**WDNR Project Quarterly Reporting**

**Reporting Period:** *May 1 2016 – July 30, 2016*

**Project Name: Sediment Loading Assessment in the Nemadji River Basin**

**Name and Contact Info: Faith Fitzpatrick,** [**fafitzpa@usgs.gov**](mailto:fafitzpa@usgs.gov)**, 608-821-3818**

**Overall Project Status Summary:**

* Completed sediment sampling.
* Continued analyses of historical sediment transport relations

**Budget Update: Include amount expended, subcontracts or subgrants awarded, jobs created, and local services or products purchased (for this reporting period).**

~85% of the funds were spent for federal fiscal year fy16 (ends September 30).

**Work accomplished this reporting period:**

A low flow sample was collectd in May. Then in July the Nemadji was hit with a flood likely with an annual exceedance probability of <0.002. During the flood on 7/12/16, Molly Wick collected a suspended sediment grab sample at 15,600 ft3/s. The peak of this flood was 16,800 ft3/s on 7/12/16.

Later on 7/15/16, flood flows had receded but the river was still carrying what looked to be a high suspended sediment load. A set of suspended sediment samples were collected at a discharge of 1,900 ft3/s.

Table 1. Sampled Events at the Nemadji River USGS gage.

|  |  |  |
| --- | --- | --- |
| Sample # | Date | Discharge |
| NM-1 | 7/7/2015 | 2,960 |
| NM-2 | 7/8/2015 | 1,540 |
| NM-3 | 10/28/2015 | 365 |
| NM-4 | 11/6/2015 | 300 |
| NM-5 | 11/17/2015 | 648 |
| NM-6 | 11/18/2015 | 1870 |
| NM-7 | 3/31/2016 | ~2000 |
| NM-8 | 4/25/2016 | ~4700 |
| NM-9 | 5/31/16 | ~250 |
| NM-10 (ss grab only) | 7/12/16 | 15,600 |
| NM-11 (no bedload) | 7/15/16 | 1,900 |

The following contains a list of the types of samples that were collected for each sampling set.

|  |  |  |
| --- | --- | --- |
| **Sample Type** | **field container type** | **Laboratory** |
| Nutrients/Weighted bottle 1 (no NM-10) | 1/2 full clear plastic weighted bottle immediately transferred into 125 ml clear plastic acidified and refrigerated | NWQL |
| TSS/SSC Weighted bottle 2 | Full clear plastic weighted bottle (equal split later at WI lab) | TSS @ SLOH, SSC @ KY LAB |
| TSS/SSC EWI-ETR (No NM-10) | ~10 glass pint milk bottles (1/10 TSS, 9/10 SSC split later at WI lab) | TSS @ SLOH, SSC/PSD @ KY LAB |
| bed material (no NM-10 or -11) | ~10 plastic containers | WI WSC LAB |
| Bedload (no NM-10 or -11) | 2+ plastic containers | WI WSC LAB |

**Work goals for coming reporting period:**

1. **Sediment transport and loads calculations –**Continued retrieval of data coming back from the labs and starting to compile loads data and sediment transport curves.