

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

STATION ID: 32E050
STATION NAME: North Fork Touchet River above Dayton
WATER YEAR: 2009
AUTHOR: Mitch Wallace

Introduction

Watershed Description

The North Fork Touchet River originates deep in the Blue Mountains at an elevation of over 6,000 feet. The watershed of the North Fork Touchet River is mainly forested with small farms in the valleys of the lower section. The North Fork Touchet River joins the South Fork Touchet River just above the city of Dayton to form the mainstem Touchet River. It contains a population of steelhead, spring Chinook, and bull trout.

Gage Location

The gage is located on the left bank, downstream of the South Fork Touchet Road bridge, southeast of the town of Dayton, WA. It is located at river mile 0.5.

Table 1.

Drainage Area (square miles)	112 (Streamstats)
Latitude (degrees, minutes, seconds)	46° 17" 50" N
Longitude (degrees, minutes, seconds)	117° 57' 04" W

Discharge

Table 2. Discharge Statistics.

Mean Annual Discharge (cfs)	199
Median Annual Discharge (cfs)	97
Maximum Daily Mean Discharge (cfs)	2380
Minimum Daily Mean Discharge (cfs)	45
Maximum Instantaneous Discharge (cfs)	3220
Minimum Instantaneous Discharge (cfs)	34
Discharge Equaled or Exceeded 10 % of Recorded Time (cfs)	496
Discharge Equaled or Exceeded 90 % of Recorded Time (cfs)	51
Number of Days Discharge is Greater Than Range of Ratings	0
Number of Days Discharge is Less Than Range of Ratings	0

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

Narrative

Peak flow occurred on January 8, 2009, during a large rain on snow event.

Error Analysis

Table 3. Error Analysis Summary.

Logger Drift Error (% of discharge)	2.9
Weighted Rating Error (% of discharge)	11.8
Total Potential Error (% of discharge)	14.7

Rating Table(s)

Table 4. Rating Table Summary

Rating Table No.	5	401	6
Period of Ratings	10/1/08 to 1/10/09	1/8/09 to 4/21/09	3/15/09 to 9/30/09
Range of Ratings (cfs)	22 to 3630	18 to 3630	25 to 3630
No. of Defining Measurements	19	19	21
Rating Error (%)	11.6	11.7	11.9

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

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

Narrative

The shift to rating 401 was caused by a significant rain on snow event in early January 2009. Seasonal runoff led to the shift to rating 6 in mid-March 2009. Eight discharge measurements were taken throughout the water year, ranging from 51 to 636 cfs.

Stage Record

Table 5. Stage Record Summary

Minimum Recorded Stage (feet)	0.57
Maximum Recorded Stage (feet)	5.68
Range of Recorded Stage (feet)	5.11
Number of Un-Reported Days	0
Number of Days Qualified as Estimates	0
Number of Days Qualified as Unreliable Estimates	0

Narrative

Data throughout the water year was adjusted to match the primary gage index (staff gage).

Modeled Discharge

Table 6. Model Summary

Model Type (Slope conveyance, other, none)	Slope Conveyance
Range of Modeled Stage (feet)	4.0 to 6.0
Range of Modeled Discharge (cfs)	1500 to 3630
Valid Period for Model	WY 2009
Model Confidence	6.6%

Surveys

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

Type	Date
n/a	n/a

Activities Completed

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