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: 2015

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Introduction

Watershed Description

Ecology's telemetry stream gage on the Wind River at Stabler, off of Hemlock Road, located at river mile 11.0 basin is mainly made up of Forest Service lands.

Gage Location

The gage is on the left bank on the upstream side of bridge. Staff gage (primary), laser level (secondary), and tape down readings were taken from the bridge marker.

Table 1. Basin Area and Legal Description

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

Table 2. Discharge Statistics.

Mean Annual Discharge (cfs)	403
Median Annual Discharge (cfs)	249
Maximum Daily Mean Discharge (cfs)	2160
Minimum Daily Mean Discharge (cfs)	54
Maximum Instantaneous Discharge (cfs)	2600
Minimum Instantaneous Discharge (cfs)	53
Discharge Equaled or Exceeded 10 % of Recorded Time (cfs)	59
Discharge Equaled or Exceeded 90 % of Recorded Time (cfs)	910
Number of Days Discharge is Greater Than Range of Ratings	5
Number of Days Discharge is Less Than Range of Ratings	0
Number of Un-Reported Days	5
Number of Days Qualified as Estimates	2
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)

Five days in Water Year 2015 exceeded the limits of the rating table and were not reported. Twenty days were above the interpolated range of the rating and considered reliable extrapolations. Two days were qualified as estimates; one day because of linear interpolation across a brief period of missing data, and one day with a period of missing data replaced with regressed data from another gaging station.

Table 3. Error Analysis Summary.

Potential Logger Drift Error (% of discharge)	2.4
Potential Weighted Rating Error (% of discharge)	16.3
Total Potential Error (% of discharge)	18.7

Table 3 Discussion (Error Analysis)

The river channel is made up of bedrock with large boulders scattered throughout the waterway causing up welling and turbulence during high-flow measurements. Rating table 2 is used for the error analysis for the period of record.

Table 4. Stage Record Summary

Minimum Recorded Stage (feet)	2.2
Maximum Recorded Stage (feet)	11.7
Range of Recorded Stage (feet)	9.6

Table 4 Discussion (Stage Record)

Minimum recorded stage occurred on August 8, 2015 and the high stage occurred on December 21, 204.

Table 5. Rating Table Summary

Rating Table No.	2		
Period of Ratings	10/1/2014 to 6/28/16		
Range of Ratings (cfs)	33 to 2,680		
No. of Defining Measurements	52		
Rating Error (%)	16		

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)

The rating table is good due to the bedrock channel which does not change.

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)

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

Type	Date
None	

Table 7 Discussion (Surveys)

A cross-sectional survey could not be done due to the depth of the channel.

Activities Completed

None

Appendix