

USGS NWISWeb Services (publicly accessible data source)

Site Service

IV Service

Stats Service

THE CWIS SYSTEM

TX-WSC CWIS Database (not publicly accessible)

Site Table

IV Table

Stats Table

Stored Procedure

Single dynamic SQL query handles all data requests

Usage Logging

CWIS task requests latest NWISWeb data each minute for all available sites in the Nation and keeps a current snapshot of real-time site info and current values (multiple parameter codes). Previous values are kept to compute rates of change. Separate task periodically refreshes period-of-record statistics for classifying current conditions.

TX-WSC Webserver (publicly accessible)

CWIS Data Service

RESTful service returning geojson or direct webmap outputs matching request parameters

CWIS JavaScript API

User-friendly interface to Data Service for easily adding auto-refreshing CWIS data layers to webmaps

TX-WSC Application:

FindMyGage

TX-WSC Application:

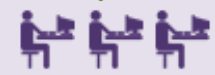
TX Water Dashboard

More TX-WSC applications using CWIS coming soon...

CWIS Data Service uses CWIS API for webmap output. Webmap output can be used in webpage iFrame for extremely lightweight use of CWIS.

Applications can employ CWIS either by using the Data Service (direct data stream), or by using the API (interface into the Data Service).

For example, FindMyGage accesses CWIS data directly through the Data Service, while the TX Water Dashboard uses the API.



Clients accessing CWIS Data Service directly (**geojson** or **webmap** format)

USGS Web Applications (non-TX-WSC)

Non-USGS Web Applications (general public)

CWIS Data Service and API are freely open to both the USGS and the general public to use in their own applications



Clients using TX-WSC application that uses CWIS API:
Texas Water Dashboard



Clients using TX-WSC application that uses CWIS Data Service:
FindMyGage



Clients using **USGS (non-TX-WSC)** applications that use CWIS

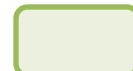


Clients using **non-USGS** applications that use CWIS

EXPLANATION:



Non-public resource



Public resource



Secure 1-way data transfer



Public 1-way data transfer



Secure 2-way data transfer (request-response)



Public 2-way data transfer (request-response)



Application using CWIS



End-point consumers of CWIS data