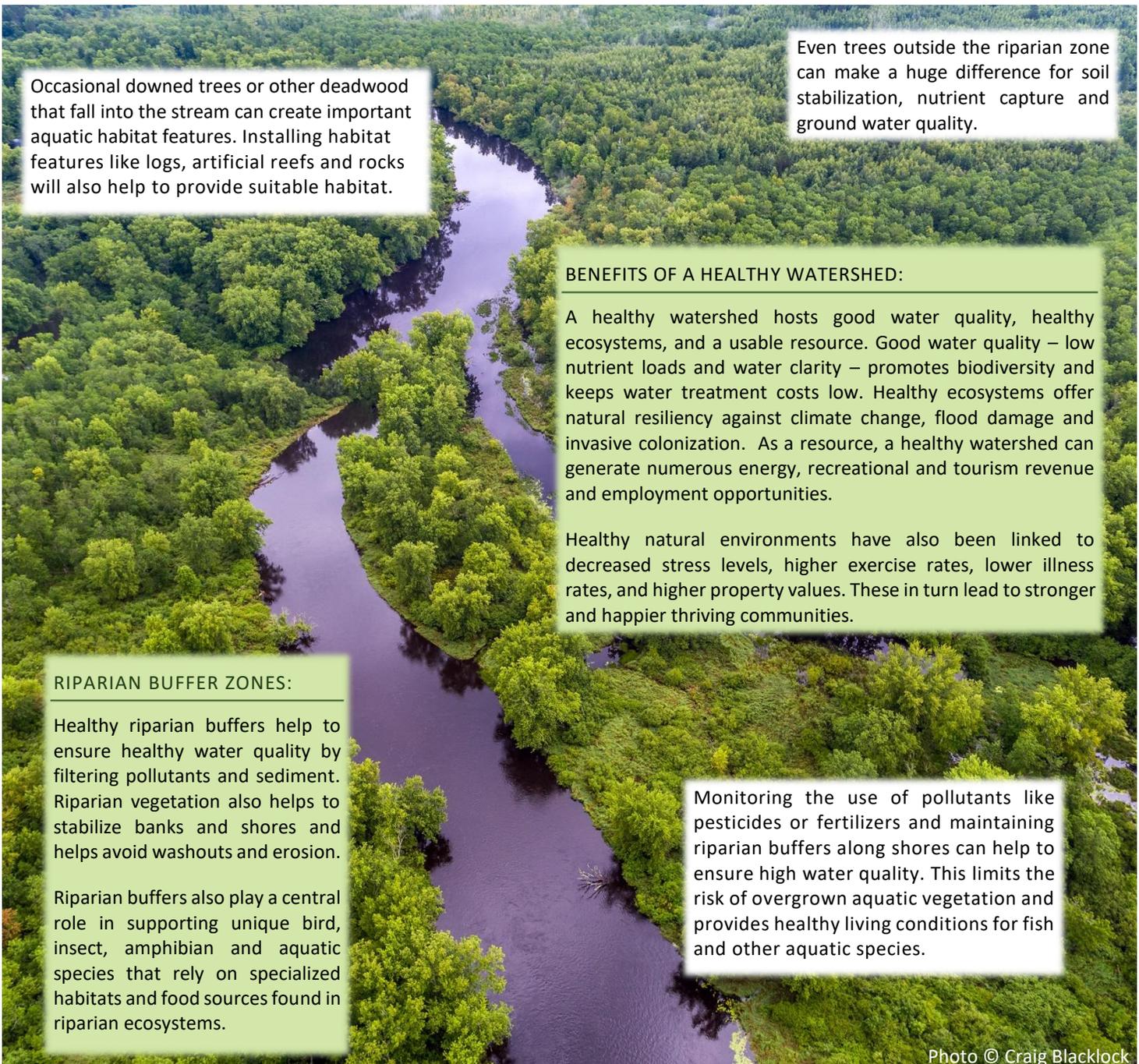


## UNDERSTANDING THE CONNECTION

### HEALTHY WOODS – HEALTHY WATERS



Occasional downed trees or other deadwood that fall into the stream can create important aquatic habitat features. Installing habitat features like logs, artificial reefs and rocks will also help to provide suitable habitat.

Even trees outside the riparian zone can make a huge difference for soil stabilization, nutrient capture and ground water quality.

#### BENEFITS OF A HEALTHY WATERSHED:

A healthy watershed hosts good water quality, healthy ecosystems, and a usable resource. Good water quality – low nutrient loads and water clarity – promotes biodiversity and keeps water treatment costs low. Healthy ecosystems offer natural resiliency against climate change, flood damage and invasive colonization. As a resource, a healthy watershed can generate numerous energy, recreational and tourism revenue and employment opportunities.

Healthy natural environments have also been linked to decreased stress levels, higher exercise rates, lower illness rates, and higher property values. These in turn lead to stronger and happier thriving communities.

#### RIPARIAN BUFFER ZONES:

Healthy riparian buffers help to ensure healthy water quality by filtering pollutants and sediment. Riparian vegetation also helps to stabilize banks and shores and helps avoid washouts and erosion.

Riparian buffers also play a central role in supporting unique bird, insect, amphibian and aquatic species that rely on specialized habitats and food sources found in riparian ecosystems.

Monitoring the use of pollutants like pesticides or fertilizers and maintaining riparian buffers along shores can help to ensure high water quality. This limits the risk of overgrown aquatic vegetation and provides healthy living conditions for fish and other aquatic species.

Photo © Craig Blacklock

### ST. CROIX RIVER WATERSHED

The St. Croix River flows more than 160 miles along much of the northern Wisconsin-Minnesota border, providing a cool healthy water flow into the Mississippi River. Its tributaries stretch across the landscape to form 28 watersheds, and its drainage basin covers over 7,800 square miles – roughly the same size as New Jersey! The watershed is home to rare geological features and habitats, globally significant migratory birds, forty native mussel species, the rare snake-tail dragonfly and Karner blue butterfly, and a wide array of terrestrial and aquatic wildlife. The St. Croix and the connecting Namekogan River were among the original eight congressionally designated Wild and Scenic rivers and the Kettle River is state designated Wild and Scenic river in Minnesota. The St. Croix waters also serve as a valuable resource to its local communities, providing drinking water, energy, and tourism and recreational opportunities.

# MANAGING YOUR FORESTS FOR YOUR WATERS

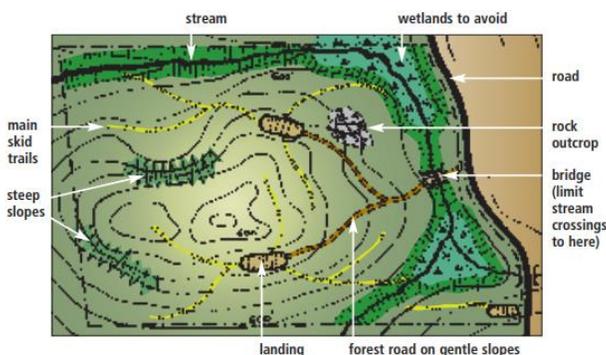
## MAPPING IT ALL OUT

Understanding the relationship between your woods and your nearby waterways often requires a wider perspective. A good way to achieve this is by mapping out your property in the context of your wider watershed. Knowing where your streams flow can help you understand the broader impacts of your management practices. Placing your property on the map can also help you determine if your property is subject to any specific zoning regulations, such as those for state and national wild and scenic rivers. Knowing the regulations ahead of time can help save you time, money and effort on projects down the road. Working with your forester, Soil and Water Conservation District staff and your County Assessor's office will help you to make useful and informative maps of your property.

## CONSIDER A FORESTRY BEST MANAGEMENT PRACTICE (BMP)

Best Management Practices or BMPs are simple guidelines for landowners and service providers to minimize impacts of forestry or other land uses on water quality. These practices are designed to be easy to implement and cost-effective, with financial assistance available from multiple sources, including your county conservation district. Below are just a few examples of BMPs to incorporate into your management plan. Working with a certified forester will help ensure you are maximizing BMPs on your property.

<b>Pre-harvest Planning &amp; Timber Harvesting</b>	<ul style="list-style-type: none"><li>• Identify sensitive and vulnerable areas to avoid like wetlands, steep slopes and streams</li><li>• Minimize skid trail grades to less than 15% where possible, and employ alternative methods, such as wenched logs, where unavoidable</li><li>• Construct landings with a slight slope on frozen ground or stable, well drained soils</li><li>• Plan operations to avoid wet seasons and sensitive times for wildlife like breeding periods</li></ul>
<b>Riparian Management Zones &amp; Erosion Control</b>	<ul style="list-style-type: none"><li>• Avoid construction or operations within riparian zones and limit unavoidable activity to times when the ground will be frozen and more stable</li><li>• Avoid soil compaction and exposure, chemical use and slash disposal within riparian areas</li></ul>
<b>Forest Wetland Protections</b>	<ul style="list-style-type: none"><li>• Avoid construction and intensive operations within wetland areas</li><li>• Limit unavoidable wetland operations to times when ground is frozen</li><li>• Avoid disposing of slash or using chemicals and pesticides within wetland areas</li></ul>
<b>Roads &amp; Stream Crossings</b>	<ul style="list-style-type: none"><li>• Utilize existing roads and avoid disturbing stable soils whenever possible</li><li>• Plan roads to follow natural contours, keep grades below 5-10 degrees, avoid water crossings where possible, and to minimize width, length and number of roads</li><li>• Employ soil stabilization and sediment capture methods during construction and use</li><li>• Time construction to dry seasons and avoid construction during fish spawning seasons</li><li>• Limit and avoid disruptions to stream banks, water quality, fish passage and water flowage</li></ul>
<b>Revegetation</b>	<ul style="list-style-type: none"><li>• Use native plant seeds that are conducive to the soil and water conditions of the area</li><li>• Remove and revegetate roads, landings and other infrastructure no longer in use</li></ul>
<b>Fire Management</b>	<ul style="list-style-type: none"><li>• Plan burns to limit erosion and run-off and implement soil stabilization methods afterwards</li><li>• Avoid removing too much forest floor cover and scorching areas of land</li><li>• Use natural breaks wherever possible and avoid using chemical fire retardants</li></ul>
<b>Forest Chemical Management</b>	<ul style="list-style-type: none"><li>• Maintain a spill containment and clean-up kit appropriate for any chemicals you are using and avoid use within riparian zones without professional assistance</li></ul>



Map ©WI DNR, from Wisconsin's Forestry Best Management Practices for Water Quality Field Manual

## HOW TO GET STARTED

Foresters are a key component to successful practices on your land. Work with your forester to map out your property and identify areas where BMPs might be implemented and which BMPs are appropriate. This will help you identify possible cost-share programs and technical experts who might be able to help you, and to develop a list of required permits or permissions. This can help you plan broadly and strategically across your property and consider the impacts of current and future management actions.

WANT TO LEARN MORE? CONTACT US AT

[WWW.MYSTCROIXWOODS.ORG](http://WWW.MYSTCROIXWOODS.ORG) OR CALL US AT (715) 483-7053.