

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

STATION ID: 32B100
STATION NAME: Touchet River at Bolles Road
WATER YEAR: 2015
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Introduction

Watershed Description

The Touchet River, the largest tributary of the Walla Walla River, flows out of the Blue Mountains in southeast Washington. Spring Chinook, steelhead, and bull trout are present within the watershed. Land use is primarily agricultural, consisting of dryland crops and irrigated farming in the lower portions.

Gage Location

This gage is located on the right bank, downstream of the Highway 125 Bridge, 3.5 miles west of the town of Waitsburg. It is located at river mile 40.4.

Table 1. Basin Area and Legal Description

Drainage Area (square miles)	357 (Streamstats)
Latitude (degrees, minutes, seconds)	46° 16' 28" N
Longitude (degrees, minutes, seconds)	118° 13' 16" W

Table 2. Discharge Statistics.

Mean Annual Discharge (cfs)	160
Median Annual Discharge (cfs)	79
Maximum Daily Mean Discharge (cfs)	1550
Minimum Daily Mean Discharge (cfs)	24
Maximum Instantaneous Discharge (cfs)	1910
Minimum Instantaneous Discharge (cfs)	15
Discharge Equaled or Exceeded 10 % of Recorded Time (cfs)	355
Discharge Equaled or Exceeded 90 % of Recorded Time (cfs)	28
Number of Days Discharge is Greater Than Range of Ratings	0
Number of Days Discharge is Less Than Range of Ratings	0
Number of Un-Reported Days	2
Number of Days Qualified as Estimates	12
Number of Modeled Days	0

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

Table 2 Discussion (Discharge Statistics)

Eight of the estimated days were due to equipment issues. The data from these days were very sporadic with multiple gaps. The data from this period was removed and filled with regressed data from another stream gaging station.

Nine discharge measurements were taken throughout the water year, ranging from 29 to 257 cfs.

Table 3. Error Analysis Summary.

Potential Logger Drift Error (% of discharge)	1.0
Potential Weighted Rating Error (% of discharge)	9.6
Total Potential Error (% of discharge)	10.6

Table 3 Discussion (Error Analysis)

The potential logger drift refers to the amount of instrument drift that was corrected in the stage record.

The potential weighted rating error is based on the quality of the individual discharge measurements used to define the particular rating and how those defining measurements related to the rating.

Table 4. Stage Record Summary

Minimum Recorded Stage (feet)	1.92
Maximum Recorded Stage (feet)	5.46
Range of Recorded Stage (feet)	3.54

Table 4 Discussion (Stage Record)

Peak flow occurred on February 10, 2015, during an early snowmelt event. The lowest flow of the water year occurred in early August, 2015. This was the lowest recorded flow since the station was installed in 2007.

Table 5. Rating Table Summary

Rating Table No.	11		
Period of Ratings	10/1/14 to 9/30/15		
Range of Ratings (cfs)	14 to 4510		
No. of Defining Measurements	17		
Rating Error (%)	9.6		

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 (%)			

Table 5 Discussion (Rating Tables)

Channel geometry was very stable throughout the water year.

Table 6. Model Summary

Model Type (Slope conveyance, other, none)	None
Range of Modeled Stage (feet)	
Range of Modeled Discharge (cfs)	
Valid Period for Model	
Model Confidence	

Table 6 Discussion (Modeled Data)

No model was used during the water year.
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Table 7. Survey Type and Date (station, cross section, longitudinal)

Type	Date

Table 7 Discussion (Surveys)

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Activities Completed

Routine station visits for maintenance and discharge measurements.
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Appendix