

we were out for our normal ambient run in the Samish Basin on Tuesday, 3/29 and for storm sampling on Wednesday, 3/30. Results are below.

First, the calm before the storm, Tuesday's ambient run:

3/29/2011

| <b>Location</b>                | <b>Fecal coliform, cfu/100 mL</b> |
|--------------------------------|-----------------------------------|
| Thomas Creek at Hwy 99         | 49                                |
| Thomas Creek at F&S Grade Road | 4.5                               |
| Friday Creek at Prairie Rd     | 17                                |
| Swede Creek at Grip Rd         | 31                                |
| Samish River at Hwy 9          | <1.8                              |
| Samish River at Thomas Rd      | 7.8                               |
| Alice Bay Pump Station         | 240                               |
| Edison Slough at School        | 49                                |
| Edison Pump Station            | 23                                |
| North Edison Pump Station      | 140                               |
| Colony Creek at Colony Rd      | 4.5                               |

Very low numbers in the streams, higher in the drainages. This sample continued the late winter pattern of mostly low fecal coliform counts, especially in the streams. The lab is now using an updated Standard Method for fecal coliform, hence the decimal places in the results.

We also sampled the whole Samish Basin on Wednesday in the middle of the rainstorm that brought almost 2" of precipitation to the lowlands, and more in the headwaters. All streams, ditches, and fields were full of water. The Samish rose from about 200 cfs to over 3,000 cfs and left its banks at Allen for the third time this water year. We sampled at Thomas Road at 8:30 am, then started at the headwaters and worked downstream, finishing again at Thomas Road at 11:00 am. This sample took place during the steep part of the river rise but not at the peak. The results (below) were a disappointment:

3/30/2011

| Location                          | Site Number | Fecal Coliform, cfu/100 mL | Duplicate |
|-----------------------------------|-------------|----------------------------|-----------|
| Samish River at Thomas Rd at 0830 | 32          | 310                        | 350       |
| Samish River at Hwy 9             | 11          | 33                         |           |
| Samish River at upper Prairie Rd  | SAM3PR      | 350                        |           |
| Parsons Creek at mouth            | PAR         | 1600                       |           |
| Samish River above Parsons Creek  | SAMPAR      | 350                        |           |
| Samish River at Double Creek Ln   | SAMDCL      | 240                        |           |
| Skarrup Creek at Double Creek Ln  | SKAR        | >1600                      |           |
| Samish River at 1st Prairie Rd    | SAM1PR      | 1600                       |           |
| Samish River at Grip Road         | SAMGRIP     | 920                        |           |
| Swede Creek at Grip Rd            | 8           | 540                        |           |
| Samish River at F&S Grade Rd      | SAMFS       | 540                        |           |
| Weir Creek Prairie Rd             | WCPR        | >1600                      |           |
| Friday Creek at Prairie Rd        | 6           | 540                        |           |
| Samish River at Hwy 99            | SAMH99      | 240                        |           |
| Thomas Creek at Hwy 99            | 3           | 1600                       |           |
| Samish River at Chuckanut Drive   | SAMCD       | 920                        |           |
| Samish River at Thomas Rd at 1100 | 32          | 1600                       | 540       |

The Samish was relatively clean at Hwy 9, but had already picked up some bacteria by the next crossing (upper Prairie Road). Counts continued to rise downstream (with some fluctuations), and the tributaries were especially bad. This event has resulted in another closure of the shellfish beds.

For a little perspective, the maximum observed fecal coliform river loading (flow x concentration) for this event was 40 trillion coliform/day. The April 29, 2008 event produced a loading of 177 trillion coliform/day.

We also obtained a sample yesterday at near the peak of the hydrograph (3300 cfs). We will receive that result later today.