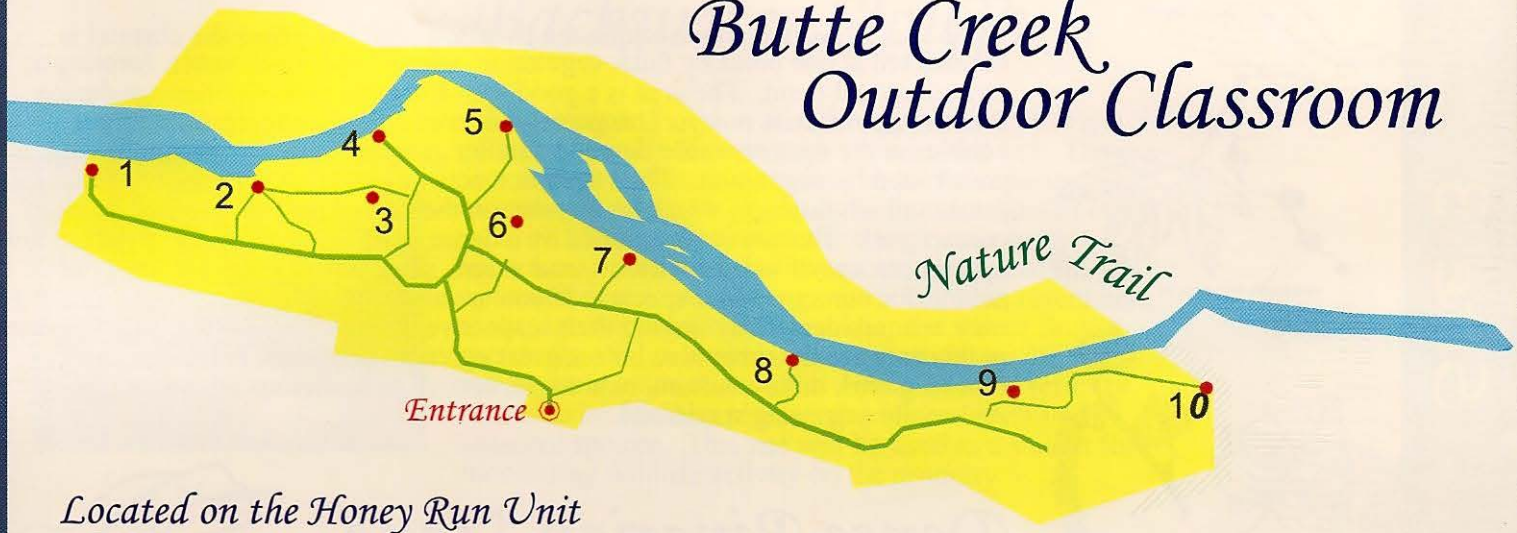
Site Map

Butte Creek Outdoor Classroom



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

Site 1


White Alder

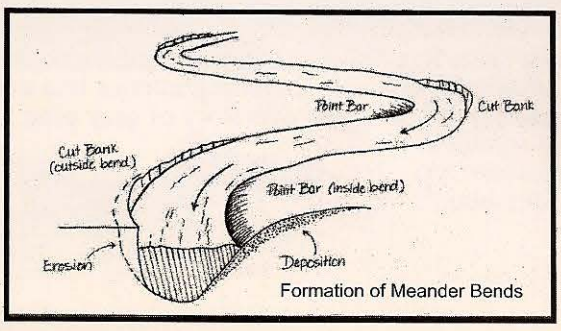
Streambank Stabilization

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.

Site 2

Creek Morphology

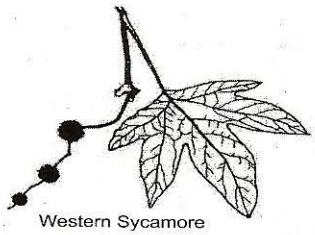
This site is the mouth of a small overflow channel, which provides an avenue for floodplain interaction, allowing high flows to influence geomorphic processes on upland areas of the property. Notice the willows and alders along the bank of the creek.



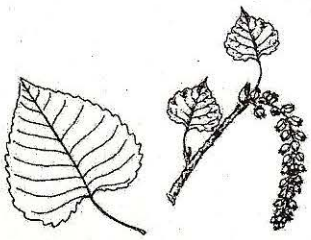
Formation of Meander Bends

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 it's 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.

Site 3



Western Sycamore

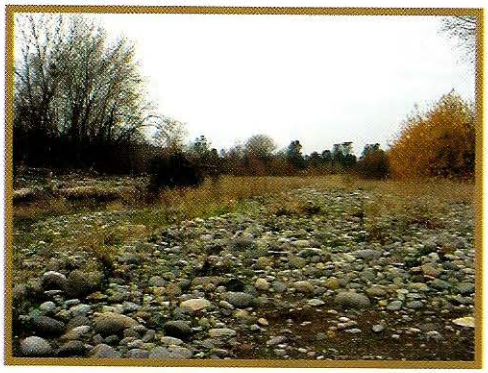


Fremont Cottonwood

This is a depositional area within the overflow channel where the channel is constricted at one point by thick vegetation, which holds back water, forming a large seasonal pond. The area is a good spot for small group gatherings during the summer when it is dry. The gravels are well sorted, ranging from larger cobbles at the upstream side down to smaller gravels where the channel becomes constricted by vegetation. The vegetation acts as a strainer, letting only the finer sands and silt through, which are present on the downstream side of the point of constriction. The site is surrounded by a dense, tall stand of riparian trees, including sycamores, cottonwoods, willows, and alders, all of which provide very good habitat for numerous bird species. If you are alone or with a small, quiet group you may hear resident birds singing their respective songs. Some of the birds present in this area are the great blue heron, great egret, wood ducks, red-tailed hawk, mocking bird, turkey vulture, bald eagle, as well as numerous others including seasonally migrating waterfowl.

Dense Riparian Stand

Site 4



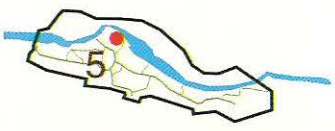
This site provides good creek access down another large overflow channel. The creek has a relatively low gradient at this spot, providing an opportunity for benthic invertebrate sampling which can indicate the health of the creek. Also worth noting are the large piles of woody debris a couple hundred feet down the overflow channel. The size of the logs illustrates the power of the flows in this area. This woody material is an essential part of the creek ecosystem. When it is totally or partially submerged in water it forms the basis of the food chain. The decomposing organic material provides a source of food for the aquatic insects, which are the main food source for fish, amphibians, birds and reptiles in the area. Woody debris also provides shelter for fish and other aquatic organisms. Left stranded on the floodplain, as in this case, woody debris provides habitat for many terrestrial species of animals.

Overflow Channel

Site 5

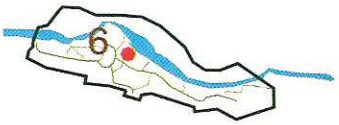
Gravel Point Bar

This site is another natural gravel point bar, which provides an interesting look at an old well casing exposed within the creek channel. This well was put in to provide water for the homes that were proposed to be built here. This is a good example of how much the creek channel moves, especially when flowing through an area with an unstable landscape, such as the tailings present on this property. Notice the bank on the south side of the creek, which eroded during the 1996/97 floods, forming another very steep unstable bank that will be used as another monitoring station. Observe the view of the north-facing slope across the creek. This steep slope supports a composition of the representative foothill hardwood species of the area, including interior live oak, blue oak, and manzanita, with a sparse overstory of gray pine.

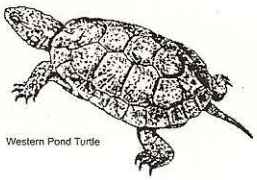


Site 6

Backwater Slough



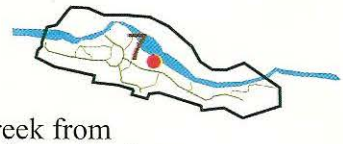
This slough grants an excellent opportunity to view an array of wildlife during the summer and fall. There are resident turtles, frogs, warm water fish species, migrating waterfowl, predatory birds, and signs of other wildlife. During the winter the slough essentially becomes a side channel of the creek, which can flush out resident animals and organisms that are present here in the drier times of the year. After the winter flows recede the slough again becomes a sanctuary for numerous species of animals, with a renewed series of niches to be filled by pioneer species and returning seasonal species. This site will be used as a station for monitoring wildlife activity on the property.



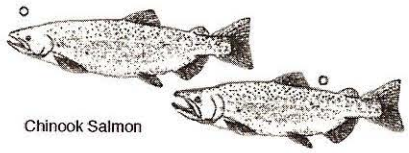
Western Pond Turtle

Site 7

Creek View



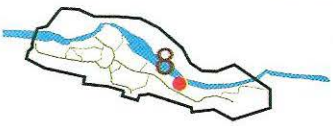
During the summer this site provides a view of the creek from about 15 feet above the water. It is a good site for viewing migrating and spawning salmon, in the spring and fall, and other resident fish such as trout, pike, minnow, hardhead, and sacramento sucker. Also, looking upstream, there is a nice view of a small riffle dropping into the pool, which is another geomorphic process that shapes the stream channel. This process also allows for increased oxygen mixing at the base of the riffle, which forms a nice feeding spot for resident fish. This upstream view will also be utilized as a photo-monitoring station for gauging the changes that occur to riffles and pools during different flows over time.



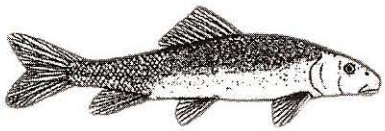
Chinook Salmon

Site 8

Old Haul Road



The trail here heads out to an old asphalt haul road, which was used as an access road to the property and surrounding area while it was being mined for gravel. This property was mined for sand and gravel from the early 1950's until the mid 1980's. The hual road ran from Baldwin Contracting's plant, just downstream of the Skyway Bridge, up the canyon to the Honey Run Unit property. It actually crossed the creek in two different spots. Both crossings were permanent bridges. One was just downstream of where the main set of powerlines cross the creek. The other crossing was located just downstream of the property boundary, on the current Department of Fish & Game parcel. Both were in place until the floods of 1986 washed them out. About this time the gravel mining company sold its holdings. Some parcels were sold to the Department of Fish & Game and this one was sold to a private individual, who in time sold it to CSU, Chico Research Foundation. The site also provides a prime spot for viewing resident aquatic species.



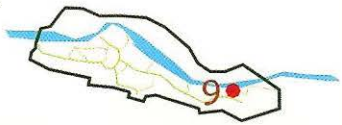
Sacramento Sucker

Site 9

Perennial Pond

The trail to this site passes through a variety of established native vegetation assemblages on the way to a man-made perennial pond. Native plant species here include mugwort, goldenrod, sedges, rushes, and numerous other riparian species. There are several wetland plant species present, as well as an abundance of frogs, and signs of numerous reptiles and mammals. Also many ducks have been seen using the pond. The trail continues past the pond and tops out on another remnant section of the old hual road.

Mugwort



Site 10

Sycamore Grove

This site is the down stream boundary of the property, reached by continuing down the old haul road. There is a depression in the landscape that has been colonized by a relatively large grove of sycamore trees. This settling, although influenced by human activities, represents a natural process of levee building (represented by the road) along the bank of the creek. This allows the larger riparian species, such as sycamores and valley oaks, to establish on the upland side of the levee. Also notice the star thistle growing up through the asphalt of the road, showing the strength of this invasive, non-native plant. It is not only replacing native grasses in meadow areas but has the capability to take hold in any disturbed area, such as along roadways and eventually the roadbed itself.

Star Thistle