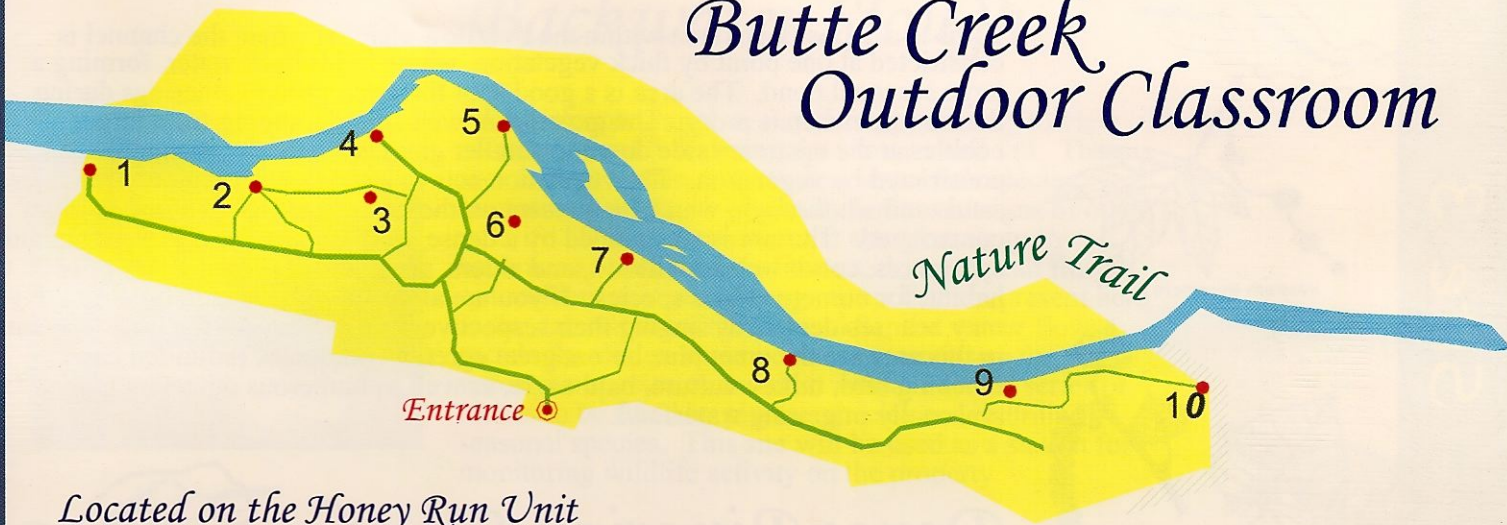


Butte Creek Outdoor Classroom



Located on the Honey Run Unit
of the Butte Creek Ecological Preserves



Streambank Stabilization

Erosion from stream bank flows during the winter floods of 1996/97 left a steep, somewhat unstable bank here. A dense line of alder trees has naturally established itself along the toe of the bank and is already providing bank protection. The site will be utilized as a monitoring station to gauge the success of the alders in stabilizing the bank. Monitoring provides information that is valuable to gauge the success of both natural processes and implemented projects, documents succession, and provides lessons learned to be used in similar future efforts. A comprehensive monitoring program for the entire property, addressing issues related to bank stabilization, plant succession, noxious weeds, and wildlife will be implemented. All are essential for determining the success of project designs.



White Alder



Creek Morphology

This site is the mouth of a small overflow channel, which provides an avenue for floodplain interaction, allowing high flows to influence geomorphic processes on upland areas of the property. Notice the willows and alders along the bank of the creek.

These riparian volunteers established naturally along banks and gravel bars as their seeds are transported by wind and water and settle out along the water's edge. Looking south across the creek provides a good view of a large gravel bar, which changes shape every year, depending on winter flows. Low areas like this are the first to receive flows as the creek's volume increases each winter and the last to feel the effects of water receding back into its flow channel. As the volume increases, the competency of the water to move materials in its path increases and the gravels begin to move. Depending on the frequency and duration of high water events the gravel bar is reshaped as gravels and cobbles are picked up and transported downstream and replaced by a new set of materials from upstream sites. Gravel bars are considered depositional areas within the creek bed. As high flows recede, much of the material being transported downstream settles out in these areas. This pushes the creek in one direction, eroding the opposite side of the bank from the bar. This is a clear example of the geomorphic process, which forms meander bends in streams. This phenomenon is also clearly shown at Site #5.

