Fish Habitat Factsheet #6

Locating Walleye Habitat on Your Property

Landowners can play a vital role in the better management of fisheries by helping to locate and identify fish habitat on their properties. A basic understanding of the habitat needs of a particular species and where and when to look for the fish is all you need. A notebook, thermometer, hip boots and small boat are also helpful.

Left: Typical healthy walleye spawning habitat in stream; right: walleye habitat can be damaged by siltation from stream bank erosion in an agricultural stream crossing; photos: John Farrell

The Preferred Spawning Habitat of Walleye

- Shallow (3-12 inches), clean, hard-bottomed areas with rocky cobble and gravel areas:
  - in river mouths
  - in pools downstream of waterfalls, in low to moderate currents
  - along windswept reef areas in lake and bays
  - often in streams with spring sucker runs
  - sometimes over vegetation in flooded marshy areas with flowing water
- Spawning occurs after ice out or when water temperatures fall between 42-52^{o}F, generally April-May, depending on latitude, overlapping with pike spawning season
- Walleyes enter spawning grounds at night, but may be seen during the day
- Fish eyes reflect red-orange glow from flashlight

Walleye Nursery Habitat

- Downstream from spawning sites, in vegetated areas or with log/brush cover, flooded shallow marsh areas
- Depths of less than 16 ft
- Water temperatures in low 60s-low 70^{o}sF

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Risks to Walleye Habitat

- Improper cattle or vehicle stream-crossing stirs up sediments that can cover spawning beds
- Unplanned shoreline development can destroy nursery habitat
- Excessive nutrients from human activities can cause heavy plant growth and lower oxygen content in spawning beds causing loss of eggs and larvae
- Low nutrient levels lower food supply and increase light penetration, forcing walleyes into deeper areas with poorer habitat
- Stream gravel mining can result in removal of preferred spawning material from habitats
- Stream flow changes from bank construction, dredging, poor culvert design, and damming can reduce walleye reproductive success
- Excessive flows can remove spawning substrate, wash eggs downstream to poor hatching conditions and near predators. Very low flows can expose eggs to drying or excessive sunlight

Tips for Improving Walleye Habitats

Walleye habitat improvement is most successful in streams with suitable habitat features and walleyes present.

- Introduce material that is a mix of sizes of 1/2-1 inch gravel as a bottom stabilizer (4-6 inch layer) to rocky cobble ranging in size from 3-9 inches placed near existing existing spawning areas, receiving suitable current, wind or wave action
- Use the same material on stream banks to prevent erosion and siltation
- Native plants (shrubs, trees and grasses) can be planted to stabilize stream banks to prevent erosion and to provide shade to eggs
- Modify culverts to reconnect wetlands with open waters and improve flows

Habitat improvement should only be considered if there will be no harm to existing habitats. Proper land management can improve overall health of the watershed and protect the habitat.

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