

Lake George Fisheries Management

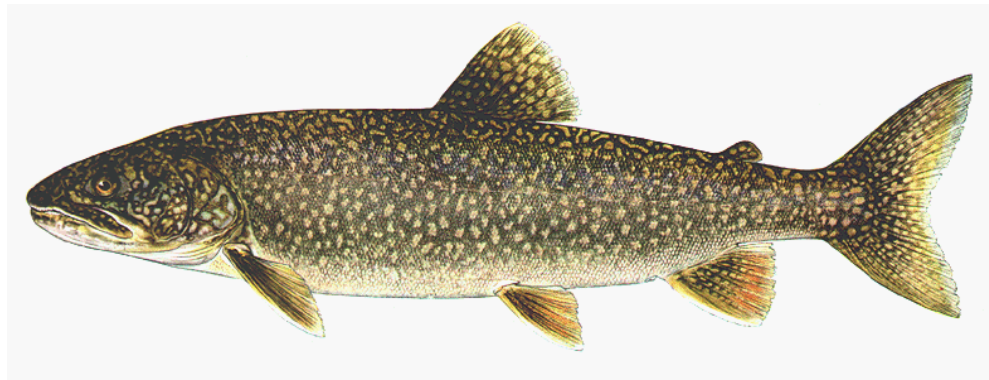
Emily C. Zollweg

Senior Aquatic Biologist

New York Department of
Environmental Conservation,
Warrensburg



Lake George- Lake Trout



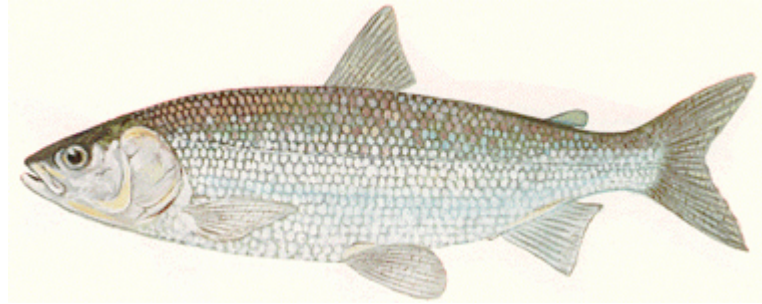
- Long lived- over 20 years
- Matures at 6-7 years of age, about 19 inches
- Prefer temperature 50F or less
- Spawns in late October- early November
- Prefers rocky spawning substrate such as shoals
- Eats invertebrates and fish, especially smelt and whitefish

Lake George- Landlocked Salmon



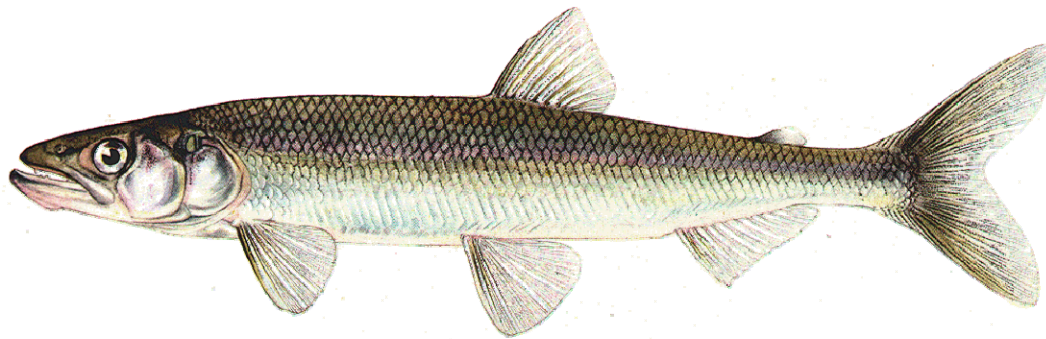
- Lives up to 7 years
- Mature at 2-3 years old
- Spawns in late October- early November
- Prefers gravel streams for spawning
- Eats big invertebrates and fish such as smelt and whitefish

Lake George- Lake Herring or Cisco



- Valuable forage fish
- Spawn in late fall in shallow waters
- Eats plankton, insects, fish eggs and small fish
- Normal size 8-12 inches, matures at 3-5 years of age

Lake George- Rainbow Smelt



- A popular food fish, for fish and humans
- Spawns in streams in early spring
- Eats aquatic invertebrates and insects
- Normal size 7-8 inches, but can grow up to 12 inches
- Live for 4-6 years

Factors to consider for regulations

- Ecological data
- Angler opinions
- Enforcement ability, judicial systems
- Economic impacts

- Other tools for fishery management-
stocking, other species, habitat manipulation

How fishery populations work

- Density Dependent processes

- Food availability
- Predation
- Cannibalism
- Disease
- Parasites
- Availability of spawning sites

- Density Independent processes

- Water temperatures
- Lake levels
- Drought
- pH
- Dissolved oxygen
- Nutrient inputs

How Fishing Regulations Work

- Minimum size limits- prevent overharvest, to protect juvenile fish until maturity.
- Slot limits- prohibit harvest from an intermediate size range.
- Creel Limits- harvest equitably divided
- Seasons- closed season to protect spawning activities

Lake George Fishery History

- Pre 1950- good LT, good LLS fishing, LT egg take 1945-1955
- Mid 1950's-1960's DDT affects LT reproduction
- Salmon fishing was also spotty
- Egg take resumed in 1973 after recovery of LT populations (well supplemented by stocking from other sources)
- 1983- LT fishery recovered, excellent LLS fishing, due to fall yearling stocking and good smelt runs.
- 1986- LLS abundance high, but small and slow growing, LT population continuing to grow
- Early 1990's- LT growth slows, LLS growth slows

Lake George Limitations

- Very little stream spawning habitat for salmonids other than lake trout- natural barriers a short distance from lake
- Unstable prey populations- smelt, cisco
- Oligotrophic nutrient limitations

Lake George Regulation History

- 1975- open all year, tip-ups Nov 15 – Mar 30, LT and LLS 15” size limit, 3 LT, 2 LLS creel. No ice fishing zone east of Dome Island (new 1975).
- 1981- 23” size limit on LT
- 1986- 18” size limit on LLS
- 1988- smelt dipping prohibited
- 1991- LT and LLS creel limit of 2

Lake George Stocking History Part 1- Lake Trout

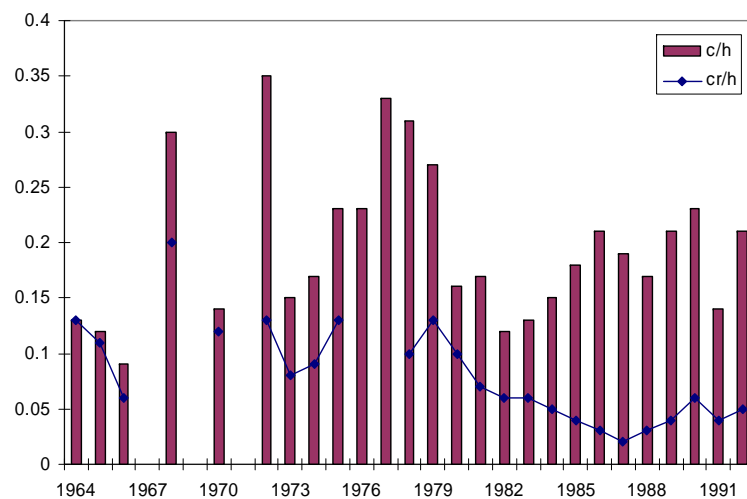
Year	Number stocked	Size	Mark	Source
1956	71,000	3.25"	LV	Lake George, Raquette Lake, Upper Saranac
1957	71,000	3.25"	RV	Raquette Lake
1958	70,000	3.25"	RV	Raquette Lake
1959	218,000	3"		Raquette Lake, Seneca Lake
1960	84,800	2.5"		Raquette Lake, Seneca Lake
1961	222,600	2-5"	Various	Raquette Lake, Seneca Lake, Upper Saranac
1962	125,000	2.5-6.5"	Various	Raquette Lake, Upper Saranac
1963	88,000	3-6.25"	Various	Raquette, Saranac, Upper Saranac, New Hampshire, Seneca Lake
1964	218,000	3.25-6"	Various	Upper Saranac, Saranac, Seneca Lake
1965	171,000	4.5-7"	RP, RV	Seneca Lake
1966	94,000	2.75-6.75	Ad	Seneca Lake, Raquette Lake, Lake George
1967	159,000			Seneca Lake, Lake George, Upper Saranac
1968	62,000	3-7.75"		Raquette Lake, Seneca Lake

Lake George Stocking History Part 2- Lake Trout

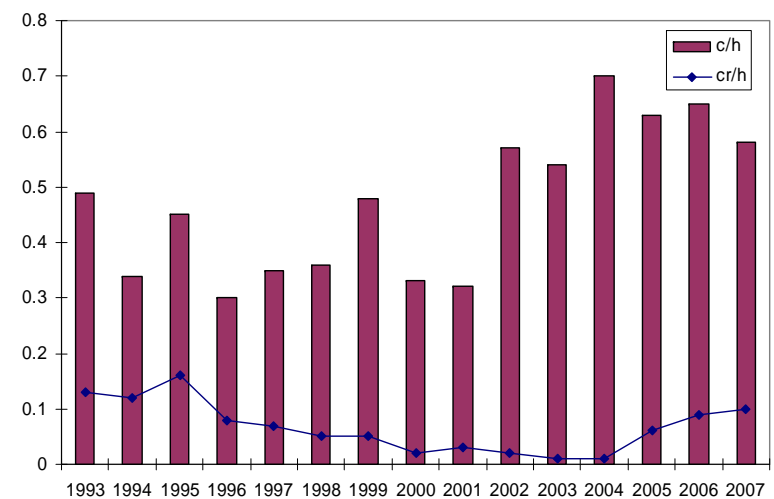
Year	Number stocked	Size	Mark	Source
1969	45,000	5.75-6.75		Seneca Lake
1970	96,500	5-6.75		Seneca Lake
1974	50,000	4.5"	RP	Lake George
1975	50,000		LP	Lake George
1976	50,000	5.5"	LV	Lake George
1977	50,000	4.75"	RV	Lake George
1978	50,000	5"	LP	Adirondack
1979	50,000	4.5"	RP	Adirondack
1980	45,000		AD	Adirondack
1981	48,000		LV	Adirondack
1982	44,000		RV, RVAD	Adirondack
1983	45,000		LP	Adirondack
1984	49,000		RP	Adirondack
1985	49,000		AD	Adirondack
1986	50,000		LV	Adirondack
1987	30,000		RV	Adirondack

Lake George Lake Trout Angling

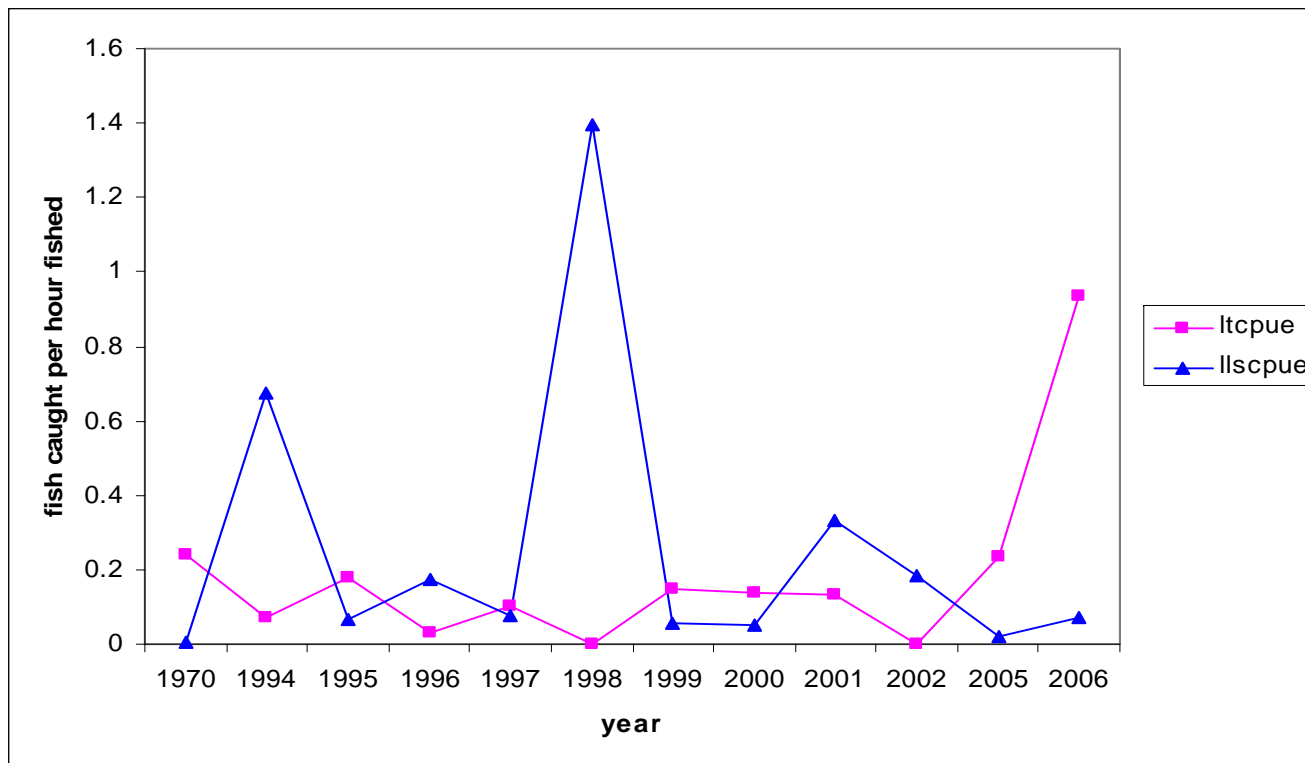
Overall lake trout catch and creel rates 1964-1992



Exclusive lake trout catch and creel rates 1993-2007

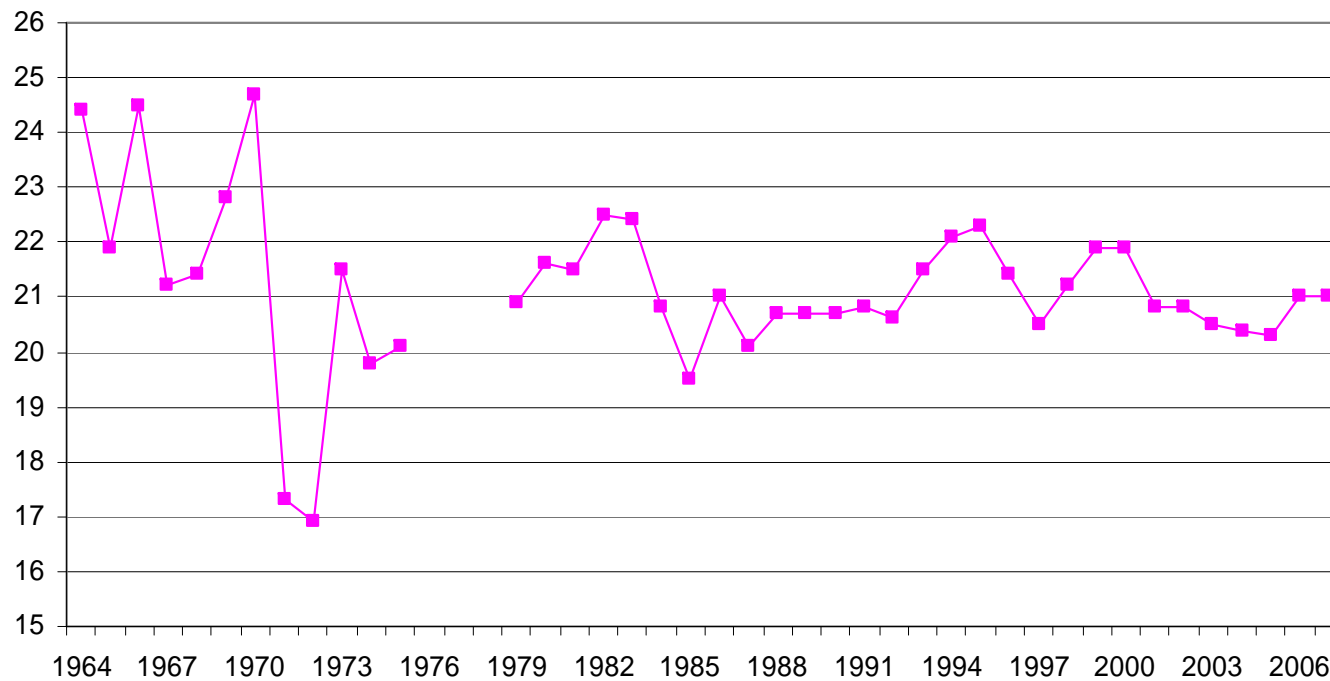


Fall trapping



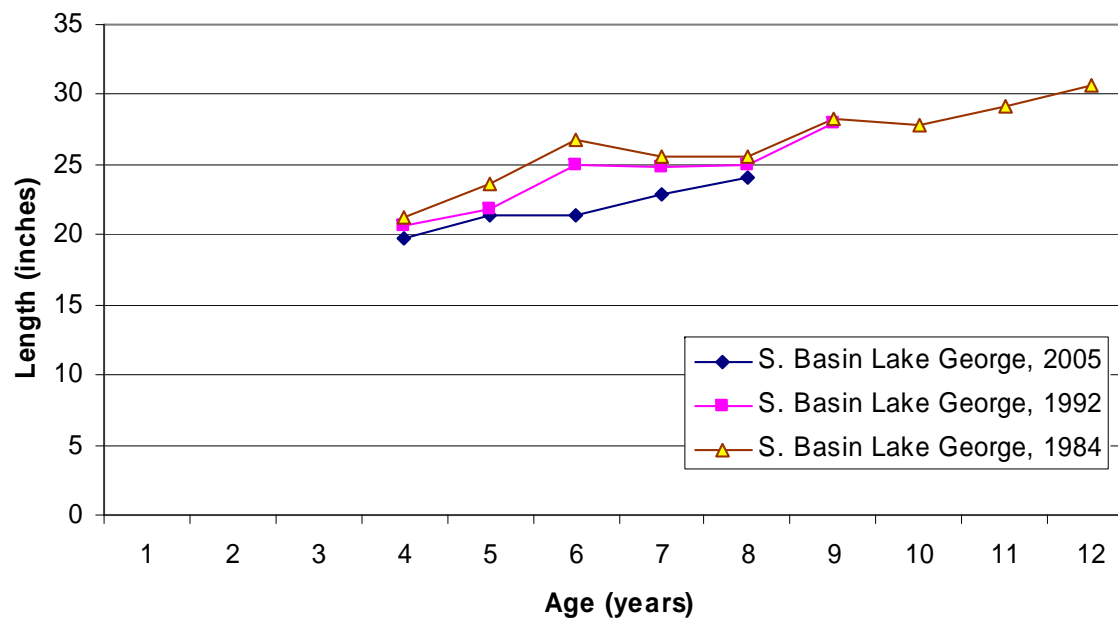
Lake Trout Mean Size Caught

mean size caught



Lake George Lake Trout Growth

South Basin Lake George LT Mean Length at Age



Thanks for Listening!



eczollwe@gw.dec.state.ny.us

(518) 623-1264

What is DEC Fisheries Role?

- Fishing Regulations- proposed change LT from 23” minimum to 21” statewide minimum
 - SMT regulations will remain in place to protect food source for salmonid predators
- Stocking- approximately 34,000 landlocked salmon are stocked annually at two sizes, offshore to escape nearshore predators
- Habitat modification permit review

DEC Fisheries Role...

- Conduct surveys to track changes in fishery, and to determine appropriate regulations and stocking rates
- Coordinate angler diary survey and analyze data

What can we do to keep fish habitat healthy?

- Maintain Riparian Vegetation
- Native In Lake Vegetation
- Pea Gravel beaches instead of sand
- Keep the water clean
- Apply for a permit for any shoreline or in water structure or disturbance

What can we do to help Lake George stay great for fish?

- Follow fishing regulations- use clean bait, don't use smelt
- Keep shorelines natural- no bulkheads, no sand
- Protect the watershed- install culverts correctly, keep stream banks vegetated, follow stormwater guidelines