

Soil Conservation and Erosion Control

I first learned the importance of conservation studying agriculture in high school where I grew up in Eastern Idaho. There are a number of inter-dependent factors involved. Water and good soil are essential to plant growth. Plants are essential to control erosion which in turn is essential to maintain good soil. It is also necessary to build up the soil with nutrients, and maintaining those nutrients by preventing leaching.

The primary source of nutrients for us at Wildwood is decaying grasses, leaves, wood, and pine needles. Fertilizer is expensive but can be conserved by applying it selectively to individual plants as I covered in my article on trees. In addition, I have broadcast a couple of sacks of common grass fertilizer granules about a hundred feet out away from my house for a number of years. There is a vast difference in comparing photos from fifteen years ago and now. That evidence is apparent in the photo accompanying my article #12 on trees.

The overriding common denominator for success is erosion control, both in building up the soil and maintaining it in good condition. There are several $\frac{1}{4}$ acre sized areas on my property that I specifically selected as erosion control test sites 28 years ago. I applied various techniques that I learned back in those high school days. Faye and I frequently visit those specific areas and admire the fruits of our labor. We also enjoy pointing out what can be accomplished to our children and friends. One of those test sites is the northeast corner of lot 1-275, next to Olympic Circle Road. That sloped corner was essentially barren 28 years ago. It was in sad shape. In fact that was true for most of the 12 acres. It was rutted where water runoff had eroded about 3 inches of soil away leaving little one to two square foot islands of raised mounds with tufts of grass on them. That alone was evidence of how grass can prevent erosion. The problem was there were only a few trees and not enough grass to slow down the runoff.

In view of the foregoing discussion, my first projects were to construct water bars – many of them- by hand. That involves digging shallow lateral ditches as level as possible along the contour of the slope about 10 or 15 feet apart. The whole idea is to catch every drop of precious rain or snow and prevent it from leaving your property. I want every drop to soak into the soil to the extent possible and not evaporate. The “name of the game” at Wildwood is soil and water collection and preservation.

Faye will vouch for this. For years I would drop whatever I was doing if we got a hard rain. I would put on a rain coat, grab a shovel, look for water running and block it with cross

dikes. I would later extend the short dikes into longer water bars that would disburse and store the trapped water. Another important technique is to dig a shallow ditch with a down slope dike in the form of a V and channel water directly to a tree. I have dug hundreds of these lateral and V type water bars by hand on our 12 acres. Years ago we had more gully washers that would moisten the soil and make it easier to dig.

The example that I cited above on the northeast corner of 1-275 can be observed from the road. Dust and other natural forest debris have filled in the little gullies to where it is a smooth slope now with the lateral water bars overgrown by native grasses. I planted several dozen seedling ponderosa pines in that particular spot as in many of the other interior sites. Those small trees are now firmly established and are about 3 to 4 feet high. Unfortunately, I don't have an old photo to compare it with today.

Another important aspect of conservation and erosion control is the use of wind breaks. Windbreaks, both trees and grass, act as barriers and dust as well as snow will drift in behind them. I used to have a lot of snow drift in against the northwest side of my out buildings and house. The drifts made it difficult to access our property in the winter. The hundreds of trees that we have planted are finally acting as snow fences should. They are trapping snow that would otherwise blow right on by. Other than a few rare years, like 2007-2008, we are able to access our home throughout the winter now. The grass and wildflowers have also accumulated and thickened substantially around the windbreaks.

Of course another real tangible effect of our conservation efforts is aesthetic. One of our greatest joys is "walking the acres" or just sitting on our deck and enjoying the peaceful beauty of our tree studded landscape. We have transformed it immensely through a lot of forward planning and hard work. I have attached a few before and after photos to show an example of the progress that we've made.

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Erosion Control and Soil Conservation



1982 Landscape, Del and Pump.



1980 to 1986 Landscape



1987 Landscape



2008 Landscape



2009 Windbreak



20+ Years Conservation Effort

EROSION CONTROL EXAMPLES

