

Information in this table has been extracted from the MNR Northeast and Northwest Regional "Provincial Fisheries Habitat Workshop #2". It is meant to give general information regarding habitat requirements for specific fish species. Additional information on fisheries habitat is available on the Ministry of Natural Resources website (www.mnr.gov.on.ca) or through district offices.

Spawning Habitat

	Walleye	Northern Pike	Smallmouth Bass	Lake Trout	Whitefish
Time/Temp.	·April/May, 5.6°C - 11.1°C ¹	·April/May, 4.4°C - 11.1°C ¹	Late May/Early July, 16.1°C - 18.3°C	·Fall spawning (Oct-Nov), H ₂ O temp. 9.0°C - 14°C ¹	·Fall spawning (October-November), <8.0°C
Substrate	·Rocky areas below white water areas in rivers ¹	·Vegetation (both aquatic and flooded terrestrial grasses, etc.)	·Sandy, gravel or rocky bottom. Eggs are usually attached to clean stones near the center of the nest.	·Generally coarse rock rubble (20-35cm or 0.2-0.35ft.) but sometimes much smaller, occasional variation ranging from clay to boulders ¹	·Hard or stony bottom, sometimes sand, rock rubble
Depth	·Shallow water (<1m - 5m) (<3.28ft - 16.4ft)	·Very shallow water (<180 cm) (<5.91ft)	·61 - 610 cm (2ft - 20ft)	·Usually shallow (0.5 to 3.0m or 1.64 - 9.84ft.) but sometimes down to 25m (82.02 ft.) ¹	·Less than 8m (26.25 ft.)
Flow	·Fast flowing rivers, spawning areas often immediately downstream of section with highest velocity		·Flow is not critical as the male fans the eggs	·Generally exposed to prevailing winds ³	·Lake shoal spawner, windward shores, points
Cover	·Use interstitial spaces between rocks for cover	·Eggs adhere to vegetation	·The nest is often protected by rocks, logs or sometimes vegetation and the eggs are protected by the parents	·Interstitial spaces (crevices) between rocks are critical for egg survival ¹	·Rubble interstices for eggs
Other	·Walleye are known to successfully spawn on sand beaches and over vegetation in flooded marshy areas ²		·Nest builder	·Have been known to use artificial spawning sites. ⁴ ·On rare occasions may spawn in rivers. ⁵ ·Usually spawn along exposed shorelines off points or islands or on mid-lake shoals.	·Pelagic species

Nursery Habitat

	Walleye	Northern Pike	Smallmouth Bass	Lake Trout	Whitefish
Time/Temp.	·Eggs hatch in 12-18 days ¹	·Eggs hatch in 12-14 days ¹	·Eggs hatch in 4-10 days ¹	·Eggs hatch in late winter (mid. February-March) ¹	·All year
Substrate		·Young remain inactive often attached to vegetation for 6-10 days while yolk sac is being absorbed ¹	·Young remain on nest bottom for 12 days (until yolk is absorbed) then rise off the bottom ¹ ·After 5-7 days begin to leave nest	·Rock and rubble on bottom until emergence age 0-2 years	
Depth			·Fry remain in brood and are guarded by the male	·Young usually seek deeper water a month or so after yolk sac is absorbed ¹	·Pelagic
Flow				·Food organisms on windward shore	
Cover	·10-15 days after hatch, young ones are dispersed into the upper levels of open water				
Other	·Success is usually associated with steady and rapid rate of water warming (0.28°C/day) ²			·Information on the distribution and movements of lake Char throughout the first year of life is limited ⁶	

Adult Feeding Habitat

	Time/Temp.	Substrate	Depth	Flow	Cover
Walleye (Cool water species)	·Spring/Fall, 10°C - 18°C	·Variable - rock, rubble, bedrock, clay, mud	·Near shore waters, 1m - 4m		
	·Summer, 18°C - 20°C	·Variable - sand, bedrock, rock, rubble	·Variable - mostly in the thermocline, some in hypolimnion ·5m - 15m (16.4 ft. - 49.21 ft.). ·Move into shadows at night.	·Variable - edges of weed beds, sparse vegetation to nil cover.	
	·Winter, 0°C - 4°C	·Rock, rubble, bedrock	·Variable - most fish in shallow water	·2-4m (6.56 ft. - 13.12 ft.)	·Edge of weed beds
Northern Pike (Cool water species)	·Spring/Fall, 8°C - 18°C ·Winter, 0°C - 4°C	·Variable - soil, mud, rock	·Very shallow to 4 meters (13.12 ft.)	·Edges of fairly dense aquatic vegetation	
	·Summer, 18°C - 20°C+	·Variable - rock, mud, clay	·At night and early morning, in shallow waters up to 4 meters (13.12 ft.). In daytime in deeper water up to 7 meters (22.97 ft.)	·Edges of fairly dense aquatic vegetation	
Smallmouth Bass (Warm water species)	·Spring/Fall, 8.5°C - 10°C	·Rock and sand, rock rubble, boulders	·Shallow waters	·Boulders, submerged logs, overhanging branches	·less active during this period
	·Summer	·Rock and sand, rock rubble, boulders	·1.5m to 6m (4.92 ft. - 19.69 ft.)	·Boulders, submerged logs, overhanging branches	·less active during this period
	·Winter - Inactive - Very little feeding				

	Season	Depth	Cover	Food Type	Other
Lake Trout (Cold water species)	·Spring/Fall	·Often in surface waters ¹	·Open water feeders	·Plankton, aquatic and terrestrial insects, many species of young fish, small mammals, etc. ¹	·Seem to be able to take advantage of an abundance of almost any food. ¹
	·Summer	·In cooler waters of hypolimnion below thermocline but may make excursions into warmer waters ¹	·Structure ·Substrate boundaries		
	·Winter	Feed at various depths			
Whitefish (Cold water species)	·Spring	·Shallow		·Copepods, cladocerans	·Food base for many top predators
	·Summer	·Deep		·Benthos, insect larvae	
	·Fall/Winter	·All over		·Small fish, plankton, benthos, fish eggs	

Tables modified from the "Provincial Fisheries Habitat Workshop #2" Northeastern and Northwestern binder. This workshop was held in 1989 in Sudbury, Ontario. Binder is located at the North Bay District Ministry of Natural Resources office.

- ¹ Scott, W.B., and E.J. Crossman. 1973. Freshwater Fishes of Canada. Bull. Fish. Res. Board Can. 184. 966p.
- ² Colby, P.J., McNicol, R.E., and Ryder, R.A. 1979. Synopsis of Biological Data on the Walleye, *stizostedion v. vitreum* (Mitchill 1818). FAO Fish. Synop. No. 119.
- ³ Martin, N.V., and C.H. Olver. 1980. The lake char, *salvelinus namaycush*, p. 205-277. In E.K. Balon (ed.), Chars, salmonid fishes of the genus *salvelinus*. Dr. W. Junk BV Publ., The Hague, The Netherlands. 928 p.
- ⁴ Martin, N.V. 1960. Homing Behaviour in Spawning Lake Trout. Can. Fish. Cult. 26:3-6.
- ⁵ Loftus, K.H. 1958. Studies on River Spawning Populations of Lake Trout in Eastern Lake Superior. Trans. Am. Fish. Soc. 87:259-277
- ⁶ Fraser 1975