

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

STATION ID: 32A105
STATION NAME: Walla Walla River at Beet Road
WATER YEAR: 2014
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Introduction

Watershed Description

The Walla Walla River is a tributary of the Columbia River, joining the Columbia just above Wallula Gap in southeastern Washington. The headwaters of the Walla Walla River lie in the Blue Mountains of northeastern Oregon. The Walla Walla River supports populations of spring Chinook salmon, summer steelhead, and bull trout. Land use in the watershed is mostly dryland and irrigated agriculture.

Gage Location

The gage house is located on the left bank near the Frog Hollow Road and Beet Road intersection at river mile 36.5. It is located approximately one-quarter mile downstream of the Gardena Farms Irrigation District #13 diversion. The period of record for this station is June 2002 to the present.

Table 1. Basin Area and Legal Description

Drainage Area (square miles)	125(Streamstats)
Latitude (degrees, minutes, seconds)	46° 01' 25" N
Longitude (degrees, minutes, seconds)	118° 25' 33" W

Table 2. Discharge Statistics.

Mean Annual Discharge (cfs)	187
Median Annual Discharge (cfs)	73
Maximum Daily Mean Discharge (cfs)	1920
Minimum Daily Mean Discharge (cfs)	17
Maximum Instantaneous Discharge (cfs)	2110
Minimum Instantaneous Discharge (cfs)	15
Discharge Equaled or Exceeded 10 % of Recorded Time (cfs)	456
Discharge Equaled or Exceeded 90 % of Recorded Time (cfs)	22
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	0
Number of Days Qualified as Estimates	10
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 discharge measurements were taken throughout the water year, ranging from 25 to 200 cfs.
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Table 3. Error Analysis Summary.

Potential Logger Drift Error (% of discharge)	1.5
Potential Weighted Rating Error (% of discharge)	11.6
Total Potential Error (% of discharge)	13.1

Table 3 Discussion (Error Analysis)

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Table 4. Stage Record Summary

Minimum Recorded Stage (feet)	2.20
Maximum Recorded Stage (feet)	6.80
Range of Recorded Stage (feet)	4.60

Table 4 Discussion (Stage Record)

In June, there were some battery issues. This resulted in over seven days of missing stage data. The gap was filled with data from a downstream station (32A100, Walla Walla River at Detour Road).

This site is also influenced by Gardena Farms Irrigation District activity. Their diversion is located one-quarter mile upstream of the gage.

Table 5. Rating Table Summary

Rating Table No.	17	135	125
Period of Ratings	10/13 to 6/19/14	6/18/14 to 8/19/14	7/9/14 to 9/30/14
Range of Ratings (cfs)	0 to 2850	8.2 to 2850	10 to 2850
No. of Defining Measurements	7	21	21
Rating Error (%)	11.4	12.2	11.7

Rating Table No.	18		
Period of Ratings	8/19/14 to 9/30/14		
Range of Ratings (cfs)	10 to 1550		
No. of Defining Measurements	3		
Rating Error (%)	12.0		

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

Table 5 Discussion (Rating Tables)

Each year, a recreational swimmers dam is constructed downstream of the gage. This activity can lead to multiple ratings during the summer months.

Table 6. Model Summary

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

Table 6 Discussion (Modeled Data)

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

Type	Date
n/a	n/a

Table 7 Discussion (Surveys)

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Activities Completed

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Appendix