



Landowner End of Project Packet



How can I promote stream health on my property and in my neighborhood?

- » Never mow to the edge of a stream or lake; let the buffer develop naturally;
- » Plant appropriate native vegetation and cuttings in the buffer zone;
- » Don't dump anything in a stream, including grass clippings and other yard waste, try home composting instead;
- » Keep the water body clean by removing trash;
- » Leave natural woody debris in a stream. It provides habitat and food for aquatic communities;
- » Use pesticides and fertilizers sparingly in your yard and not at all in the buffer (Always stay at least 15 feet from stream);
- » Keep septic systems in good working order to prevent contaminated runoff;
- » Don't change the course of a stream or try to use rocks or other materials to stop stream bank erosion yourself. You can do more harm than good;
- » Pick up dog waste and dispose of properly;
- » Never dump chemicals, oil, gas, paint, etc. on your lawn, street, or driveway;
- » Organize neighborhood clean-up days;
- » Tell your neighbors to call the Duluth Stream Corps to plant trees on their streamside property!

Along with planting trees, increasing a "No-Mow" (Buffer) zone next to your stream will have a positive, quick impact.

What is a buffer?

A buffer (also called a riparian buffer area or zone) is the strip of natural vegetation along the bank of a stream, lake or other water body that separates the water from developed areas such as lawns, buildings, roads, driveways, etc. Buffers can include grass, shrubs, and trees, which hold the soil in place and act as living filters of pollution. Without buffers, homes and residential neighborhoods can contribute sediment, fertilizers, pesticides, metals, oil and other vehicle fluids, pet waste and many other pollutants to nearby waters. Buffers also help prevent property loss due to erosion.

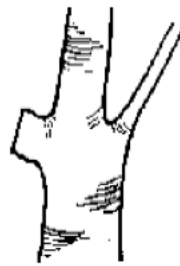
Why Does Fertilizing My Lawn Potentially Harm The Watershed?

When the excess nutrients from all the fertilizer we use runs off into our waterways, they cause algae blooms sometimes big enough to make waterways impassable. When the algae die, they sink to the bottom and decompose in a process that removes oxygen from the water. Fish and other aquatic species can't survive in these so-called "dead zones" and so they die or move on to greener underwater pastures.

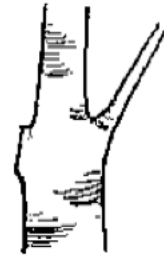


Landowner Tree Care Guide

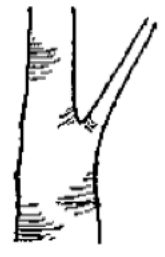
Thank you for helping to ensure that these trees thrive in their new streamside home!



Incorrect--
Too much stub



Correct



Incorrect--
Too close to the trunk

Watering

The first year of a tree's life is the most important. You will need to monitor soil moisture often, especially during the summer months, but be careful not to over-water the tree. The weed mat placed over the planting hole will greatly reduce the risk of the new tree drying out.

Weeding

Weeding will probably not be needed due to the weed mats that we have installed. In the event that some weeds are able to find a way up through the mat, be sure to pull them on a regular basis. If allowed to grow up, weeds can shade out the neighboring tree and steal water and nutrients, limiting the tree's growth potential and in some cases killing it. Try to remove weeds before they flower and spread seeds. Note: the weed mats are NOT biodegradable and should be removed after 5 or 6 years.

Removing the protection

As they grow, the trees will eventually not need fencing or tree tubes. For the conifers, you can remove the fencing after 6-10 years, or as soon as the upper branches get out of the reach of deer (usually 6-7 feet high). For the tree tubes, it is important to leave them on well after the trees grow up out of the tube. This is because the tubes continue to protect the trees from bark-browse by rodents, and because male deer like to rub their antlers against deciduous saplings. The tubes will deter the deer from damaging the tree in this manner. It is very important to note, however, that the tube must be removed before the tree is constrained by it. As a rule of thumb, you should remove the tube as soon as the tree trunk grows to a diameter of 3 inches. Once you remove the fencing or tubes, remember that those materials belong to you and not Community Action Duluth – you are free to use them in any way you wish! You are encouraged to continue to plant native trees and increase the aesthetic appeal and health of your stream.

Pruning

Pruning will probably be required sometime during the life of the tree to remove dead, diseased, or damaged limbs that inhibit the growth of the rest of the tree. Using the diagrams below, you will be able to gauge how close you should prune limbs to the trunk. Use sharp, reliable tools when pruning. If we planted white pine on your property, please see the enclosed blister rust handout for special instructions on pruning to prevent disease.



Want to take Stream Restoration a Step Further?

Rain Gardens:

Do you have a wet spot in your yard that you've been trying to contend with? Do you have problems with water runoff? Instead of trying to drain the water off of your property, take advantage of it by creating a rain garden.

Rain gardens not only provide visual interest to yard but also help your local streams by reducing the amount of stormwater entering our lakes, rivers and streams. They are small vegetated depressions that promote infiltration of stormwater runoff from your roof, driveway and lawn. Some are even designed to capture runoff from the street. Rain gardens help things like fertilizer, loose soil and grass clipping stay in your yard and out of the local streams and Lake Superior, where they can add unacceptably high levels of nutrients to the water, increase the stream turbidity or deplete oxygen as the stuff rots.

Rain gardens are designed with a depression to hold water after rain storms and a shallow swale to route storm water from roofs and driveways to the garden. Plants are selected to be tolerant of large water volumes, and to aid in infiltration and pollutant capture. Rain gardens have loose, absorbent soils in a shallow bowl-shape called a "ponding" area. It will contain perennial plants native to your region. When complete, rain gardens act like a natural meadow or a light forest ecosystem.

FOR MORE INFORMATION: The Blue Thumb website by the Rice Creek Watershed District, MN offers manuals, a cost calculator, on-line plant guide, and construction advice on their website: <http://www.bluethumb.org/raingardens/>



Want to take Stream Restoration a Step Further?

Natural Landscaping:

Natural landscaping has many benefits over lawns and exotic gardening. Native plants need little to no supplemental watering since they survive on natural rainfall along, thus conserving water. Native plants have few major pests or diseases, eliminating the need for landscape chemicals and thus preserving water quality and reducing health risks. Wildlife suffers less due to the preservation or recreation of habitat including water, food, and shelter.

Natural landscaping also has aesthetic benefits. By using native plants that have grown in an area naturally, a greater connection to the place we live in is achieved. Standard lawn landscapes are identical around the nation and lack a sense of identity or location, whereas natural landscapes reflect the region in which they exist.

Natural landscaping also has monetary and time benefits as well. Less maintenance is required since the native plants do not need fertilizer or constant watering, reducing maintenance costs of the landscape. Retaining the natural shapes of the plants, reducing the amount of pruning and edging needed. Native short grasses such as grow slower and shorter than exotic lawn grasses, reducing or eliminating the need for mowing (and the noise and air pollution created by mowing). Native plants are tougher in the proper situation than exotic plants, reducing the expense of replacing exotic plants that have died.

Native plants and natural gardening are well accepted now. Gardening magazines and publications include articles about native plants, habitat gardening, and natural gardening. Government organizations, educational institutions, and environmental organizations encourage native plant use, habitat gardening, and natural gardening.

FOR MORE INFORMATION: The local chapter of Wild Ones ® has the mission to educate and to share information on the benefits of preserving and landscaping with native plants in order to promote biodiversity, environmentally sound practices, and a sense of place by featuring the plants that make the Minnesota Arrowhead region the beautiful place that it is. The chapter frequently takes field trips including native plant identification hikes, tours of native plant nurseries, and demonstration "show me, help me" sessions at members' homes. The chapter maintains a demonstration native plant garden in Leif Erikson Park in Duluth. To join, fill out on the online application on the website (<http://www.d.umn.edu/~wildones/>) or contact Carol Andrews (phone: (218) 529-8204).



Want to take Stream Restoration a Step Further?

Donations:

Consider making a tax exempt donation to a non-profit organization devoted to stream restoration. The following organizations are involved in restoration efforts in Minnesota. These organizations may have members and/or staff affiliated with the Duluth Stream Corps, but are not necessarily endorsed by Community Action Duluth.

DULUTH STREAM CORPS: www.communityactionduluth.org/streamcorps.html Community Action Duluth is a non-profit organization and accepts donations. Contributions made to the Duluth Stream Corps will support stream restoration projects in the Duluth Area.

CLEAN WATER ACTION: www.cleanwateraction.org Clean Water Action is an organization of almost one million members working to empower people to take action to protect America's waters, build healthy communities and to make democracy work for all of us. For 36 years Clean Water Action has succeeded in winning some of the nation's most important environmental protections through grassroots organizing, expert policy research and political advocacy focused on holding elected officials accountable to the public.

*Donations are NOT tax exempt because the organization lobbies for policies that would protect water resources.

FRIENDS OF THE BOUNDARY WATERS WILDERNESS: www.friends-bwca.org Mission: To protect, preserve and restore the wilderness character of the Boundary Waters Canoe Area Wilderness and the Quetico-Superior Ecosystem.

IZAAK WALTON LEAGUE OF AMERICA: www.iwla.org Founded in 1922, the Izaak Walton League is one of the nation's oldest and most respected conservation organizations. With a powerful grassroots network of nearly 270 local chapters nationwide, the League takes a common-sense approach toward protecting our country's natural heritage and improving outdoor recreation opportunities for all Americans.

*Donations are NOT tax exempt because the organization lobbies for policies that would protect natural resources.

ST. LOUIS RIVER ALLIANCE: www.stlouisriver.org The St. Louis River Alliance is working to oversee activities and practices that are helping to restore, protect and enhance the St. Louis River.

TROUT UNLIMITED: www.tu.org To conserve, protect and restore North America's coldwater fisheries and their watersheds. By the next generation, Trout Unlimited will ensure that robust populations of native and wild coldwater fish once again thrive within their North American range, so that our children can enjoy healthy fisheries in their home waters.



Want to take Stream Restoration a Step Further?

Conservation Easement:

A conservation easement is a legally enforceable land preservation agreement between a landowner and a qualified land protection organization (often called a "land trust") that restricts real estate development, commercial and industrial uses, and certain other activities on a property to a mutually agreed upon level. Conservation easements typically involve the transfer of development rights from the landowner to either a land trust or a unit of government. The landowner reserves all rights not transferred, including the right to hunt, harvest timber, or use the land for recreation. Every conservation easement is different. The terms of each easement are negotiated between the landowner and the entity holding the easement. Conservation easements can be financially beneficial. When development rights are donated, the landowner can claim the donation against her/his taxes. However, this is not always the case. For most families the primary reason to pursue a conservation easement is to leave a family legacy on the land. A permanent easement ensures that the family land will remain intact and undeveloped for years to come. Although conservation easements are attractive to many landowners, some are disappointed to find themselves unable to find an organization to accept the easement. Land trusts have limited resources, and tend to focus their resources on the highest priority parcels. High priority parcels tend to be large and somehow unique, either ecologically, historically, or both.

FOR MORE INFORMATION: Download a copy of 'Land Protection Options: A handbook for MN landowners' (PDF: MN DNR publication) from <http://myminnesotawoods.files.wordpress.com/2009/10/landprot.pdf>



Thank You

**for participating as a landowner in the
Duluth Stream Corps restoration project!**

Thank you. By having restorative work done on your property you are contributing to the health of your stream and the greater St. Louis River/Lake Superior watershed!

This packet contains information on how you can care for and maintain trees and shrubs planted on your property and information on taking stream restoration a step further.

If you have any questions or concerns, we would be happy to help. Please see our website at <http://www.communityactionduluth.org/streamcorps.html>, send us an email at StreamCorps@communityactionduluth.org, or give us a call at (218) 726-1665.

To Learn More about Water Quality and our Environment please visit these sites:

For more information on Duluth's streams and on Lake Superior's watershed;

<http://www.lakesuperiorstreams.org/>

For more information on how to create a buffer zone;

<http://www.dca.state.ga.us/development/environmentalmanagement/programs/downloads/dcbackyardbuffers.pdf>

For more information on the science behind stream ecology and stream health;

http://www.waterontheweb.org/curricula/ws/ws_index.html

For more information on water quality;

http://cleanwatermn.org/app_themes/cleanwater/pdfs/forTeachers/BeaWatershedHero.pdf

For more information on Lake Superior and the St. Louis River;

<http://basineducation.uwex.edu/lakesuperior/pdf/StLouisRiverBrochure.pdf>

For more information on how to sustainably landscape along bodies of water;

<http://www.dnr.state.mn.us/lakescaping/index.html>

For more information on how to sustainably landscape along bodies of water;

http://www.prairieresto.com/boreal_natives.shtml