

DECREASING BANK EROSION South Boise Water Co.

Many areas in the company system are subject to bank erosion. If running water adjoins an unprotected bank, it will tend to wear the bank down and deposit the material in slower water. If the grade is sufficient, it will cut down as well. If the grade is slight, the water will deposit the material in the bottom of the stream, resulting in a progressively wider and shallower situation, until a swamp develops. There are many locations in our system where this occurs to some extent. The largest instance is the "Larkey Pool," the stretch of Loggers Creek between RiverRun Dr. and Larkey Dam. In many areas the creek is 30 feet wider than it used to be and the process continues.

The major factor in this process is the presence of running water next to unprotected banks. Secondly, the growth of water plants, especially American elodea, a native plant to the Boise River contributes to the problem. As the elodea grows in the center of the stream, it forces the water to the side, eroding the banks further. Full sunshine, the infiltration of fertilizers, and the deposition of fine silts all contribute to plant growth.

Prevention

1. Leave streamside vegetation there. The roots hold the bank and trees shade out the elodea.
2. Do not fertilize near the water.

Natural restoration

1. Plant trees and bushes adapted to the habitat, such as willows, alders and poplars. You may need to protect them from beavers. Three-foot high 2"X4" welded wire fencing is reasonably easy to work with and usually works well for this purpose. Popular bushes include syringa (State flower), wild currant, red osier dogwood, red twin berry and black twinberry. Syringa and currants like sun, the twinberries do best with some shade.
2. Most willows will send roots out into the water. After they are several years old, they can reclaim stream bank at the rate of 6-12 inches per year as the roots grow out into the water and trap sediment..

Engineering solutions

Some of these are expensive; some are effective only if done over a distance of hundreds of feet; and some require similar treatment of both banks to be very effective. For Loggers Creek the ID Dept. of Fish and Game provides the winter water and would have review authority on any engineering solutions. Because they provide the water for fish and wild life habitat, they would only approve of a plan that included restoration of streamside vegetation.

1. Barb dams that push the water back toward the middle and create an eddy behind them where silt will deposit and trees can grow.
2. Line the bank with rocks or concrete. (Neighbors may not like the view, depending on the material you choose.)
3. Build dikes to narrow the channel and fill in behind them. These can be rock, concrete, or fabric tubes filled with sand or silt.