

**WASHINGTON DEPARTMENT OF ECOLOGY  
ENVIRONMENTAL ASSESSMENT PROGRAM  
FRESHWATER MONITORING UNIT  
STREAM DISCHARGE TECHNICAL NOTES  
MANUAL STAGE HEIGHT STATION**

**STATION ID:** 32F060  
**STATION NAME:** Dry Creek near Mouth  
**WATER YEAR:** WY 2009  
**AUTHOR:** Mitch Wallace

**Introduction**

Watershed Description

Dry Creek is a tributary of the Walla Walla River. The confluence is just south of the town of Lowden. Dry Creek's watershed is mainly used for dryland wheat agriculture, with only sparse forest in the headwaters. It drains the lower slopes of the Blue Mountains southeast of the town of Dixie.

Gage Location

Dry Creek near Mouth is located off of Highway 12 near the town of Lowden. The staff gage is located on the right bank, underneath the highway bridge.

Table 1.

Drainage Area (square miles)	244 (Streamstats)
Latitude (degrees, minutes, seconds)	46° 03' 46" N
Longitude (degrees, minutes, seconds)	118° 34' 31" W
Primary Gage Index Type	Staff
Secondary Gage Index Type	Tapedown from bridge

**Error Analysis**

Overall Rating Error Percentage	11.3
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**Rating Table(s)**

Table 2. Rating Table Summary

Rating Table No.	203	7	
Period of Ratings	10/1/08 to 1/7/09	1/8/09 to 7/15/09	
Range of Ratings (cfs)	0.25 to 174	1.51 to 174	
No. of Defining Measurements	6	4	
Rating Error (%)	11.2	11.3	

Rating Table No.			
Period of Ratings			
Range of Ratings (cfs)			
No. of Defining Measurements			
Rating Error (%)			

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## Narrative

The water year began under a phase period between Rating #403 and #203. Rating #203 went into full effect in mid December 2008. Rating #7 began in early January 2009. There was a significant rain-on-snow event that led to channel scour.

High variability exists at this site, due to significant instream vegetation and silt build-up.

## Discrete Flow Record

Table 3. Discrete Flow Record Summary

Number of Discrete Stage Readings	31	
Maximum Observed Stage (feet) and Date	9.16	4/03/2009
Maximum Predicted Discharge (cfs) and Date	n/a	4/03/2009
Minimum Observed Stage (feet) and Date	2.93	7/02/2009
Minimum Predicted Discharge (cfs) and Date	1.5*	7/02/2009
Range of Stage (feet) and Discharge (cfs)	5.23	n/a

## Narrative

Maximum predicted discharge will not be reported, because it is greater than 2 times highest measured flow.

Four readings were calculated based on a regression between staff gage and a secondary gage index, in this case a tapedown from the bridge. At high flows, this was needed, because the staff was underwater. At low flows, the bottom of the staff gage was buried in silt and was not readable.

Five discharge measurements were taken, ranging from 3.10 to 89 cfs.

\*Unknown flow, less than reported discharge.

## Modeled Discharge

Table 4. 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 5. Survey Type and Date (station, cross section, longitudinal)

Type	Date
n/a	n/a

## Activities Completed

Monitoring at this site was discontinued in July 2009, due to budget constraints.