

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

STATION ID: 35M100
STATION NAME: Deadman Creek near Gould City
WATER YEAR: 2009
AUTHOR: Mitch Wallace

Introduction

Watershed Description

Deadman Creek is a left-bank tributary to the Snake River, opposite Central Ferry State Park. The creek drains the fertile agricultural highlands flanking the southern breaks of the Snake River in its northernmost bend into Washington State.

Gage Location

The station is located on the right side of the stream at the Deadman Creek road bridge, approximately 2.0 miles downstream from the confluence of the north and south forks of Deadman Creek.

Table 1. Basin Area and Legal Description

Drainage Area (square miles)	77 (USGS)
Latitude (degrees, minutes, seconds)	46° 36' 0" N
Longitude (degrees, minutes, seconds)	117° 36' 0" W

Table 2. Discharge Statistics.

Mean Annual Discharge (cfs)	5.0
Median Annual Discharge (cfs)	3.9
Maximum Daily Mean Discharge (cfs)	23
Minimum Daily Mean Discharge (cfs)	1.1
Maximum Instantaneous Discharge (cfs)	25
Minimum Instantaneous Discharge (cfs)	0.8
Discharge Equaled or Exceeded 10 % of Recorded Time (cfs)	8.9
Discharge Equaled or Exceeded 90 % of Recorded Time (cfs)	2.6
Number of Days Discharge is Greater Than Range of Ratings	4
Number of Days Discharge is Less Than Range of Ratings	6
Number of Un-Reported Days	4
Number of Days Qualified as Estimates	21
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)

The four unreported days were due to rating table exceedances.

Eight discharge measurements were taken throughout the water year, ranging from 2.7 to 13 cfs.

Table 3. Error Analysis Summary.

Potential Logger Drift Error (% of discharge)	2.5
Potential Weighted Rating Error (% of discharge)	10.0
Total Potential Error (% of discharge)	12.5

Table 3 Discussion (Error Analysis)

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Table 4. Stage Record Summary

Minimum Recorded Stage (feet)	4.51
Maximum Recorded Stage (feet)	5.67
Range of Recorded Stage (feet)	1.16

Table 4 Discussion (Stage Record)

Peak flow occurred on January 7, 2009 during a rain-on-snow event.

The battery failed in the middle of November. The data gap resulting from this issue was filled with regressed data from Ecology Stream Gage 35M060 (Deadman Creek nr Mouth). This accounts for the 14 estimated days listed in the discharge statistics table above.

Table 5. Rating Table Summary

Rating Table No.	9	10	
Period of Ratings	10/1/08 to 11/4/08	10/1/08 to 9/30/09	
Range of Ratings (cfs)	0.64 to 25	1.3 to 25	
No. of Defining Measurements	8	9	
Rating Error (%)	7.8	10.2	

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)

Leaf litter accumulation in the channel is common here in the fall months. This can lead to rating shifts.
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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

Table 6 Discussion (Modeled Data)

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

Type	Date
n/a	n/a

Table 7 Discussion (Surveys)

Activities Completed

Appendix