

WASHINGTON DEPARTMENT OF ECOLOGY
ENVIRONMENTAL ASSESSMENT PROGRAM
FRESHWATER MONITORING UNIT
STREAM DISCHARGE TECHNICAL NOTES

STATION ID: 01F070
STATION NAME: South Fork Nooksack River at Potter Rd
WATER YEAR: WY2013
AUTHOR: Don Watt

Introduction

Watershed Description

The watershed upstream of this gage ranges from 232 feet to 6990 feet in elevation. The mean basin elevation is 2330 feet. Steep forested hills cover most of the area. The average slope in the basin is 36 percent. Mean annual precipitation in the basin is 83 inches.

Gage Location

The gage house is on the downstream side of the Potter Road bridge, on the left bank of the South Fork Nooksack River, at river mile 1.8. The bridge is about one-half mile west of the intersection of Potter Road and Hwy 9.

Table 1.

| | |
|---------------------------------------|------------------|
| Drainage Area (square miles) | 179 |
| Latitude (degrees, minutes, seconds) | 48, 47, 21 North |
| Longitude (degrees, minutes, seconds) | 122, 11, 53 West |

Discharge

Table 2. Discharge Statistics.

| | |
|---|-----------|
| Mean Annual Discharge (cfs) | 1190 cfs |
| Median Annual Discharge (cfs) | 962 cfs |
| Maximum Daily Mean Discharge (cfs) | 7150 cfs |
| Minimum Daily Mean Discharge (cfs) | 116 cfs |
| Maximum Instantaneous Discharge (cfs) | 11700 cfs |
| Minimum Instantaneous Discharge (cfs) | 107 cfs |
| Discharge Equaled or Exceeded 10 % of Recorded Time (cfs) | 2520 cfs |
| Discharge Equaled or Exceeded 90 % of Recorded Time (cfs) | 171 cfs |
| Number of Days Discharge is Greater Than Range of Ratings | 0 days |
| Number of Days Discharge is Less Than Range of Ratings | 0 days |

Note: Statistics displayed in Table 2 may not include values in which the predicted discharge exceeds the range of ratings.

Narrative

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Error Analysis

Table 3. Error Analysis Summary.

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| Logger Drift Error (% of discharge) | 1% |
| Weighted Rating Error (% of discharge) | 12% |
| Total Potential Error (% of discharge) | 13% |

Rating Table(s)

Table 4. Rating Table Summary

| | | | |
|------------------------------|---------------------|--|--|
| Rating Table No. | 10 | | |
| Period of Ratings | 10/1/2012-9/30/2012 | | |
| Range of Ratings (cfs) | 92 to 24100 cfs | | |
| No. of Defining Measurements | 19 | | |
| Rating Error (%) | 12% | | |

| | | | |
|------------------------------|--|--|--|
| Rating Table No. | | | |
| Period of Ratings | | | |
| Range of Ratings (cfs) | | | |
| No. of Defining Measurements | | | |
| Rating Error (%) | | | |

| | | | |
|------------------------------|--|--|--|
| Rating Table No. | | | |
| Period of Ratings | | | |
| Range of Ratings (cfs) | | | |
| No. of Defining Measurements | | | |
| Rating Error (%) | | | |

Narrative

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Stage Record

Table 5. Stage Record Summary

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|--|----------|
| Minimum Recorded Stage (feet) | 6.01 ft |
| Maximum Recorded Stage (feet) | 13.09 ft |
| Range of Recorded Stage (feet) | 7.09 |
| Number of Un-Reported Days | 0 |
| Number of Days Qualified as Estimates | 0 |
| Number of Days Qualified as Unreliable Estimates | 0 |

Narrative

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Modeled Discharge

Table 6. Model Summary

| | |
|--|---------------------|
| Model Type (Slope conveyance, other, none) | Slope conveyance |
| Range of Modeled Stage (feet) | 13.00 to 16.00 |
| Range of Modeled Discharge (cfs) | 11,400 to 24,100 |
| Valid Period for Model | 10/1/2012-9/30/2013 |
| Model Confidence | Within 5% |

Surveys

Table 7. Survey Type and Date (station, cross section, longitudinal)

| Type | Date |
|------|------|
| | |

Activities Completed

There were eight discharge measurements made at the station during the water year. A new tidbit water temperature sensor was added to the station in April 2013.