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ESCI 330 NATURAL HISTORY OF THE PACIFIC NORTHWEST

Chuckanut Creek Field Trip

Riparian Geomorphology

Describe the spatial distribution of large rocks, cobbles, gravel, and fines. Consider their locations relative to source materials, current and prior creek channels, and local topography (creek bends, etc.)

Describe current channel morphology. Where is water confined to a single channel? Where does the creek form pools? Where does the creek flow turbulently?

Identify locations of prior creek channels. What features help you identify prior channels? Can you identify why the creek migrated away from prior channels?

How does channel morphology differ in reaches with steep vs. shallow gradients?

Large Woody Debris (LWD)

Describe the spatial distribution of logs in the Chuckanut Creek floodplain. Consider locations relative to existing forest, active channels, inactive channels, and channel morphology.

Compare relative frequencies of isolated logs vs. LWD clusters. Are most logs isolated or clustered?

Can you identify structural characteristics that consistently appear in LWD clusters?

Can you identify any patterns in LWD orientation relative channel or flow direction? Relative to LWD source areas? Relative to other LWD?

Find logs that fell into the creek recently and identify their former locations as standing trees. Can you determine what caused the trees to fall? Can you deduce any role of the creek in LWD recruitment?

Wildlife

What kinds of birds do you see along the creek corridor?

What are those birds doing to find food? What are they doing to conserve heat?

Can you find tracks of any animals on the creek banks? Which species? What were the animals doing?

Can you identify animal uses of LWD? Where? Which species?

Can you find (m)any active non-aquatic insects? Consider how your insect observations might affect the kinds of birds you might see or not see.

Plants

What kinds of trees and shrubs grow along the creek? What do the kinds of plants suggest about variation in creek level?

Do you notice any differences in forest characteristics on the north vs. south banks of the creek?

Where do shrubs grow densely along the creek bank, and where do trees grow without shrubs?

Are riparian shrubs browsed heavily in this creek valley? How does browsing affect riparian vegetation?

Leaf litter falling from trees provides much of the organic matter and nutrient inputs to the aquatic food web. (Salmon carcasses also are an important source.) Can you find accumulations of decaying leaf matter in the creek? If so, consider characteristics of their locations.

Deciduous trees do not bear leaves in winter. Consider how the locations and extent of shaded vs. illuminated parts of the creek would differ between now and mid-summer.