

**COLUMBUS WASH
GAGE # 5013**

STATION DESCRIPTION

LOCATION – The gage site is located approximately 1/4 mile south of Lahman Road, and about 1 mile west of 579th Avenue, and approximately 15 miles north of Interstate 8. Latitude N33° 06' 45.7", Longitude W113° 20' 22.0". Located in NW1/4 S06 T4S R10W, in the USGS 7.5 minute Hyder SE quadrangle.

ESTABLISHMENT – Gaging was established on September 22, 1999. Station was moved to new location on January 8, 2013.

DRAINAGE AREA – 25.4 mi² via USGS Streamstats.

GAGE – The gage is a pressure transducer type instrument. The PT is at gage height 2.500 feet.

There are no staff gages at this location.

There is one crest gage located near the PT. The pin elevation is 3.000 feet gage height.

ZERO GAGE HEIGHT – Zero gage height is defined as a point about 1.5 feet below the elevation of the pressure transducer at its current location. It is not exactly determined in a datum, but will be assumed to be 700.000 feet NAVD88. Values will be adjusted when an RTK survey is performed.

HISTORY – Previous gage located about 3,000 feet downstream from current location. Station was moved following significant flood damage from events in September 2012. Station was established at this new location on January 8, 2013.

REFERENCE MARKS –

RM-CLMBUS is an FCD brass tablet set below the berm at the old gage station site. It is at elevation 702.72 feet NAVD 1988, levels of March 29, 2010.

RM-1 is a two-foot rebar in the ground on the toe of the left bank levee just downhill from the station tube. Elevation is 6.882 feet gage height, levels of January 21, 2015.

RP-1 is the top of a sign rail post on the left bank near the PT. Elevation is 3.412 feet gage height, levels of January 21, 2015.

RP-2 is also XSGLB and is the top of sign rail near the station tube on the left bank. Elevation is 10.070 feet gage height, levels of January 21, 2015.

RP-3 is also XSGRB and is the top of a rebar stake on the top of the right bank at the gage cross section. Elevation is 8.012 feet gage height, levels of January 21, 2015.

RP-4 is also XS2LB and is the top of a rebar stake on top of the left bank at a cross section approximately 170 feet downstream from the gage cross section. Elevation is 6.261 feet gage height, levels of January 21, 2015.

There is also a point called XS2RB, but it is a wood stake on the right bank at cross section two. It is elevation 5.994 feet gage height, but is not a reliable elevation point.

CHANNEL & CONTROL – The channel has a natural bottom with built up levees on the left bank, and a generally natural bank on the right bank. The channel bottom is mainly sandy with few, if any, rocks and cobbles. The channel has been recently graded much lower than it was during the summer 2014. The control at low levels is not well defined. The channel is the control at higher stages.

RATING – A new rating was created from survey and interpolated cross sections at the new gage location. Cross section data were used to create a model in HEC-RAS for analysis. It is rating #2.

DISCHARGE MEASUREMENTS – Direct discharge measurements may be difficult due to great distance from the office. Indirect measurements could be done in a reach at the gage and going downstream.

POINT OF ZERO FLOW - The PZF is at 1.0 feet gage height, levels of January 21, 2015.

FLOODS – None known

REGULATION – No known regulation

DIVERSIONS – No known diversions

ACCURACY – Poor

JUSTIFICATION – Cooperative gage with MCDOT for monitoring flows in Columbus Wash for grading of High Line Road and 579th Avenue following flow events, and several other roads downstream such as Butterfield Stage Road.

UPDATE - January 22, 2015
 D. E. Gardner