**ESS/OCEAN 230 Field Trip A**

**Nisqually River – Glacier to Delta**

**Please explain your answers**

**Reports should be typed and submitted by email to the Jonathan within a week of the trip**

*1) How do the forms of the channels in the upper and lower Nisqually River differ? (i.e., from the first two stops to the next-to-last stop).*

*2) How does the sediment size and composition change downstream along the Nisqually River?*

*3) What are the primary sediment delivery processes to the upper and lower Nisqually River, and how do they differ? (i.e., from the first two stops to the next-to-last stop).*

*4) Estimate an approximate time interval between landslide events (debris flows) for Kautz Creek, and state your logic.*

*5) Does the upper or lower Nisqually River have a streambed surface that more closely reflects the size of the sediment delivered to it from upstream?*

 *6) Does the upper or lower Nisqually River have a more temporally variable sediment regime? (i.e., in which part of the river is the sediment supply delivered in a more punctuated, rather than a steady fashion?)*

*7) What is the effect of the Alder Dam on the river?*

*8) How does the ratio of how the river erodes laterally versus vertically change upstream versus downstream of Alder Dam?*

*9) What processes are similar and different for the delta at the head of Alder Reservoir versus the delta entering Puget Sound?*

*10) What are the impacts of putting dikes around the Nisqually delta?*