

RIVER AND WEATHER CONDITIONS

Prepared for Waterways Association Meeting 9/14/2016
National Weather Service Forecast Office, Pittsburgh PA

For the latest river and weather forecasts--<http://www.weather.gov/pittsburgh>

WEATHER RECAP

August 2016 was the 5th hottest August and this summer was the 8th hottest summer in Pittsburgh on record. Overall, temperatures across the region were approximately 4 to 5 degrees F above normal, while precipitation was below.

OUTLOOK

Week of Sep 12: Above normal temperatures. Limited rain midweek and again on weekend. About 1 inch of rain possible.

Outlook for week of Sep 19: Mostly dry week with showers for the weekend. Normal temperatures. Rain amounts 1 to 2 inches.

Outlook for week of Sep 26: More fall like with below average rainfall.

Outlook October: Above normal temperatures and average rainfall, but keep eye open for tropical storms.

Outlook November: Above normal temperatures and average rainfall.

HIGH WATER POTENTIAL




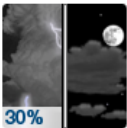




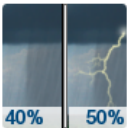
Barring a tropical storm, High water potential is below normal. A minimum of 2.00 inch basin wide rainfall in 6 to 12 hours is needed to bring rivers to bank full. Total precipitation through the first week of October should average about 2 inches which is below normal.

<i>Location</i>	<i>Aug 2016 Precipitation</i>	<i>Departure (Inches)</i>
Pittsburgh	3.29	-0.19

<i>Location</i>	<i>Aug Average Temperature</i>	<i>Departure Degrees</i>	<i>Extreme High</i>	<i>Extreme Low</i>
Pittsburgh	75.5	+2.9	91 Aug 11	56 Aug 23

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average monthly precipitation	2.7	2.39	2.95	3.11	3.95	4.3	3.83	3.48	3.11	2.29	3.23	2.85	38.19
Average High Temperature	35.7	39.3	49.2	61.7	70.8	79.1	82.5	81.4	74.3	62.6	51.2	39.4	60.7
Average Low Temperature	21.1	23	30	40.2	49.3	58.4	62.8	61.5	54	42.9	34.7	25.3	42
Average monthly snowfall	11.8	10.3	7.6	1.5	0	0	0	0	0	0.4	2	8.3	41.9

WEATHER FORECAST

Today	Tonight	Wednesday	Wednesday Night	Thursday	Thursday Night	Friday	Friday Night	Saturday
								
Sunny	Mostly Clear	Mostly Sunny then Chance T-storms	Chance T-storms then Partly Cloudy	Mostly Sunny	Mostly Clear	Mostly Sunny	Mostly Cloudy	Chance Showers then Chance T-storms
High: 84 °F	Low: 61 °F	High: 80 °F	Low: 57 °F	High: 75 °F	Low: 57 °F	High: 81 °F	Low: 65 °F	High: 80 °F

8-14 Day Outlook... Drier and warmer than normal.

30 Day Outlook... Above normal temperatures and near normal precipitation.

Nov-Dec-Jan Outlook... Warmer and drier than normal Nov/Dec. Colder than normal Jan.

Jan-Feb-Mar Outlook... Colder than normal with above normal snowfall.

Mar-Apr-May Outlook... Normal temperatures and normal precipitation

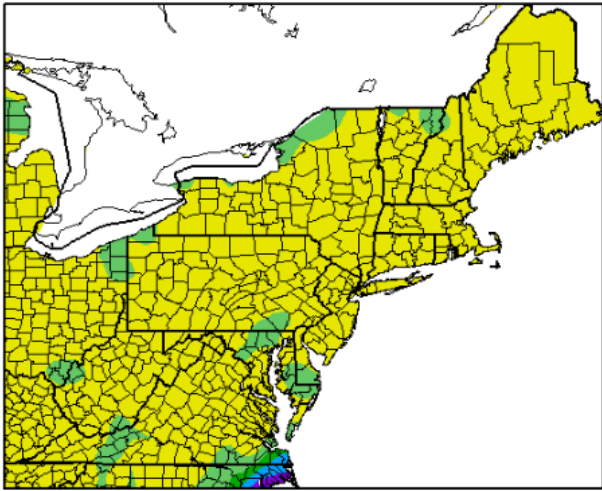
Average Yearly rainfall Pittsburgh: 38.19 inches **So far in 2016:** 23.32(-2.58)

Totals for: 2015:40.56 2014: 36.84 2013: 36.65 inches; 2012: 41.74 inches; 2011: 44.24 inches; 2010: 37.85 inches

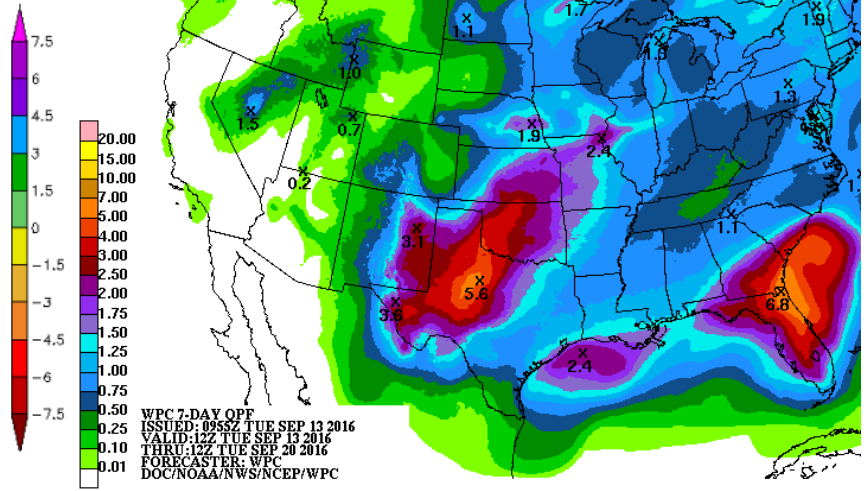
Average Yearly snowfall Pittsburgh: 41.9 inches 2015-16 season: 29.6 inches (-12.3)

2014-15: 47.2 in 2013-14: 63.4 in; 2012-13: 57 in; 2011-12: 37 in; 2010-11: 57 in; 2009-10: 77 in

Departure from Normal Precipitation (in)
8/30/2016 - 9/5/2016



7 Day rain forecast

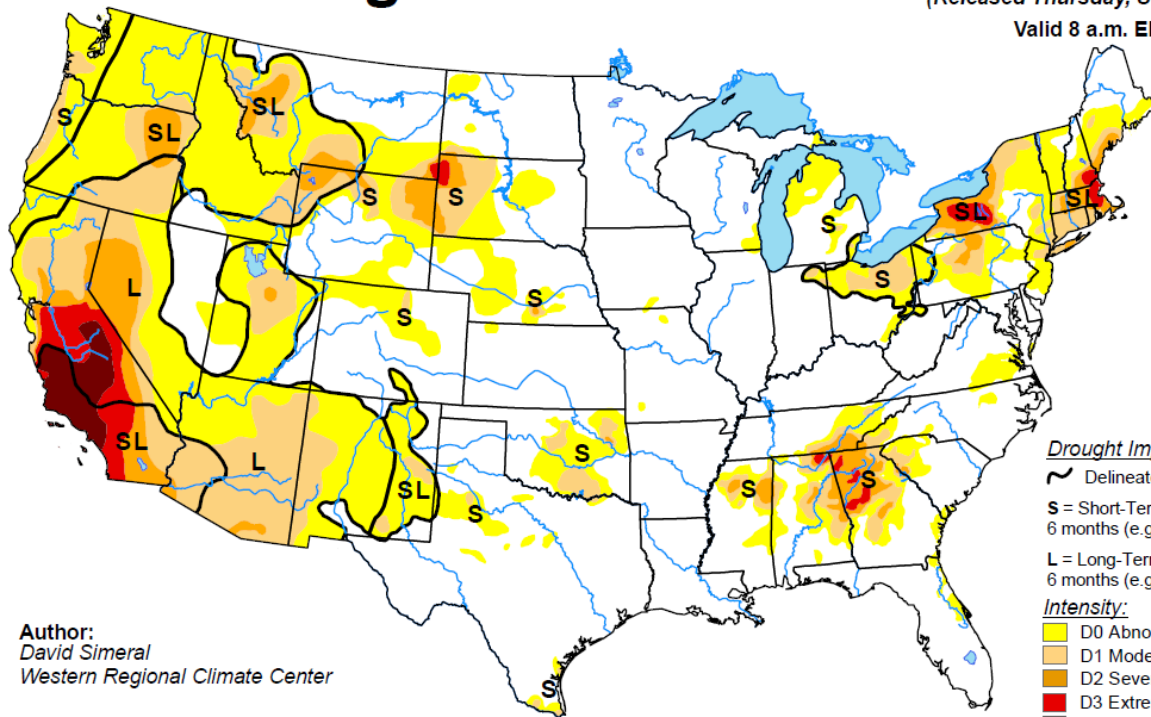


Thirteen of the 20 years (65 percent) experienced above normal temperatures in the Fall after extremely warm Junes and Julys compared to only seven below normal (35 percent). Based on this limited sample of years, the odds are about 2:1 that the coming Fall season will bring above normal temperatures across Pennsylvania.

Category	# of Years
Much Below Normal	5
Below Normal	2
Above Normal	6
Much Above Normal	7

U.S. Drought Monitor

September 6, 2016
(Released Thursday, Sep. 8, 2016)
Valid 8 a.m. EDT



Drought Impact Types:
 ~ Delineates dominant impacts
 S = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)
 L = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)

Intensity:
 Yellow: D0 Abnormally Dry
 Light Orange: D1 Moderate Drought
 Orange: D2 Severe Drought
 Red: D3 Extreme Drought
 Dark Red: D4 Exceptional Drought

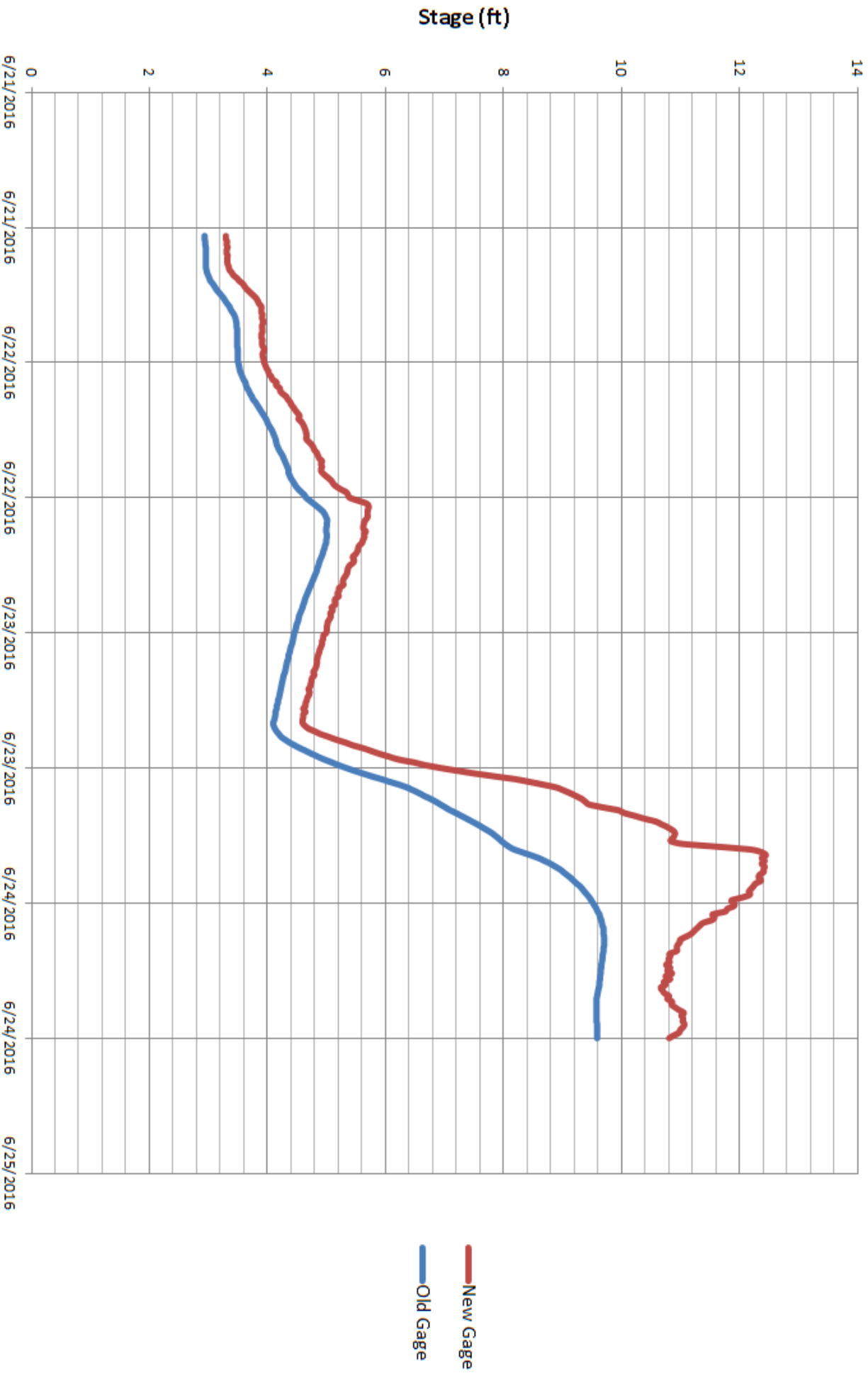
Author:
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Western Regional Climate Center

NOTICE:

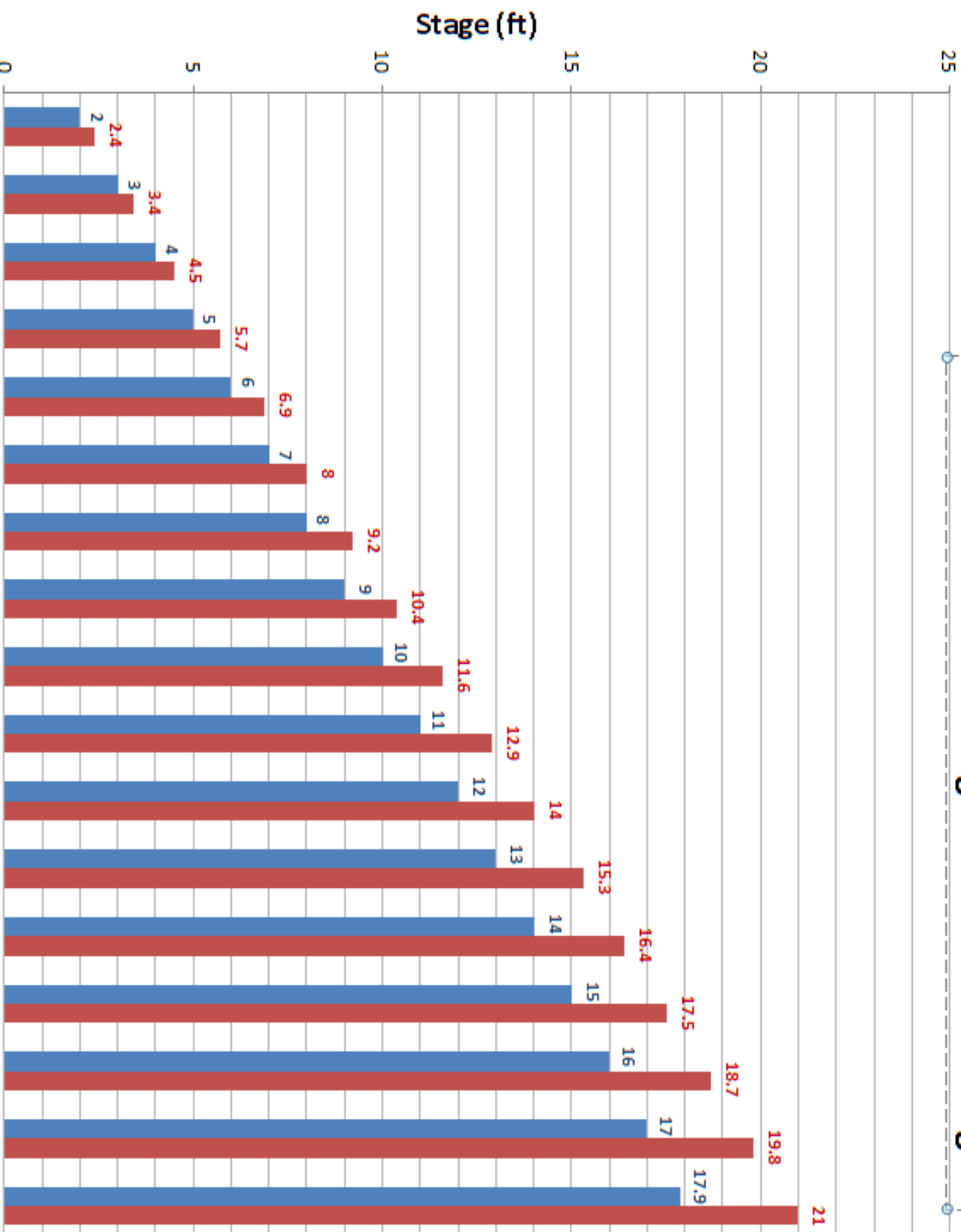
Due to extensive deterioration of the existing Parsons gage structure, a new gage shelter has been installed 1700 feet upstream of the current location on the Holly Meadows Bridge. Gage-height data are being collected concurrently at both locations, at the same datum, and a new stage-discharge rating is currently available for the new gaging location above. There is not a direct relationship to the stage at the old gage compared to this new gage. The flood stage at the Holly Meadows bridge will be different than the old Parsons gage. NOTE: Preliminary flood stage above is for informational purposes only and will be finalized this summer. Plans are to terminate data collection at the old location during the fall of 2016.

Preliminary/Estimated Gauge Height Relationship: Current Gauge vs New Gauge	
Current Parson River Gauge Stage (ft)	New Parsons River Gauge on Holly Meadows Bridge Equivalent Stage (ft)
2.0	2.4
3.0	3.4
4.0	4.5
5.0	5.7
6.0	6.9
7.0	8.0
8.0	9.2
9.0	10.4
10.0	11.6
11.0	12.9
12.0	14.0
13.0	15.3
14.0	16.4
15.0	17.5
16.0	18.7
17.0	19.8
17.9	21.0

Comparison of stage (ft) over a three day period of the old and new gauges at Parsons



Estimation of Stage Equivalency (ft) Relationship: Parsons' Old River Gauge vs. New River Gauge



■ Current Parson River Gauge
■ New Parsons River Gauge on Holly Meadows Bridge

This graph uses the rating curves of each gauge to represent the relationship between their stages.

**Rating Curves of Old and New Parsons Gauges:
Stage (ft) vs. Flow (cfs)**

