

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

STATION ID: 35D100
STATION NAME: Asotin Creek abv George Creek
WATER YEAR: 2009
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Introduction

Watershed Description

Asotin Creek is a tributary of the Snake River, flowing through the town of Asotin in southeastern Washington. The area is semiarid, with land use being pasture/rangeland, forest, and cropland.

Asotin Creek contains summer steelhead, spring Chinook, and bull trout. All of these are listed as threatened under the Endangered Species Act.

Gage Location

The Asotin Creek Above George Creek stream gage is located on the left bank, one mile above the confluence with George Creek.

Table 1.

Drainage Area (square miles)	172 (Streamstats)
Latitude (degrees, minutes, seconds)	46° 19' 23" N
Longitude (degrees, minutes, seconds)	117° 08' 06" W

Discharge

Table 2. Discharge Statistics.

Mean Annual Discharge (cfs)	86
Median Annual Discharge (cfs)	51
Maximum Daily Mean Discharge (cfs)	385
Minimum Daily Mean Discharge (cfs)	31
Maximum Instantaneous Discharge (cfs)	431
Minimum Instantaneous Discharge (cfs)	28
Discharge Equaled or Exceeded 10 % of Recorded Time (cfs)	213
Discharge Equaled or Exceeded 90 % of Recorded Time (cfs)	34
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

<p>Eight discharge measurements were taken, ranging from 34 to 212 cfs. Measurement #38 was discarded due to the uncertainty caused by the presence of anchor ice.</p>
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Error Analysis

Table 3. Error Analysis Summary.

Logger Drift Error (% of discharge)	0.7
Weighted Rating Error (% of discharge)	9.1
Total Potential Error (% of discharge)	9.8

Rating Table(s)

Table 4. Rating Table Summary

Rating Table No.	4		
Period of Ratings	5/18/08 to 5/17/11		
Range of Ratings (cfs)	17 to 856		
No. of Defining Measurements	21		
Rating Error (%)	9.1		

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 log-offset (e) value of 0.39 was applied to this rating.

Stage Record

Table 5. Stage Record Summary

Minimum Recorded Stage (feet)	1.11
Maximum Recorded Stage (feet)	3.47
Range of Recorded Stage (feet)	2.36
Number of Un-Reported Days	12
Number of Days Qualified as Estimates	5
Number of Days Qualified as Unreliable Estimates	0

Narrative

Unreported days were a result of ice-impacted data. The battery failed in late January. The data during this period was replaced, using data from the Department of Ecology's stream-gaging station 35B150 Tucannon River at Marengo.

Modeled Discharge

Table 6. Model Summary

Model Type (Slope conveyance, other, none)	Slope Conveyance
Range of Modeled Stage (feet)	3.50 to 4.75
Range of Modeled Discharge (cfs)	440 to 856
Valid Period for Model	WY 2009
Model Confidence	1.9%

Surveys

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

Type	Date
N/A	N/A

Activities Completed

Replaced battery.
