Planting a Shoreland Buffer of Native Plant Communities

Basic Information and Fact Sheets

Sherburne Soil and Water Conservation District

April 25, 2011

Contents

Permits for work within shorelands

Projects within shoreland districts frequently require permits

Shoreland districts are areas within 1,000 feet of the Ordinary High Water Level (OHWL) of a lake and within 300 feet of the OHWL of a river or stream. See the DNR website below for information on how the OHWL is determined.

The **DNR** requires permits for many projects affecting the area waterward of the OHWL.

Sherburne County requires permits for alterations within the shore impact zone. The shore impact zone is one half the structure set back from the OHWL for a given lake or stream. Permits are also required for alterations to bluffs which drain toward a lake or stream. For information on shore and bluff impact zones, see the Sherburne County website below or call your local zoning office. Other areas within the shoreland district may also require permits for alterations.

To determine which permits are required for your project, contact:

MN DNR Division of Waters at (320) 255-2984.

In unincorporated areas: Contact Sherburne County Zoning at (763) 765-4450 or (800) 438-0578.

Within the City of Elk River: call (763) 635-1000.

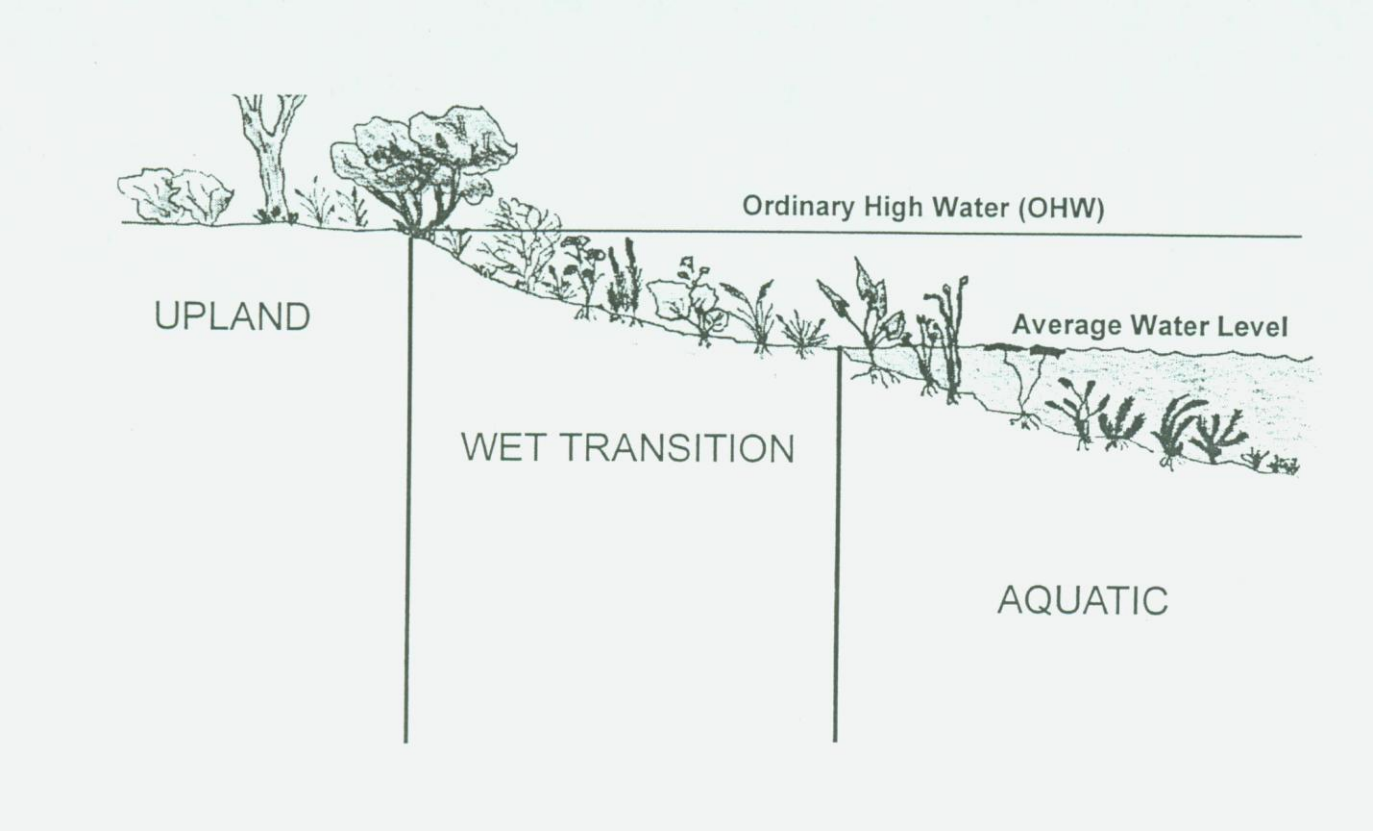
Within other incorporated areas, contact the city's planning and zoning office.

If your project includes the **planting or transplanting of aquatic vegetation** below the OHWL, a **MN DNR Permit to Restore Aquatic Vegetation** is required. Call (320) 616-2450 for information. A copy of the application is included in the back of this information packet.

The DNR's web site provides information on permits and types of projects that can be done without a DNR permit. See:
http://www.dnr.state.mn.us/waters

Sherburne County Shoreland Ordinances can be found at: www.co.sherburne.mn.us/zoning.

Shoreland Zones and the Ordinary High Water Level (OHWL)



The Ordinary High Water Level (OHWL) is the highest water level, which has been maintained for a sufficient period of time to leave evidence upon the landscape. The OHWL is commonly the point where the natural vegetation changes from predominantly aquatic to predominantly terrestrial. For streams and rivers, the ordinary high water level is usually the top of the bank of the channel.

Examples of Shoreline Buffers of Native Vegetation

Donnelly's, Lake Orono

Phelps, Lake Julia

Phelps, Lake Julia

Phelps, Lake Julia

Revised April 25, 2011

Koontz, Briggs Lake – Before, 2005

Koontz, Briggs Lake, After, August, 2007

Revised April 25, 2011

Tucker, Big Elk Lake, Before, 2004

Tucker, Big Elk Lake, September, 2006

Design Guidelines for Shoreland Revegetation Projects

1. Generally, a larger buffer will provide more benefits for water quality and wildlife.

2. Length guidelines: We recommend that the length of the shoreline buffer extend for at least 100 feet along the shoreline or if the lot width is 100 feet or less, the shoreline buffer should extend along the entire property shoreline with the exception of a 12 foot wide access. The access may be for a dock, sand beach or other use.

3. Width guidelines (landward from the shoreline): Roadways, play areas, building setbacks often create constraints on the practical width of a buffer on a residential lot. Where possible, we recommend that the average width of the upland plus transition zones be at least 15 feet. Landowners may also want to consider phasing their project over 2 or more years to develop a larger buffer. The potential for runoff at the site should be considered when assessing the acceptable buffer width.

4. Plant materials can be herbaceous or woody and must be considered native to the Ecoregion. Multiple species should be included. When herbaceous plants are established, at least 50% of the total plants should be grasses and sedges. The potential for bank erosion should be assessed when selecting species. Species with greater potential for erosion control should be selected where conditions warrant.

5. The buffer should include upland and transitional vegetation.

6. Emergent aquatic vegetation may be included where site conditions are suitable. The planted aquatic zone may be less than the total buffer length along the shoreline. Increasing the area of aquatic plants will be encouraged where aquatic plants successfully establish. Methods to prevent aquatic plant losses due to muskrats, carp and wave action should be included in the design.

7. Sedimentation and soil erosion must be controlled during installation and establishment.

Notes to Design Guidelines:

1. The width guidelines stated are regarded as minimal and performance for water quality and habitat benefits will vary depending on site conditions and species requirements. Guidelines on riparian buffers from some sources recommend widths of 30+ feet to ensure riparian buffer benefits.
2. A recent study conducted by Westwood Professional Services on buffer filtering performance showed that 5 foot wide filter strips can remove 43 to 53% of the phosphorus from the runoff created by a 2 year storm event. A 20 foot width can remove 56 to 88%. Performance is related to the steepness of the slope.
3. The condition of vegetation up slope from the buffer will affect the overall filtering of pollutants. For example, denser, vigorous turf up slope from the buffer will help filter runoff and reduce the pollutants reaching the shoreland buffer.
4. For many residential shorelines, it is not practical to install a buffer width capable of adequately filtering runoff. Treating runoff up slope from the buffer should be considered if a large volume of runoff is expected due to the percent of impervious area, steepness of slope or size of the contribution area. Infiltration systems such as rain gardens or water diversions should be implemented at these sites in addition to a shoreland buffer.
5. The presence of an ice ridge along the shoreline will enhance the performance of the buffer by reducing the quantity of runoff to the lake.
6. Wildlife habitat recommendations usually specify a minimum of a 35 foot buffer width. However, informal observations for recently established shoreland buffers with widths varying from 15 to 25 feet have shown an increase in frogs, turtles, humming birds and butterflies compared to the pre-existing mowed turf conditions. Habitat that provides for seasonal food sources and temporary cover may not be suitable for reproduction of a species.
7. To provide bank erosion benefits, the buffer width should extend landward at least as far as the maximum wave run-up at ordinary high water levels.

Shoreline Revegetation – Site Prep and Planting

The first step is to spray the existing vegetation with a glyphosate herbicide. For spraying near water, it is best to use a glyphosate herbicide that is labeled for aquatic use such as Rodeo.

Site Prep:

1) Plan on a lead time of about 17 days between the first spraying and the start date of planting. For sites with an abundance of reed canary grass, it is advisable to do a couple of herbicide applications in the fall prior to the planting year.

2) Cut the vegetation to be treated to a maximum height of 4 inches.

3) Wait a couple of days so the vegetation starts to grow again. For the herbicide to work the vegetation should be actively growing.

4) Spray the unwanted vegetation. Wait about a week and spray again.

5) Plant 10 days after the last spraying.

6) If reed canary grass is present, it is best to do two treatments; one in the fall and one in the following year prior to planting.

7) It is not necessary or desirable to till the soil.

Planting:

1) After site prep, spread 2 inches of shredded wood mulch.

2) If an erosion blanket is needed, apply the blanket over the wood mulch and stake down.

3) Plant seedling plugs by cutting small openings in the blanket. Then clear away enough mulch to plant into the soil.

4) Be sure to plant plugs so that the roots are into the soil below the mulch.

5) Begin watering within a couple of hours of starting to plant. Do not let the plugs begin to wilt.

6) Regular watering is essential in the early stages particularly in hot weather.

Plant Spacing Guide

Spacing planned	Divide square feet by this number To determine number of plants
1 ft	1
1½ ft	2.22
2 ft	4.0
2½ ft	6.25
3 ft	9.1
4 ft	16.66

Mulch Coverage Guide

Cubic yards = (inches of mulch ÷ 12) X square feet ÷ 27

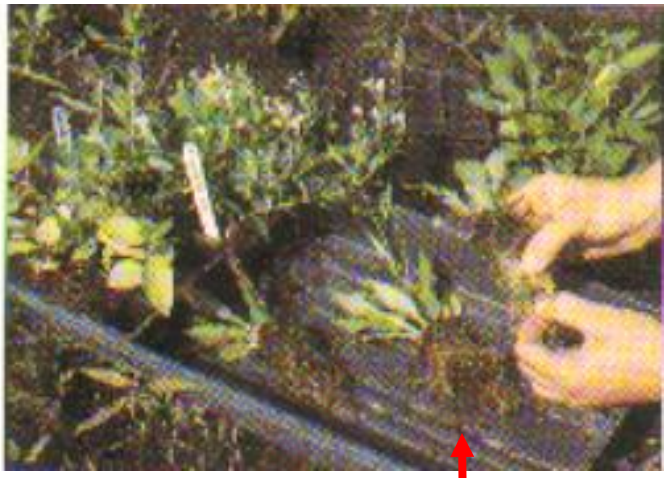
For 2 inch depth:

Cubic yards = 0.167 X square feet ÷ 27

Turf grass and other unwanted vegetation in the planting area are treated with glyphosate herbicide. Use a product labeled for aquatic use such as Rodeo© if spraying herbicide close to the water.

Apply 2 inches of shredded wood mulch over the planting area prior to planting plugs or potted plants.

If high water or flooding is possible, a straw erosion control blanket is staked over the mulch prior to planting to prevent the mulch from being washed out. The blanket should have bio-degradable netting. Synthetic photo degradable netting often lasts many years and animals can get caught in the netting.



If seedlings have become “root bound” in the container, gently pull apart the roots.

Place plant I.D. markers next to several plants of each species to help with identification later.

Wave Breakers are often needed to Protect Seedlings From Waves When Planting Along a Shoreline

On a shoreline, native plantings should be protected from being washed out by waves until they are well established. Low cost materials for constructing a temporary wave breaker include pine trees thinned from a plantation or tree farm and brush bundles of tree trimmings. Rolls made from coconut fiber are a more expensive alternative.

Pine Tree Examples:

Koontz, Briggs Lake, 2005


Koontz, Briggs Lake, 2007

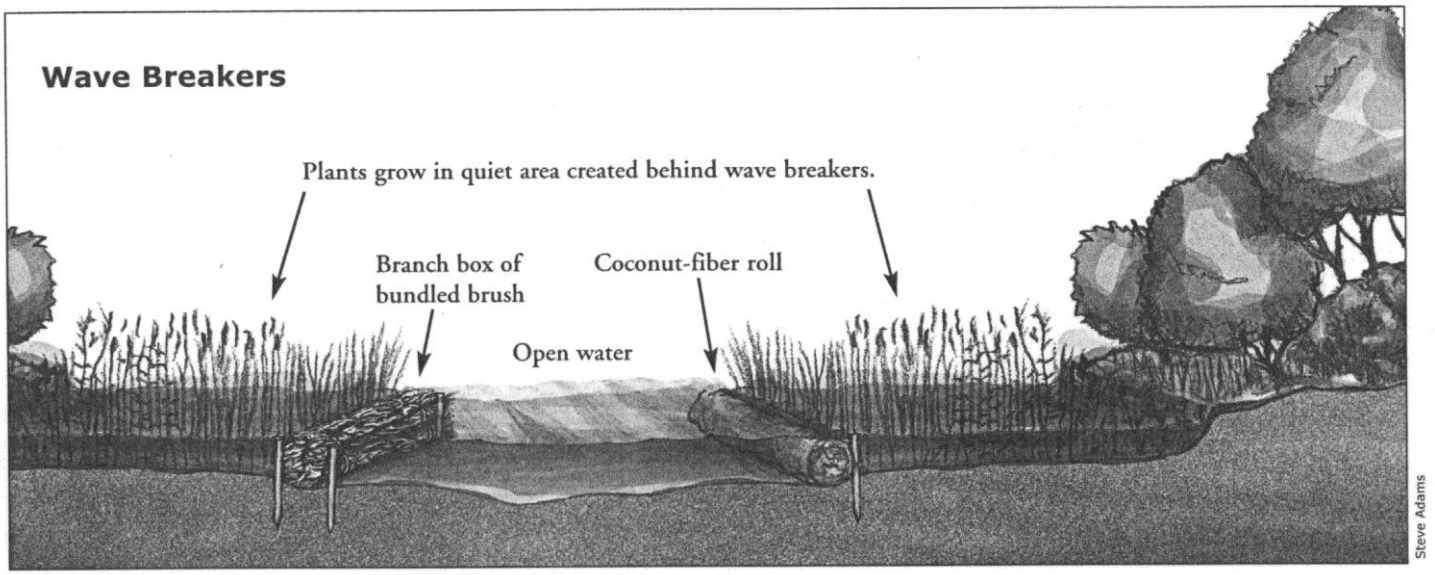
Revised April 25, 2011

Phelps, Lake Julia, 2005

Phelps, Lake Julia, 2006

Godlewski, Rush Lake 2008. In this example the pine trees have been compressed by bundling them with cord. This method creates a denser and more effective wave breaker. A 2 foot wire fence has been installed on the outside to exclude muskrats from the planting.

Brush Bundle and Coconut Fiber Roll Examples:



From Lakescaping for Wildlife and Water Quality, Minnesota Department of Natural Resources

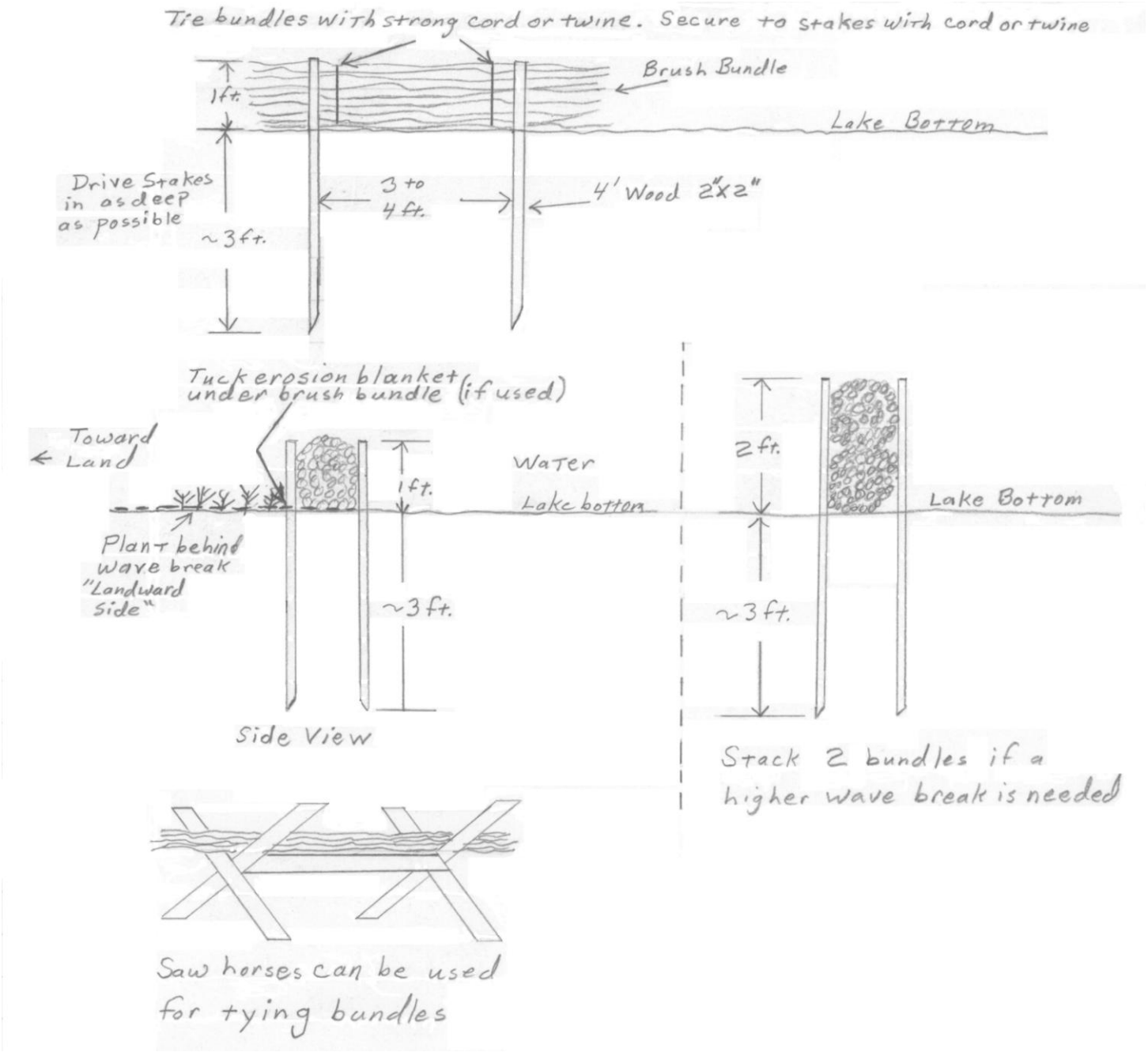
Installing coconut-fibre rolls

Coconut-fiber rolls installed

Brush Bundles being installed with 4 foot hardwood stakes

Constructing a Brush Bundle Wave Break

Brush from trimming trees and shrubs are used.
Do not use brush from exotic species such as Buckthorn when seeds or berries are present.
Use 4 foot 2” X 2” stakes or 1” X 1” hardwood stakes for anchoring bundles.
Space stakes at 3 to 4 foot intervals depending on the length of the bundles.



Preventing Animals from Damaging Your Shoreline Planting

Canada geese are attracted to freshly planted seedling plugs and can consume an entire planting.

Brightly colored flagging tape and lathe has been used as an effective goose deterrent.

Flagging tape and lathe are available at hardware stores and home improvement stores. Bird scare tape made of shiny mylar ribbon can also be purchased at some hardware stores.

Muskrats will eat aquatic plants.

Place temporary wire fence around aquatic plants to exclude muskrats.

Native Plant Nurseries

This list of nurseries does not imply any endorsement or recommendation

Codes: R-Retail, W-Wholesale, M-Mail Order;
T-Trees, S-Shrubs, FE-Ferns, FO-Forbs, G-Grasses, W-Wetland Plants

Dragonfly Gardens (R; T, S, FE, FO, G, W) 491 State Highway 46 P.O. Box 192 Amery, WI 54001 715-268-4666 www.dragonflygardens.net catalog available	**Out Back Nursery** (R; T, S, FE, FO, G, W) 15280 110th Street South Hastings, MN 55033 651-438-2771 www.outbacknursery.com catalog available
Hild & Associates (W; FE, FO, G, W) 326 Glover Road South River Falls, WI 54022 715-426-5131 www.hildnatives.com catalog available	**Prairie Moon Nursery** (R; T, S, FE, FO, G, W) Route 3 Box 163 Winona, MN 55987-9515 507-452-1362 www.prairiemoonnursery.com catalog available
Landscape Alternatives (R, W; FE, FO, G, W) 25316 St. Croix Trail Shafer, MN 55074 651-257-4460 www.landscapealternatives.com catalog available	**Prairie Restorations** (R; T, S, FE, FO, G, W) Box 327 Princeton, MN 55371 763-389-4342 www.prairieresto.com catalog available
North American Prairies (R, W; T, S, FO, G, W) 11754 Jarvis Avenue Annandale, MN 55302 320-274-5316 www.northamericanprairies.com catalog available	**Hayland Woods** (R; T, S, FE, FO, G) 6549 Keystone Road Milaca, MN 56353 320-983-6354 catalog available
Natural Shore Technologies (R, W; FO, G, W) 6275 Pagenkopf Road Maple Plain, MN 55359 612-703-7581 www.NaturalShore.com catalog available	**Minnesota Native Landscapes, Inc.** 8740 77th St NE Otsego, MN 55362 Ph 763-295-0010 Fax 763-295-0025 www.nativelandscapes.com

Suppliers: Landscaping and Erosion Control Products

Brock White Company 580 41st Ave. North St. Cloud, MN 56303 320-251-5060	**Brock White Company** 12785 Elk Lake Road Elk River, MN 55330 763-441-2004
Natural Shore Technologies 6275 Pagenkopf Road Maple Plain, MN 55359 612-703-7581 www.NaturalShore.com catalog available	

Installing an erosion control blanket on a slope to prevent erosion and soil loss

1. The blanket should have bio-degradable netting. Synthetic photo degradable netting often lasts many years and animals can get caught in the netting.
2. Roll the blanket down the slope from top to bottom.
3. Overlap the edges.
4. Insert wood, bio-degradable plastic or metal stakes to secure the blanket.
5. Dig a narrow trench along the top about 6 inches deep and insert the edge of the blanket to prevent runoff from flowing under the blanket.

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EROSION CONTROL Products
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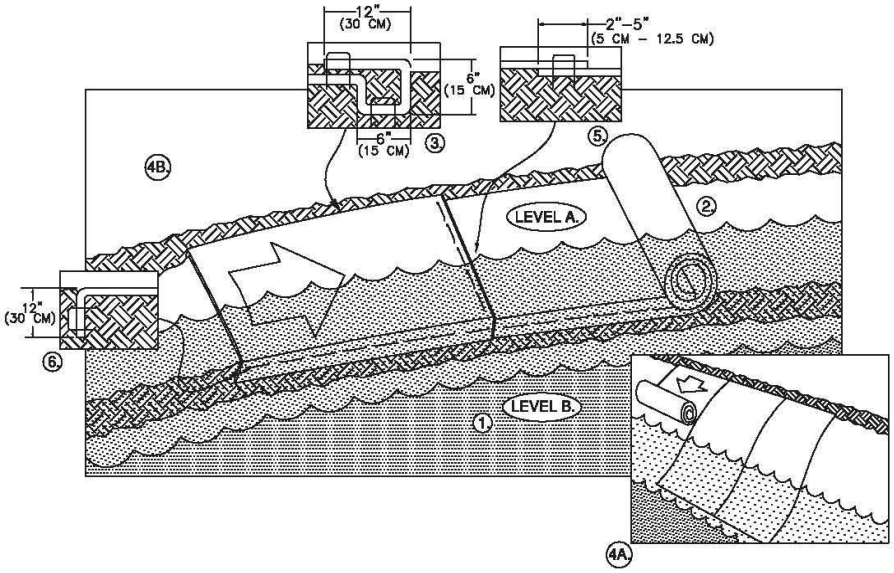
A tensar. Company

14649 HIGHWAY 41 NORTH
EVANSVILLE, IN 47725
800-772-2040
www.nagreen.com

Erosion Control Blanket: Shoreline Installation



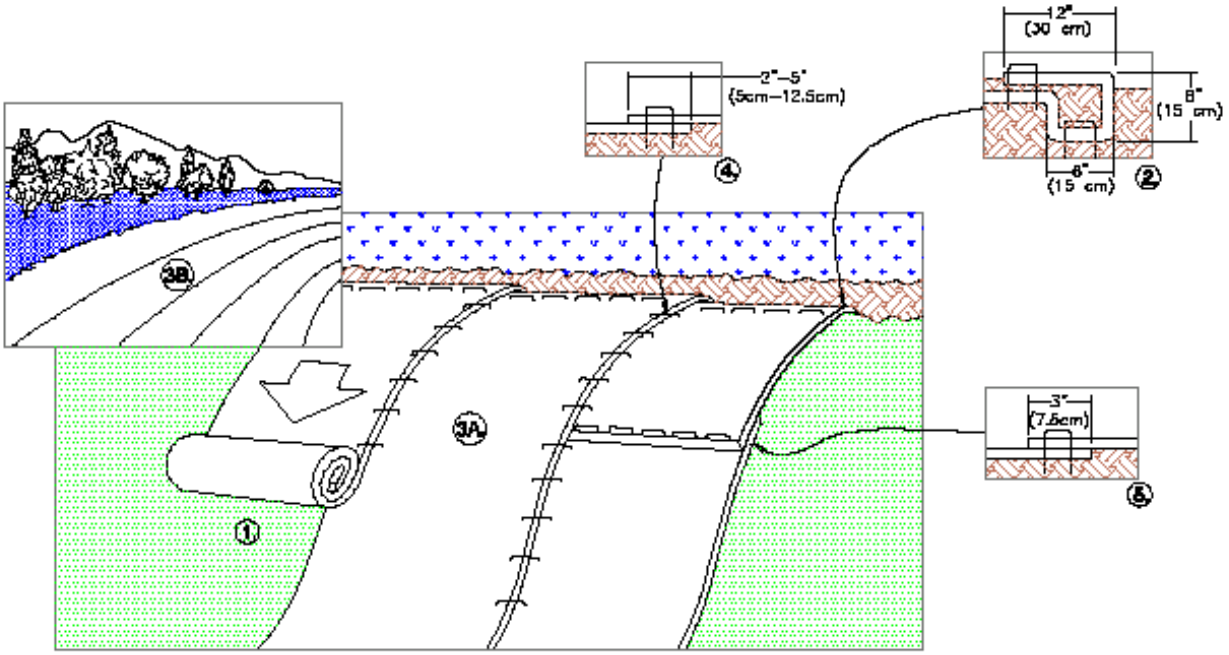
1. FOR EASIER INSTALLATION, LOWER WATER FROM LEVEL A TO LEVEL B BEFORE INSTALLATION.
2. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
3. BEGIN AT THE TOP OF THE SHORELINE BY ANCHORING THE BLANKET IN A 6" (15 CM) DEEP X 6" (15 CM) WIDE TRENCH WITH APPROXIMATELY 12" (30 CM) OF EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30 CM) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30 CM) PORTION OF BACK OVER SEED AND COMPACTED SOIL. SECURE OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) APART ACROSS THE WIDTH OF THE BLANKET.
4. ROLL RECP's EITHER (A.) DOWN THE SHORELINE FOR LONG BANKS, (TOP TO BOTTOM) OR (B.) HORIZONTALLY ACROSS THE SHORELINE SLOPE. RECP's WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP's MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM™, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
5. THE EDGES OF ALL HORIZONTAL AND VERTICAL SEAMS MUST BE STAPLED WITH APPROXIMATELY 2" - 5" (5 CM - 12.5 CM) OVERLAP.

   NOTE:
   * SEAM OVERLAP SHOULD BE SHINGLED ACCORDING TO PREDOMINANT EROSIVE ACTION.
6. THE EDGE OF THE BLANKET AT OR BELOW NORMAL WATER LEVEL MUST BE ANCHORED BY PLACING THE STAPLES/STAKES IN A 12" (30 CM) DEEP X 6" (15 CM) WIDE ANCHOR TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30 CM) APART IN THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING (STONE OR SOIL MAY BE USED AS BACKFILL.)

   NOTE:
   * IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15 CM) MAY BE NECESSARY TO PROPERLY ANCHOR THE RECP's.

Erosion Control Blanket: Slope Installation

NORTH AMERICAN GREEN

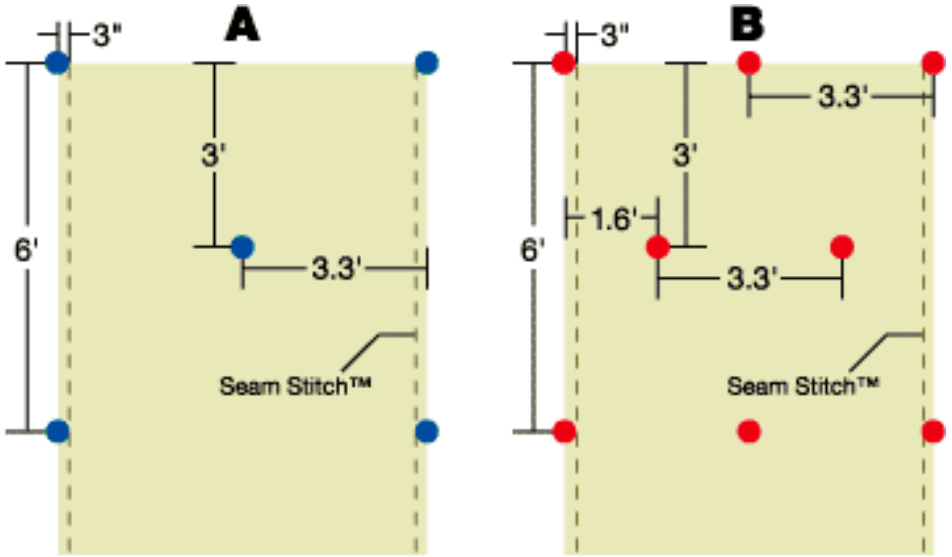


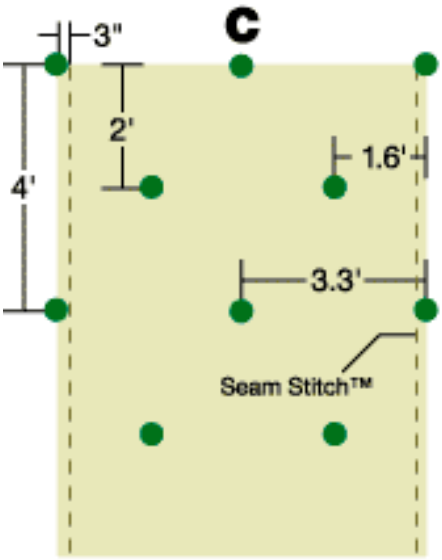
1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" (15cm) DEEP X 6" (15cm) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30cm) PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30cm) APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL THE BLANKETS (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING OPTIONAL DOT SYSTEM™, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2"-5" (5cm-12.5cm) OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH™ ON THE PREVIOUSLY INSTALLED BLANKET.
5. CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5cm) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30cm) APART ACROSS ENTIRE BLANKET WIDTH.

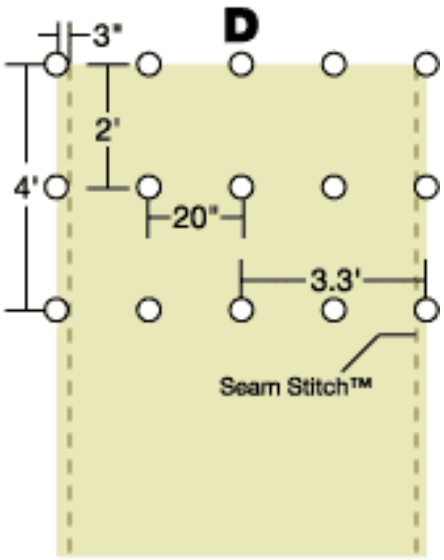
NOTE:
*IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" (15cm) MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.

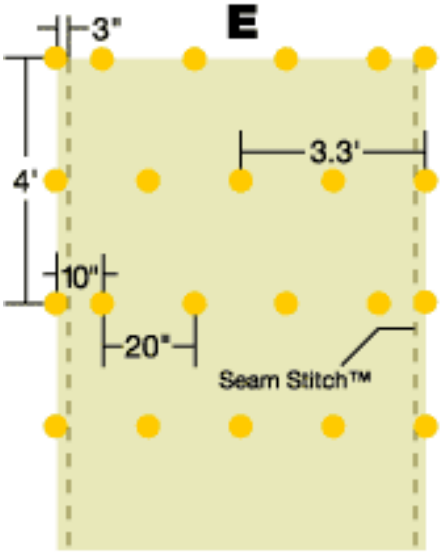
14649 HIGHWAY 41 NORTH, EVANSVILLE, INDIANA 47725
USA 1-800-772-2040 CANADA 1-800-448-2040
www.nagreen.com

Staple Patterns: 6.67’ Wide Erosion Control Blanket









A	**4:1 Slopes**
B	**3:1 Slopes**
C	**2:1 Slopes**
D	**Medium/High Flow Channel**
E	**High Flow Channel And Shoreline**

Revised April 25, 2011

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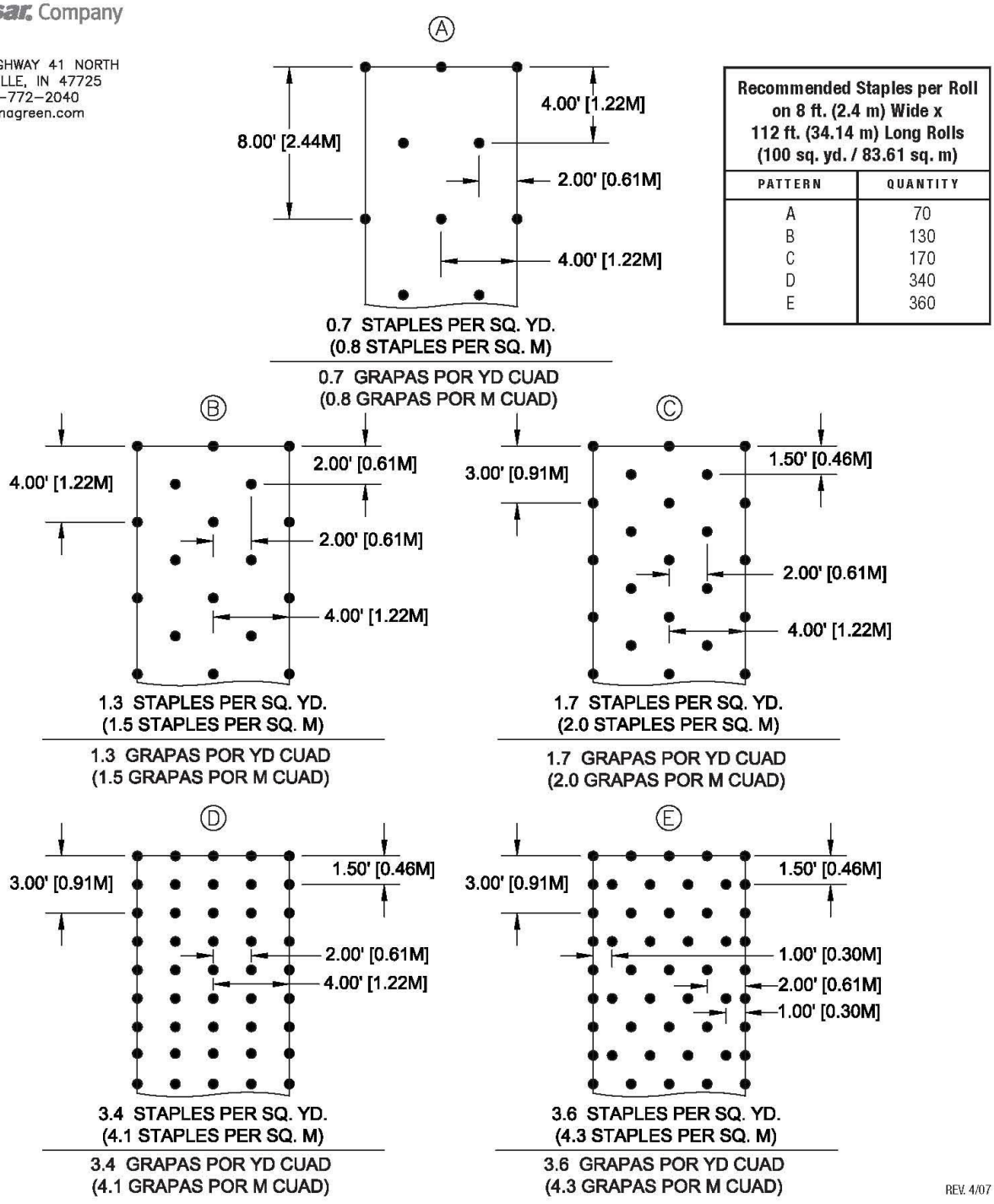
Staple Patterns: 8’ Wide Erosion Control Blanket

Recommended Staples per Roll on 8 ft. (2.4 m) Wide x 112 ft. (34.14 m) Long Rolls (100 sq. yd. / 83.61 sq. m)	
PATTERN	QUANTITY
A	70
B	130
C	170
D	340
E	360



Resources for Shoreland Revegetation Planning

- Minnesota's Bookstore www.minnesotasbookstore.com:
  - Lakescaping for Wildlife and Water Quality, MnDNR,
  - Restore Your Shore, MnDNR, interactive multimedia program on CD. Features restoration information including plant lists and interactive plant selection based on site characteristics.
    - Does not run if "Quick Time Media Player" is on your computer
    - Fixes. (1) Uninstall Quick Time Media Player or (2) change settings in Quick Time Media Player so it does not "Play movies automatically".
    - **Now available on line** – see below
- Restore Your Shore, MNDNR, On line at www.dnr.state.mn.us/restoreyourshore or search: mndnr.gov/restoreyourshore.
- Native Plant Nursery web sites:
  - Prairie Restorations
  - Dragonfly Gardens
- Web searches: use scientific name of plant

APPLICATION TO COLLECT AND/OR TRANSPLANT AQUATIC VEGETATION

Please Print or Type

Applicant's Name (First, M.I., Last)	Home Residence Telephone Number ( )
Home Address (No. & Street, RFD, Box No., City, State, Zip Code)	Lake Residence Telephone Number (if different) ( )
Lake Address (No. & Street, RFD, Box No., City, State, Zip Code)	Work Telephone Number (daytime) ( )

Lake Name Where Plants are to be Transplanted

Lake Name or Bay	County	

Types and Sources of Plants to be Transplanted (attached additional pages if needed)

Common Name of Plant	**Scientific Name** (required)	**No. Plants & Type of Plant material**	**Source of Plants** Lake Name & County and/or Company Name & Address

REASON FOR PROJECT *(explain why this project is desired)*
Sketch proposed collection and transplant area on back of this application or on a separate sheets of paper. Indicate compass direction "North"; location on lake (shore, point, bay, etc.); dimensions of proposed collection and transplant areas with names and total frontages of each property owner. Include fire number, noteworthy landmark, and enough detail so that the property can be located for possible inspection.

MAKE SURE THAT YOU HAVE INCLUDED THE FOLLOWING INFORMATION: Sketch/Maps ☐ Plant List ☐ Source of Plants ☐ Signature ☐

I hereby make application for a permit to collect and transplant aquatic vegetation as described below. I understand that the collection and transplanting of aquatic vegetation is subject to rules and regulations of the Commissioner of Natural Resources. I understand that an Aquatic Plant Management Specialist may wish to inspect the above areas before, during, and/or after work is completed and that by making this application I give permission to the specialist to enter my property to make such inspection at reasonable times. I understand that an annual report may be required on all work done and results achieved.

Applicant's Signature	Date

INSTRUCTIONS

For Completing an Application to Transplant and/or Collect Aquatic Vegetation

Please read the entire application carefully and provide all information requested. Also, print legibly or type when completing this form. Your cooperation helps DNR staff prevent the introduction of species that could cause problems in the lake. If you have questions regarding the permit application, please contact your Regional Fisheries office.

1. **Name and Address**: Give your complete name and address (including your Zip Code), for both your home residence *and your lake residence* (if different). Provide all relevant telephone numbers including a number where you can be reached during business hours.

2. **Lake** and **County**: Give the name of the county and the lake into which you will be planting.

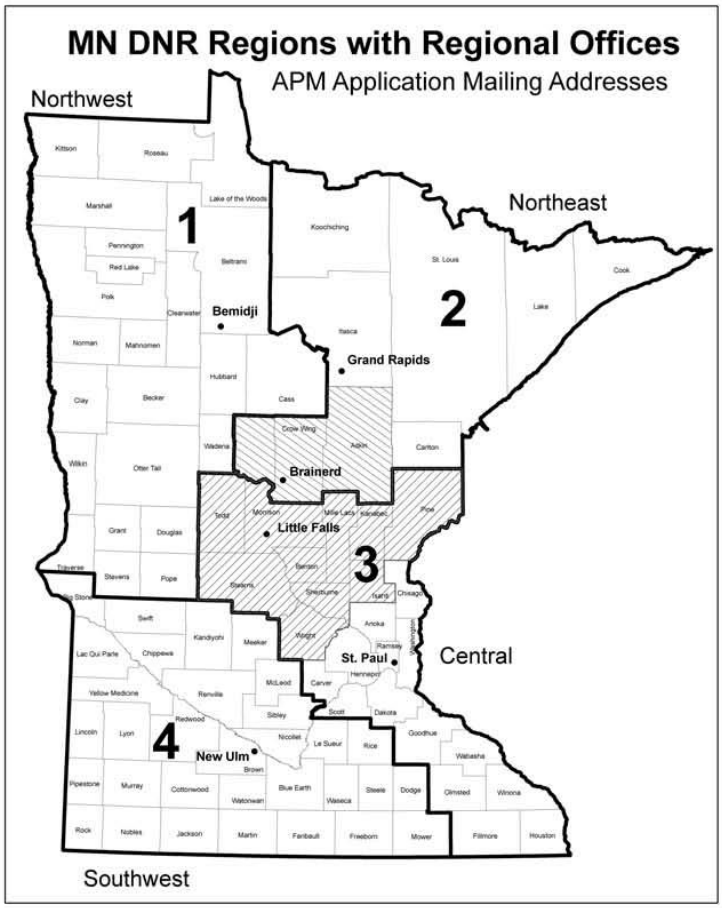
3. **Types and Sources of Plant Materials**: Provide *both* the common and scientific name (genus and species) for each plant. Include the type of plant material (seed, rootstock, whole plant, live cutting) and the quantity to be planted. Specify the location where you intend to collect the plants and/or the company from which you intend to order them. The actual plant source must also be identified – that is, the origin of the plant material itself in addition to the vendor name. Plants of local origin are preferred, if possible from within the same watershed or county. Plant materials originating beyond Minnesota and its adjacent states will *not* be permitted. *Provide the above information for all plant species to be used*. Attach additional pages if necessary.

4. **Reason for Project**: Explain why you wish to collect and/or transplant aquatic plants and the objective of your project.

5. **Sketch**: Provide a sketch of the proposed collection and/or transplant area as instructed on the application form. *Include all requested details*.

6. **Signature**. Sign and date your application.

Use the map on the back of this page to locate the county where your project will take place and note the DNR region number. Mail your application to the corresponding Regional Fisheries Office whose address and telephone number are also on the back.



NORTHWEST – REGION 1 – Bemidji (plus Lake Osakis)
Department of Natural Resources
Regional Fisheries Manager
2115 Birchmont Beach Road NE
Bemidji, MN 56601
(218) 308-2623

NORTHEAST – REGION 2 – Grand Rapids
Department of Natural Resources
Regional Fisheries Manager
1201 East Highway 2
Grand Rapids, MN 55744
(218) 327-4414

BRAINERD
Includes: Aitkin (excluding South Big Pine), Crow Wing, Southern Cass County, and Mille Lacs Lake
Department of Natural Resources
Aquatic Plant Management
1601 Minnesota Drive
Brainerd, MN 56401
(218) 828-2735

CENTRAL – REGION 3 – St. Paul
Includes: Anoka, Carver, Chisago, Dakota, Hennepin, Ramsey, Scott, Washington, Goodhue, Wabasha, Olmsted, Winona, Fillmore, and Houston
Department of Natural Resources
Fisheries APM Staff
1200 Warner Road
St. Paul, MN 55106
(651) 259-5816

LITTLE FALLS
Includes: Benton, Isanti, Kanabec, Pine (plus South Big Pine), Mille Lacs (excluding Mille Lacs Lake), Morrison, Sherburne, Stearns, Todd (excluding Lake Osakis), and Wright Counties
Department of Natural Resources
Aquatic Plant Management
16543 Haven Road
Little Falls, MN 56345
(320) 616-2450 – Ext. 235

SOUTHWEST – REGION 4 – New Ulm
Department of Natural Resources
Regional Fisheries Manager
261 Highway 15 South
New Ulm, MN 56073-8915
(507) 359-6026