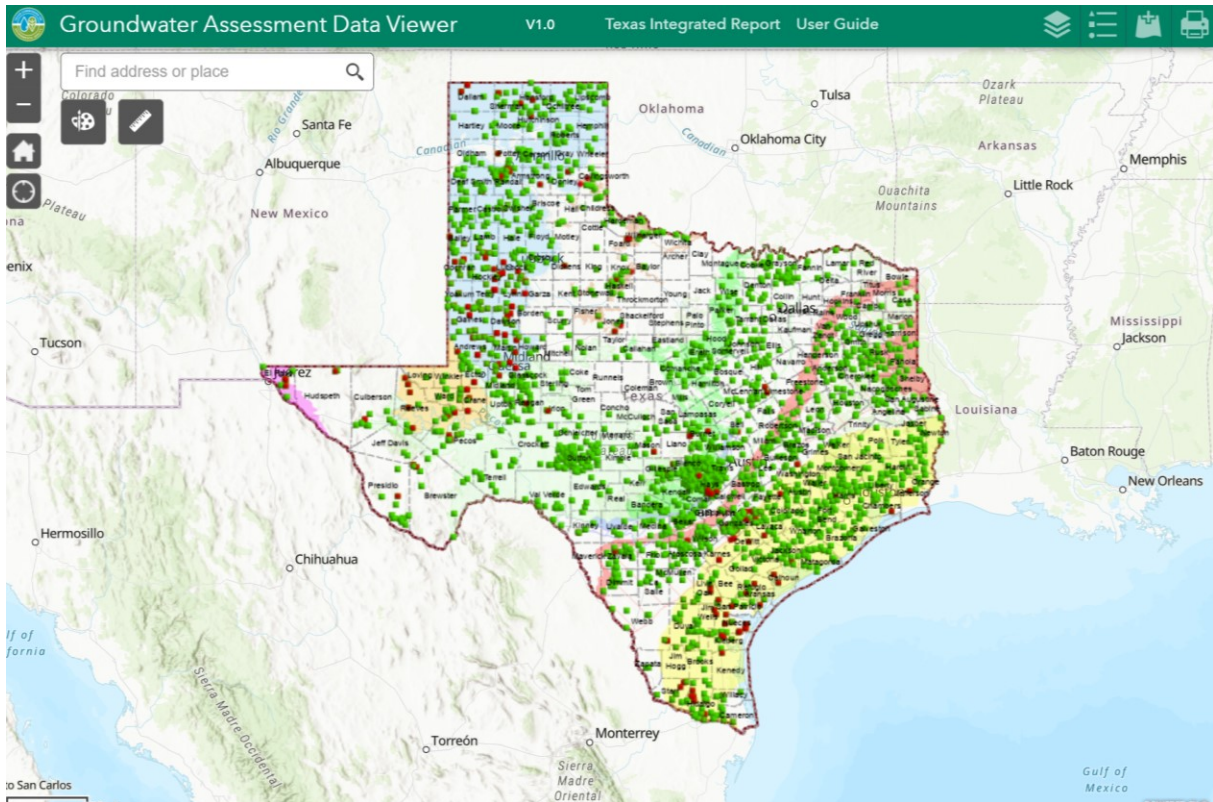


# Groundwater Assessment — Texas Integrated Report Data Viewer

## User Guide



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## Application Overview

This Web application was prepared by Texas Commission on Environmental Quality (TCEQ) under US EPA grant partnership, Section 305(b) reporting requirement of the Clean Water Act. In general, 305(b) reports describe the quality of surface waters and groundwater and existing programs to protect water quality. Section 305(b) of the Clean Water Act requires a biennial reporting of activities conducted for the program, including groundwater monitoring to protect sources of drinking water.

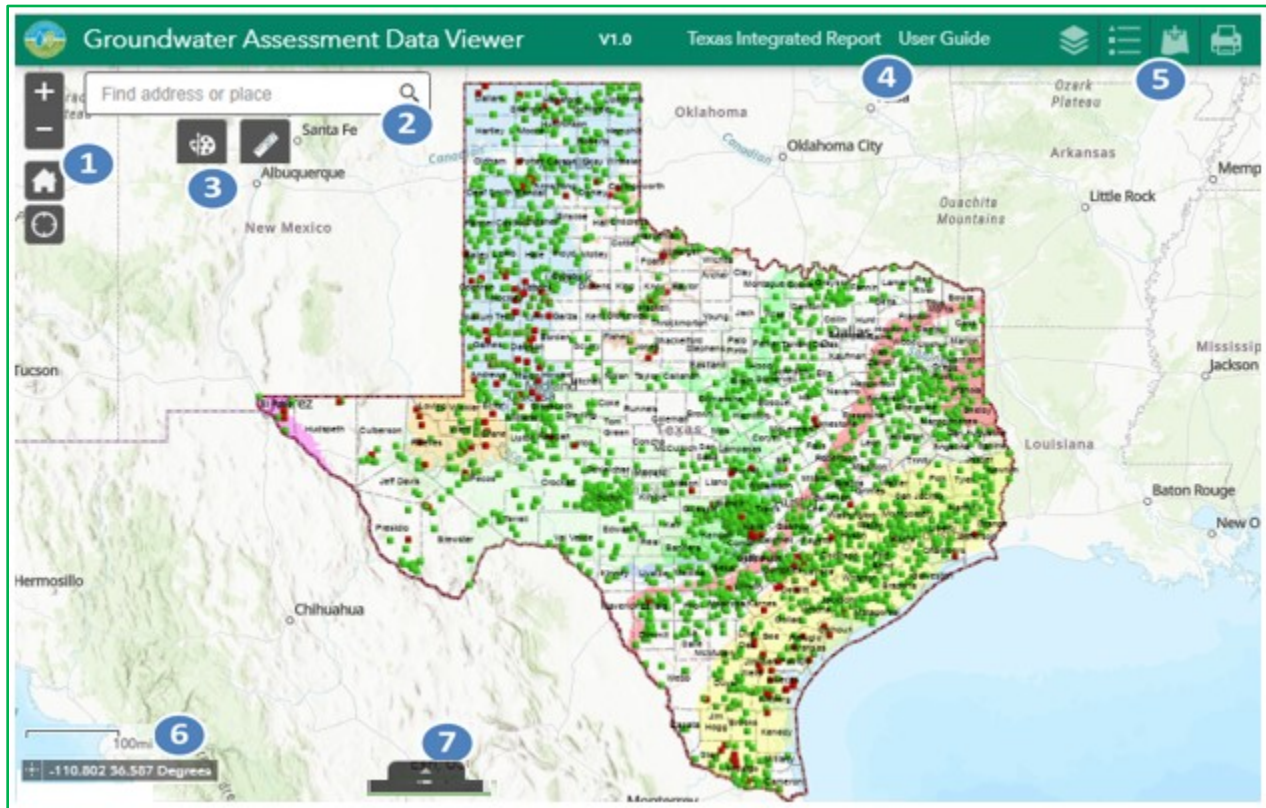
You may use this Web App Viewer to do the following:

- Search the location to find water wells monitoring and sampling taken for certain chemical constituents.
- Search to find information about the chemical of concerns in the aquifer regions.
- Print a custom map that shows groundwater monitoring in the local area.





For the 2022 report, TCEQ evaluated ambient groundwater data for Fiscal Year (FY) 2012 through FY2021 (September 1, 2011, through August 31, 2021) from the TWDB groundwater database. The Chemicals of Concern constituents were chosen from all the analyses conducted because they are listed in state rules related to drinking water standards: arsenic, barium, cadmium, chromium, copper, gloss alpha; iron, manganese, mercury, selenium, sulfate, chloride, nitrate-nitrogen, total dissolved solids and zinc.

In evaluating these constituents of interest, staff sorted the data and filtered the results to eliminate duplicate samples for any given well, giving a “snapshot” of the highest concentration value for each well that is available. The purpose for choosing the highest concentration at each sampled well during the ten-year period was to be conservative in estimating concentrations of constituents in each aquifer. Concentrations illustrated in previous reports may have changed at specific sampling sites since each report looks at the most recent ten-year period. For each constituent, results were evaluated to determine how many wells in each sampled aquifer were above an accepted regulatory value, typically the maximum contaminant level (MCL) for drinking water established by US EPA.

# Navigating Around the Map Viewer

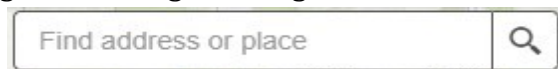


## 1- Interactive Location Tools:

-  **Zoom In** – This button provides interactive *zoom in* the map display. Hover over the icon and click to view increment details on the map.
-  **Zoom Out** – Click this button once or multiple times to zoom out at fixed increments.
-  **Home** – Click once to return to the default map extent.
-  **My Location** – Detects your physical location and zoom the map to it. The location can be highlighted if necessary.

## 2- Search Address Tool:

-  **Search Bar** – Type in an address or place into the bar to search for a location. The widget uses the geocoding service to match addresses or features names on the map.



If you see your desired location appear, simply click on it and the map will zoom to that location. Or you can complete typing in the location and then press Enter on the keyboard or click the magnifying glass. You can click the X on the bar to clear out the search bar.

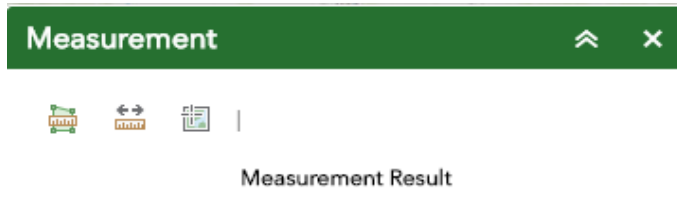
The following are examples of the types of searches you can perform.

- Addresses: [100 Congress Ave, Austin, TX, 78701](#)
- Local Places: Zilker Park
- Counties: Travis County



### 3- Analysis Tools:





**Draw** —Allows you to draw simple graphic and text on the map. You can use it to add circles, lines, polygon shapes, text or freehand polylines.



**Measurement** — Allows you to measure the area of a polygon or length of a line or find the coordinates of a point. The Measure window will appear as shown below.

- To close the window, click the  in the upper right-hand corner. To collapse the window, click the  just to the left of the close button.
- There are three different ways to measure features on the map:

 **Area** - Click this button, choose a unit of measure from the drop-down list, then single-click the first point of your polygon on the map. Continue to single-click until you have finished measuring your area feature. Double-click to end. Results will appear in the Measure window.

 **Distance** - Click this button, choose a unit of measure from the drop-down list, then single-click the first point of your line on the map. Continue to

single-click until you have finished measuring your linear feature. Double-click to end. Results will appear in the Measure window.



**Location** - Click this button, choose a unit of measure from the drop-down list, then click a point on the map then move the mouse across the map. Result will display the coordinates for both the green indicator and cursor.

## 4- TCEQ Useful links:

[Texas Integrated Report](#) [User Guide](#)

Click these hyperlinks to find GCD information and guide from TCEQ website.

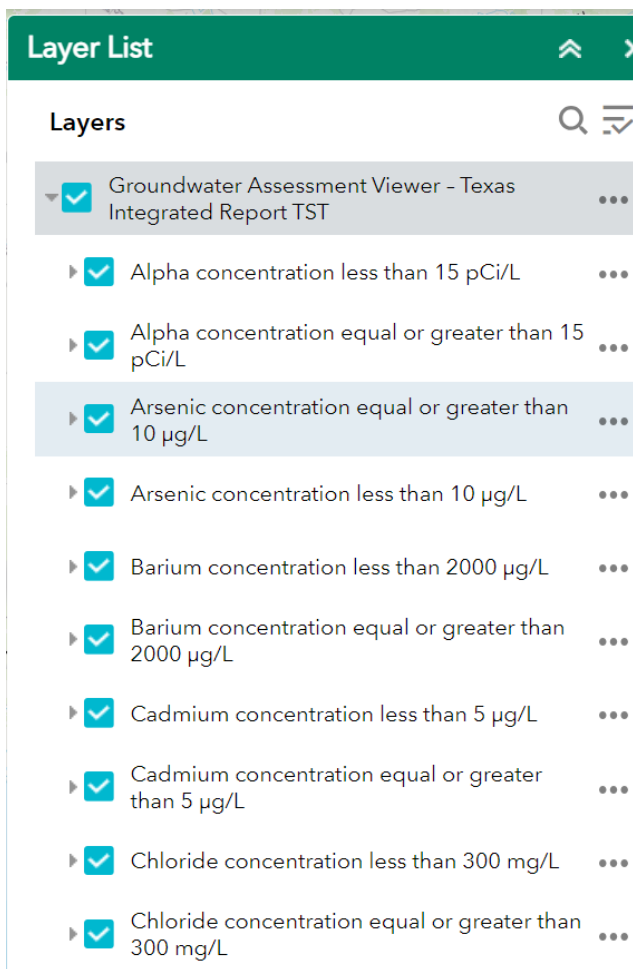
## 5- Main Toolbar:





The following tools display the map legend, layer and background images. It allows you to add data and to turn layers on and off.



**Legend** tool displays the symbology for layers in the map. The legend will only show those layers that are currently turned on using the layers tool.



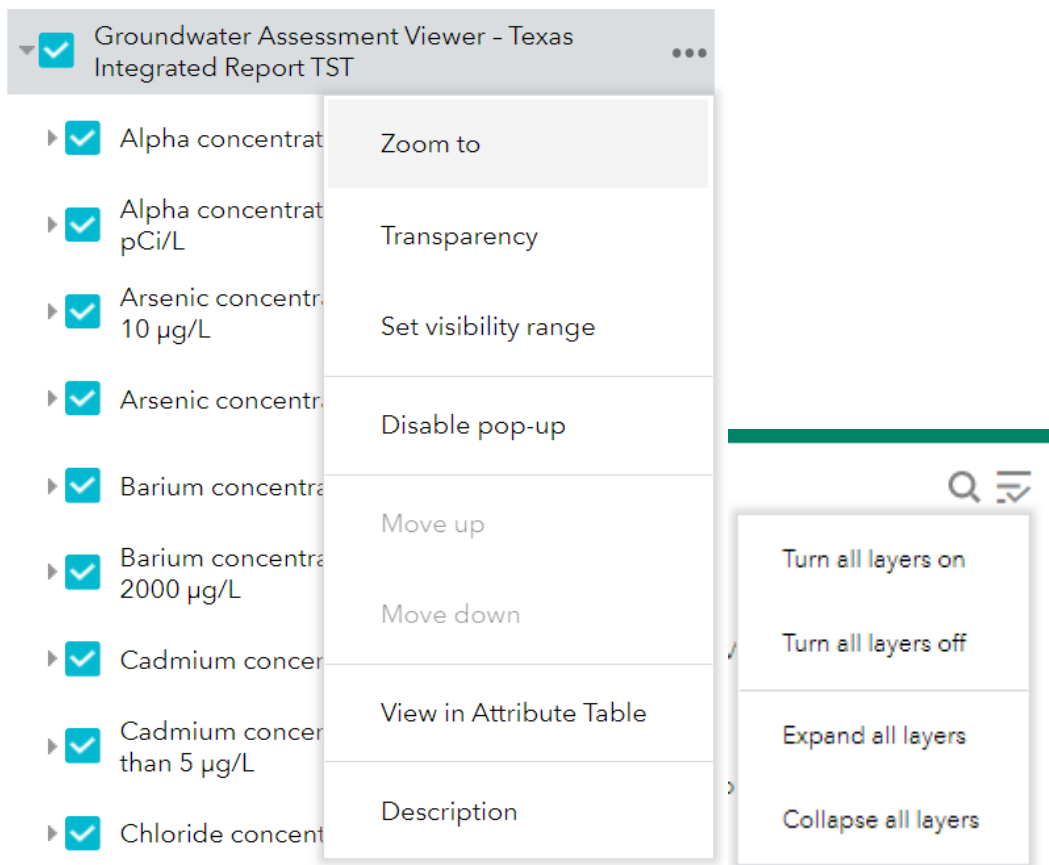
- To close the window, click the  in the upper right-hand corner. To collapse the window, click the  just to the left of the close button.



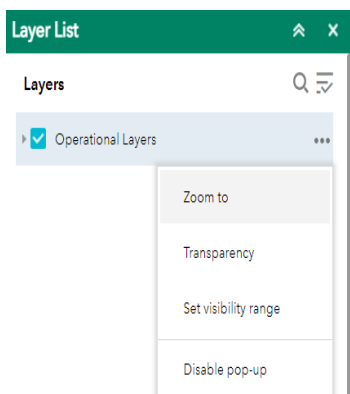
**Layers** tool provides a list of operational layer and their symbols and allows you to turn individual layers on and off. Each layer in the list has a check box that allows you to control its visibility.

Click the layer button to control the behavior of the layers in the list. You can turn the layers on or off and expand or collapse the layers.

Click the three dots to the right to expand the layer settings in the map.



Expand the layer by clicking the small arrow to the left of the check box. Optionally, check to **Expand all layers** by default check box. You can select following options to appear on the layer context menu:



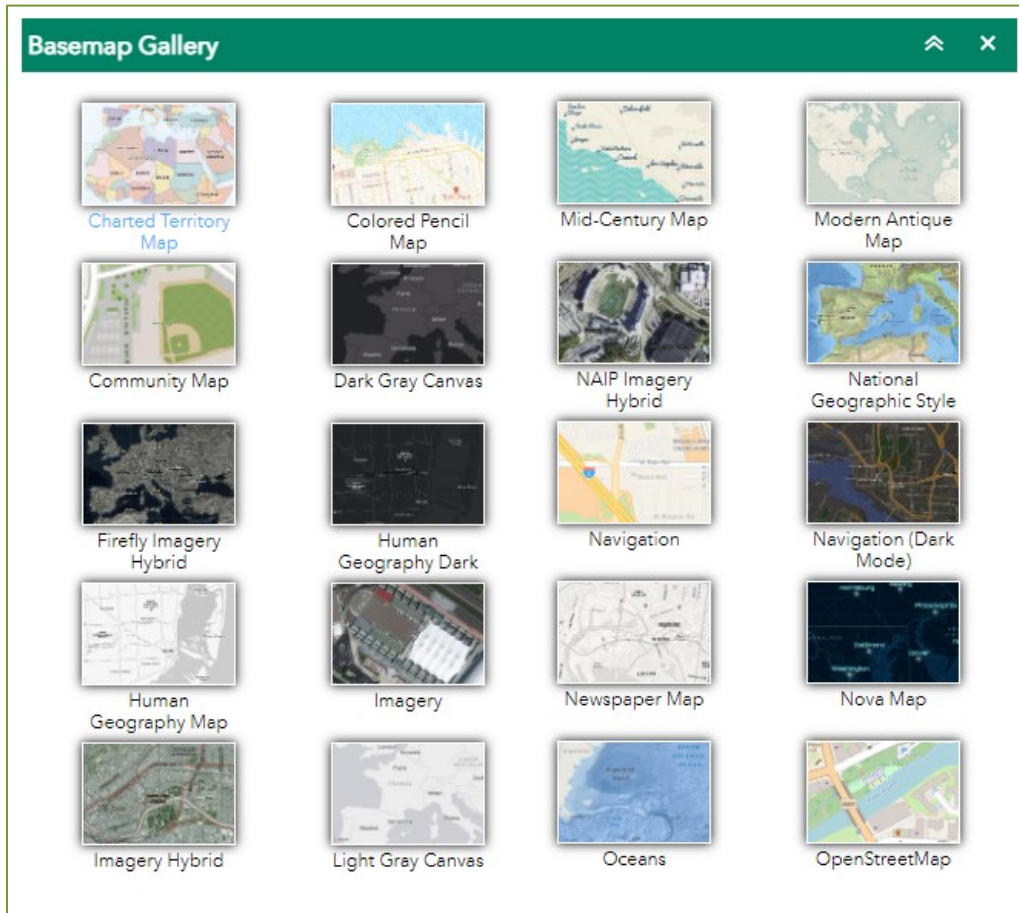
- **Zoom To**—Sets the map extent to the extent of the layer.
- **Transparency**—Sets the transparency for the layer.
- **Enable Pop-up/Remove Pop-up**—Enables or disables the pop-up for the feature layer. If a feature layer does not have a pop-up configured in the map, clicking Enable Pop-up shows all field values for the feature layer.
- **Open attribute table**—Opens the attribute table for the feature layer.
- **Description** —Opens the service description or the item details page for the service or the item associated with the layer if available.


Uncheck layers in the map that you don't want to show on the list.



## Basemap Gallery

- The **Basemap** tool allows you to select one from the gallery as the background image for your map. The topographic basemap is the default basemap.

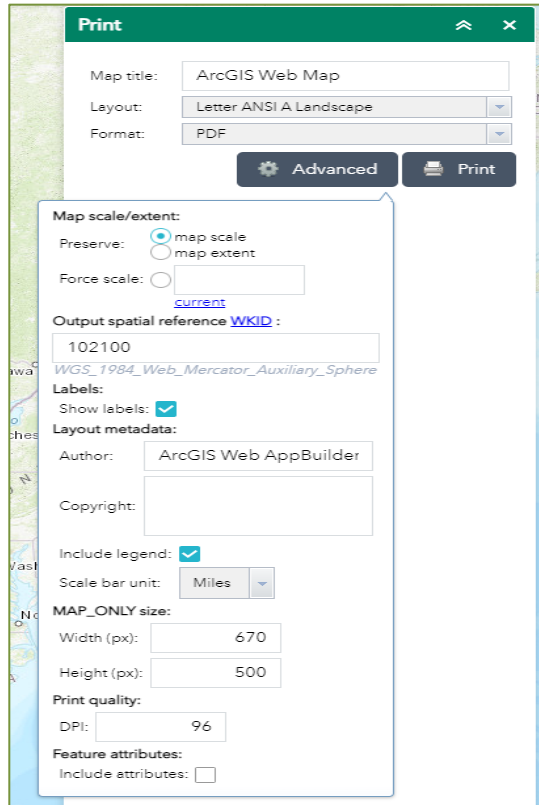


- You may choose from twelve different basemaps. Note: Some basemaps (such as Open Streetmap) may not visible when zoomed in too close.
- To close the window, click the in the upper right-hand corner.
- To collapse the window, click  the just to the left of the close button.



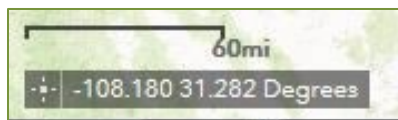



**Print** — This tool allows to create and print a copy of the map in PDF format or others an image (e.g. PGN, JPG, GIF , EPS, SVG AND SVGZ). Select the applicable Layout and Format for the exported map.



The default print settings contain the map title, author and scale. The default properties can be changed and submitted directly to the print service for display in the printed layout. You may enter a customized title, select a layout and size, and format. Advanced features include ability to set map scale, pixel dimensions, and graphic quality resolution.

## 6- Coordinate Indicator:




- Allows to display X and Y- coordinate values on the map. Click this cursor tool  then click anywhere on the map to obtain the coordinates in decimal degrees.
- The tool will also show the coordinates of your current mouse position over the map.

## 7- Attribute Table Display:



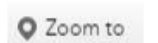
The Attribute Table button displays a tabular list of the layer’s attributes. It displays at the bottom at the bottom of the App and can be opened, resized and sorted out alphabetically.

State Well Number:	Parameter:	Value:	Units:	Aquifer:	LONGITUDE:	LATITUDE:
5839922	ZINC, DISSOLVED (UG/L AS ZN)	5.00	ug/L	Carrizo-Wilcox	-97.15	30.41
5839923	ZINC, DISSOLVED (UG/L AS ZN)	5.00	ug/L	Carrizo-Wilcox	-97.15	30.41
5840611	ZINC, DISSOLVED (UG/L AS ZN)	112.00	ug/L	Carrizo-Wilcox	-97.01	30.42
5764604	ZINC, DISSOLVED (UG/L AS ZN)	4.00	ug/L	Edwards-Balcones Fault Zone	-98.01	30.05
5764605	ZINC, DISSOLVED (UG/L AS ZN)	4.00	ug/L	Edwards-Balcones Fault Zone	-98.03	30.05

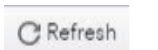
You can use this tool to select one or multiple attributes to be included in the tabular view. Hoover over the tabular list and click to select, copy or create a QR bar code for this app. You can also show or hide columns by clicking the + icon  in the top right portion of the Attribute Table.



**Options** – use the Options drop down menu to filter attributes, show and hide columns



**Zoom To** – after selecting a unique row in the table, click this button to zoom to its location.



**Refresh** – click this button to reload the attribute table.

## Contact Us

TCEQ Water Availability Division, Groundwater Planning and Assessment Team. If you have questions regarding this Web App, please email us [gpat@tceq.texas.gov](mailto:gpat@tceq.texas.gov) or contact via phone (512) 239-4600.

<https://www.tceq.texas.gov/waterquality/assessment>

<https://www.tceq.texas.gov/> help search keyword: “305(b) Groundwater”