

# HABITAT FRIENDLY SHORELINE MANAGEMENT

## Lake Homes & Habitat Harmony

Fish habitat and lake homes can coincide if landowners have the proper mindset. Considering how you are using your shoreline can be important to protect fish habitat and spawning beds.



## Walleye, Minnesota's Favorite Fish!

The walleye is native to most of Minnesota, flourishing in large, shallow, windswept lakes with gravel shoals. It is also native to many smaller lakes and streams in all of Minnesota's major drainages.

Walleye spawn very early in the spring typically on gravel/rocky bottoms. They spawn in shallow areas from 1-6 ft in depth. Try to avoid disturbing these areas shortly after ice out through early spring.

The walleye is the most sought-after game fish in Minnesota. Its thick, white fillets, and elusive nature make it a favorite of anglers.

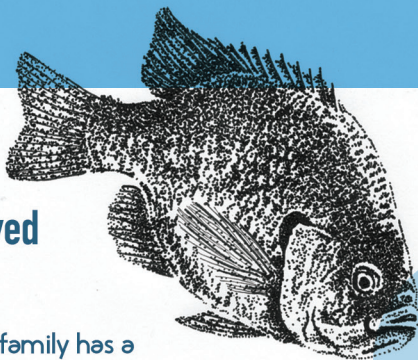


## The Beloved Bluegill .

The Sunfish family has a variety of subspecies which all live a similar life and enjoy similar habitat. They are often found close to shorelines or shallow weedy humps. They are often the most accessible and fun-filled fish for young anglers to catch!

The Sunfish family typically spawn starting in May through early summer, but can keep spawning into August under the right conditions. They build small bowl shaped nests in sand and gravelly bottoms, often in large groups. Avoid disrupting the beds by avoid disruption to the substrate.

The sunfish family includes: Bluegills, pumpkinseeds, green sunfish and orangespotted sunfish.



## Threats to Minnesota Lakes.

The primary threats to our fish, by way of the lake, is elevated levels of phosphorus caused by contaminated runoff, erosion, and sediment from over-developed land use. This includes lakeshore over-development, the loss of forests and native vegetation. Improper agricultural or industrial practices near our waters can also add phosphorus and contaminants.

Some lakes are also polluted with chloride, which comes from road salt and water softeners.

Still other lakes are infested with Aquatic Invasive Species, (AIS) such as zebra mussels, Eurasian watermilfoil, stony stonewort, and Asian carp. Non-native aquatic plants and animals cause economic and environmental damage to our lakes. AIS have taken hold in many Minnesota lakes.

The way landowners manage their lakeshore property can make a huge impact on how well the fishery of the lake thrives.

## Yellow Perch.

Yellow Perch can be found in a wide range of habitats but prefer sandy bottom areas with woody debris and ample vegetative cover. They reproduce in early spring when the water is still relatively cold. Females lay their eggs in long gelatinous strands, usually hanging from vegetation or some other structure. Watch out for perch eggs in spring while putting docks in. Avoid removing lake vegetation.

Yellow Perch are enjoyed by anglers for their tasty fillets, but perch are also essential links in the food chains of our lakes. In some waters, they are the primary food source for walleye, pike, and musky!



Yellow perch are highly sought after by ice anglers. Perch fillets have a great taste that rivals that of their larger cousin, the walleye!



## Minnesota's 2nd Favorite Fish.

Crappies are one of Minnesota's most popular fish. In fact, a recent study determined that only the walleye surpasses the crappie as the state's favorite fish.

Crappies prefer deeper lakes with cool, clear water. They are primarily minnow eaters... so to find schools of crappies, look for minnow hideouts like fallen trees, bushes, old piers, and submerged weed beds.

They spawn in early spring typically through June. This is when they move to shallower water than their typical deep water habitat. Shallow woody debris is ideal breeding habitat as it protects them from predators.

Crappies are affectionately called "Slabs" by anglers who enjoy the tasty slabs of fillets that Crappies produce!



## What the Pike Like!

Northern Pike are found in most lakes and rivers across the state. They are aggressive ambush predators that typically hang around weed lines, drop offs, or shallow areas with vegetation.

In the late winter and early spring spawning pike move into tributaries stream or shallows of the lake to lay their eggs. They attach their eggs to vegetation so it is recommended that lakeshore landowners refrain from removing vegetation in the early spring.



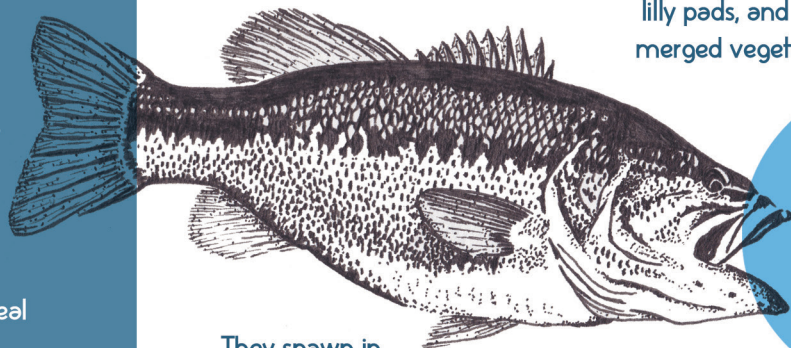
Efforts to maintain water quality on shore or near lakes will benefit pike.

Reducing the amount of contaminants and sediment that enters the lake will bolster pike population.

## Big, Sassy, and Bassy!

Large Mouth Bass prefer to reside in the shallow regions of productive lakes with ample aquatic vegetation.

They enjoy shallow areas with wood, lily pads, and submerged vegetation.

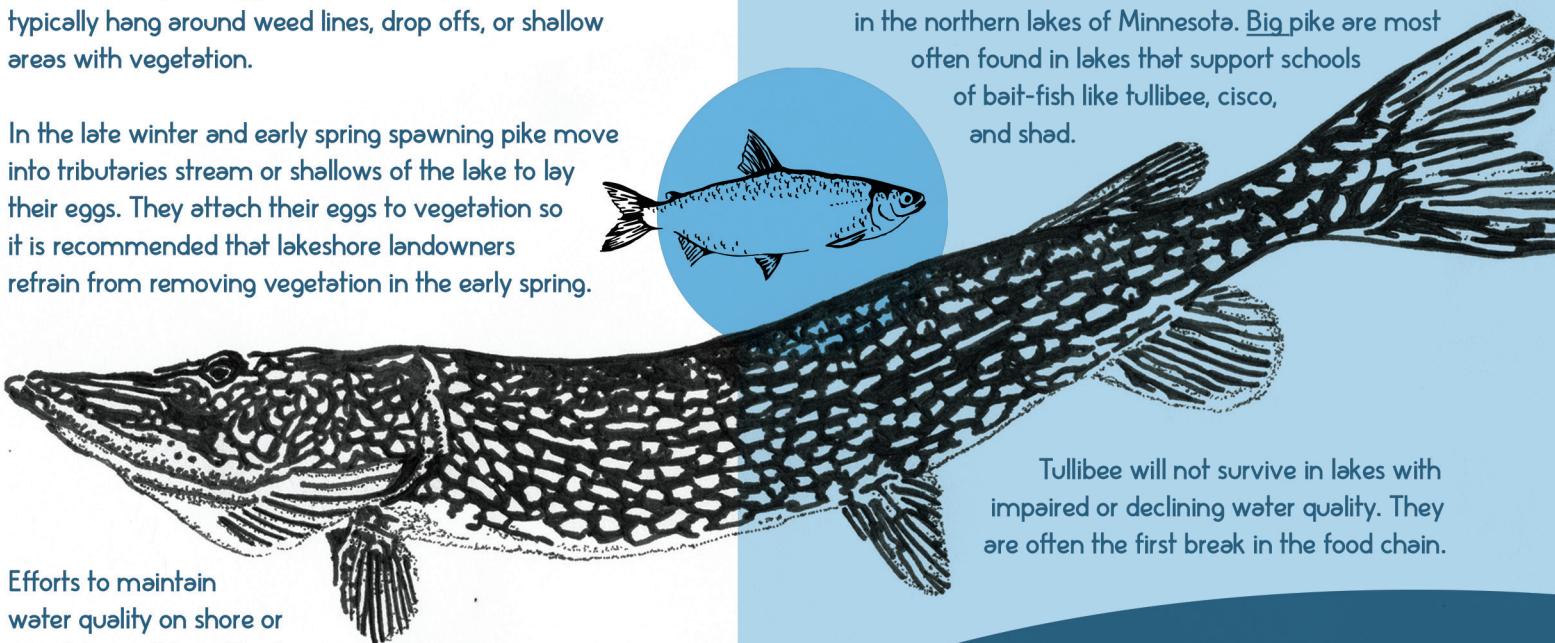


They spawn in the spring, and typically start building nests in May and June in areas with firm lake bottoms ranging from 2-8 ft in depth. Nests are typically round depressions that often appear lighter than the surrounding areas. In the spring, take care to avoid bass nests and beds. When putting in docks.

Protecting our lakes and fisheries is a responsibility we share, and fish need our help more than ever! It starts along the shorelines of our properties!

## ... What BIG Pike Like!

For Pike to truly thrive, they prefer deeper lakes with cool, clear, well oxygenated water. They grow largest in the northern lakes of Minnesota. Big pike are most often found in lakes that support schools of bait-fish like tullibee, cisco, and shad.



Tullibee will not survive in lakes with impaired or declining water quality. They are often the first break in the food chain.

Tullibee are only found in clean, cold, well oxygenated, deep waters. Because of their habitat requirements tullibee are fantastic "measuring sticks" for water quality.

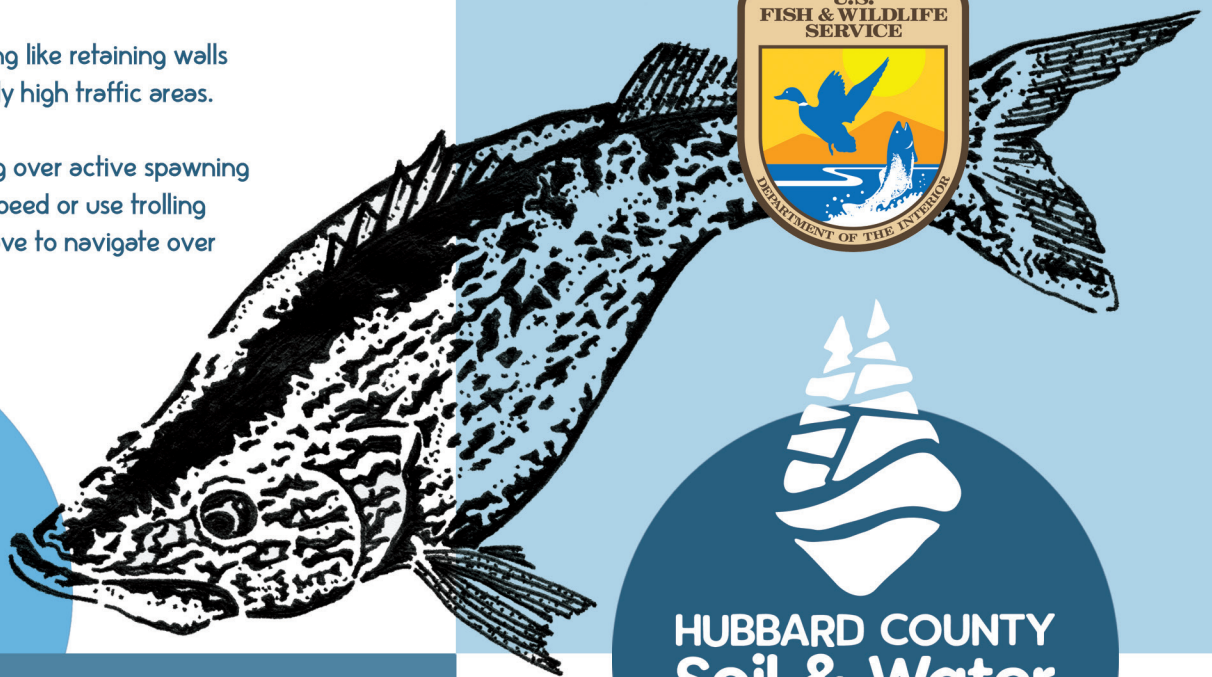
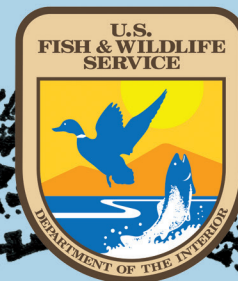


## Tips for Fish Friendly Shoreline Management

- During the spring and early summer, watch out for spawning fish.
- Avoid disrupting spawning areas with docks and water equipment.
- Limit vegetation removal to only area required for open water access.
- Plant shade trees and leave fallen woody debris on shore and in water.
- Docks can provide wonderful fish habitat especially if aquatic plants are allowed to grow under and around the dock.
- Limit hardscaping like retaining walls and riprap to only high traffic areas.
- Avoid navigating over active spawning zones. Reduce speed or use trolling motors if you have to navigate over spawning areas.



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