

Community Partners for Clean Streams Monthly eMonitor



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Up Front

The eMonitor is designed to keep our Partners and friends updated on CPCS, stormwater management issues, provide helpful information to reduce stormwater and nonpoint source pollution, recognize new Partners, highlight upcoming events, and create networking opportunities. We hope you enjoy each edition of the Monthly eMonitor and welcome any comments, concerns, or suggestions.

Buffer Strips for Water Quality

The term "buffer" can be used to describe many different things. Snow fences, conservation buffers, agricultural contouring and shelterbelts all fall into the buffer category. For the purposes of this issue, buffer strips refer to the transition zone between a body of water and the land.

Many water bodies are in close proximity to human related land uses or activities that are detrimental to water quality. Buffer strips serve to protect water quality by acting as filters with plants and soils that remain undisturbed along the waters edge. The small things you do to maintain your landscape can have a big effect on the quality of water not only on your business or personal property, but also downstream.



The vegetation in buffer strips serves multiple purposes. They provide bank stabilization, filter pollutants and create habitat for terrestrial and aquatic wildlife. Buffer strips are composed of plants that are suitable for a particular site, can be of varying widths and are also site and land use dependent. Native plants are typically used in these situations because they are already suited for the region. This issue focuses on the benefits of and identifying the need for buffers on your property.

Benefits of Buffers

Buffers around water bodies in urbanized areas have many benefits for both the ecosystem and the people who live in it. One of the most important benefits of buffer strips is to filter out sediments, fertilizers, chemicals and debris from the surrounding land. In many urban areas, retention and detention ponds are created as a means to manage stormwater and prevent flooding. In Michigan, many businesses and homes are also located directly adjacent to natural and created water bodies. The proximity to rooftops, concrete and other impervious surfaces means stormwater runoff that contains pollutants is washed directly into the ponds. Some benefits of buffers are listed below.

- Filter pollutants and keep them out of the water body.
- Reduces sedimentation – excess sediments can be detrimental to habitat for fish and plants.
- Prevent soil erosion at the water's edge by stabilizing the banks with plant roots.
- Provide habitat for both aquatic and land wildlife. Stream bank buffers also create migratory corridors for many types of wildlife.
- Plant roots naturally aerate the soil. Plants typically found along the water's edge have deep, fibrous roots, unlike turf grass which has small, shallow roots.
- Contributes to overall biodiversity – areas along water bodies often harbor more diverse plant and animal life than other areas.
- Vegetation around water bodies has been shown to regulate water temperature, which protects aquatic life from extreme variations.



Do I Need a Buffer?

If your business site or home property has a detention pond or other body of water running through or adjacent to it, a buffer is a wise water quality choice. The following items are signs that your water quality has been compromised. If you answer yes to the questions below, you may want to consider adding a buffer.



- Algae or other plants have taken over your pond.
- The water is green or murky.
- Sediment is building up.
- The water body cannot sustain fish or other aquatic life.
- Geese love your property. They prefer closely mowed turf that leads directly to the water's edge.
- Turf is mowed right up to the water's edge.
- Your pond or stream looks similar to one of those shown on the left.

The two ponds shown above showcase the problems that can arise when there is no buffer between residential/industrial land use and water bodies. These photos are presented courtesy of the Washtenaw County Building Services.

Buffer Installation Tips

Buffers are most effective when designed to meet the needs of a specific site. There are many widths and plant types that are suitable. A buffer strip can meet the needs of the land use as well as the water it is protecting. For example, in a subdivision that has a common area surrounding a retention pond, a small buffer area of 10 feet around the water may be suitable. However, in an agricultural area with a stream running through, 25-50 would be more appropriate. Check with your local government to determine if specific buffer widths are indicated by ordinance.



This stormwater pond is located at the Pfizer Global Research and Development facility in Ann Arbor. This is a beautiful example of a pond buffer created with native plants.

- Determine the width of the buffer that will best suit the needs of water quality and of the surrounding land uses. If the area is surrounded by turf that is used for recreation, a smaller buffer may be more practical. An area that is used for passive recreation or has a more highly sensitive ecosystem may benefit from a wider buffer. Ultimately, it is a balance between these two uses, and what is best for the landowner and environment.
- Choose plants that are suitable to your site. Consider the depth of the water, soil type, desirable plant height and wildlife you may want to attract. Native plants are typically the best choice for buffers since they are already adapted to the local climate, soils and moisture availability.
- If necessary, hire a professional engineer and/or landscape company to handle the design and planting stage. In some cases, particularly when dealing with a stormwater pond and drainage issues, there are complicated engineering aspects that must be taken into consideration. Permitting is usually necessary when any earth change activity is required. Contact your local government before beginning your buffer establishment. Contact the Drain Commissioner's Office for more information if the waterway is under the Drain Commissioner's jurisdiction at 734-222-6833 or 734-944-2525.

Additional Resources for Buffers

The following websites are excellent resources for planting and maintaining a buffer on your business site or home property.

- The NRCS has a website all about buffers, mainly geared toward the agricultural community. It does however offer detailed explanations of different types of buffers and how to create them.
<http://www.nrcs.usda.gov/feature/buffers/>
- The Southeast Michigan Resource Conservation and Development Council have created the following brochure about creating and maintaining buffers.
<http://semircd.org/buffers/bufferguide.pdf>
- The Michigan DEQ has created a flier with excellent examples of a few buffer projects in Southeast Michigan.
<http://www.deq.state.mi.us/documents/deq-ess-nps-semi-soft-eng-project.pdf>

[CPCS News](#)

New and Renewing Partners

We would like to welcome and thank our new and renewing Community Partners for this month. Thank you for your continuing commitment to water quality!

New Partner: *Ann Arbor News*

Renewing Partner: *ReCellular, Inc.*



Upcoming Community Partner Events

Huron River Day

Sunday, July 9, 2006 from 8:30 – 4:00 pm is the annual Huron River Day located at Gallup Park and Parker Mill County Park. It is a day FREE fun for the whole family to enjoy that includes activities for kids, a run/walk, even a walk for dogs! For details and more information about this event please call 734-622-9319 or visit www.a2gov.org/HRD.

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