

**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:** 2012  
**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)	25
Median Annual Discharge (cfs)	10.3
Maximum Daily Mean Discharge (cfs)	171
Minimum Daily Mean Discharge (cfs)	2.3
Maximum Instantaneous Discharge (cfs)	192
Minimum Instantaneous Discharge (cfs)	1.7
Discharge Equaled or Exceeded 10 % of Recorded Time (cfs)	78
Discharge Equaled or Exceeded 90 % of Recorded Time (cfs)	3.1
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 conducted throughout the water year, ranging from 2.8 to 125 cfs. Peak flow occurred on January 19, 2012.</p>
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**Error Analysis**

Table 3. Error Analysis Summary.

Logger Drift Error (% of discharge)	2.4
Weighted Rating Error (% of discharge)	9.7
Total Potential Error (% of discharge)	12.1

**Rating Table(s)**

Table 4. Rating Table Summary

Rating Table No.	703	20	21
Period of Ratings	10/1/11 to 11/8/11	11/8/11 to 1/10/12	12/6/11 to 9/30/12
Range of Ratings (cfs)	0.11 to 350	0.20 to 399	0.20 to 399
No. of Defining Measurements	9	5	14
Rating Error (%)	12.0	7.4	9.9

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**

Datum shift occurred between ratings 703 and 20.

**Stage Record**

Table 5. Stage Record Summary

Minimum Recorded Stage (feet)	3.65
Maximum Recorded Stage (feet)	12.53
Range of Recorded Stage (feet)	n/a
Number of Un-Reported Days	37
Number of Days Qualified as Estimates	5
Number of Days Qualified as Unreliable Estimates	0

**Narrative**

Datum shift occurred during water year. Therefore, a reported range of stage would be inaccurate.

The Confederated Tribes of the Umatilla Indian Reservation completed a habitat-restoration project early in the water year. This work led to a 2 to 2.5 ft increase in the gage-pool water-surface elevation. A new datum was established.

Thirty-four of the unreported days were from the period when the restoration work was ongoing.

## 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

After the habitat-restoration work was completed, the slant pipe was re-run and shortened. A new laser level pad and reference marks were also installed.

Labor and Industries upgrade was completed.