

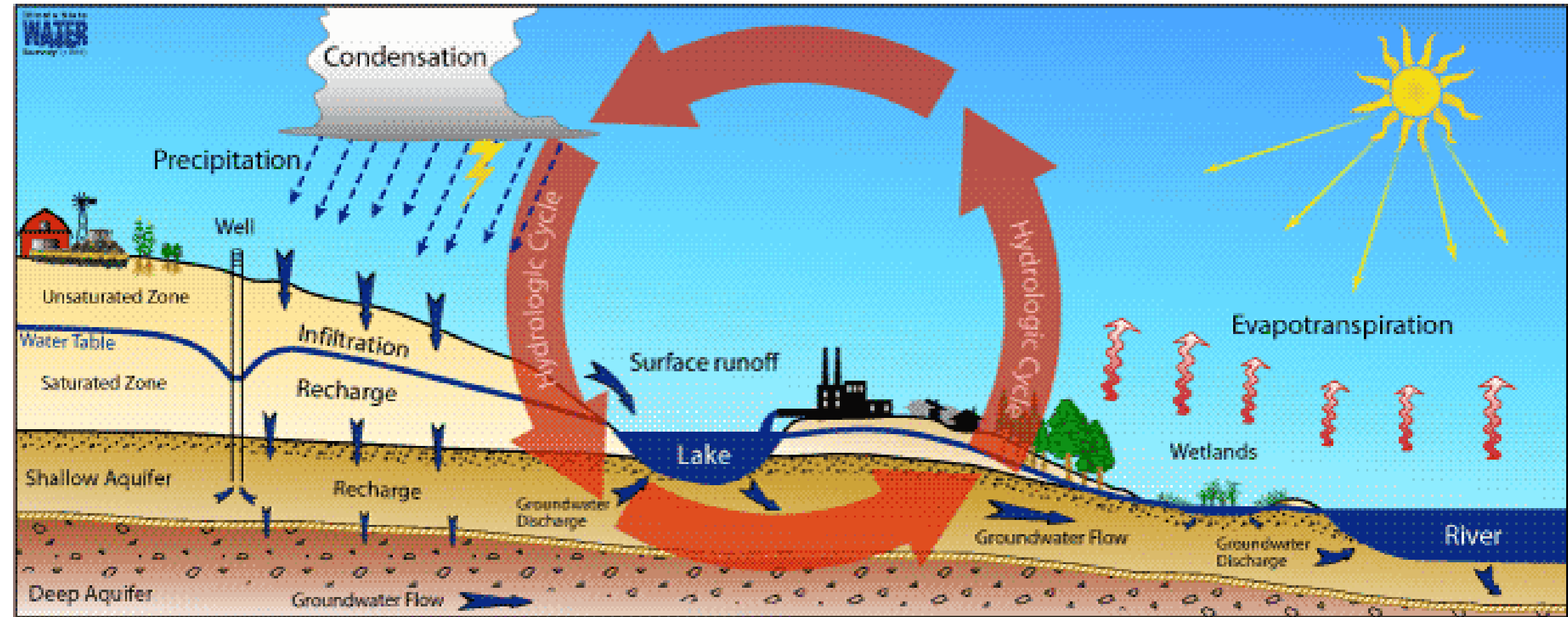
Hydrology and Hydrologic Analysis

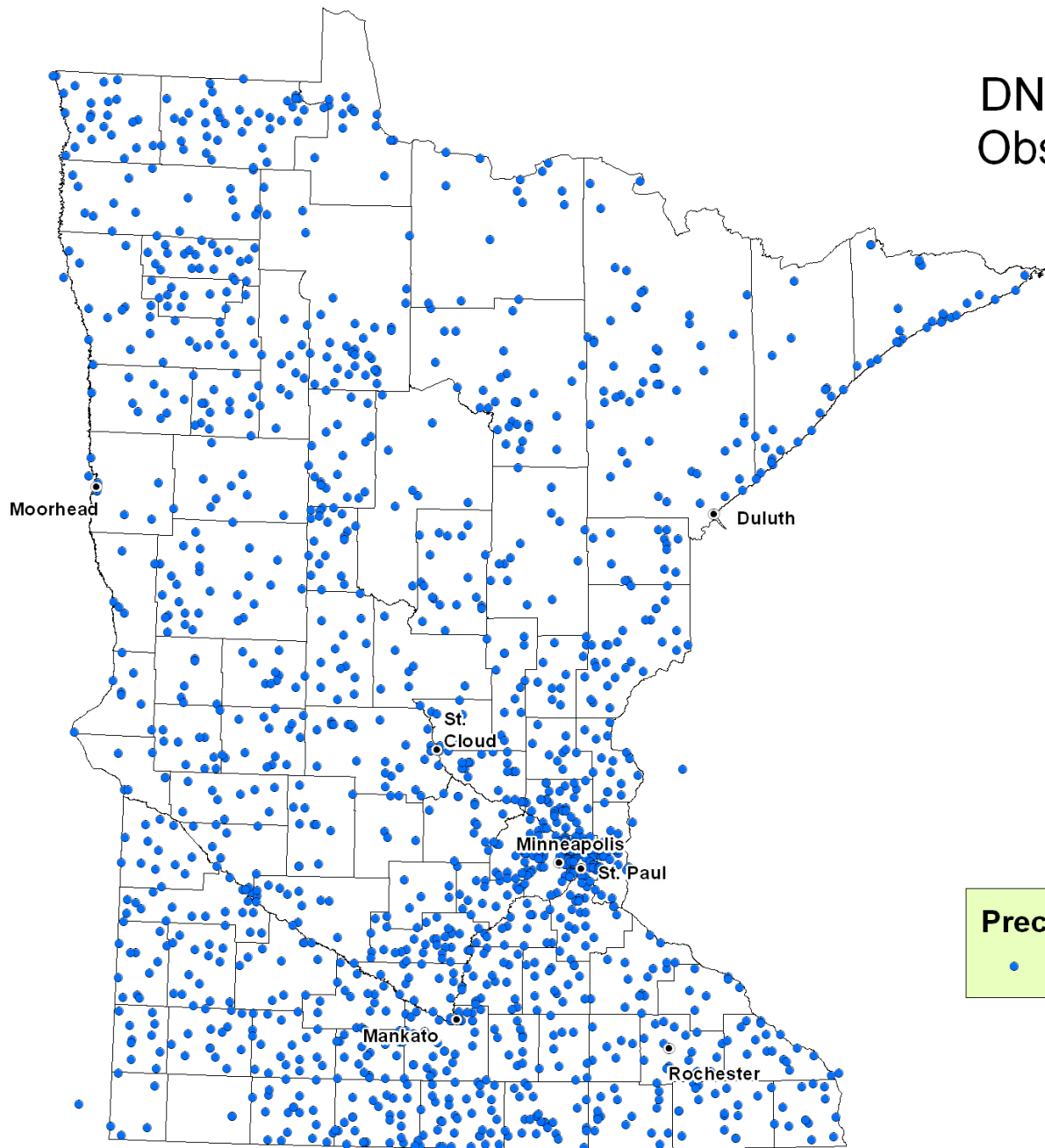
Greg Kruse

Water Monitoring and Surveys Unit



Hydrologic Cycle





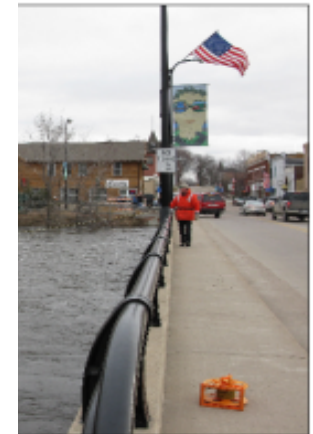
DNR Precipitation Observer Network

Precipitation Observer Network

- reporting locations from July 2011



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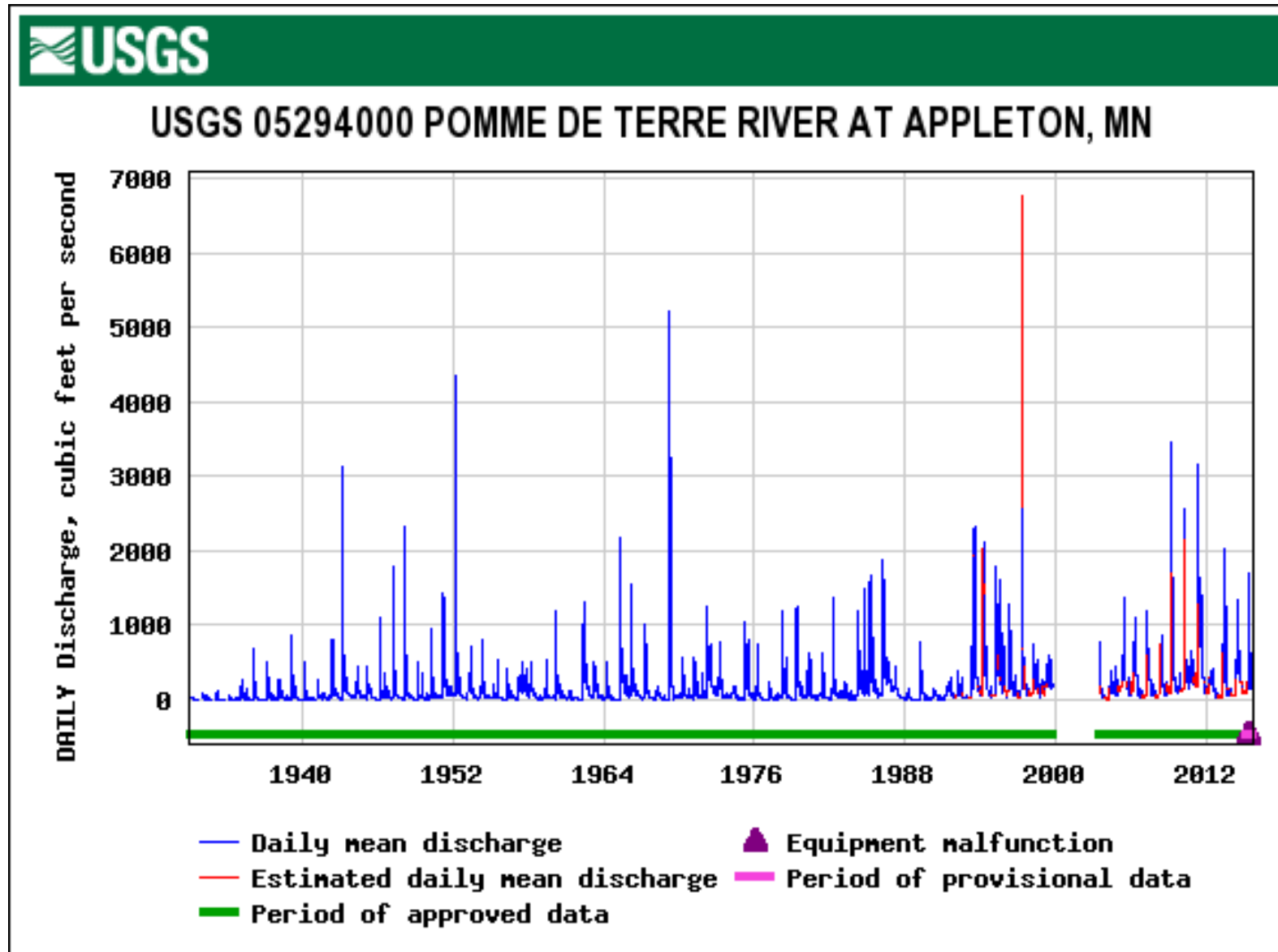
live-feed data (125)
etered data (109)
additions for 2014 (17)

- Mississippi River Basin
- Missouri River Basin
- Colorado River Basin
- Pacific Headwaters
- Superior/Great Lakes Basin
- Yukon River Basin



Period of Record Hydrograph

April 1931-September 2015



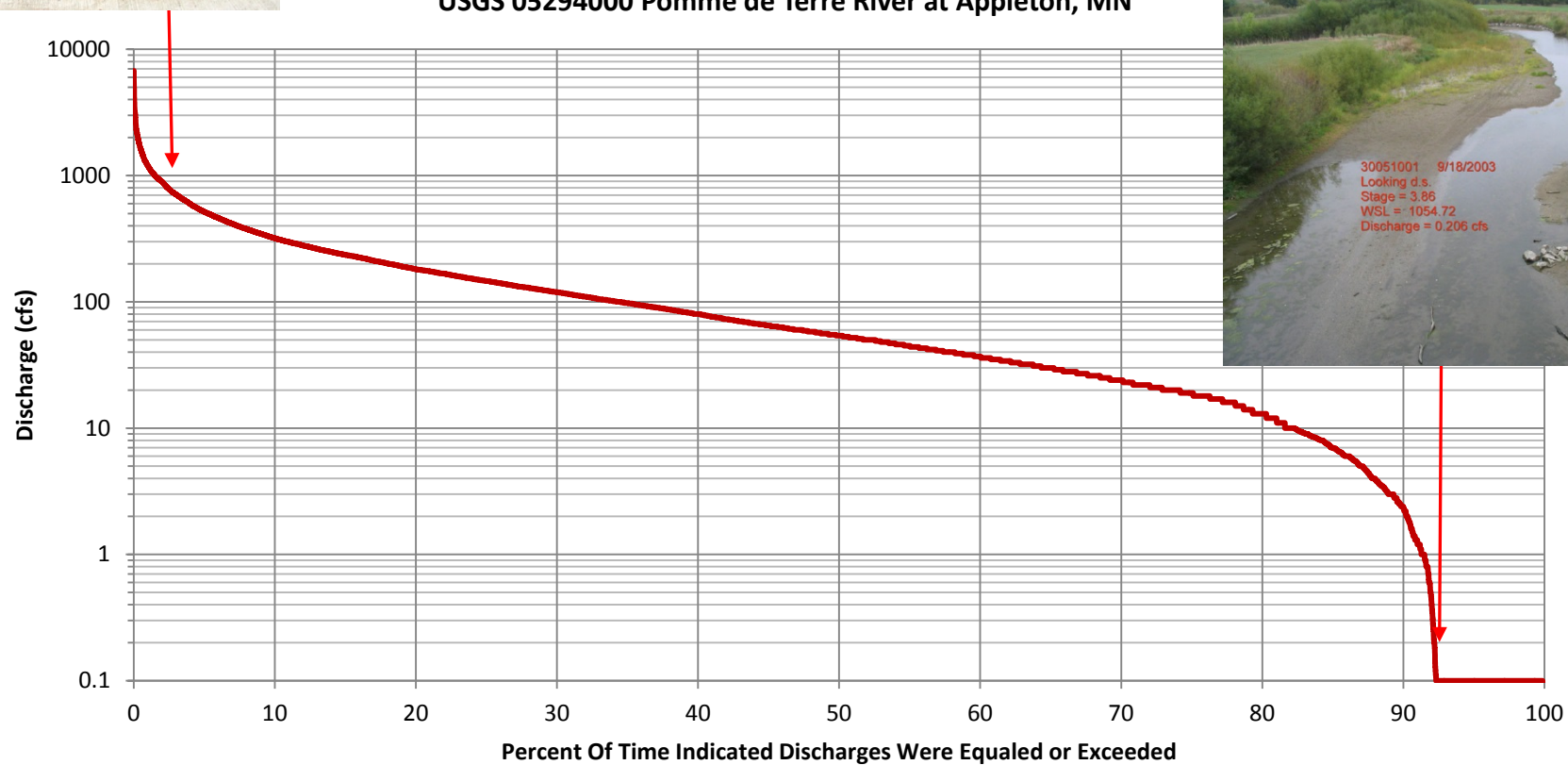


30051001
Looking D.S. 1
09-15-04
Stage = 1050.33
Q = 936



Flow Duration Curve

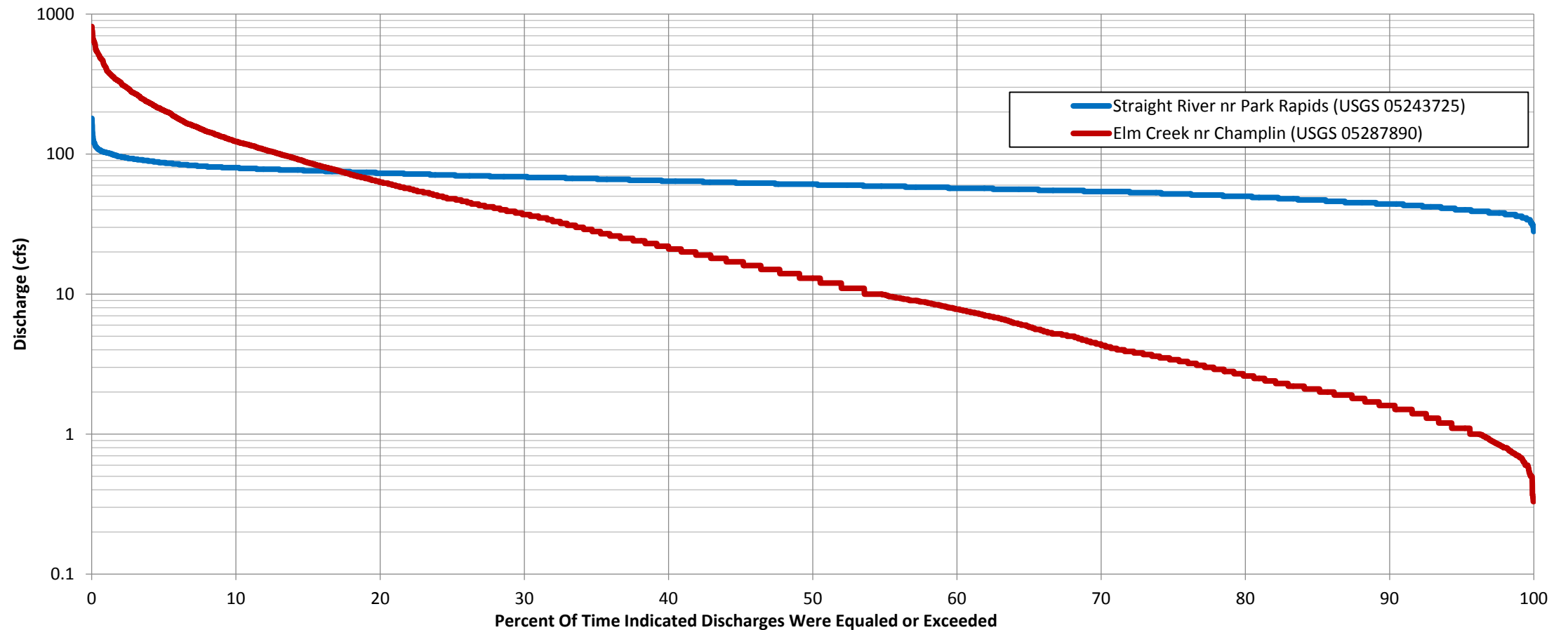
Flow Duration Curve 1931-2012
USGS 05294000 Pomme de Terre River at Appleton, MN





Flow Duration Curve Comparison

Flow Duration Curve Comparison 1992-2014



Buried Aquifer Water Levels near Belgrade, MN

Hydrograph

Well Construction

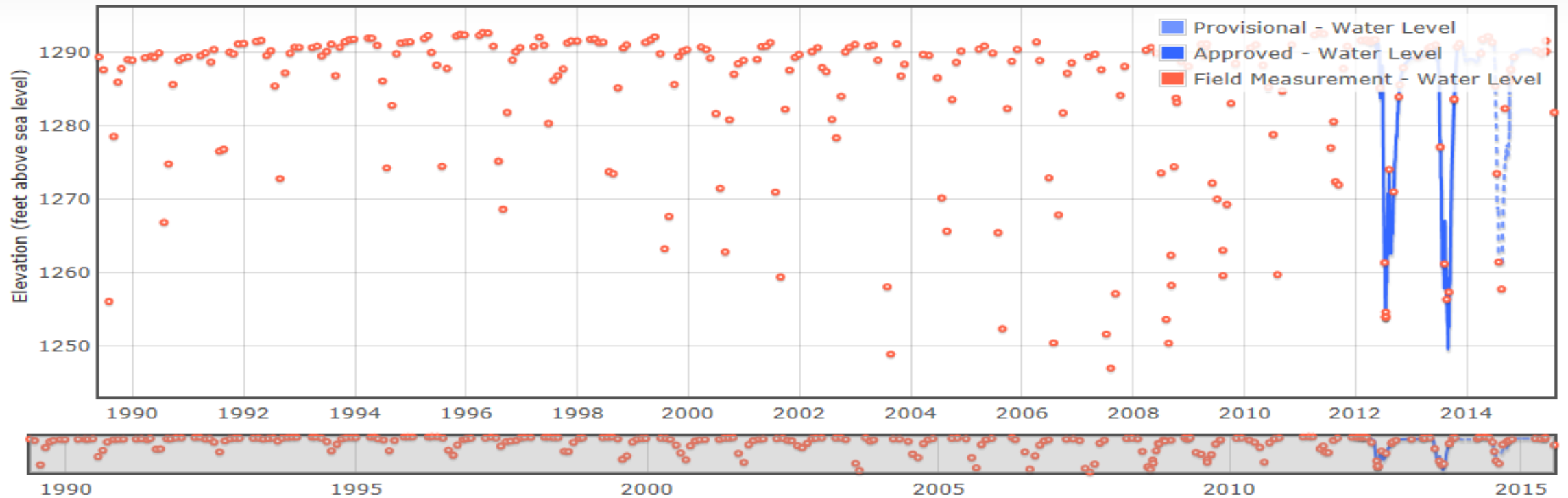
Help

Feedback

Quick range:

☐ display depth below measure point

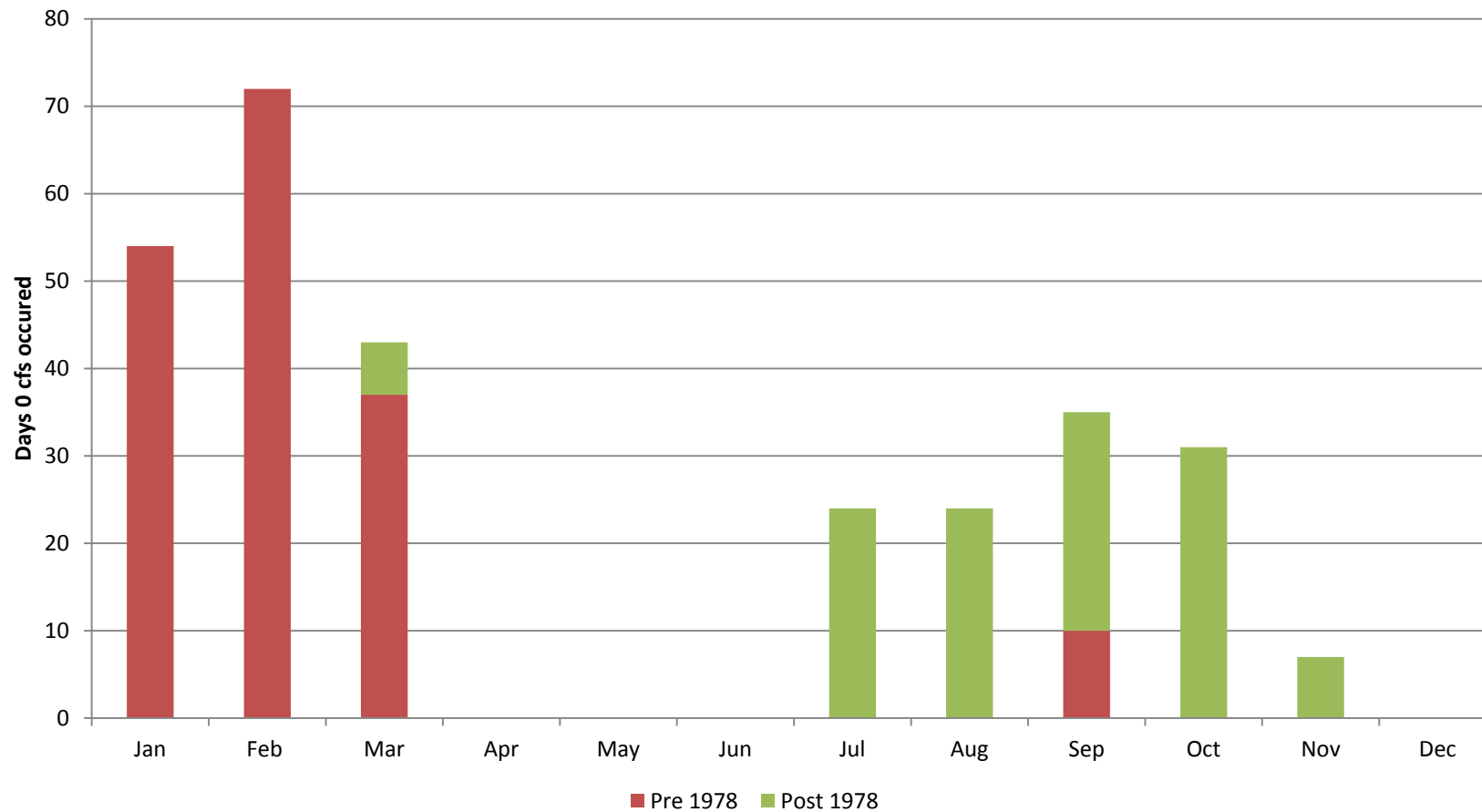
Displayed Range: 1989-5-23 to 2015-7-30





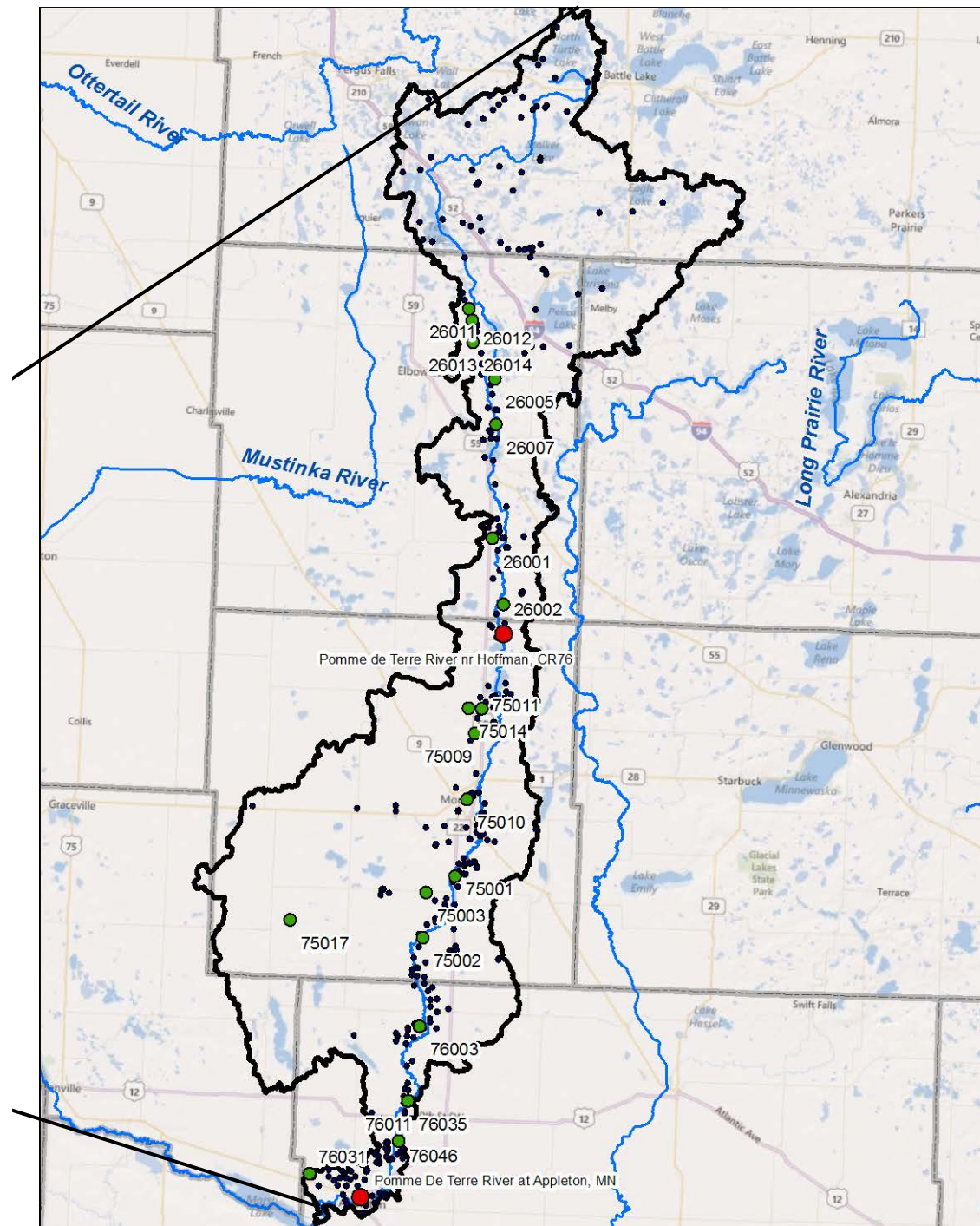
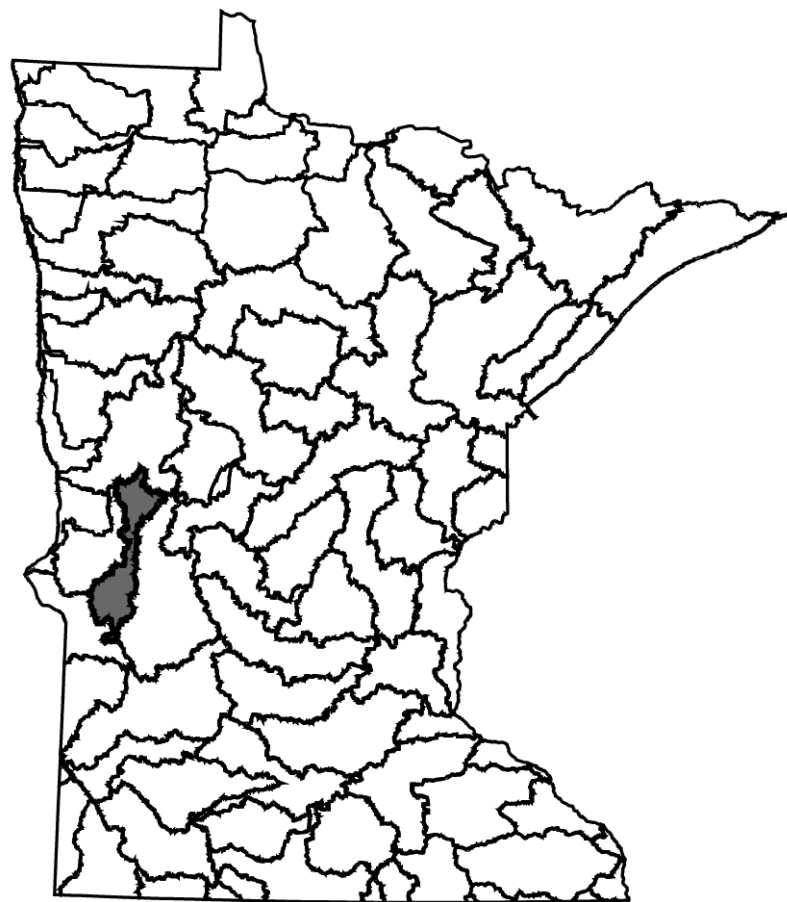
Zero Flow Comparison

Zero Flow Seasonal Changes
Pomme de Terre R. at Appleton 1931-2012





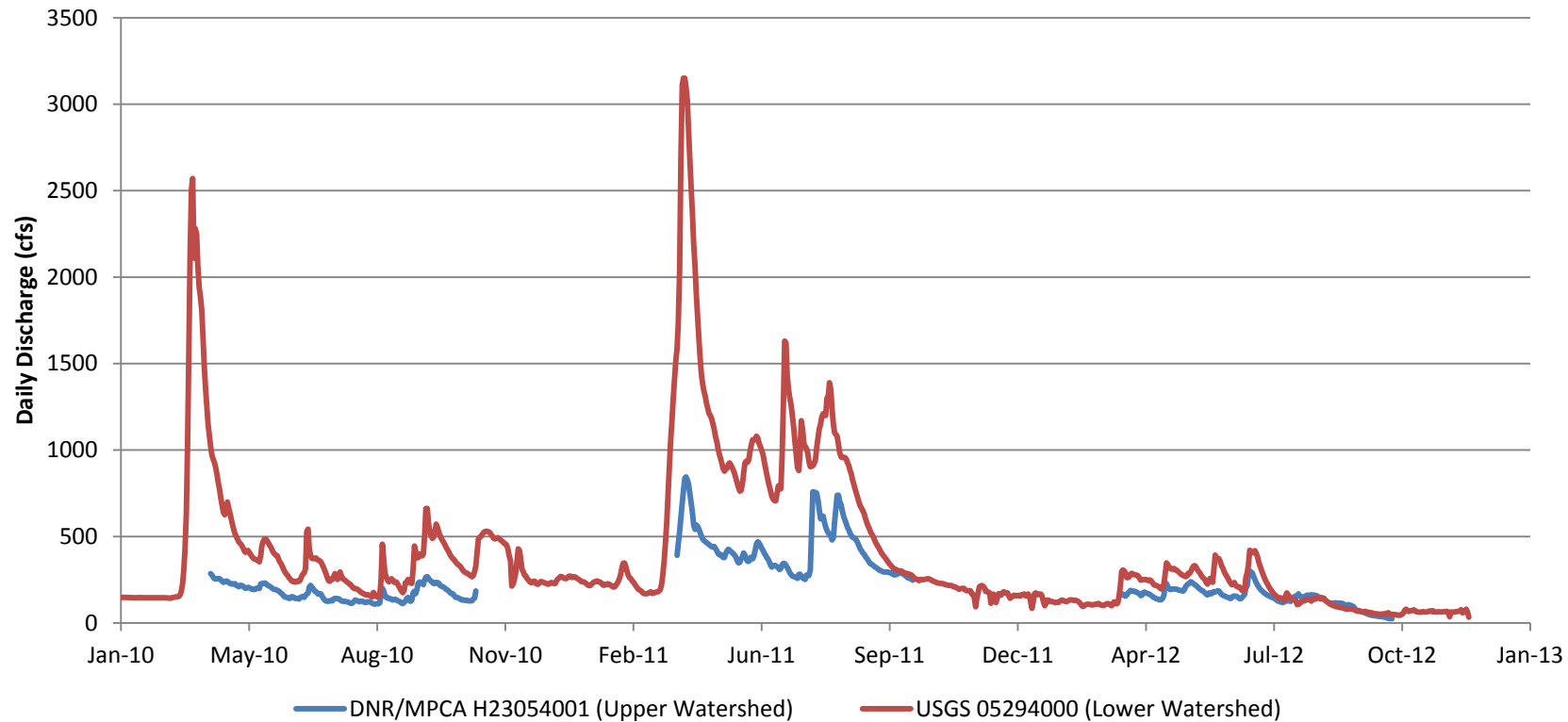
Maps of the Watershed





Upper and Lower Watershed Hydrograph Comparison

Daily Discharge Comparison 2010-2012
(Over H23054001's Period of Record 2010-2012)





Flow Duration Curve Comparison

Flow Duration Curve Comparison 2010-2012

USGS 05294000 Pomme de Terre River at Appleton, MN
& DNR/MPCA H23054001 Pomme de Terre near Hoffman, MN

