# A Minnesota lake side paradise

Minnesota's lakes are the best! For generations we have looked to our lakes for relaxation, recreation, and family memories. The thought of a weekend at the lake stirs up emotions many of us can't put into words. Whether you are a regular at a resort, own a cabin or permanently reside lake side, you know the value of our lakes.

**"Lakes are the center of attention in northern Minnesota."**

Lakes drive much of our economy in the north. We have not only some of the cleanest lakes in the state, but in the entire country! Our lakes and rivers are also the source of clean drinking water for many larger cities downstream.

## Threats to our lakes

Unfortunately, many of our waters are in danger to a host of threats. Some property owners are replacing more and more of the natural lakeshore habitat with fertilized lawns, larger buildings, and paved surfaces. These hard or "impervious surfaces " increase the rate of runoff. Our lakes are becoming inundated with stormwater runoff filled with contaminants like phosphorus and nitrates that cause changes to the water quality and throw off the lake's natural balance.

***Phosphorus*** is a nutrient found in manure, leaves, soil, and fertilizer. Under natural conditions phosphorus is typically scarce in water. Human activities, however, have resulted in excessive phosphorus loading into our lakes. Phosphorus triggers harmful algae blooms.

1 pound of phosphorus = 500 pound of algae

## Land is connected by water

Lakeshore property owners are firsthand witnesses when imbalances occur within the watershed. All the land surrounding and within a watershed contributes to the overall health or deterioration of water quality. Your local SWCD continually works with all types of landowners to protect the natural resources and water quality within our watersheds. We assist landowners of all kinds in conservation practices that will achieve the best outcome for the watershed and our many lakes.

Itasca SOIL AND WATER CONSERVATION DISTRICT

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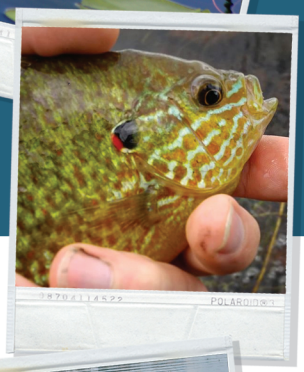

## Collectively, many small efforts result in large-scale success stories!

As a lakeshore property owner, there are assorted numbers of conservation projects that are simple to accomplish and provide lasting results for the good of your lake. Most of these practices are designed to limit the amount of stormwater runoff that enters the lake.

Why is it important to limit stormwater runoff? Stormwater runoff carries contaminants such as fertilizer and nutrients like phosphorus. Both negatively effect our waters, causing decreased clarity, oxygen levels, and spurring algae blooms. Runoff from dark impervious surfaces can also cause thermal pollution by heating the water. This triggers a chain of effects that harm natural cycles within the lake.

Stormwater falls and begins to collect contaminants from buildings, and yard space. Impervious surfaces like the roof of a building or paved driveway/walkways, expedite the flow of stormwater runoff. Slowing runoff with a rain barrel under a downspout not only catches excess water, but is a good source of extra water for gardens. Broken surfaces like stone or pebble walkways allow water to better soak into the ground.





Shoreline rain garden.

Trees and native plants act as a sponge, soaking up stormwater runoff. Strategically placed rain gardens with native flowers and plants are helpful for soaking up excess stormwater runoff. The slope along the building in the graphic above would be a good ***Rain Garden*** location.

## Gotta have my beach!

People go to the lake to enjoy it. We understand the value of a sandy beach, but over development of shoreline and the elimination of all natural shoreline buffers reduces the ability of a lake to protect itself from contaminants. Removing shoreline vegetation in small amounts may be permissible, however, we strongly encourage leaving designated areas for natural vegetation.

Natural shoreline buffers can be as simple as leaving a section of no-mow grasses along the lake, or in cases where shoreline damage has occurred, newer practices like the addition of ***Coir Logs*** can be used.

These buffers not only protect your property from erosion and wave action, but also provide habitat for fish, birds, and animals. Native shorelines are essential for the natural cycles that support our legendary Minnesota fisheries.