

Public Information Statement
National Weather Service Seattle WA
400 PM PDT Fri May 16 2025

...NOTIFICATION OF MAJOR CHANGES TO FLOOD STAGES DUE TO CHANGES IN
STREAM GAUGE REFERENCE LEVELS FOR THE SOUTH FORK STILLAGUAMISH
RIVER...

The National Weather Service will be adjusting the flood warning
levels for the river forecast point, the South Fork Stillaguamish
River at Jordan Road Bridge gauge (WRAW1), effective June 4, 2025.

The stream gauge owner Washington State Department of Ecology will
convert the base reference point (datum) for this gauge. This means
the river stage reading will be different than what you are used to
seeing and that the National Weather Service (NWS) flood levels need
to be adjusted to match the changes.

The stage height of the water level reported by a gauge is measured
from a base reference point which can be an arbitrary number. For
example, if a gauge has a base reference level of 6.0 feet and the
water level at the gauge reads 10.0 feet, it means the height of the
water level is 4.0 feet above the base. Since the base level is
usually given for some level below the bottom of the streambed, the
actual stream depth would typically be something less than 4 feet.
In the new system, called North American Vertical Datum 88 (NAVD88),
the base reference level is nearly mean sea level and the measured
water level is the elevation of the water surface above mean sea
level. That means that, for the same example gauge, instead of
reading 10.0 feet, it may read, say, 170.0 feet. A water level reading
of 170.0 feet of this example gauge means that the water level is 170.0
feet above sea level while it is still the same 4 feet deep.

For the NWS river flood warning system, the defined flood levels for
minor, moderate and major flood categories have to be converted to
NAVD88 as well, in order to match the reported river stages. The
conversion factor for this gauge is 196.54 feet. Below please find
the listing of this flood warning point's old flood levels, and the
newly converted flood levels. Levels were rounded to nearest one-half
foot as needed.

Here are the new and old flood stages:

S.F. Stillaguamish River at R Street

Flood Category	New Stage	Old Stage
Flood Stage/Minor Flood	211.0 ft.	14.5 ft.
Moderate Flood	212.5 ft.	16.0 ft.
Major Flood	213.5 ft.	17.0 ft.

If you would like more information about the National Weather
Service hydrologic services in the Seattle area, please contact
Brent Bower, Senior Service Hydrologist, at 206-526-6095.