14/01 for Minister's visit 17 Aug. 78

3-10-22

WHITE LAKE

1860 to 1960:

- Dam operated by local sawmill
- Frequent drastic water fluctuations
- Waters clear, rocks clean
- Pickerel spawning satisfactory

1950 to 1960:

- Period of Tourist camp development

1960 to 1975:

- Period of private cottage growth
- Pronounced fishing pressure increase

1960 to 1968:

- Dam deteriorated, public complaints re: water levels
- Water quality excellent
- Spawning beds excellent
- Fishery satisfactory, Water fluctuation 4'2"

1968:

- Department of Public Works reconstructs dam

1968 to 1976:

- Water levels managed to satisfy cottagers and boating interests ie. stabilized all summer, drawdown for the winter

Results:

- Siltation of spawning beds
- Encroachment of aquatic vegetation
- Failure of pickerel recruitment
- Failure of the pickerel fishery
- Reduction of muskrat production
- Drastic reduction of bullfrog production

1972, 1976, 1977: Attempts by local Fish & Game Club to raise pickerel at their expense. Overall success — very poor, cost to the private sector about $4,000/yr.

1977:

- Introduction of new water management schedme to closely reflect natural water levels, but moderating the extreme fluctuations.
- Gradual drawdown - April to September - 2½ feet

Primary Purposes: To flush the lake throughout the summer, and eliminate stagnant water
- To reduce algae growth
- To permit sun and wind action onto the spawning shoals
- To reach winter levels early enough for the benefit of muskrats, beaver and bullfrogs

Secondary Purposes: To rehabilitate water quality
- To rehabilitate the tourist and sport fishery
- To increase recreational potential
- To increase cottageing capacity (?)

Time Schedule:
- 1977 to 1980 (incl.) private stocking, creel census, water contro
- 1980 interim assessment
- If unsuccessful terminate
- If successful continue
- 1984 re-assess and modify if necessary

Preliminary Assessment:
- 1977 first year - shoals clean
  - water clarity improved
- 1978 2nd year - shoals clean
  - water clear and sweet smelling
  - blue dot minnow re-appeared (Local Term)
  - pickerel seen on spawning shoals again.

Public Reaction:
- 1968 to 1976 - unrest, requests for stocking
  - unsatisfactory self-help project
- Summer 1977 - Many complaints about change in water regime, due to inadequate public relations
- Winter 1978 - Some public approval of water quality improvement
- Spring 1978 - Several meetings and news releases
- Summer 1978 - No adverse comments - some public approval re: water quality.

mean that waterfowl young relying on the organisms for food will have to leave their sheltered areas in search of food in more exposed sites.

If winter water levels are too low freezing of sediments will result in high mortalities of both invertebrates in the mud and overwintering vegetation.

3. VERTEBRATES (Excluding fish)

1. Waterfowl: Once waterfowl have nested the water level should remain constant so that water is readily available for the young near the protected area of cover which the adults have selected. This nesting normally occurs in late May or early June with incubation lasting until at the latest, early July. Above all it is important not to raise the water level so that nests are flooded.

11. Beaver, Muskrat: Water manipulation becomes important during the fall months when these animals start building lodges and laying in food reserves. Water levels should be dropped before this time to prevent leaving homes high and dry and thus isolating the animals from their food supply and allowing them to freeze to death. The lodges are built in late October, just prior to freeze-up. If the beaver are to survive, the overall fluctuation should not vary greatly because the kits born in early spring must survive within the lodge, built during low water, and not be forced out by rising spring water, until May.

4. FISH

Spring: 1. Pickerel: A great deal of consideration should be given to shoal spawning pickerel, due to their high value as a sports fish. In the spring the water should be high

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enough that the shoals are completely submerged, but not so high as to exclude the currents from wave action which drive oxygen down amongst the rubble where eggs have been deposited. The period in question is from ice-out in late April until the latter part of May when the fry become free swimming.

11. Pike, Maskinonge: These fish spawn on flood plains in 15 - 20" of water, so even a slight decrease in depth will leave adults or eggs high and dry. Therefore, water level must be kept high and constant while the water temperature ranges between 50° - 60°F, which often involves the month of May.

Summer: 1. Bass: These fish spawn in mid June in 1 - 4 feet of water along the shoreline. Water levels should therefore, not be dropped greatly after the time that eggs have been deposited, or numerous nests close to shore might be lost.

11. Water levels in shallow lakes should be kept as high as possible during the summer months so that excessive heating of the water does not occur, along with its resulta fish mortality, and greatly accelerated primary production.

Fall: The water level should be dropped so that more shoreline and rocky shoals are exposed to wave action. Any accumulat sediment therefore, is washed off. This will allow much higher survival of eggs deposited the following spring.

The following is a graph demonstrating the water level needs of the various organisms discussed. From this a compromise can be reached which should satisfy the requirements of each.

(GRAPH NOT AVAILABLE/2014)

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