

Interpreting the Eagle Island Flow Split Charts

June 22, 2018

Five graphical charts are provided: 2006, 2011, 2012, 2017 & 2018. The data presented are equivalent, only the years have changed.

The bottom half of each chart page (measured discharges) is read against the left axis. The black (Glenwood) and red (S. Channel, Eagle Rd.) are gage readings with a 60 minute lag shift included. The blue (N. Channel, Eagle Rd.) is an indirect reading obtained by subtracting the red from the black. Keep in mind, the North Channel is an indirect reading, so be careful putting too much stock in that factor.

The top half of the chart (North/South Channel Flow split) is read against the right axis. Assuming all flow at Glenwood is conveyed to Eagle Rd. (no irrigation depletions and no flooding around the S. Channel gage) and no external inputs (the Q from the Boise Waste Water plant is neglected along with any other stormwater inputs), the split between the South and North Channels is calculated.

In 2017, a 50/50 split initiated at 2,100 cfs flow at Glenwood. However, on the receding limb, the flows returned to 50/50 in the mid-7,000 cfs range. Apparently, sediment deposition at the head of the Island or a South Channel head-cut affected the split as a very uncharacteristic split set up during the final month of flows.

In 2012, the split held in the 70/30 (South/North) range all while flows were in the 1,000 cfs range. In 2011, things started moving when the flows stepped up to 1,000 cfs. However, in 2006 the change didn't show until 2,500 cfs.

Data Sources:

Boise River @ Glenwood:

http://waterdata.usgs.gov/id/nwis/uv?dd_cd=01&dd_cd=02&format=gif&period=7&site_no=13206000

Boise River, S Channel @ Eagle Rd:

http://waterdata.usgs.gov/id/nwis/uv/?site_no=13206305&PARAMeter_cd=00065,00060