

Self-Evaluation Checklist for Waterfront Runoff

Runoff from waterfront property impacts lake water quality and may cause unsightly erosion problems for you.

Use this checklist to assess the need for water quality improvements on your property.

- Analyze water flow patterns and sources of runoff on your lot
- Consider potential solutions to runoff problems
- Find out where to go for additional assistance

A project of
Balsam Lake Protection and Rehabilitation District
Burnett County Land and Water Conservation Department
Deer Lake Conservancy
Harmony Environmental
Wisconsin Department of Natural Resources



Are all areas of your lot well covered with vegetation?

- Yes** Good, a cover of vegetation prevents erosion to the lake. Native plants with deep root systems are especially good for preventing erosion.”
- No** Areas of bare soil may lead to significant erosion and deposition of sediment and nutrients in the lake. Let’s see if there is a way to address the problem.

Consider the possible cause of areas of bare soil...

- Foot traffic?**
Consider re-routing your pathway. Curved pathways can help to slow and divert water flow and reduce erosion. Add stepping stones to prevent erosion of soil. County permits may be required for stairs and pathways. Do not pave or cement the area — increased impervious surfaces result in more runoff and can increase erosion.
- Shade?**
Plant native shade-tolerant vegetation such as big leaf aster or Pennsylvania sedge in sandy, dry soils or ferns in moist soils. This vegetation may not tolerate much foot traffic. You might also seed each year with fast-growing annual rye grass (available at hardware and garden stores).
- Construction project?**
It is especially important to protect your property from erosion when areas are cleared for construction. Install silt fences down-slope of bare soil, and revegetate bare soil as quickly as possible. See page 4 for resources for additional construction site practices to prevent erosion.
- Water flow?**
If water is washing away soil and vegetation, look uphill to the source. Identify the area that drains to your problem spot, and divert the flow of water to an infiltration practice as close to the source as possible. See examples below.

TIP: Try to divert water as close to the source as possible. It is easier to deal with smaller quantities of water before they pick up speed running downhill.

Are there no deposits of sand in flat areas?

- Yes** This is probably a good thing. When the flow of water carrying sediment slows, particles of sand which are larger than other soil particles, will frequently settle out. If you have no deposits, it may mean that your runoff is clean. However, be cautious; it may simply mean that water doesn’t have a chance to slow down, and runoff is carried all the way to the lake.
- No** Deposits of sand show that runoff water carries a significant sediment load. It also probably means that smaller silt and clay particles that carry a higher nutrient load have made their way to the lake.

Water diversion practices *Create ways for water to flow to an infiltration practice and/or away from the lake.*



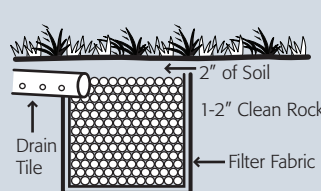
Rain Gutters

Rain gutters should discharge at the back of the house away from the lake, or to a rain barrel or infiltration area.



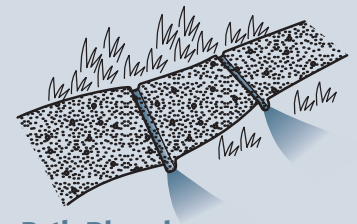
Berms

Gradual berms or bumps can retain or move water.



Drain Tile

Drain tile, perforated plastic pipe, allows some infiltration as water is moved to an infiltration practice.



Path Diversions

Divert water across a pathway or driveway at intervals using pipes or channels.

Does water flow across your lot evenly?

During or after a big rainstorm is a good time to check. You can sometimes see the pathway of water flow by looking for leaves or pine needles that have washed downhill or grass that is laying flat.

- Yes** Avoiding channelized flow of water will help to reduce erosion and minimize pollutants that reach the lake.
- No** If there are obvious paths of water flow, look uphill to the source of water. Could water be diverted to an infiltration practice?

Do you have natural, wild vegetation near the lakeshore?

- Yes** Good for you! Your property is an example for other lakeshore property owners. You are helping to keep the lake clean while providing habitat for the many creatures that live near the water's edge.
- No** Please consider a natural shoreline buffer of native vegetation. Lawn grasses have shallow root systems and short stems. The deep roots and tall stems of native vegetation slow runoff flow preventing erosion and allowing infiltration.

Want to do more? Help is available.

Arrange a free site visit or consultation.

Or contact your local land and water conservation department for more information. Listings are available online at www.datcp.state.wi.us keyword search: "LCD Directory"

Get help from a landscaper.

Many local landscapers have attended training to learn about rain gardens and other native landscaping and infiltration practices. Check local listings and ask about experience and qualifications.

FYI: THIS AREA FOR BUSINESS CARD. GRAY BOX AND NOTE WILL BE REMOVED.

TIP: Native Wisconsin plant lists may be available from your local land and water conservation department. Or try the web resources listed on the back.

CAUTION:

Call Diggers Hotline 1.800.242.8511 to locate utility lines before you dig!

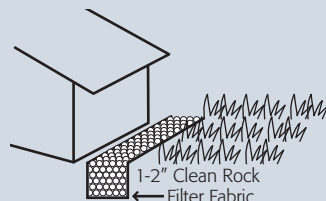
Permits may be required for waterfront landscaping and construction. Contact your local zoning office to determine which activities require a permit.

Infiltration practices *Create places for water to soak into the soil.*



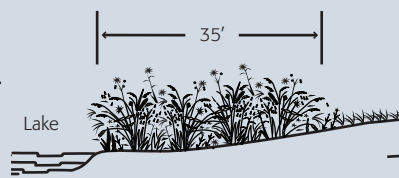
Rain Gardens

Sunken gardens planted with native flowers capture runoff water and add beauty to your yard.



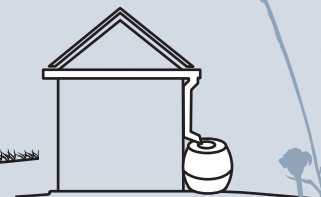
Infiltration Trenches

Capture water next to pole buildings and garages.



Natural Buffer Zones

These areas of tall vegetation slow runoff flow, allowing it to soak into the soil (especially on gradual slopes).



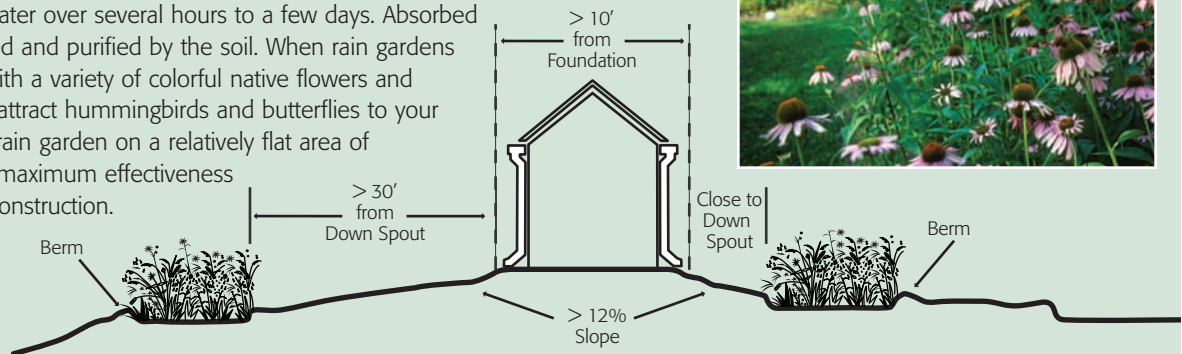
Rain Barrels

Save the rain water from your roof to water your plants.

Waterfront Water Quality Practices

Rain Gardens

Rain gardens are designed to capture runoff from rain events and absorb water over several hours to a few days. Absorbed water is filtered and purified by the soil. When rain gardens are planted with a variety of colorful native flowers and grasses, they attract hummingbirds and butterflies to your yard. Place a rain garden on a relatively flat area of your yard for maximum effectiveness and ease of construction.



Rain Barrels

Rain barrels capture water from a rain gutter downspout for watering gardens and potted plants. Many styles are available for purchase or you can build your own. Be sure that your rain barrel is covered to prevent mosquitoes from laying eggs and reproducing.



Infiltration Areas

Infiltration areas may be flat areas of woods or tall grasses or constructed pits or trenches. Where the slope is flat and the soil is sandy, it may be possible to simply divert water to an area where it can soak in. Other times infiltration areas are constructed by digging a pit or trench, lining it with porous landscape fabric, and filling the void with 1-2 inch clean rock. The size and depth depends upon the size of the area draining to the infiltration area and the type of soil beneath it. Do not encourage infiltration over a septic drain field, near a drinking water well, or within 10 feet of the foundation of your house.



Shoreline Buffers

Shoreline buffers are areas of native trees, shrubs, and groundcovers. Natural buffers of shoreline vegetation have many benefits. They keep the water clean by filtering runoff and holding soil in place, create natural, northwoods beauty, and provide a home for the diversity of creatures who live near the water. Shoreline buffers can be designed so that you can still access and enjoy your view to the water.



Learn More

Many useful publications are available to download from the internet:

Burnett County Land & Water Conservation Department

<http://www.burnettcounty.com/burnett/lwcd>

Publications available in .pdf format:

- **Shoreline Buffer Restoration A Guide for Landowners**
Includes plant lists, plant sources, and instructions.
- **Natural Shorelines Restoration Stories**
Includes before and after pictures of restoration projects.
- **Controlling Runoff and Erosion from Your Waterfront Property**
Describes runoff diversion and infiltration techniques.

Information About Rain Gardens

clean-water.uwex.edu/pubs/

Go to *Home and Garden Clean Water Practices* and choose *Rain Gardens*.

<http://dnr.wi.gov/runoff/rg/>

Vascular Plants of Wisconsin

<http://www.botany.wisc.edu/herbarium>

Plant ID and photos

Information About Shoreline Buffers

www.wisconsinlakes.org/AboutLakes/shorelandrestoration [web address "not found"]

DNR PUB WY-004