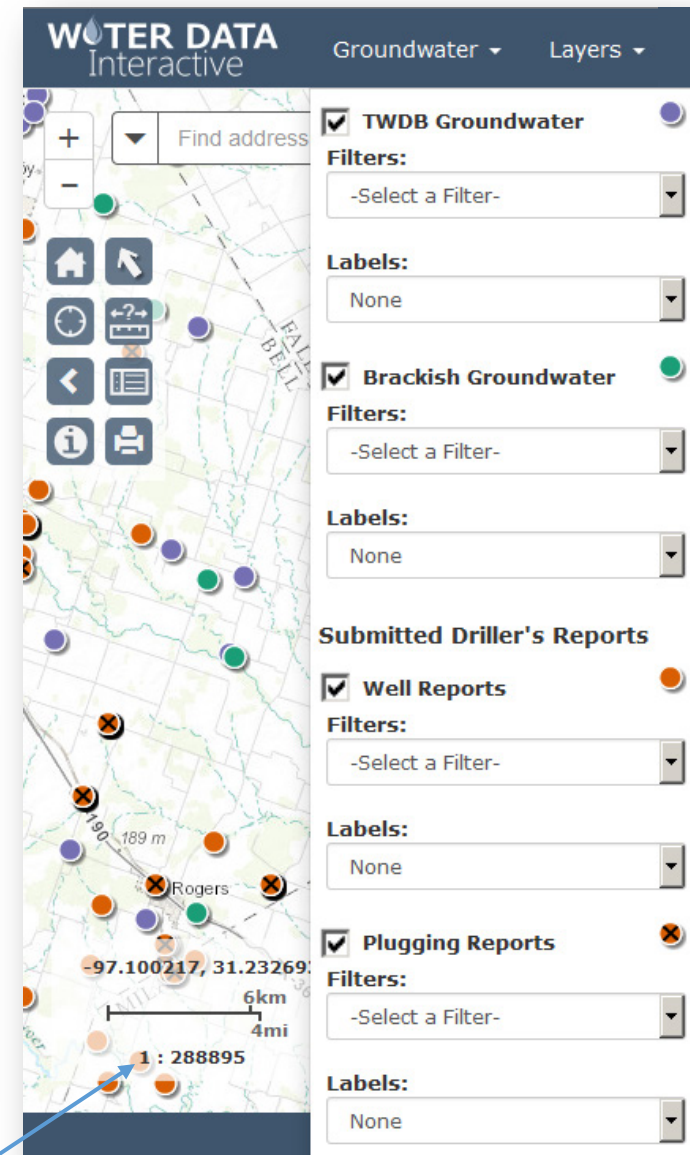
- Available at zoom level scale 1:288895 and closer, the Groundwater data points (TWDB Groundwater, Brackish Groundwater, Well Reports, and Plugging Reports) can be filtered on type, use, water level and quality availability. Multiple filters can be set simultaneously. Once a filter is set a tab appears that allows the user to keep the filter on or turn the filter off. (example below: filter type 'Spring' Label 'Well Type')



Filter 'on' indicator



Scale at 1:288895 or lower



Section 6. General Navigation

WATER DATA Interactive Groundwater Layers Help

Search by specific well, track, or grid number, address, county, location name, or Longitude Latitude coordinate (default search is 'All')

Zoom In/Out + -

Find address or place [Search Icon]

Default Extent [Home Icon] [Previous Extent Icon]

Find my location [Clock Icon] [Location Icon]

Previous extent [Previous Icon]

Identify any point on the map [Identify Icon]

TOOLS
All map tools have "tool tip" popup instructions for executing the tool. In addition to the tool tip, many tools include an expanded instruction window that can be minimized or maximized

All
Find address
TWDB Groundwater Database
Brackish Groundwater
Submitted Driller's Well Reports
Submitted Driller's Plugging Rep...
7.5' USGS Grid
2.5' State Grid
Counties

Locator Map Toggle

Hide Map Overview

-Longitude , Latitude (cursor location)
-97.850001, 34.768548

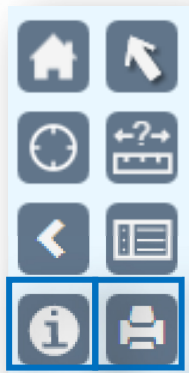
Map scale bar
200km
100mi
1 : 9244649

Ratio map scale

Selection Results

TEXAS WATER DEVELOPMENT BOARD

Esri, DeLorme, FAO, USGS, NOAA, EPA, NPS **esri** POWERED BY



Section 7. Tools

7.1 Print Tool

7.2 Identify Tool

7.3 Legend Tool

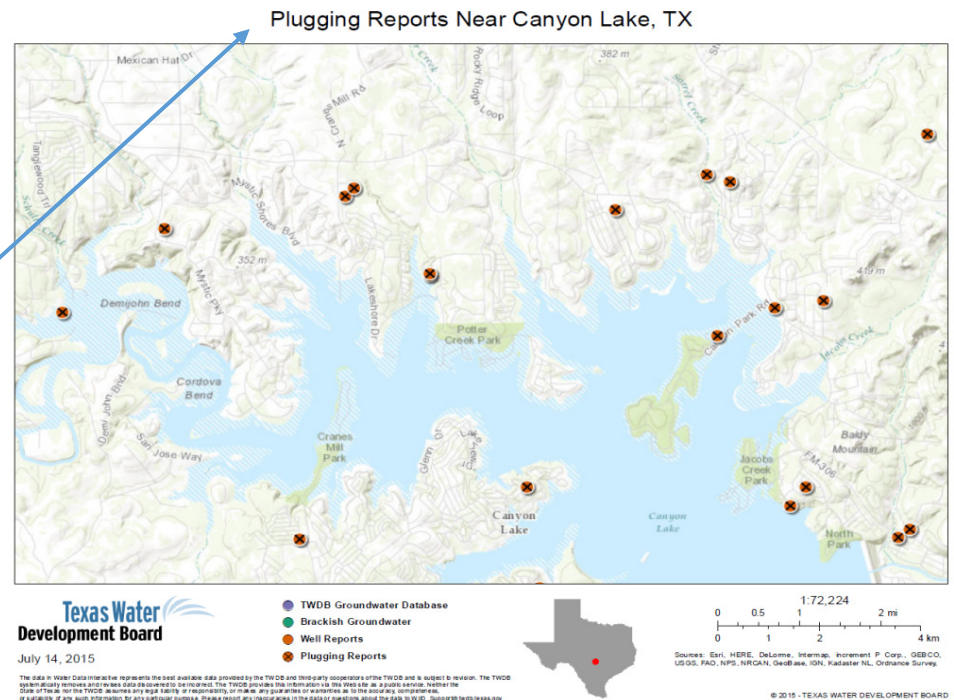
Print Tool

Print Tool

Center the map where you want the center of your print, enter a title in the textbox and choose a page size for your print using the drop down.

Print Preview ▾

- 1) Letter ANSI A Landscape
- 2) Letter ANSI A Portrait
- 3) Tabloid ANSI B Landscape
- 4) Tabloid ANSI B Portrait
- MAP_ONLY



Identify Tool

Identify Tool

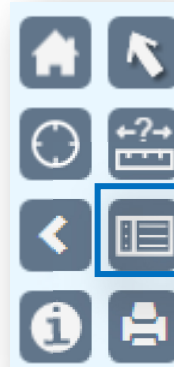
Click any position on the map to reveal attributes for a specific location.

Geology, Major and Minor Aquifers, Regional Water Planning Areas, Groundwater Management Areas, Groundwater Conservation Districts, River Basins, Counties, 7.5' United State Geological Survey Grid, 2.5' State Grid, Latitude, Longitude, and Land Elevation.

Click on Name to expand result information

Attributes

Rock Unit Name: [Smithwick Formation](#)
 Member Name: [sandstone](#)
 Fault Type: [Normal](#)
 Minor Aquifer: Hickory
 Minor Aquifer: Ellenburger-San Saba
 RWPA: Lower Colorado
 GMA: 8
 GCD: [Central Texas GCD](#)
 River Basin: Colorado
 7.5' USGS Grid: Mormon Mill (5723)
 2.5' State Grid: 57-23-7
 County: Burnet
 Latitude (DD): 30.634515
 Longitude (DD): -98.236616
 Land Elevation (ft): 896.1 (10m DEM)



Legend Tool

View a legend for the map

Legend

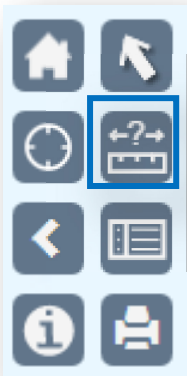
Brackish Groundwater




TWDB Groundwater






7.4 Measurement Tool




Measurement Tool

Expanded Instructions



Measurement Tool


Select the area, distance or location tool below.

For the area tool click points on the map to begin building the polygon you want to measure and then double click to close the polygon.


For the distance tool click points on the map to build line segments to measure and double click to complete the measurement. For the location tool click on the map to get coordinates for a particular location.



Area



Distance






XY Location



Measurement Result


Clear

Area: (select desired units, draw a free form polygon and view results)


Measurement Tool











Acres


Measurement Result

Clear


Measurement Tool




Sq Miles



Measurement Result



4.99 Sq Miles


Clear

Distance: (select units, "Miles" is default, click to add points and double click to finish and view the resulting distance)


Measurement Tool











Miles


Measurement Result

Clear


Measurement Tool




Feet



Measurement Result



1,124.4 Feet


Clear

XY Location: (select units, "Degrees" is default, click on the map and view the coordinates)


Measurement Tool











Degrees


Measurement Result

Clear


Measurement Tool








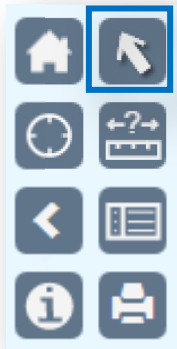
Degrees

Measurement Result

	Longitude	Latitude
	-98.435674	30.759337
	-98.483224	30.738904

Clear

7.5 Select & Buffer Tool



Select by:

point, rectangle, circle, triangle, polygon, freehand polygon

Select: select, view selected records and save results to csv file

*User can continue to select and add to the selection set until the “Clear Selection” button is pressed. Result summary and csv export available in the Selection Tool window.

data export
(csv file)

Zoom to record

Report Link

Data export, CSV file

Minimize/Maximize Selection result table

data export (csv file)

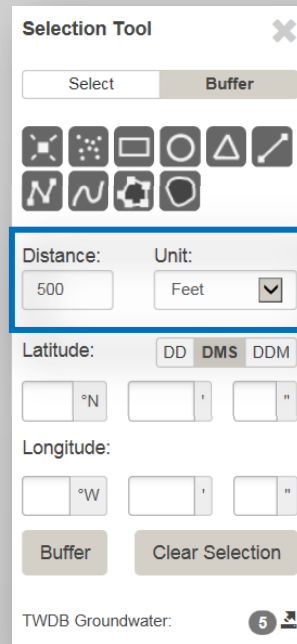
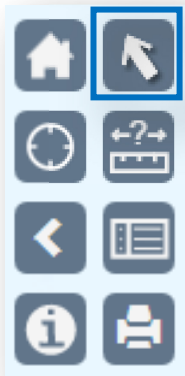
Selection Tool

Select Buffer

Clear Selection

TWDB Groundwater: 2
Brackish Groundwater: 0
Well Reports: 4
Plugging Reports: 6

State Well Number	Owner	Water Use	Elevation (ft)	Well Depth (ft)	Water Level Observation Type	Water Quality Available	Aquifer Code Name	Latitude	Longitude	County	Well Type
5843702	State of Texas	Unused	543	1554	Miscellaneous Measurements	Y	218GLRSL- Glen Rose Limestone, Lower Member	30.273888	-97.739999	Travis	Withdrawal of Water
5843707	State of Texas	Unused	545	471	None	N	218EDRDA- Edwards and Associated Limestones	30.274721	-97.739721	Travis	Withdrawal of Water



Set Distance and Units; Buffer by:

point,
multi-point,
rectangle,
circle,
triangle,
line segment,
multi-line segments,
freehand line,
polygon,
free hand polygon
Latitude & Longitude

To locate X, Y coordinates,

- 1. Buffer with no distance value**
- 2. Enter latitude/longitude**
- 3. Tool will zoom to and display location ‘+’**

