

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: 2005
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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)	64
Median Annual Discharge (cfs)	53
Maximum Daily Mean Discharge (cfs)	407
Minimum Daily Mean Discharge (cfs)	27
Maximum Instantaneous Discharge (cfs)	490
Minimum Instantaneous Discharge (cfs)	25
Discharge Equaled or Exceeded 10 % of Recorded Time (cfs)	116
Discharge Equaled or Exceeded 90 % of Recorded Time (cfs)	31
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 March 28, 2005.

Error Analysis

Table 3. Error Analysis Summary.

Logger Drift Error (% of discharge)	2.6
Weighted Rating Error (% of discharge)	11.7
Total Potential Error (% of discharge)	14.3

Rating Table(s)

Table 4. Rating Table Summary

Rating Table No.	4		
Period of Ratings	10/1/04 to 9/30/2005		
Range of Ratings (cfs)	18 to 3630		
No. of Defining Measurements	19		
Rating Error (%)	11.7		

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

Four discharge measurements were taken throughout the water year, ranging from 33 to 53 cfs.

Stage Record

Table 5. Stage Record Summary

Minimum Recorded Stage (feet)	0.59
Maximum Recorded Stage (feet)	2.37
Range of Recorded Stage (feet)	1.78
Number of Un-Reported Days	2
Number of Days Qualified as Estimates	160
Number of Days Qualified as Unreliable Estimates	0

Narrative

Unreported days are due to ice-impacted data. Data from the beginning of the water year to February 8, 2005, was replaced with data from Ecology station 32B110, Touchet River at County Line. This was due to a malfunctioning logger. Data from late March to mid-April was filtered to remove excessive noise from the record. Data record throughout water year was adjusted to match the primary gage index (staff gage) using time-weighted adjustments.

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 2005
Model Confidence	6.6 %

Surveys

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

Type	Date
n/a	n/a

Activities Completed

Replaced DCP board.
