

# CALCULATOR FOR LOW FLOWS (CALF)

HEFR Workshop

University of Texas at Austin

Center for Research in Water Resources

Brief introduction to CaLF and background of HIS and EFIS.

Clark Siler, 10 Jun 2010

# Outline



- Background
  - CUAHSI HIS
  - TxHIS
  - EFIS
- CaLF
  - Demo

# Background – CUAHSI HIS



- HIS: Hydrologic Information System
- Internet-based system for sharing hydrologic data
- Databases and servers, connected through web services
- Allows for the publication, discovery and access of data
  
- Example

<http://his.cuahsi.org/>





## National Water Information System: Web Interface

[USGS Water Resources](#)

Data Category:  Geographic Area:

[News](#) - updated March 17, 2010

# USGS 08192000 Nueces Rv bl Uvalde, TX

## PROVISIONAL DATA SUBJECT TO REVISION

Available data for this site

Funding for this site is provided by the cooperators / programs below:



Edwards Aquifer Authority



Cooperative Water Program

### Rainfall Disclaimer



Advanced Hydrologic  
Prediction Service

[Retransmission, forecasts and summary by the National Weather Service](#)

This station managed by the San Antonio Field Unit.

| Available Parameters  | Period of Record      | Output format                          | Begin date                              | End date                                |                                   |
|---|-----------------------|--|---|---|-----------------------------------|
| <input type="checkbox"/> All 2 Available Parameters for this site |                       | <input type="radio"/> Graph            | <input type="text" value="1940-01-01"/> |   | <input type="button" value="GO"/> |
| <input checked="" type="checkbox"/> 00060 Discharge (Mean)        | 1939-04-05 2010-06-09 | <input type="radio"/> Graph w/ stats   |   | <input type="text" value="2009-12-31"/> |                                   |
| <input type="checkbox"/> 00065 Gage height (Mean)                 | 1991-10-01 2010-06-09 | <input type="radio"/> Graph w/ meas    |   |   |                                   |
|   |                       | <input checked="" type="radio"/> Table |   |   |                                   |
|   |                       | <input type="radio"/> Tab-separated    |   |   |                                   |

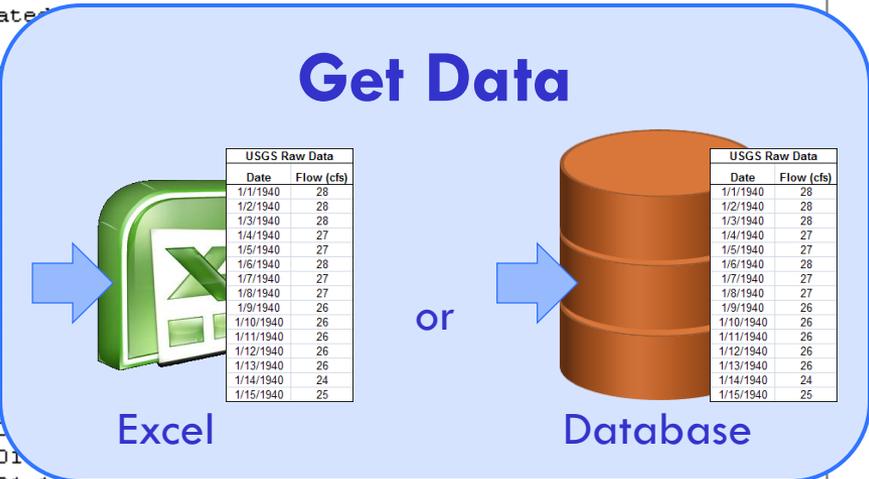
[Summary of all available data for this site](#)

# Table

| Date       | Discharge, ft <sup>3</sup> /s (Mean) |
|------------|--------------------------------------|
| 01/01/1940 | 28 A                                 |
| 01/02/1940 | 28 A                                 |
| 01/03/1940 | 28 A                                 |
| 01/04/1940 | 27 A                                 |
| 01/05/1940 | 27 A                                 |
| 01/06/1940 | 28 A                                 |
| 01/07/1940 | 27 A                                 |
| 01/08/1940 | 27 A                                 |
| 01/09/1940 | 26 A                                 |
| 01/10/1940 | 26 A                                 |
| 01/11/1940 | 26 A                                 |
| 01/12/1940 | 26 A                                 |
| 01/13/1940 | 26 A                                 |
| 01/14/1940 | 24 A                                 |
| 01/15/1940 | 25 A                                 |

# Tab-separated

```
# ----- WARNING -----
# The data you have obtained from this automated U.S. Geological Survey database
# have not received Director's approval and as such are provisional and subject to
# revision. The data are released on the condition that neither the USGS nor the
# United States Government may be held liable for any damages resulting from its use.
# Additional info: http://waterdata.usgs.gov/tx/nwis/help/?provisional
#
# File-format description: http://waterdata.usgs.gov/nwis/?tab_delimited_format_info
# Automated-retrieval info: http://waterdata.usgs.gov/nwis/?automated_retrieval_info
#
# Contact: gs-w_support_nwisweb@usgs.gov
# retrieved: 2010-06-10 07:27:50 EDT
#
# Data for the following site(s) are contained in this file
# USGS 08192000 Nueces Rv bl Uvalde, TX
# -----
#
# Data provided for site 08192000
# DD parameter statistic Description
# 01 00060 00003 Discharge, cubic feet per second (Mean)
#
# Data-value qualification codes included in this output:
# A Approved for publication -- Processing and review completed.
# e Value has been estimated
#
agency_cd site_no datet
5s 15s 16d 14n
USGS 08192000 1940-
USGS 08192000 1940-01-
USGS 08192000 1940-01-14
USGS 08192000 1940-01-15
```



# Background - TxHIS



- HIS for Texas
- Under development by TWDB
- *Update?*



# Background – EFIS



- EFIS: Environmental Flows Information System (for Texas)
- Data model, data repository, and relevant tools

## □ Four disciplines:

- Hydrology
- Biology
- Water Quality
- Geomorphology

## □ Five information types:

- Observations Data
- Documents
- Geographic (GIS) Data
- Tables
- Tools

<http://efis.crwr.utexas.edu/>



# Calculator for Low Flows (CaLF)



- CaLF is one of the tools available from EFIS
- Use CaLF to:
  - Parameterize environmental analyses
  - Download USGS daily streamflow data
  - Calculate the 7Q2 flow value
  - Calculate and plot flow duration curve
  - Calculate Lyons' method values
- Demo:

<http://efis.crwr.utexas.edu/>



# Personal Information



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