

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

STATION ID: 29C100
STATION NAME: Wind River at Stabler
WATER YEAR: 2011
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Introduction

Watershed Description

The basin consists mainly of Forest Service lands. Reference gage heights are determined by staff gage observations. During extreme high and low discharge events the staff gage can become submerged or de-watered. During these times secondary gages are used to determine gage height.

Gage Location

Ecology's telemetry stream gage on the Wind River at Stabler is located at river mile 11.0, on Hemlock Road,. The gage is on the left bank on the upstream side of bridge.

Table 1.

Drainage Area (square miles)	107
Latitude (degrees, minutes, seconds)	45 48 28
Longitude (degrees, minutes, seconds)	121 54 33

Discharge

Table 2. Discharge Statistics.

Mean Annual Discharge (cfs)	610
Median Annual Discharge (cfs)	565
Maximum Daily Mean Discharge (cfs)	2,310
Minimum Daily Mean Discharge (cfs)	82
Maximum Instantaneous Discharge (cfs)	2,500
Minimum Instantaneous Discharge (cfs)	81
Discharge Equaled or Exceeded 10 % of Recorded Time (cfs)	1,218
Discharge Equaled or Exceeded 90 % of Recorded Time (cfs)	100
Percent of Time Discharge is Greater Than Range of Ratings	3%
Percent of Time 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

Thirty-four days were above rating but are reliable extrapolations.

Error Analysis

Table 3. Error Analysis Summary.

Logger Drift Error (% of discharge)	2.2%
Weighted Rating Error (% of discharge)	16.9%
Total Potential Error (% of discharge)	19.1%

Rating Table(s)

Table 4. Rating Table Summary

Rating Table No.	2			
Period of Ratings	10-01-08 2-27-13			
Range of Ratings (cfs)	66 to 1,338			
No. of Defining Measurements	32			
Rating Error (%)	16.9%			

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

Narrative

Flow measurements are influenced by turbulence and bedrock side's ledges and very deep pools.

Stage Record

Table 5. Stage Record Summary

Minimum Recorded Stage (feet)	2.53
Maximum Recorded Stage (feet)	15.12
Range of Recorded Stage (feet)	12.59
Number of Un-Reported Days	11
Number of Days Qualified as Estimates	0
Number of Days Qualified as Unreliable Estimates	0

Narrative

Eleven days went unreported because stage was high enough such that the reportable range of the rating was exceeded.

Modeled Discharge

Table 6. Model Summary

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

Surveys

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

Type	Date
All	08/26/2009

Activities Completed

A cross sectional, and longitudinal survey of the station was conducted on 08/26/2009.