

**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:** 2008  
**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)	154
Median Annual Discharge (cfs)	103
Maximum Daily Mean Discharge (cfs)	894
Minimum Daily Mean Discharge (cfs)	39
Maximum Instantaneous Discharge (cfs)	1000
Minimum Instantaneous Discharge (cfs)	36
Discharge Equaled or Exceeded 10 % of Recorded Time (cfs)	322
Discharge Equaled or Exceeded 90 % of Recorded Time (cfs)	45
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 May 18, 2008 during seasonal runoff.
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**Error Analysis**

Table 3. Error Analysis Summary.

Logger Drift Error (% of discharge)	5.3
Weighted Rating Error (% of discharge)	11.8
Total Potential Error (% of discharge)	17.1

**Rating Table(s)**

Table 4. Rating Table Summary

Rating Table No.	301	5	
Period of Ratings	10/1/07 to 12/4/07	12/2/07 to 9/30/08	
Range of Ratings (cfs)	20 to 3630	22 to 3630	
No. of Defining Measurements	19	19	
Rating Error (%)	12.8	11.6	

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

A channel scour event led to the shift to rating 5. Nine discharge measurements were taken throughout the water year, ranging from 43 to 293 cfs.

## Stage Record

Table 5. Stage Record Summary

Minimum Recorded Stage (feet)	0.63
Maximum Recorded Stage (feet)	3.35
Range of Recorded Stage (feet)	2.72
Number of Un-Reported Days	6
Number of Days Qualified as Estimates	25
Number of Days Qualified as Unreliable Estimates	0

## Narrative

Unreported days were a result of ice-impacted data. Data throughout the water year has been adjusted to match the primary gage index (staff gage). The days where the mean daily flow values between corrected and uncorrected data were greater than 20 percent were qualified as estimates.

There was a data gap during early October. This gap was filled with data from Ecology stream gage 32B100 (Touchet River at Bolles Road). The reason for this data gap was unknown.

## 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 2008
Model Confidence	6.6%

## Surveys

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

Type	Date
n/a	n/a

## Activities Completed

Installed a laser level set-up and associated reference marks as a secondary gage index.