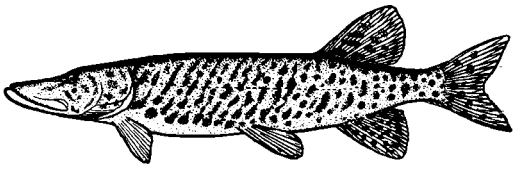
Muskellunge *(Esox masquinongy)*

General Information
Muskellunge have been introduced into six waterbodies within the state. These waters include Echo Lake Reservoir, Furnace Lake, Greenwood Lake, Monksville Reservoir, Furnace Lake and the Delaware River north of Belvidere. Muskellunge are most noted for their huge size and fighting ability.



Native Range	Freshwaters of eastern North America. South from Quebec through western Vermont, south to Tennessee, but west of the Appalachian mountains. From Tennessee, the range extends north into the Great lakes and extreme south east Manitoba, excluding the main stem of the Mississippi River. (Cook and Solomon 1987)

Habitat Description
Lake: large waterbodies (> 100 ha) with 23 - 75% of the surface area vegetated, solitary and predominantly sedentary except during spawning. Usually remain in less than 10-15 ft of water, reside in deeper water during the summer months. (Cook and Solomon, Scott and Crossman 1973, Carlander 1969)
River: large, slow, heavily vegetated rivers with low gradient**.** (Cook and Solomon 1987)

Optimum Habitat Requirements	
Dissolved Oxygen	> 6.0 mg/l
Temperature	23.0^{o} - 25.6^{o} C
PH	
Turbidity	
Current	

Diet	
Fry	zooplankton
Fry (40 mm)	fish
Juveniles	fish, crayfish,frogs, sm. mammals
Adults	fish, crayfish,frogs, sm. mammals
Notes: ambushes prey, rarely pursues, sight feeders, gizzard shad considered best forage	

Growth (mm)							
Age	**I**	**II**	**III**	**IV**	**V**	**VI**	**VII**
		Recent growth data not available					

Notes: females grow faster & live longer, require diversity of sizes of forage fish, growth may be impaired if food of adequate size is not available, growth is highly variable from one location to another, very few fish per acre, long lived (average 15 yrs.)

Reproduction				
Time of Year	Late March - April		Age Males Mature	III - V
Temperature Range	9.4^{o} - 15.0^{o} C		Age Females Mature	III - V
Water Depth			Nest	none
Substrate	veg, detritus, debris		Egg Type	semidemersal, non-adhes.
Time of Day			Parental Care	none
Critical pH			Days to Hatching	8 - 14
Vegetation	not critical		Stable Water Level	critical

Notes: no type of vegetation, depth or substrate is critical for spawning will adapt in most circumstances, factors promoting natural reproduction is limited northern pike abundance, rising water level & high alkalinity, spawning usually doesn't last more than 1 week, eggs & milt are released at random & dropped into vegetation & plant material. Reproduction, diet and habitat requirements taken from Cook and Solomon 1987, Scott and Crossmon 1973 and Carlander 1969