

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

**STATION ID:** 35F050  
**STATION NAME:** Pataha Creek near Mouth  
**WATER YEAR:** 2008  
**AUTHOR:** Mitch Wallace

**Introduction**

Watershed Description

Pataha Creek is a tributary of the Tucannon River. The confluence is approximately 1 mile downstream from the station. Pataha Creek runs generally northward from its headwaters in the northern Blue Mountains and then turns westward near the communities of Pataha and Pomeroy, where it drains agricultural lands.

Gage Location

The station is located at the Highway 261 crossing of Pataha Creek. It is located within the right-of-way of Highway 261 on the left side, downstream of the highway crossing.

Table 1.

Drainage Area (square miles)	170 (Streamstats)
Latitude (degrees, minutes, seconds)	46° 30' 43" N
Longitude (degrees, minutes, seconds)	117° 58' 23" W

**Discharge**

Table 2. Discharge Statistics.

Mean Annual Discharge (cfs)	15
Median Annual Discharge (cfs)	9
Maximum Daily Mean Discharge (cfs)	77
Minimum Daily Mean Discharge (cfs)	0.9
Maximum Instantaneous Discharge (cfs)	92
Minimum Instantaneous Discharge (cfs)	0.9
Discharge Equaled or Exceeded 10 % of Recorded Time (cfs)	37
Discharge Equaled or Exceeded 90 % of Recorded Time (cfs)	1.87
Number of Days Discharge is Greater Than Range of Ratings	0
Number of Days Discharge is Less Than Range of Ratings	26

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 conducted throughout the water year, ranging from 1.6 to 61 cfs. Peak flow occurred on May 19, 2008.</p>
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## Error Analysis

Table 3. Error Analysis Summary.

Logger Drift Error (% of discharge)	7.0
Weighted Rating Error (% of discharge)	11.0
Total Potential Error (% of discharge)	18.0

## Rating Table(s)

Table 4. Rating Table Summary

Rating Table No.	13	14	131
Period of Ratings	10/7/07 to 10/23/07	10/1/07 to 12/4/07	10/23/07 to 12/8/07
Range of Ratings (cfs)	0.72 to 350	1.02 to 350	0.72 to 350
No. of Defining Measurements	10	3	10
Rating Error (%)	11.1	9.1	11.1

Rating Table No.	702	122	15
Period of Ratings	12/7/07 to 3/5/08	1/14/08 to 8/6/08	8/6/08 to 8/25/08
Range of Ratings (cfs)	0.11 to 350	0.94 to 419	0.94 to 365
No. of Defining Measurements	9	7	0
Rating Error (%)	12.0	11.0	n/a

Rating Table No.	16	17	
Period of Ratings	8/6/08 to 9/29/08	8/25/08 to 9/30/08	
Range of Ratings (cfs)	1.11 to 201	0.98 to 201	
No. of Defining Measurements	3	3	
Rating Error (%)	12.0	11.0	

## Narrative

Rating 15 was created after a new staff gage was installed.

## Stage Record

Table 5. Stage Record Summary

Minimum Recorded Stage (feet)	3.83
Maximum Recorded Stage (feet)	7.12
Range of Recorded Stage (feet)	3.29
Number of Un-Reported Days	0
Number of Days Qualified as Estimates	94
Number of Days Qualified as Unreliable Estimates	0

## Narrative

Fifty-seven of the estimated days were qualified as questionable estimates due to beaver activity at the control. The battery failed in early December, resulting in a loss of data. This data gap was filled with data from Ecology's stream gage on Alpowa Creek (35K050).

## Modeled Discharge

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

## Surveys

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

Type	Date
n/a	n/a

## Activities Completed

New datum established after installation of new staff gage. Installed laser level pad.