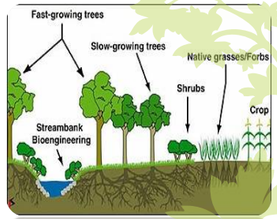

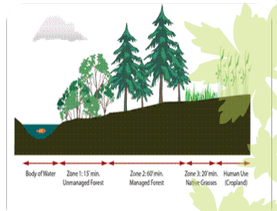

Riparian Buffers:

A Great Backyard Tool

Riparian buffers are useful to anyone owning property along a stream, river, lake, or wetland. Native plants (buffers) are used to create a habitat for wildlife, as well as to help slow and filter water running off property of sediment, pesticides, and nutrients, therefore improving the quality of local waterways and larger bodies of water, like the Chesapeake Bay, where these excess materials eventually end up (Alliance for the Chesapeake Bay).

A buffer is composed of three zones: streamside, middle, and outer. A streamside is the zone from the edge of the water to the top of the bank. The addition of trees and shrubs help to control bank erosion and create habitat. The middle zone contains trees and shrubs as well as wildflowers and grasses. This is useful for wildlife habitat and alternative products (nuts, fruits, etc.). The outer zone adjoins the rest of the yard and is best utilized when substantially planted with native grasses and wildflowers. This area must be maintained to aid maximum nutrient uptake and sediment filtering. Generally, the wider the whole buffer is, the more benefits there are for wildlife and health of local waterways (Alliance for the Chesapeake Bay).

To get started on creating a buffer on your property, first stop mowing to the edge of the waterway; change your mowing line to begin 15 feet back from the bank and allow grass to grow four to six inches. If your banks are eroding, the next step would be to contact a professional to help stabilize the banks; if the banks are already stable, outline the proposed buffer area with rope, flags, or spray paint. Measure the area and note the plants and wildlife there (Alliance for the Chesapeake Bay).

Next, draw a sketch of your buffer site. Research native vegetation that you would like to plant in your buffer and make a list of the preferred plants and where they should go - it would be helpful to draw the expected area of each plant on your sketch. If you are having trouble selecting plants, it may be useful to get a soil test done to see what would grow best.

Remember to check the property map for public utility right-of-ways; if you are unsure of these locations, try a PA One Call at 1-800-242-1776 for the information (Alliance for the Chesapeake Bay).

When you are finished planning, it's time to start! Site preparation is key to the success of a buffer: identify and remove invasive vegetation from the site (common ones include multiflora rose, mile-a-minute vine, or Japanese honeysuckle). If large amounts of soil are exposed after weed removal, consider planting a cover crop to help prevent growth of new weeds, or use weed mats or landscape fabric. Collect the chosen plants from a local nursery or garden center and get to planting! (Alliance for the Chesapeake Bay).

Maintaining your new buffer, especially during the first year, is essential. Make sure to water and keep tall grass/weeds away from young plants. Applying four-inch deep composted mulch may help hinder weed growth, as well as retain moisture. Continue to monitor and control weed growth by pulling and mowing until the trees and shrubs are established (this takes about three years). As the buffer becomes stable, the less care the better. Be wary of working in the buffer zone from mid-April to mid-August, as wildlife may be utilizing this area to mate and rear young (Alliance for the Chesapeake Bay).

The above information was taken from:

Alliance for the Chesapeake Bay. "Backyard Stream Buffers." (June 2005). Print, or <www.alliancechesbay.org>
For additional information, the following may be useful:

Forest Buffer Toolkit: Replanting Pennsylvania's Streamsides. <www.dep.state.pa.us/dep/deputate/watermgt/wc/subjects/StreamReLeaf/forestbuffertool/tkit_ToC.pdf>

"RestoreCorps". Alliance for the Chesapeake Bay. July 9, 2010 <http://www.acb-online.org/project.cfm?vid=77>.

Riparian Buffer Systems. <www.riparianbuffers.umd.edu/>

NORTHUMBERLAND COUNTY
Conservation District

Examples of Projects

Jim Diemer, Sunbury

The stream section at Jim Diemer's was continually eroding back onto his property, causing a steep bank which was washing away significant amounts of sediment. This sediment is not good for stream quality, and eventually ends up in the Chesapeake Bay, therefore affecting the health of the water of the Bay. To prevent this, installed at the Diemer site was a mudsill with two end deflectors attached. The mudsill provides stream bank stabilization as well as a shaded overhang that creates fish habitat, while the deflectors help to redirect the flow of the water to the center of the channel.

Before

After

Before

After

Gary Truckenmiller, McEwensville

At the Truckenmiller site, constant erosion caused very steep banks that were receding back into the farmland and fields of the property, creating a serious issue. Sediment was, once again, being eroded into the water and transported down to the Chesapeake Bay. To prevent this concern, a mudsill was installed for bank stabilization. A couple of deflectors were placed at the start of the project to direct water flow back toward the center channel and away from the bank. Finally, root wads were incorporated into the project; these dissipate energy in a high-water event and create an area appealing to fish.

Paul Ross, Sunbury

The Paul Ross property had some erosion issues and a wide channel at some parts. To account for this, a mudsill was built to support the eroding bank from collapsing or losing sediment; deflectors were installed to narrow the existing channel and gradually build the bank back up (by trapping substrate along the bank below the device); and a cross-vane was installed to establish grade control, center flows in the channel, and provide some plunge-pool habitat.

Before

After