

## **Northern Pike (lakes) Population Status History**

### **Collapse and the Road to Recovery**

As one of Alberta's most popular sport and commercial fish, northern pike were often overharvested, collapsing in many lakes across the province. Sport fishing during the 1980s and 1990s was so poor that, on average, the catch rate for keeper-sized pike was only 0.15 pike/h (1 pike for every 6 hours of fishing!). During the late 1990s, bag and size limits were changed to protect overharvested pike and allow them to live long enough to spawn once or twice before being harvested. Many populations partially recovered under these regulations, with the average catch rate increasing to 0.6 pike/hour (1 pike every 1.5 hours).

Pike are now living long enough to spawn once or twice (increasing the numbers and catch rates) but are quickly harvested once of a legal size. Large trophy-sized pike, however, can only be found at a few lakes managed under largely catch-and-release rules.

Because of the rapid harvest of legal-sized pike, the majority (68%) of northern pike populations remain collapsed or highly vulnerable.

### **Recovery Still Needs Help!**

Alberta's anglers promoted and accepted the major restrictions on pike harvest during the past decade in order to improve the quality of their sport fishing. Although numbers and catch rates of pike have certainly increased, anglers now, understandably, also want to catch larger fish.

Having pike living longer and becoming larger is also more sustainable and ecologically sound. Steps towards this necessary additional recovery include the closure of commercial fishing in Alberta, experimental lake-specific harvest restrictions, and a careful review of pike competitive fishing events.

The partial recovery of Alberta's pike now gives us the luxury of exploring a range of potential fishing and conservation opportunities. Additional protection allowing pike to live long enough to spawn three or more times is likely necessary to recover these important fisheries to a higher, more sustainable quality. This goal could be achieved through larger minimum size limits, limited-harvest tag fisheries, or large protected slot limits.

Different fisheries could be managed for different goals, such as harvest-oriented lakes versus trophy-quality lakes. These options must be explored with anglers to meet our shared goal of social acceptability and conservation necessity.

### **Northern Pike Need Clean Water Too**

In lakes throughout Alberta, water quality has declined. Run-off of nutrients from developments (agriculture, municipal, road networks, etc.) in the surrounding watersheds has resulted in algae blooms and the subsequent summer and winterkills of fish. More effective watershed protection and planning will be essential if these lakes are to recover and remain healthy.

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Anglers have certainly done their part in helping the recovery, but other groups must also take responsibility for conservation of Alberta's water and biodiversity. Government and stakeholder watershed planning groups will need to implement effective reductions in nutrient run-off, protect and restore wetlands, maintain groundwater flows and generally ensure development is balanced with acceptable trade-offs for water quality and biodiversity.

### **We're Getting There**

In summary, although northern pike populations are on the road to recovery many are still at very low abundance following the serious provincial collapses in the 1980s and 90s. These lakes continue to experience considerable pressure from fishing and development. Strong conservation efforts by Alberta fisheries managers are needed to continue to restore Alberta's popular northern pike fisheries in order to meet the goals and objectives of Alberta's anglers and the Fish.