

The objective is to improve fishing by strengthening lake ecology with a more healthy system. Following are examples of lake problems, most result from human activities

Change in the size of northern pike produced many small ones around 1940 due to over-fishing. Now there are a few large northerns and many small ones.

There was a huge increase in the number of small bass which remains.

The population of naturally reproducing walleye was lost.

Suckers were lost as a forage fish due to loss of lake flushing.

The large decrease in bluegill size seems now stabilized with reaching medium size.

There was also a decrease in crappie size.

There was a decrease in the growth rates of panfish due to excess populations that overgrazed their main food supply (zooplankters).

Important invertebrates such as mayfly larvae have come down in numbers.

Decrease in the population of mussels is down and extinction is an issue.

There was at one large rise and fall of the populations of snails.

Loss of wild rice; important to both lake residents and Native Americans.

Relationships

All these species interact and interactions promote stability.

Loss of species reduces species diversity

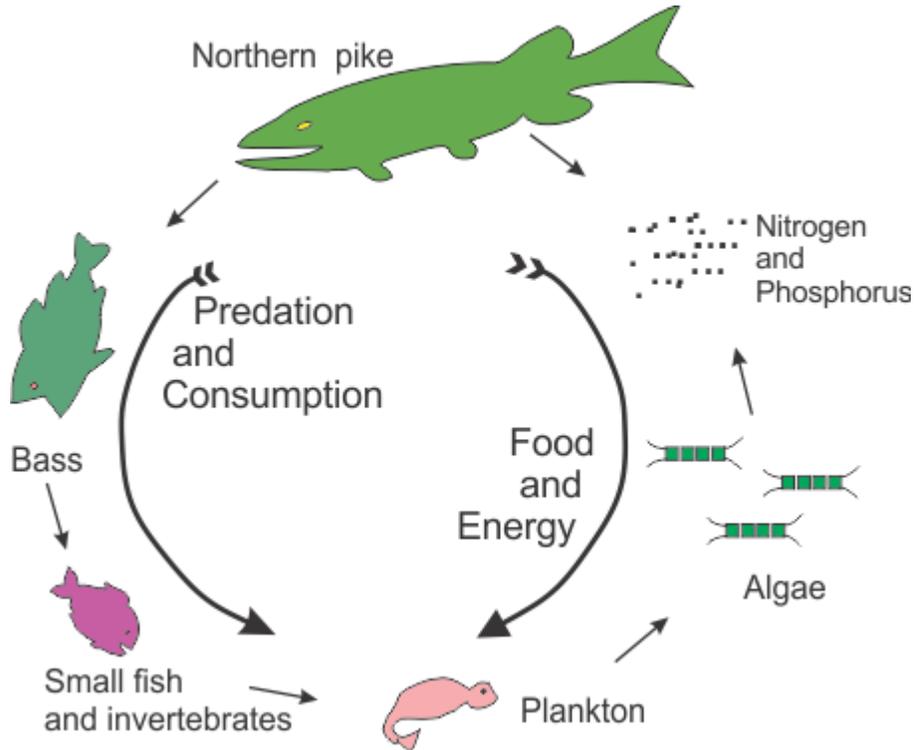
Both unstable and low diversity systems invite invasion by alien species.

Controlling small northern pike and bass populations.

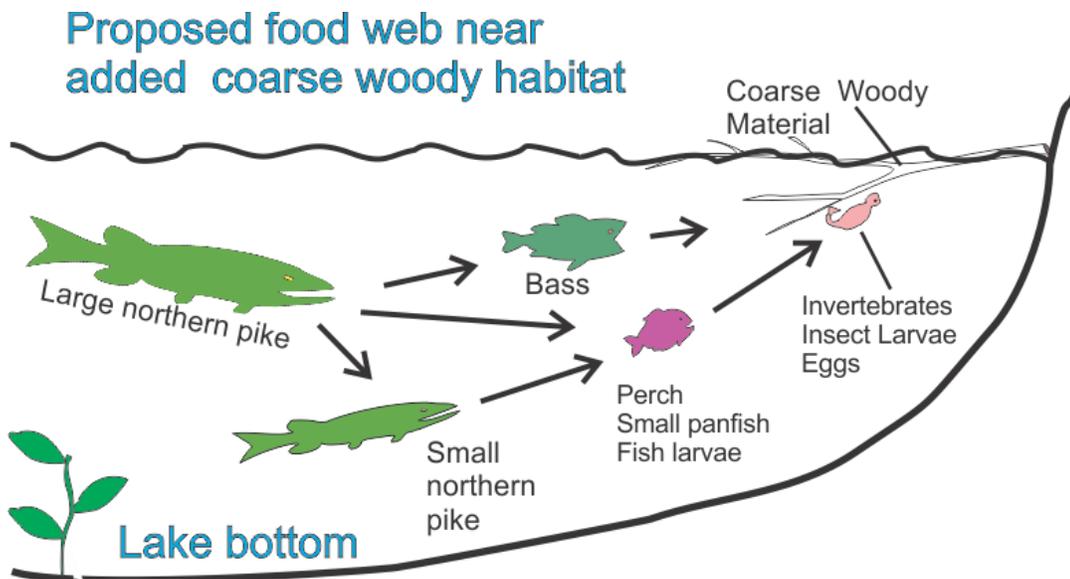
Mature northern pike are fish eaters that prefer shallow bodied prey. Thus cannibalization is common and northern pike. Prey approaching the size of their attackers are consumed. This cannibalistic behavior can serve as both an efficient way of quickly obtaining a large meal, and also can serve to control both large northern pike and bass. bass and small northern pike can be controlled by large northern pike.



Improving the health of Big Sand Lake



Normal food chain with a top predator that limits the population of small fish that overgrazes the food supply.



Restoring the population of the main top predator allowing more fish to attain normal size, and reducing windows of opportunity for invasion by alien species.