
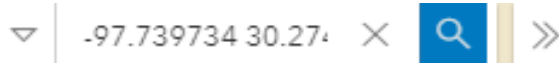

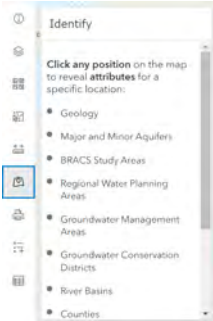
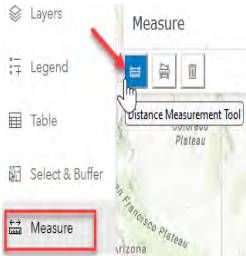


Quick Reference Guide

Water Data Interactive: Groundwater Data Viewer

Application Support Email: WDI-Support@twdb.texas.gov

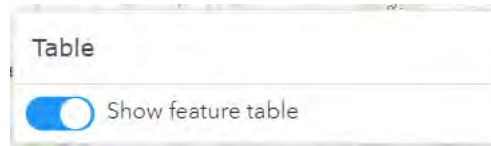
| How to... | Tool(s) | Steps |
|--|---|---|
| Find a well by State Well or Tracking number |  | <p>Click on the <u>Search Tool</u> (magnifying lens) and start typing a well number (Groundwater Well Number or Driller Tracking Number). Matching numbers will begin to appear; you can then select or continue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

How to...

Tool(s)

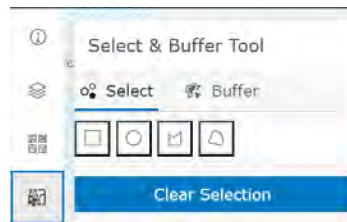
Steps

Show the Feature Table.

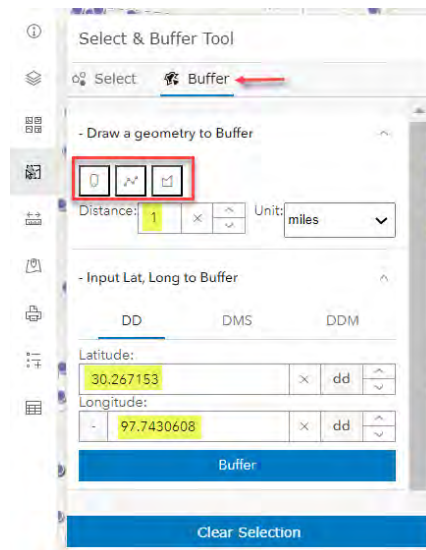


- Click on the Table button
- Click the Show Feature Table toggle
- Click the toggle again to hide

Select and Buffer





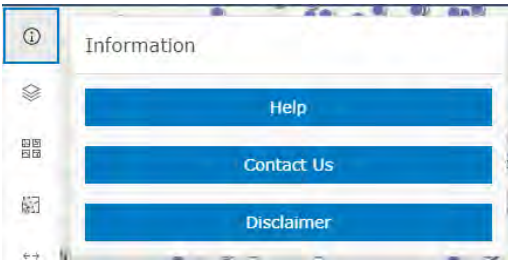


- Choose Select
- Choose a selection method
- Make selection on map



- Choose Buffer
- Set the buffer distance and unit of measure
- Choose geometry to buffer by, or
- Enter a latitude and longitude to buffer from and Buffer
- Click Clear Selection to clear all sites

Note: all selections are cumulative until 'Clear Selection' is pressed.

| How to... | Tool(s) | Steps |
|---|---|--|
| Export well information to CSV file format. (Microsoft Excel readable) |   | <p>Using the Select & Buffer Tool:</p> <ul style="list-style-type: none"> • Select wells • Export from the result table |
| Print a map |   <p>Exported files</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> untitled.png <input checked="" type="checkbox"/> untitled(1).png <input checked="" type="checkbox"/> User Guide.pdf | <p>Using the Print Tool:</p> <ul style="list-style-type: none"> • Enter a map title • Select page setup • Select more advanced options • Click Export • Click the title link to download the map |
| Get additional Help |  | <p>Click Information:</p> <ul style="list-style-type: none"> • Click Help for a User Guide • Contact Us to connect • Click for a Disclaimer |

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.

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Section 1. General Information

TWDB Data, Apps, & Maps homepage

TWDB Homepage

User Guide and Contact email

Groundwater well points, data, and reports. Plus TWDB map base layers

Aerial photography, USGS, Streets, and Google imagery

Water Data Interactive: Groundwater Data Viewer

Texas Water Development Board

Information

Layers

Basemaps

Select & Buffer

Measure

Identify

Print

Legend

Table

Map Scale - 1:9244648

Pointer - DMS: 30° 58' 0" N 90° 6' 8.79" W

DD: 30.974195 -90.102441

300 km

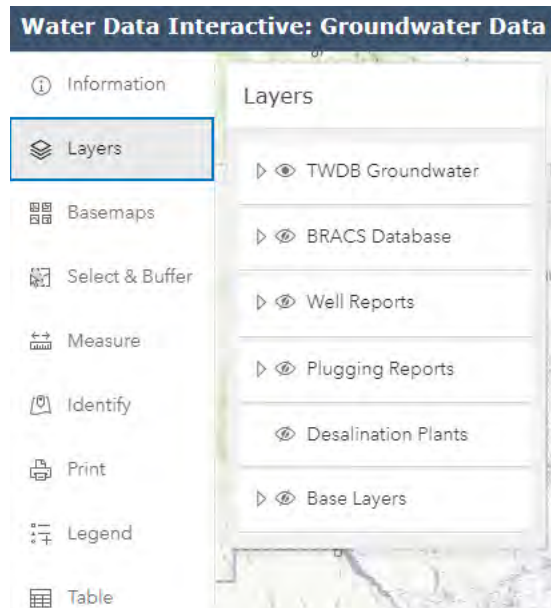
100 mi

México

Parks & Wildlife, CONANP, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA

Powered by I

Section 2. Groundwater Data

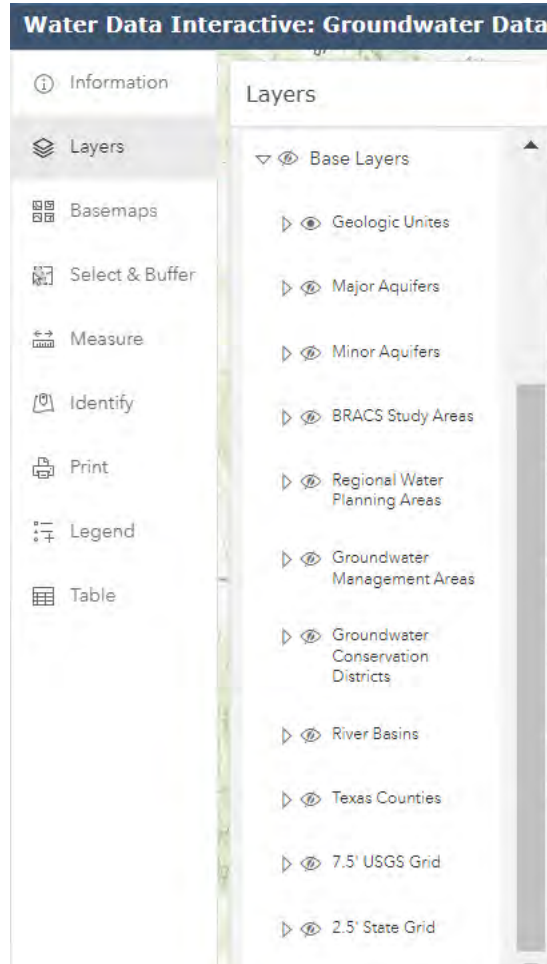


- Click the eye icon to show and hide a layer.

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

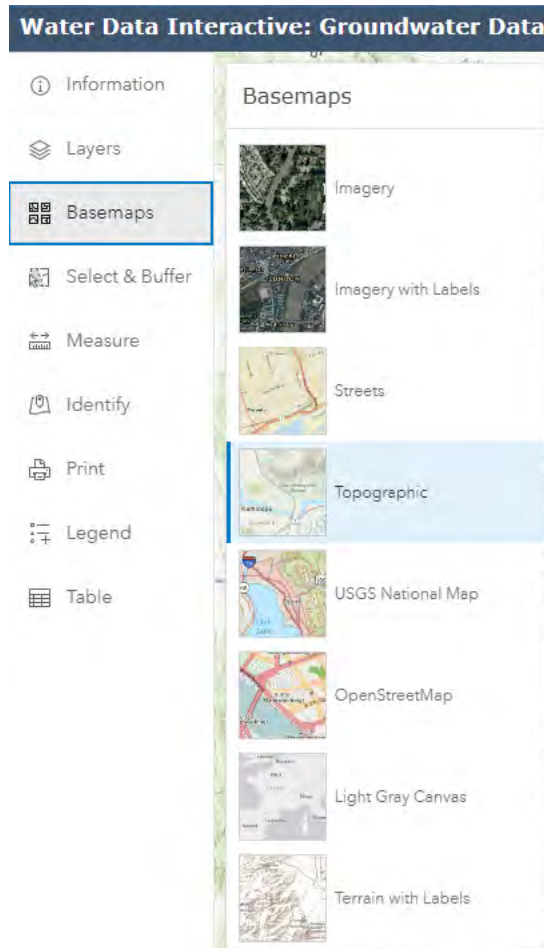


Layers: *Coordinate system is WGS 1984 Web Mercator (auxiliary sphere)*

| | |
|------------------------------------|---|
| Geologic Units | The Geologic atlas of Texas (GAT). This data set was jointly created by USGS, TNIRIS, 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)*

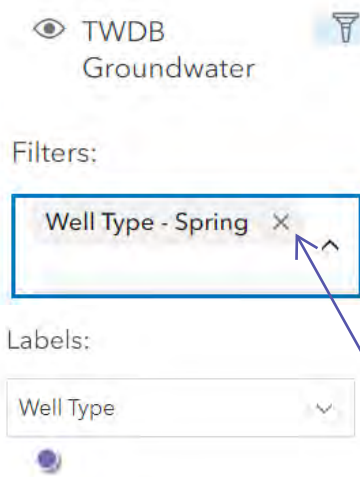


| | |
|-------------------------------------|--|
| Imagery | The Imagery map is a detailed image map layer designed to be used as a base map for various maps and applications. |
| Imagery with Labels | The Imagery with Labels map is a detailed image map layer that also includes labels to be used as a base map for various maps and applications. |
| Streets | The Streets base map presents a multiscale street map for the world. |
| Topographic | The Topographic map includes boundaries, cities, water features, physiographic features, parks, landmarks, transportation, and buildings. |
| USGS National Map | The USGS National Map combines the various base map services (Boundaries, Names, Transportation, Elevation, Hydrography, Land Cover and others.) |
| Open Street Map | The OpenStreetMap is a community map layer that is designed to be used as a basemap for various maps and applications. |
| 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. |
| Terrain with Labels | The Terrain with Labels basemap is designed to be used to overlay and emphasize other thematic map layers. |

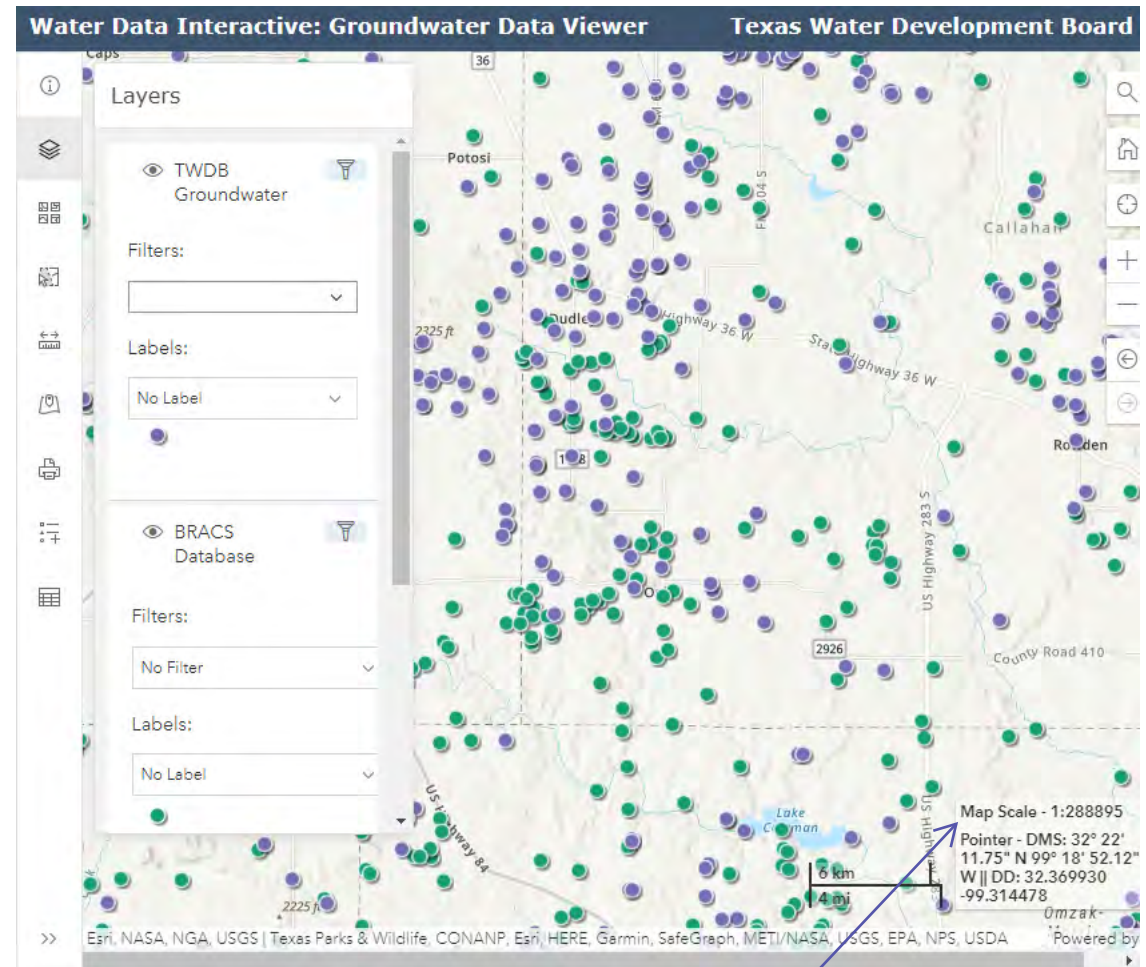
Section 5. Groundwater Filters & Labels

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 remove it. (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 Data Viewer **Texas Water Development Board**

Information →

Layers →

Basemaps →

TOOLS →

All map tools have a “tool tip” indicating its use. Each tool opens a popup that includes options to select when using the tool, and may include expanded instructions. Click the icon to open and close the tool.

Table (Selection results) →

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

Find address or place →

Collapse →

Default map view →

Find my location →

Zoom in →

Zoom out →

Previous extent →

Next extent →

Map Scale - 1:9244648 → **Ratio map scale**

Pointer - DMS: 36° 27' 44.17" N 96° 35' 43.3" W
|| DD: 36.462270 -96.595361 → **Longitude, Latitude (cursor location)**

300 km
100 mi → **Map scale bar**

Esri, USGS | Texas Parks & Wildlife, CONANP, Esri, HERE, Garmin, FAO, NOAA, USGS, EPA

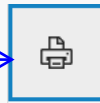
Powered by

Section 7. Tools

7.1 Print Tool

7.2 Identify Tool

7.3 Legend Tool



Print Tool

Center the map where you want the center of the print, enter a title, choose a page setup, choose a file format and click export.

Layout uses a template, and **Map only** is a screenshot.

Print

Export

Title

Title of file

Page setup

1) Letter ANSI A Landscape

File format

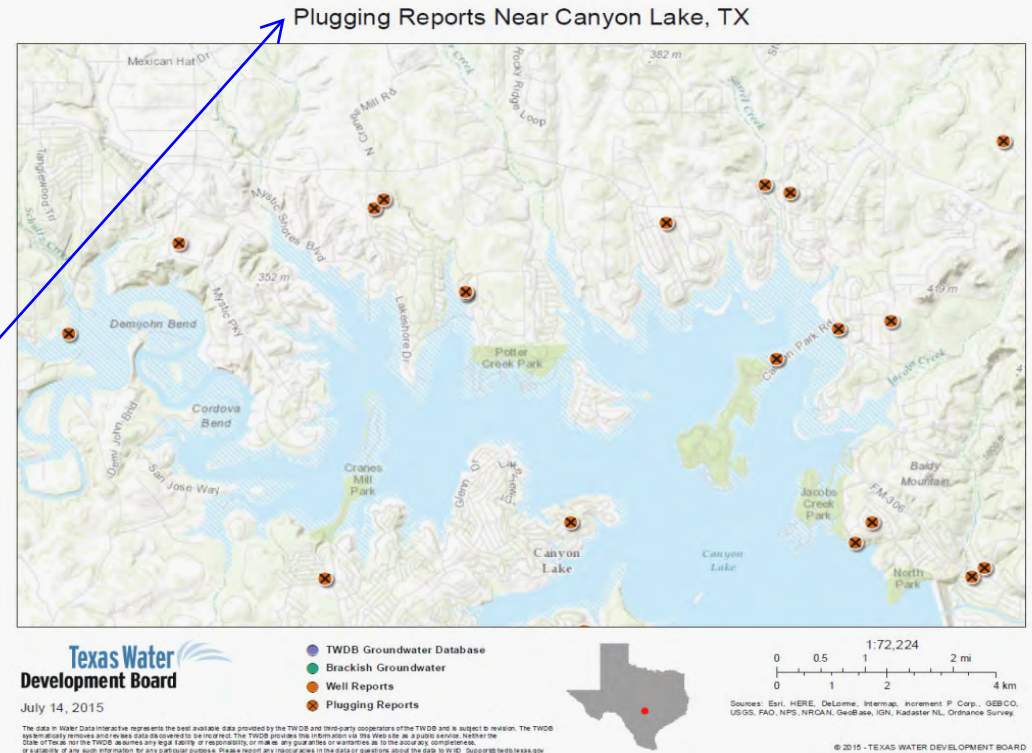
PNG8

Advanced options

Export

Exported files

Your exported files will appear here.



Identify Tool

Additional information may exist for some attributes and would follow with a blue background as shown.

Identify

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

Geology, Major and Minor Aquifers, BRACS Study Areas, Regional Water Planning Areas, Groundwater Conservation Districts, River Basins, Counties, 7.5' USGS Survey Grid, 2.5' State Grid, Latitude/Longitude, Land Elevation

Attributes of: [-98.314, 29.751]

Rock Unit Name: Edwards Limestone

Rock Unit Code: Ked

Sheet Name: San Antonio

Period: Cretaceous

Epoch or Series: Comanchean

Group Name: Fredericksburg Group

Description: includes Georgetown at top; fine to coarse grained, abundant chert, medium gray to grayish brown; fossils are rudistids as reefs and individuals, miliolids, and shell fragments; solution zones and

Zoom to

New Braunfels



Legend Tool

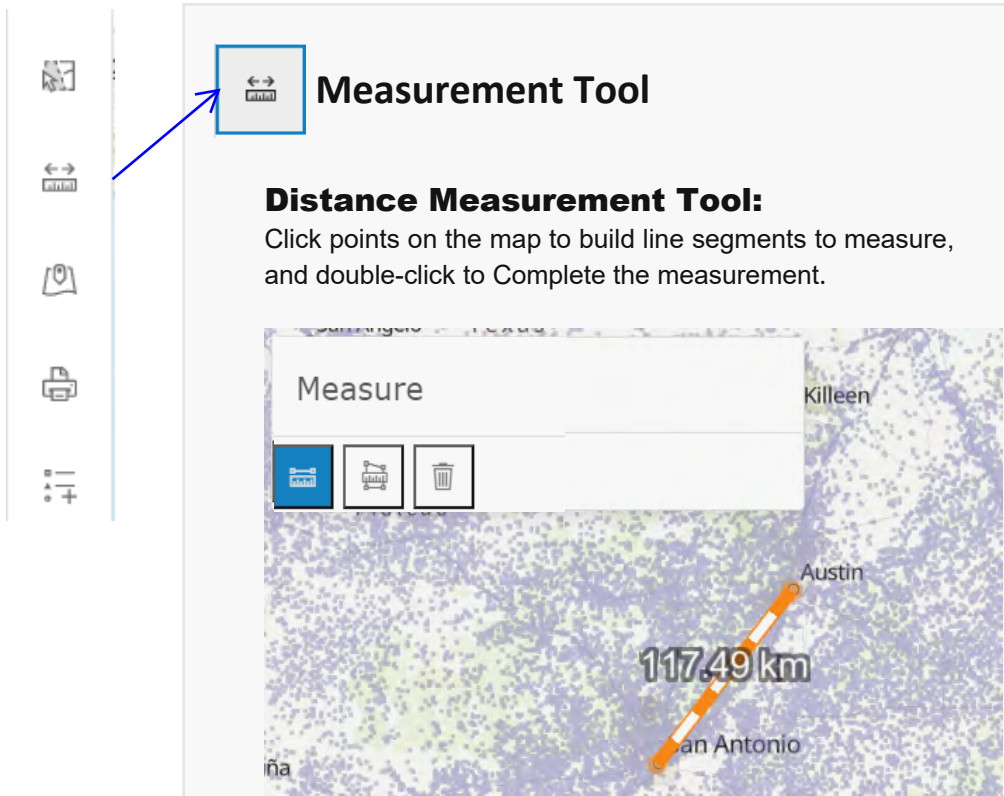
View a legend for the map

Legend

Well Reports

Plugging Reports

7.4 Measurement Tool

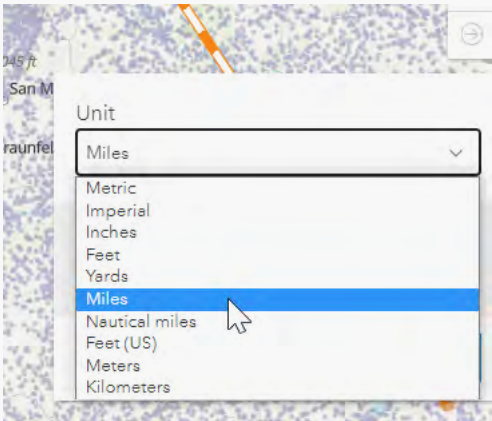


Measurement Tool

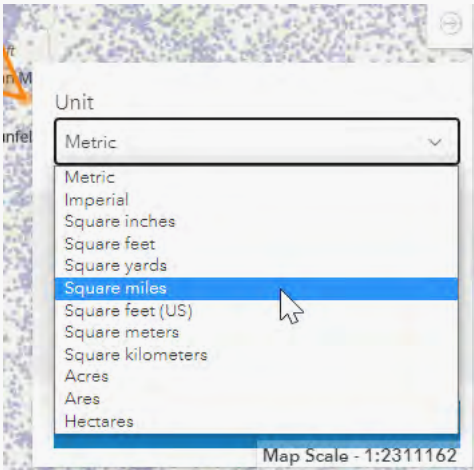
Distance Measurement Tool:
Click points on the map to build line segments to measure, and double-click to Complete the measurement.

Area Measurement Tool:
Click points on the map to begin building the polygon you want to measure, then double-click to close the polygon.

By default, the measuring units are in kilometers.
Once you begin to measure you can choose to change the units.



By default, the measuring units are in kilometers.
Once you begin to measure you can choose to change the units.



7.5 Select & Buffer Tool

Select

Select by:

Rectangle, circle, polygon, and
freehand polygon

Select:

Choose a select by method, view selected records in the table, and
save results to a CSV file.

Selections are cumulative. Each selection adds sites to your selection
set. Click "Clear Selection" to remove the selection set.

Show Table.

Water Data Interactive: Groundwater Data Viewer Texas Water Development Board

Select & Buffer Tool

Select Buffer

Clear Selection

Find address or place

Map Scale - 1:18055
Pointer - DMS: 30° 16'
6.74° N 97° 43' 18.76" W
DD: 30.268538
-97.721677

Esri, NASA, NGA, USGS, FEMA | Esri Community Maps Contributors, Austin Community College, City of Austin, Texas Parks & Wildlife, CONANP, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US C... Powered by Esri

TWDB Groundwater BRACS Database Well Reports Plugging Reports

TWDB Groundwater (Features: 10, Selected: 10)

| | State Well Number | Owner | Water Use | Elevation (ft) | Well Depth (ft) | Water Level |
|-------------------------------------|-------------------|-----------------|-----------|----------------|-----------------|----------------------------|
| <input checked="" type="checkbox"/> | 2111905 | Kenneth Carroll | Domestic | 1,465 | 17 | Miscellaneous Measurements |
| <input checked="" type="checkbox"/> | 2119104 | G. W. Hallis | Unused | 1,542 | 69 | Miscellaneous Measurements |
| <input checked="" type="checkbox"/> | 2111803 | Ellie Ranch | Stock | 1,480 | | Miscellaneous Measurements |

Export selection as CSV

Zoom to record:

Click the check box to select and zoom.

Export Selection:

- Use the grid export to export selection as CSV.
- Export applies to the current selected tab only.
- Export only applies to selected records (checked)

7.5 Select & Buffer Tool

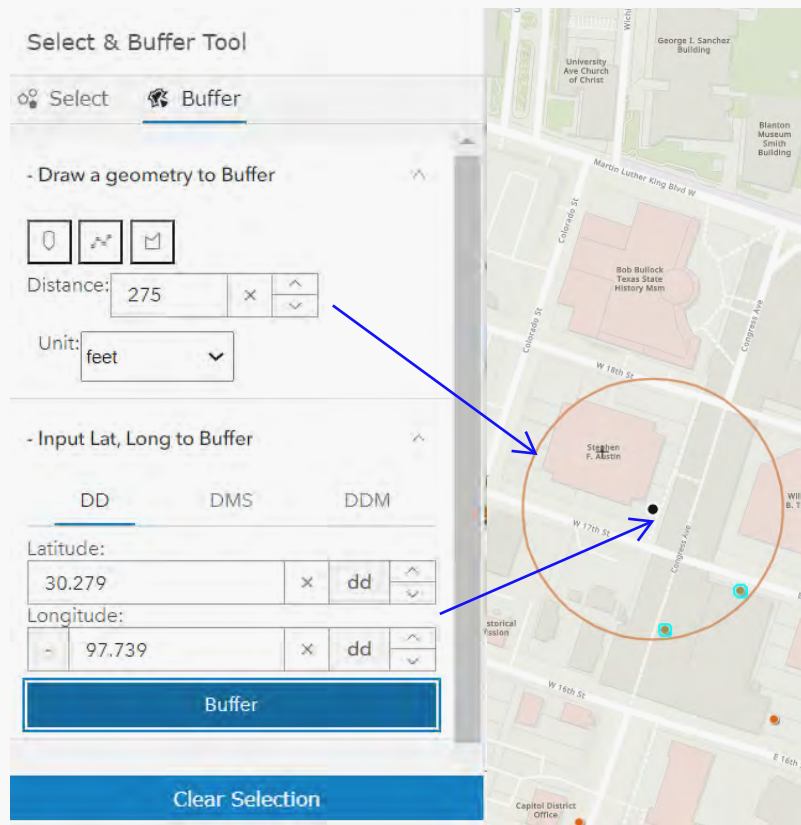


Buffer

Buffer by Geometry:

Choose point, line segment, or freehand polygon to select sites.

Selections are cumulative. Each selection adds sites to your selection set. Click "Clear Selection" to remove the selection set.



Buffer by Lat, Long:

Choose Decimal Degrees (DD), Degrees Minutes & Seconds (DMS), or Degrees Decimal Minutes (DDM), then enter latitude and longitude and click Buffer to select sites.

- Lat/Long input uses units and distance from geometry selection.
- Selections are cumulative.
- Click "Clear Selection" to remove the selection set.

