**Test Stations**

1. **Keeley Creek Above Mouth Near Babbitt, MN – 05125039**

* Download: 2010/01/01, 2023/01/01, Sep, Oct, Jul, Aug, Nov

1. **Marengo River at Four Corners Road Near Mason, WI – 040265935**

* Download: 2010/01/01, 2023/01/01, Sep, Oct, Jul, Aug, Nov >>>>> Noadata
* Download: 2023/11/01, 2025/01/01, Sep, Oct, Jul, Aug, Nov

1. **Red River of the North at Fargo, ND – 05054000**

* Download: 2011/11/02, 2025/01/01, Sep, Oct, Jul, Aug, Nov >>>>> Takes 30 seconds >>> Use the date picker

1. **Mississippi River at St. Paul, MN – 05331000**

* 2008/11/14, 2015/01/07, Sep, Oct, Jul, Aug, Nov – No streamflow
* 2020/01/01, 2025/01/01, All – Needs further check

1. **San Marcos River at San Marcos, TX – 08170500**

* Download: 2011/11/10, 2025/01/01, Sep, Oct, Jul, Aug, Nov

|  |  |  |
| --- | --- | --- |
| **Test Step** | **Description** | **Expected Outcome** |
| **Download Test** | Use each gage number, set date range, and select months | CSV files created in the correct output folder |
| **Peak Detection** | Enter prominence value and run | Peaks\_\*.csv created, peaks look reasonable |
| **Manual Filtering** | Try modifying peak indices | Peaks file updates and analysis continues |
| **Storm Hydrograph** | Process events and adjust window sliders | Plotly charts appear, data makes sense |
| **Gaussian Smoothing** | Apply different sigma values | Smooth plot rendered; see updated NSE/peak diff |
| **Save Results** | Save smoothed file and generate DUH | CSV saved; DUH shape looks as expected |
| **Interpolate and Aggregate DUHs** | Run final step to create normalized hydrograph | overall\_duh.csv created, chart shown |
| **Error Handling** | Try incorrect inputs, empty fields | Streamlit shows clear error or warning |