

The Role of Flathead Lake In Bull Trout Management

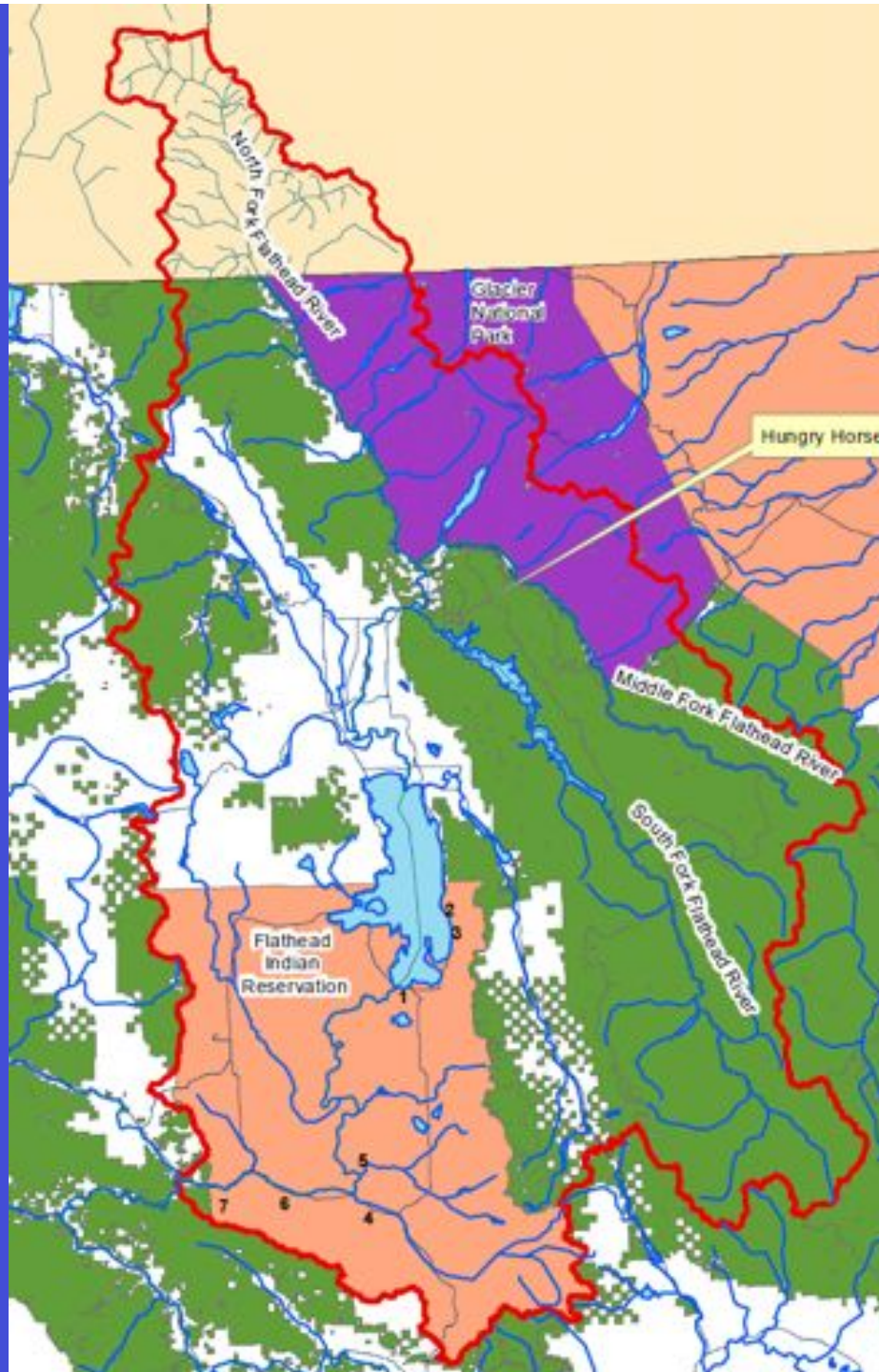
**Confederated Salish and
Kootenai Tribes**

Barry Hansen

A scenic view of Flathead Lake with snow-capped mountains in the background. The lake is a deep blue, and the mountains are a lighter blue with patches of white snow. The sky is a clear, light blue. The foreground shows some dark silhouettes of trees or buildings.



Flathead SubBasin



History of Ecological Changes

Identify Limiting Factors

Status of Bull Trout

Describe Solutions

**Lake trout
introduced**

1896

1905

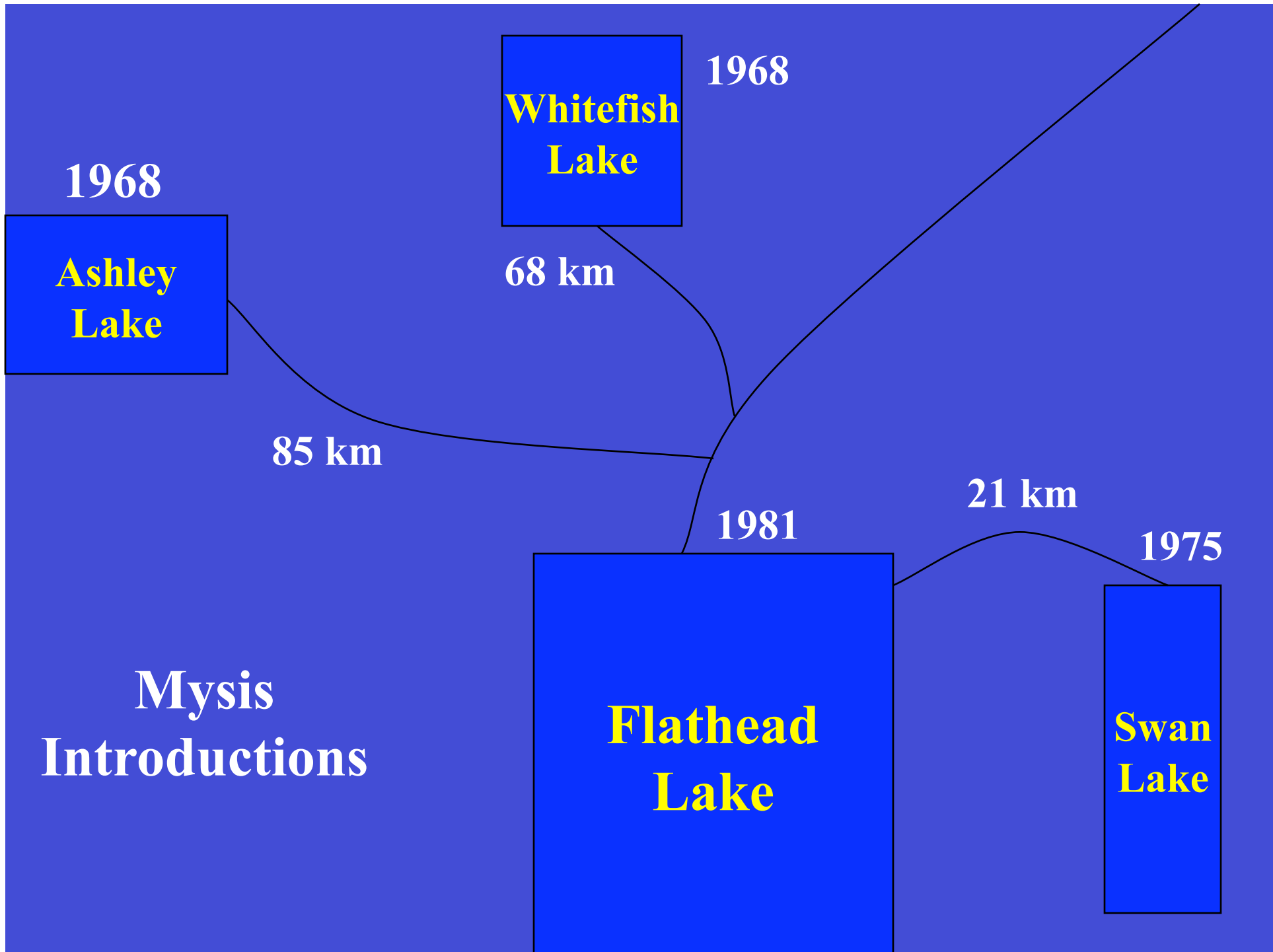
1916

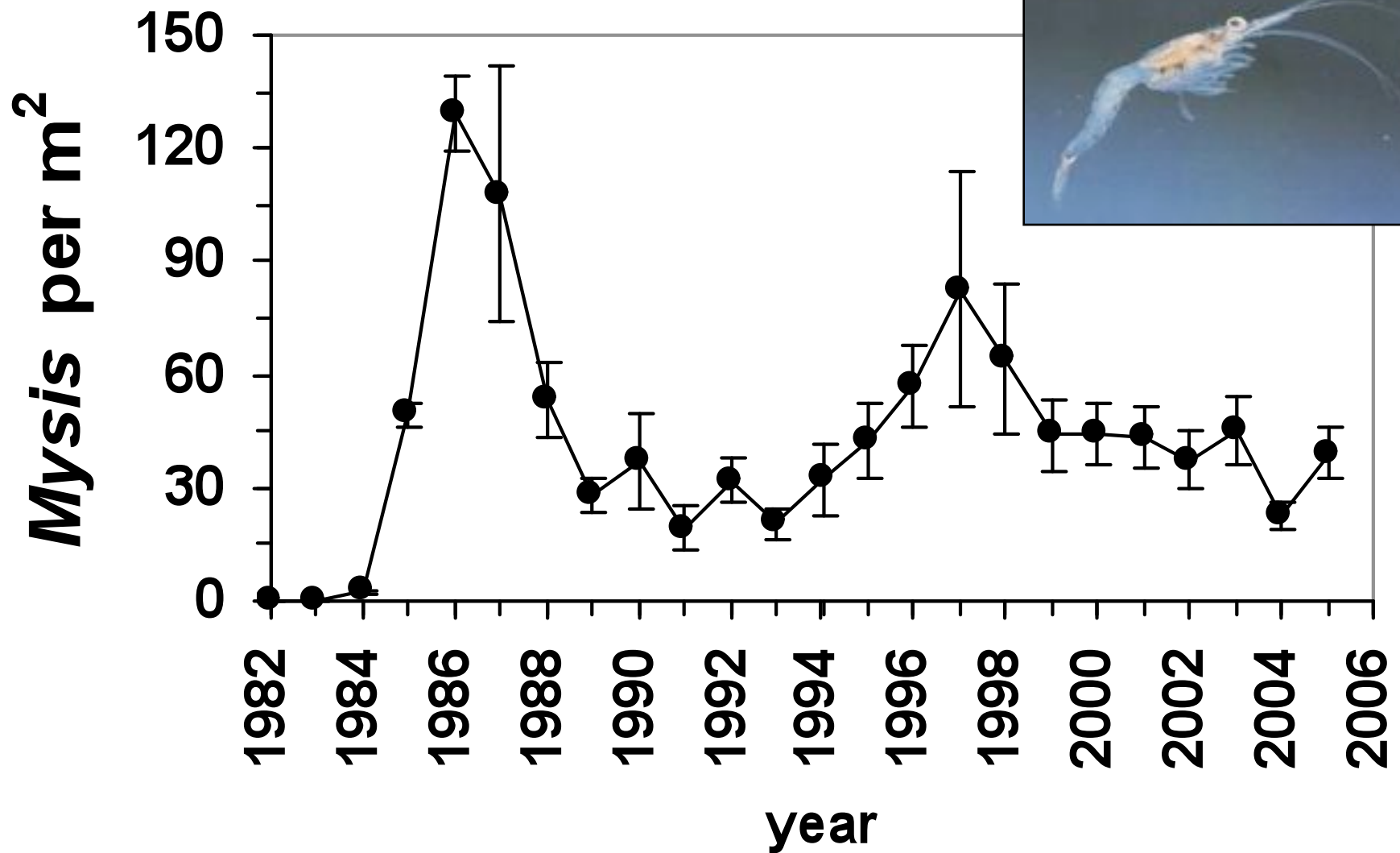
1981

**Lake
whitefish
introduced**

**Kokanee
introduced**

**Mysis discovered
in Flathead Lake**





Data from Ellis, B.K. 2006. Alternate states in a large oligotrophic lake, PhD. Dissertation, Univ. of Montana

**Lake trout
introduced into
Flathead Lake**

Kokanee Crashed

1896

1916

1981

1905

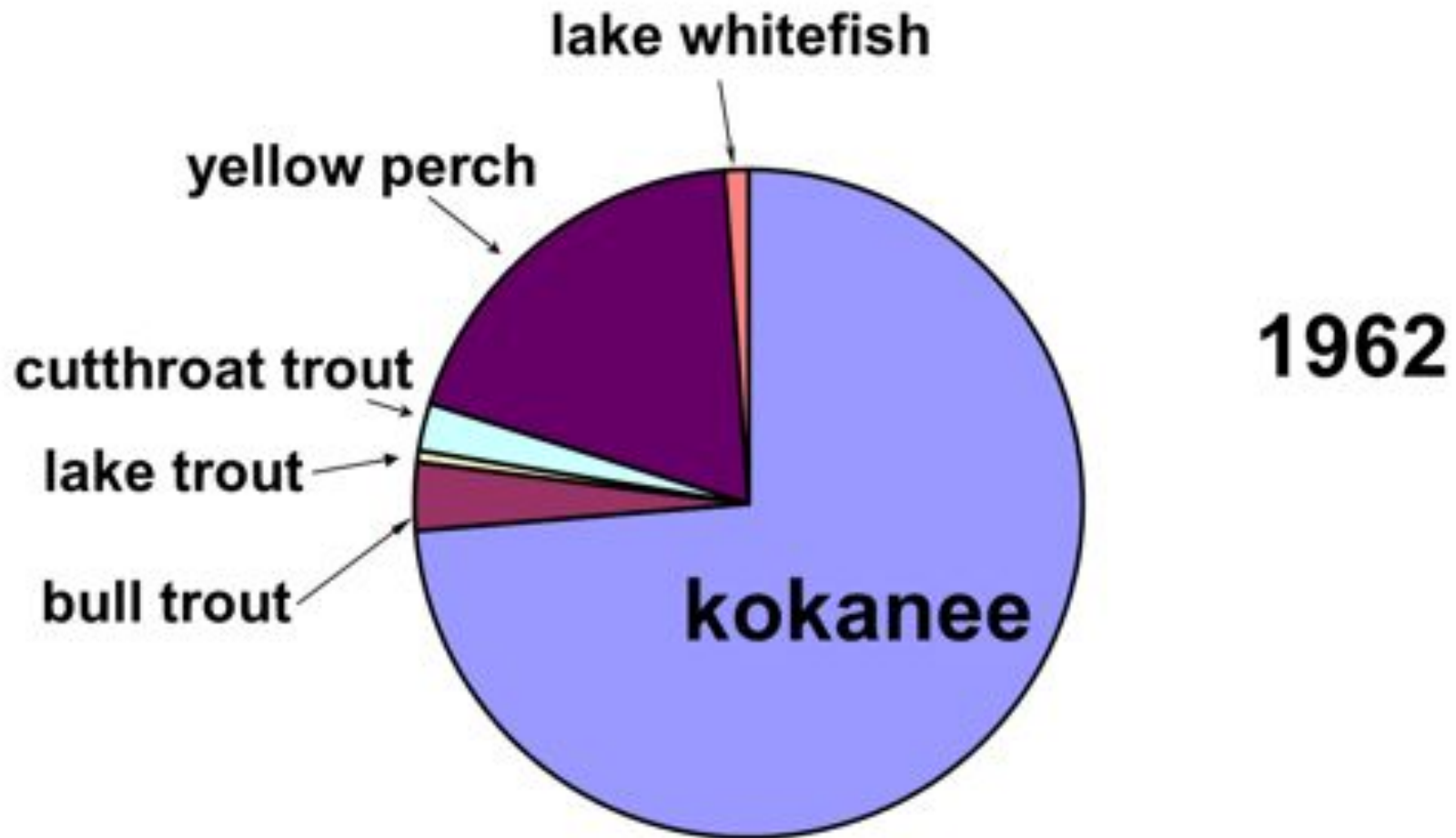
1987

**Lake
whitefish
introduced**

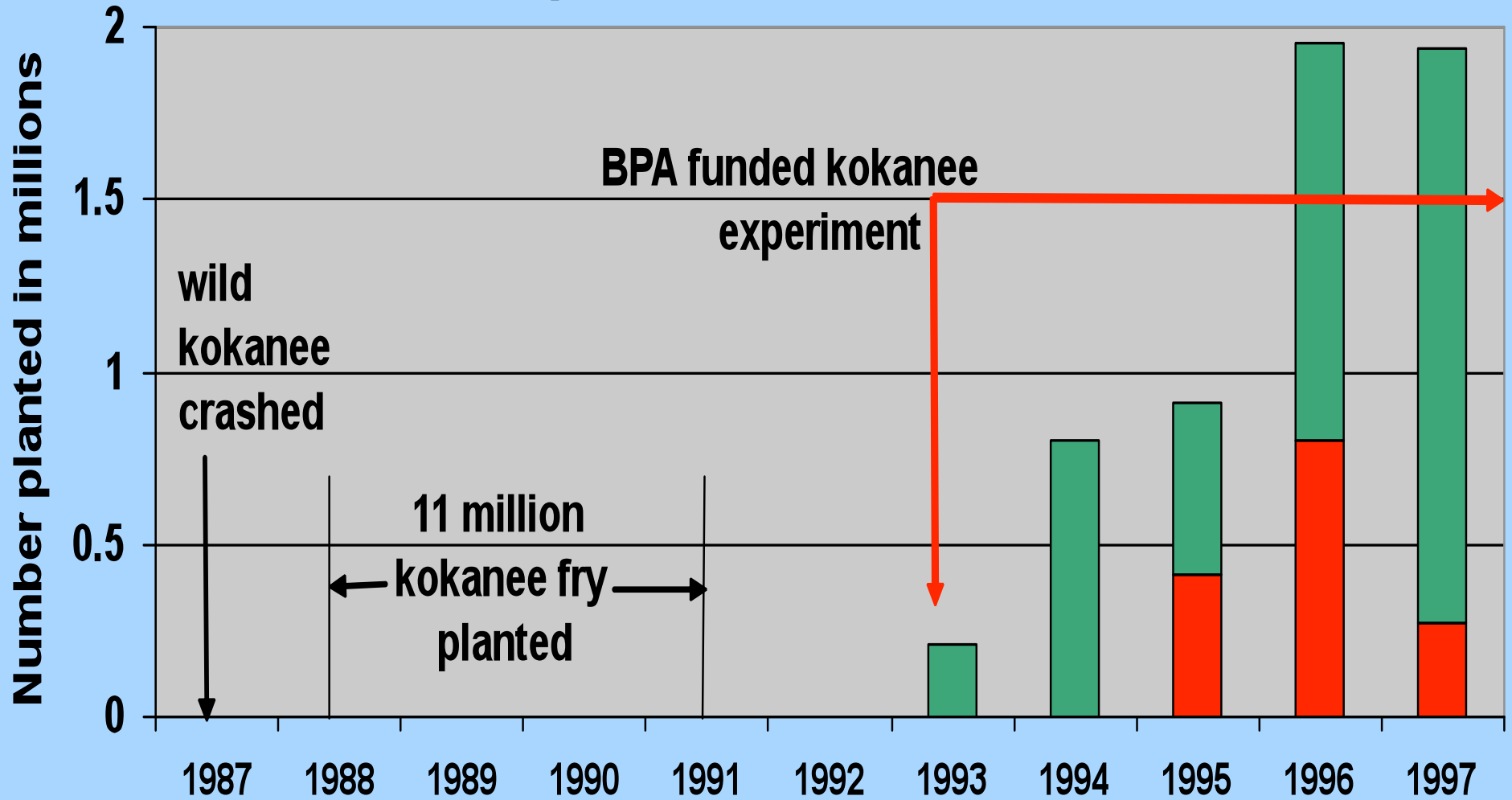
**Kokanee
introduced**

**Mysis discovered
in Flathead Lake**

Changes in Composition of the Fishery

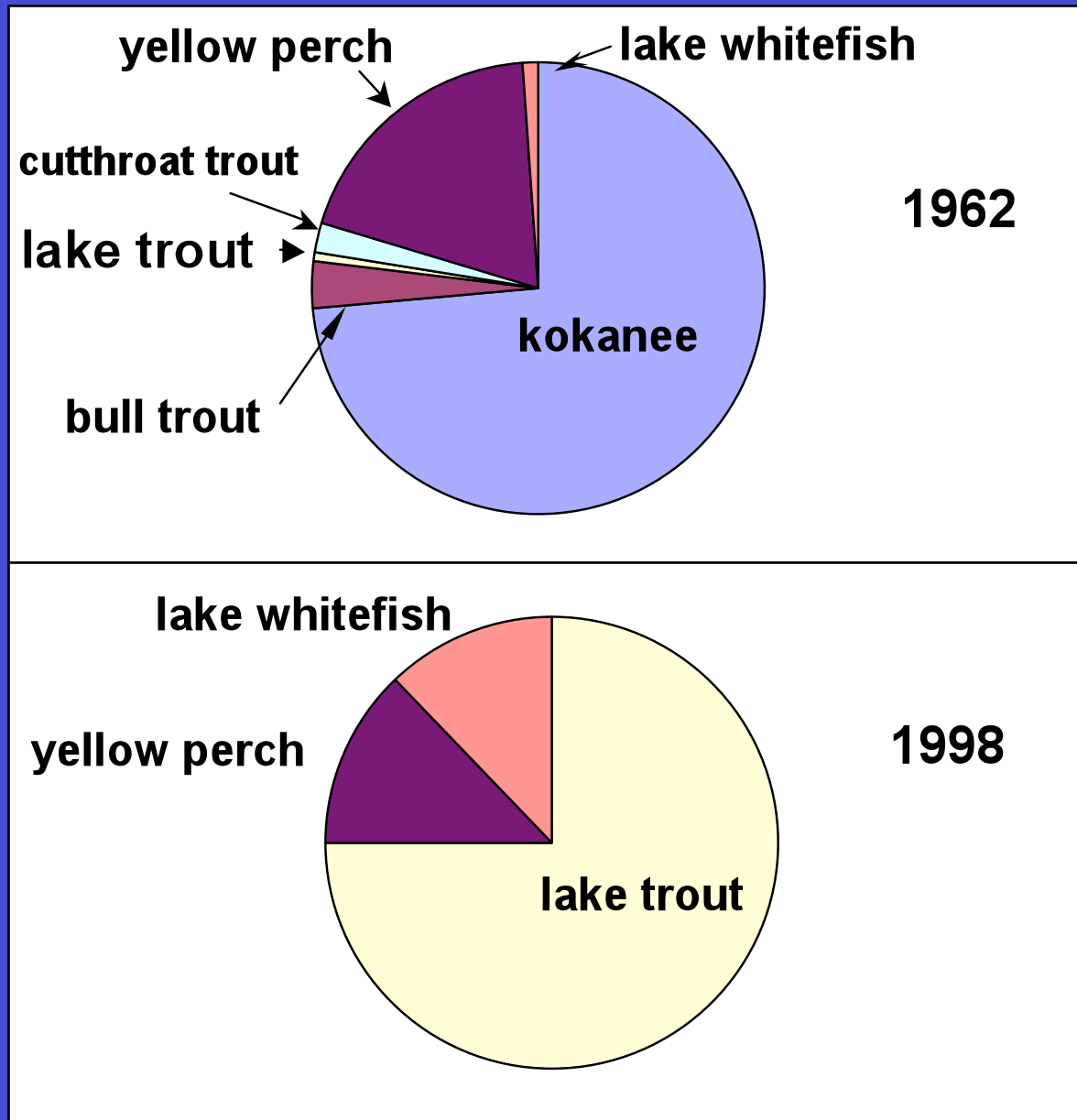


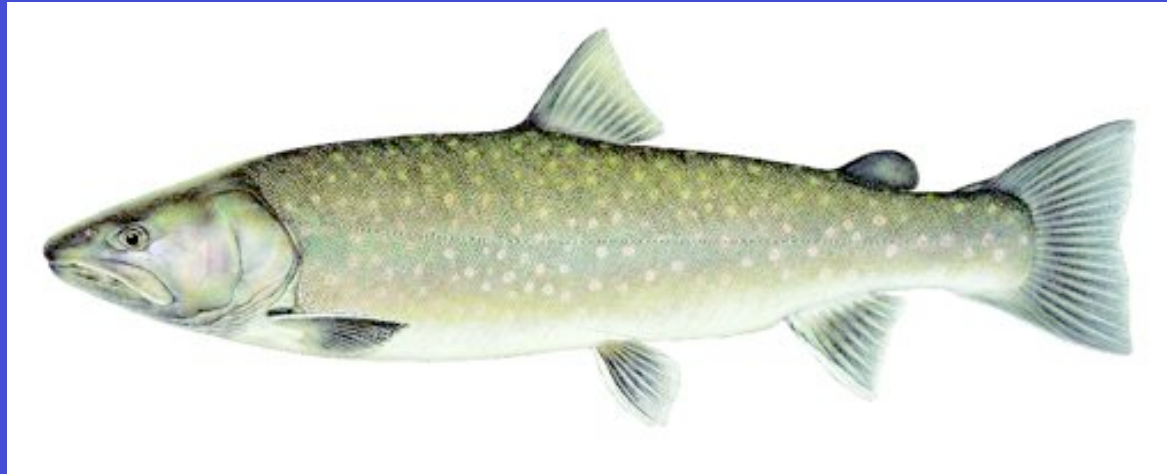
Kokanee planted in Flathead Lake





Changes in Composition of the Fishery

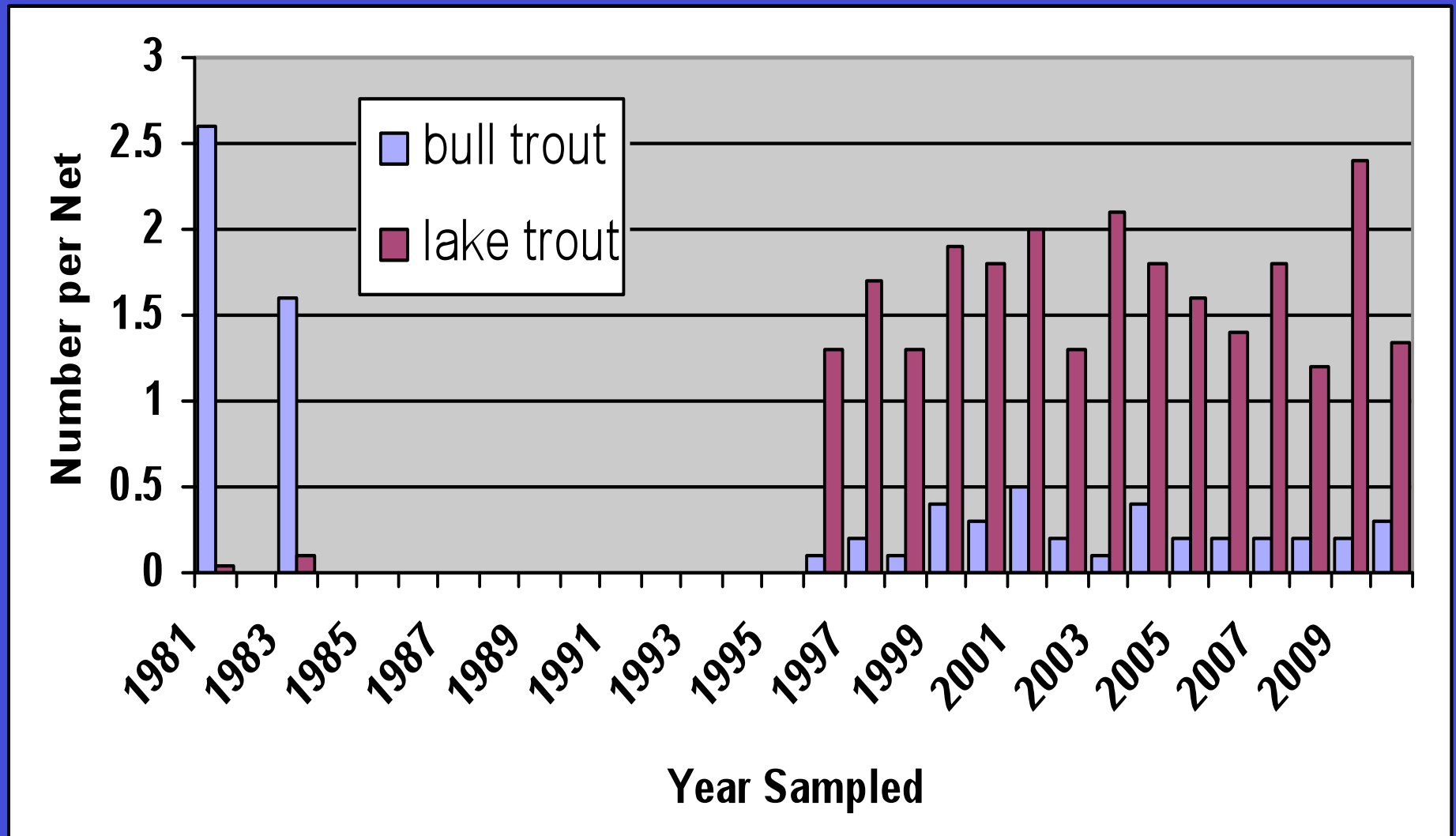




Donald, D.B. and Alger, D.J. 1993. Geographic distribution, species displacement, and niche overlap for lake trout and bull trout in mountain lakes. Canadian Journal of Zoology 71:238-247



REVERSAL IN ABUNDANCE



Data from Montana Fish, Wildlife and Parks

**Lake trout
introduced into
Flathead Lake**

**Bull trout listed
as threatened**

Kokanee Crashed

1896

1916

1981

1987

1998

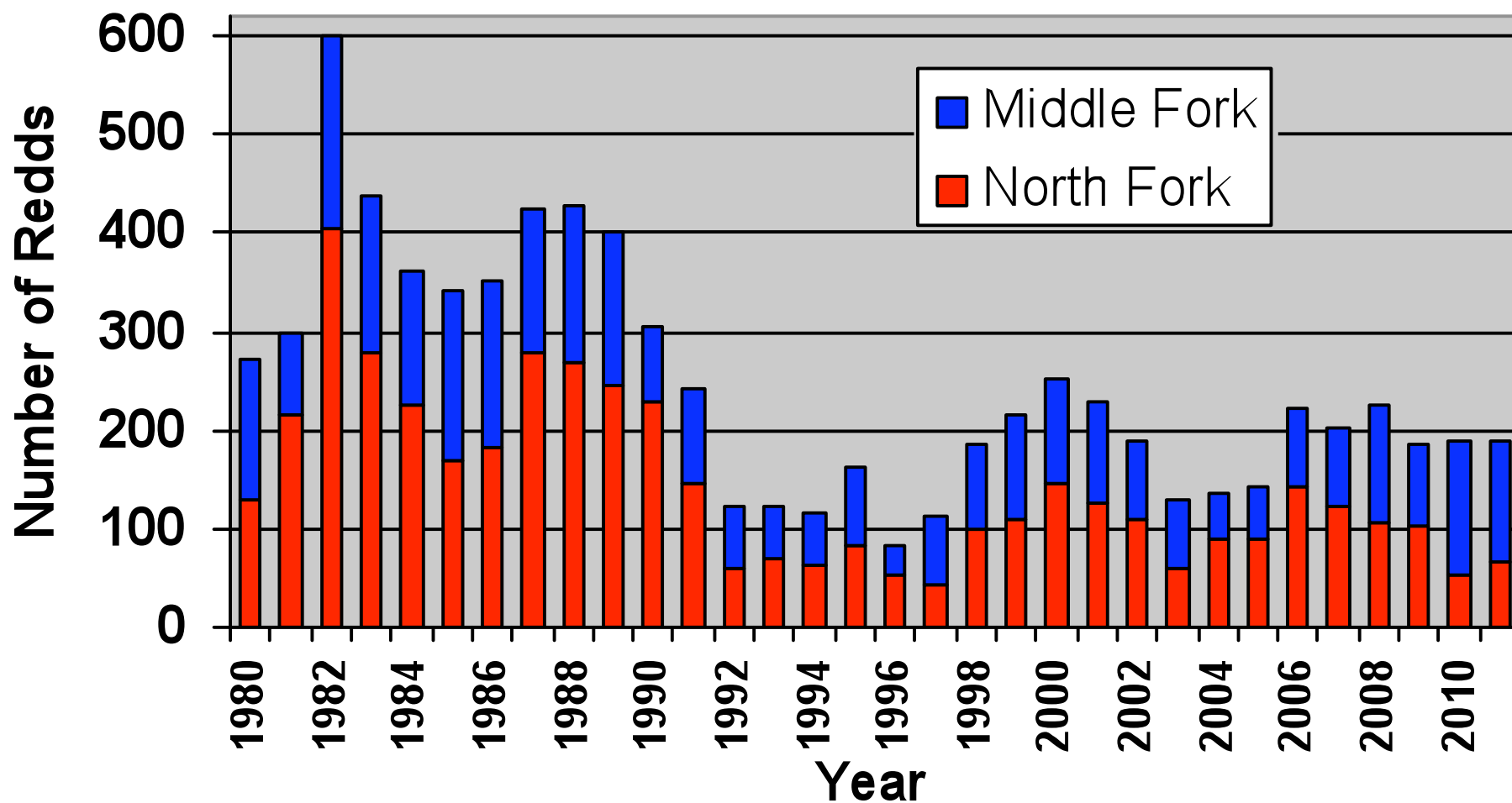
1905

**Kokanee
introduced**

**Lake
whitefish
introduced**

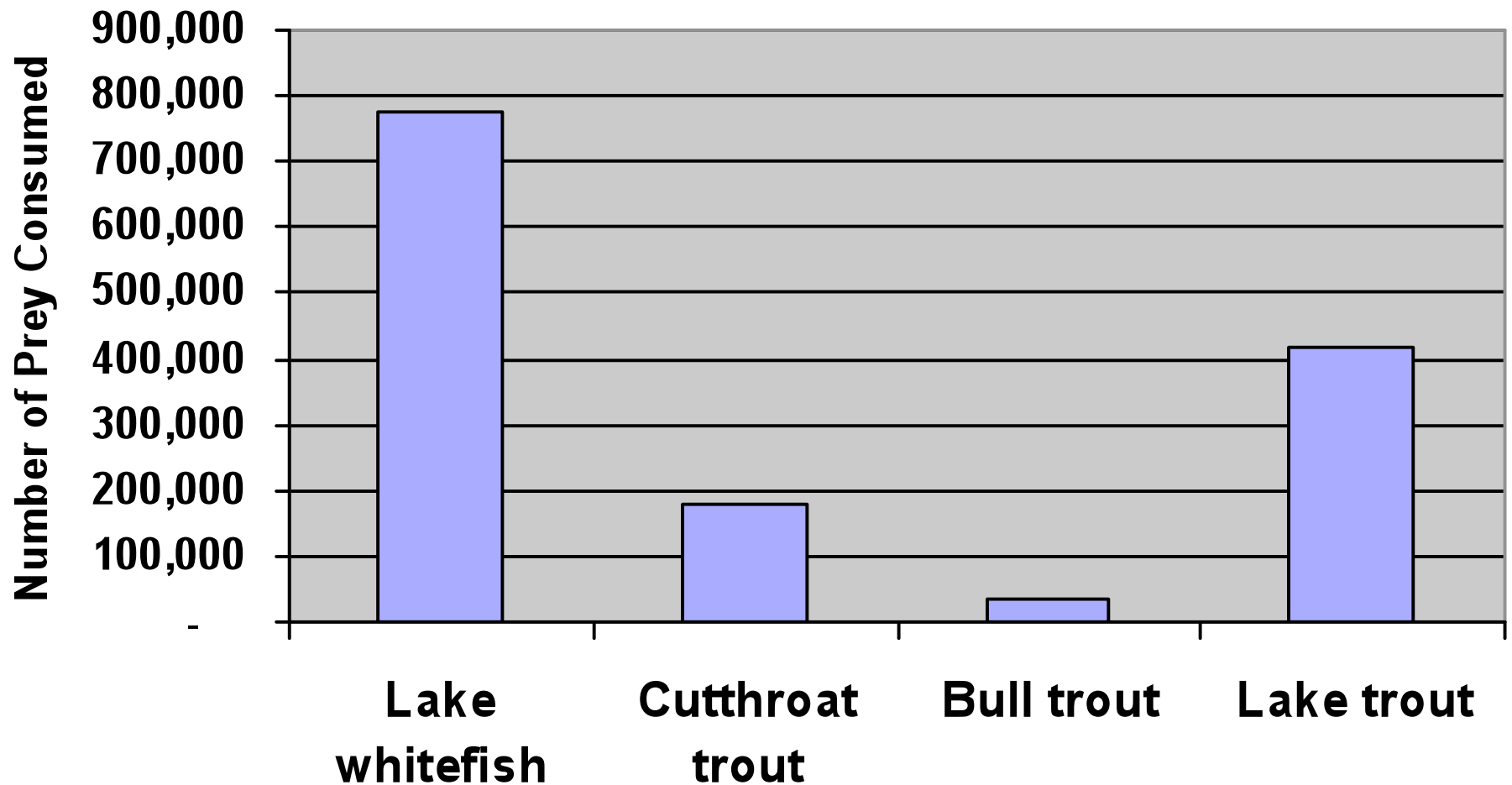
**Mysis discovered
in Flathead Lake**

LONG-TERM DECLINE



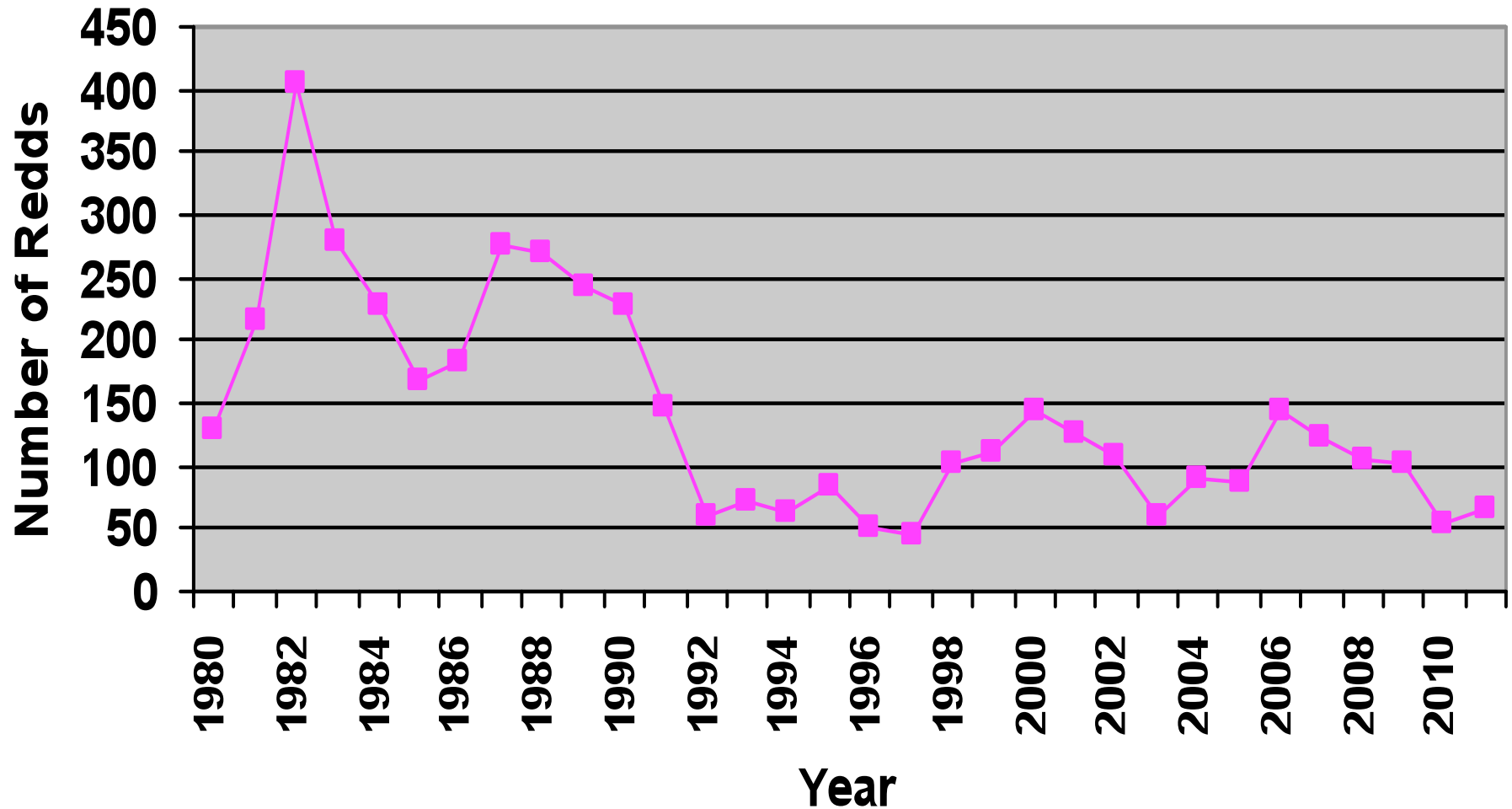
Data from Montana Fish, Wildlife and Parks

Numerical prey consumption by lake trout, age 4-21 lake trout



Source: Dave Beauchamp, U. of Washington (2006)

North Fork Flathead River



Data from Montana Fish, Wildlife and Parks

Why is This Population So Important?

Extensive Interconnected Habitat

Pristine and Protected Lands

Resistant to Effects of Climate change

Nineteen Spawning tributaries

Howell
Cabin
Trail
Whale
Red Meadow
Coal
Big

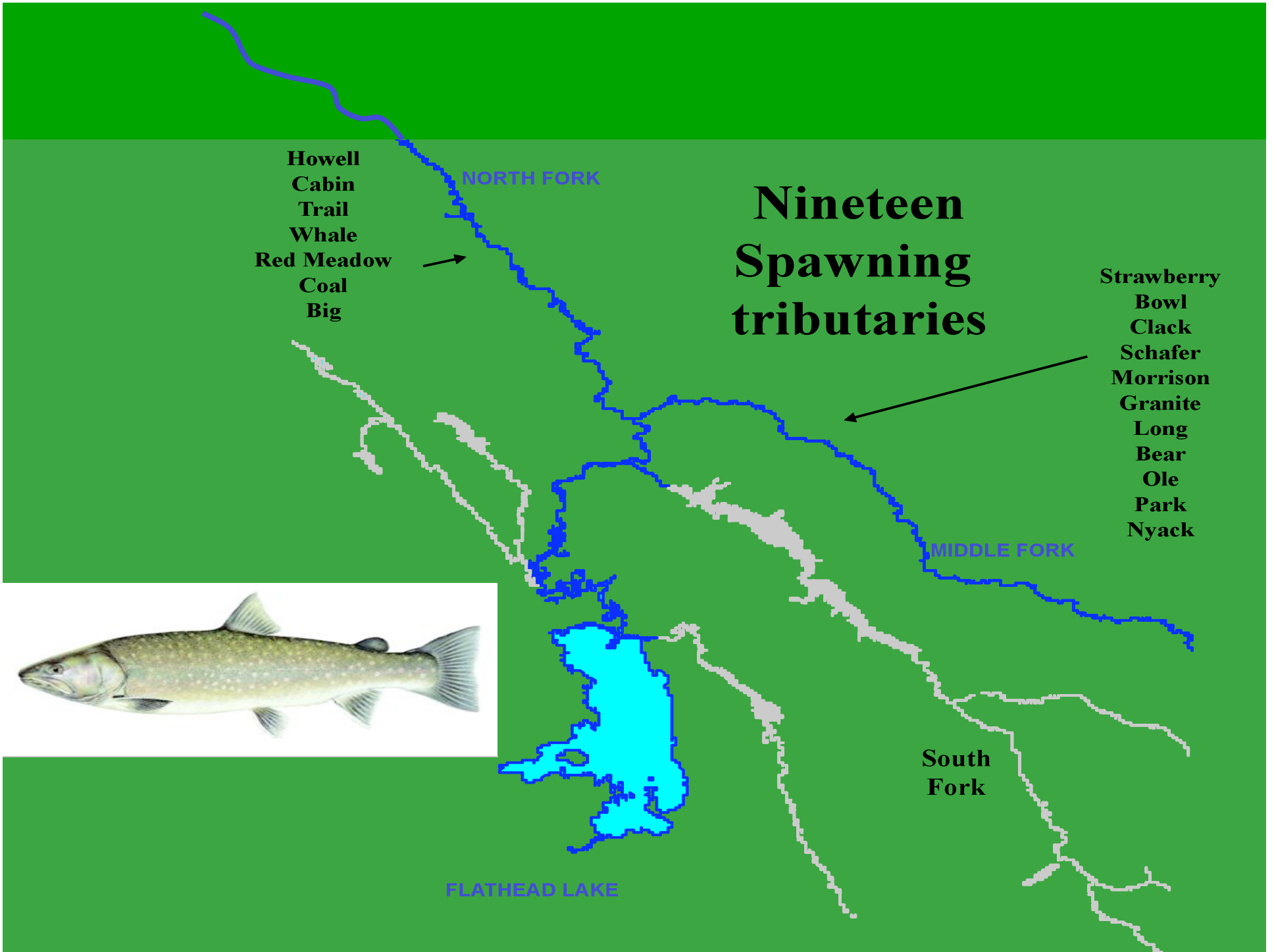
NORTH FORK

Strawberry
Bowl
Clack
Schafer
Morrison
Granite
Long
Bear
Ole
Park
Nyack

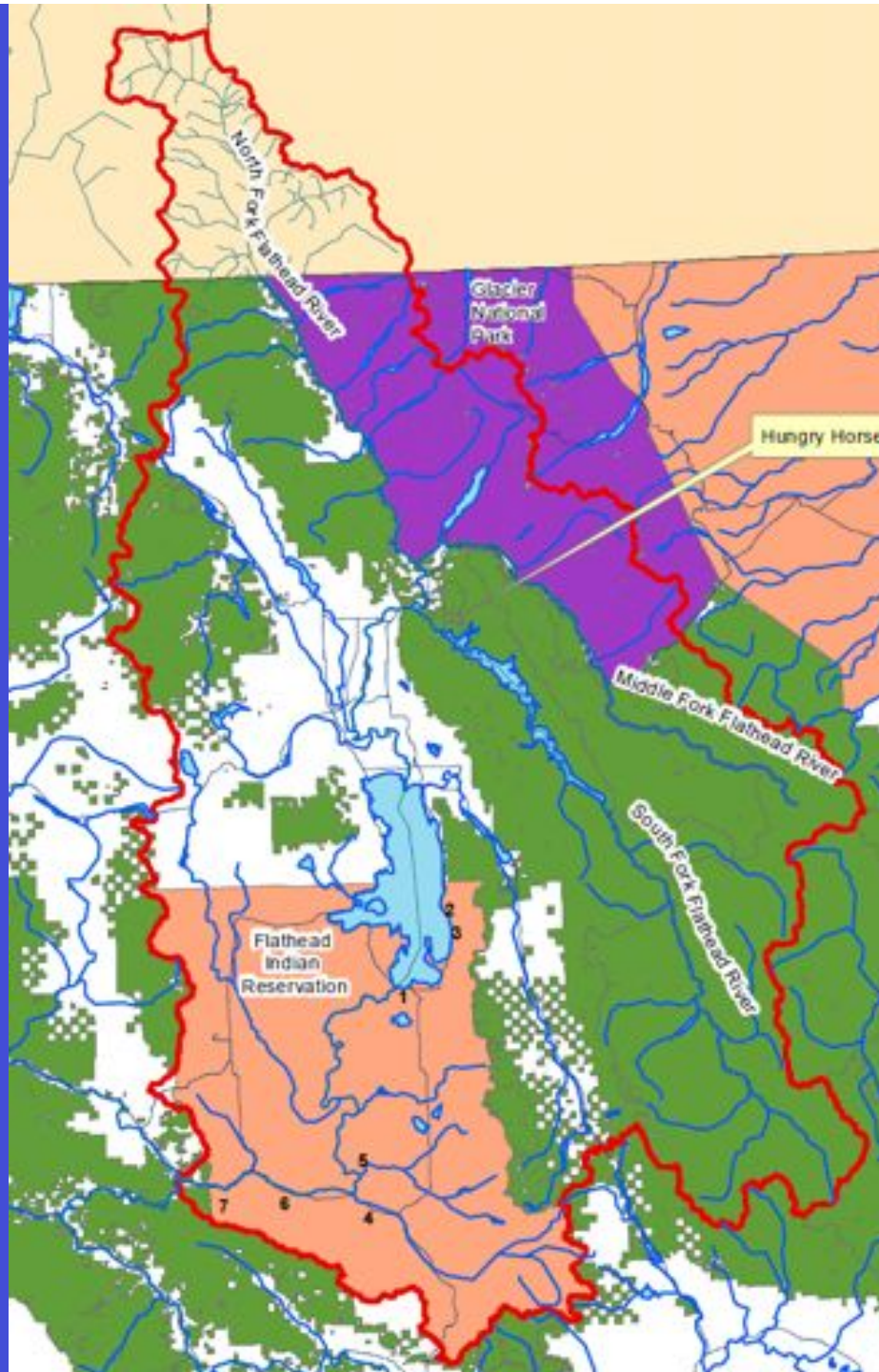
MIDDLE FORK

South
Fork

FLATHEAD LAKE



Flathead SubBasin



**Lake trout
introduced into
Flathead Lake**

**Bull trout listed
as threatened**

Kokanee Crashed

1896

1916

1981

2000

1905

1987

1998

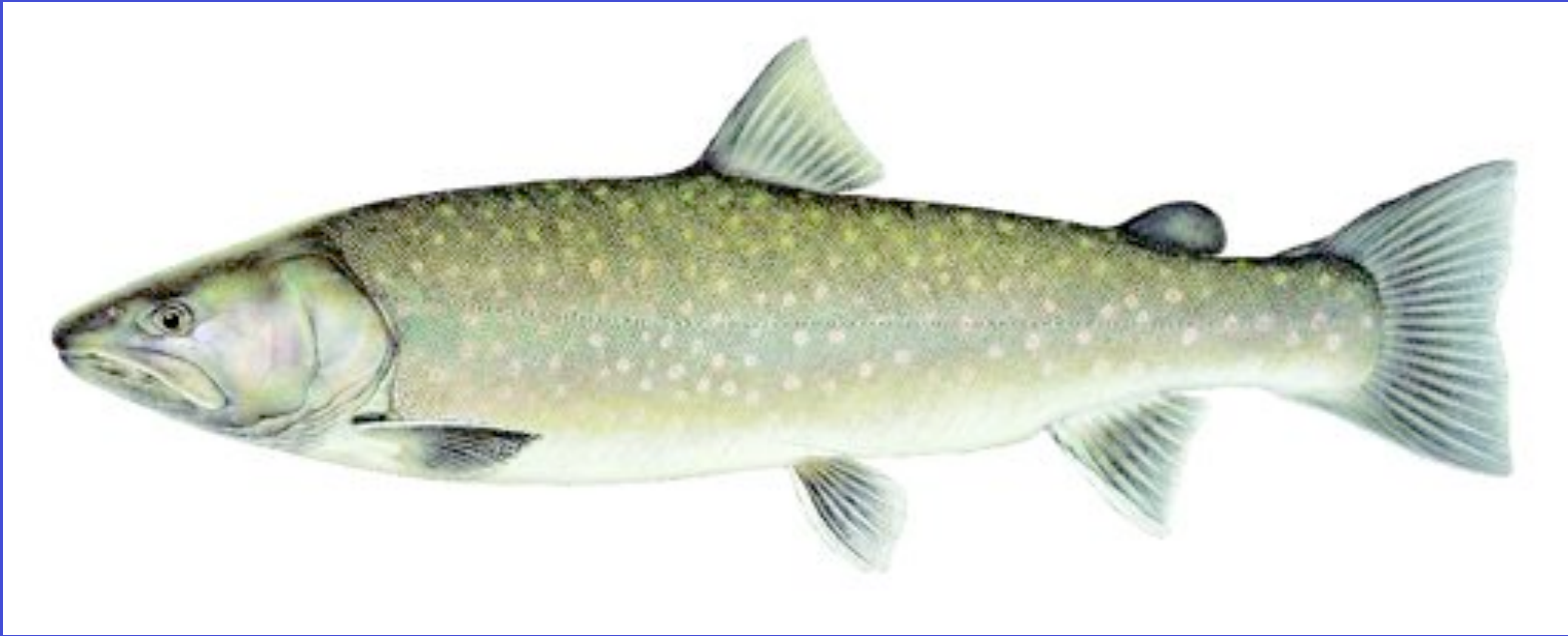
**Lake
whitefish
introduced**

**Kokanee
introduced**

**Mysis discovered
in Flathead Lake**

**Flathead Lake
CoManagement
Plan**

NATIVE SPECIES / FOCAL SPECIES





**FLATHEAD LAKE AND RIVER FISHERIES
COMANAGEMENT PLAN
2001 - 2010**

**STRATEGY: “Fish Population Management
A. Suppress Nonnative Fish Through
Recreational Angling, B. Commercial, and
C. Netting”**



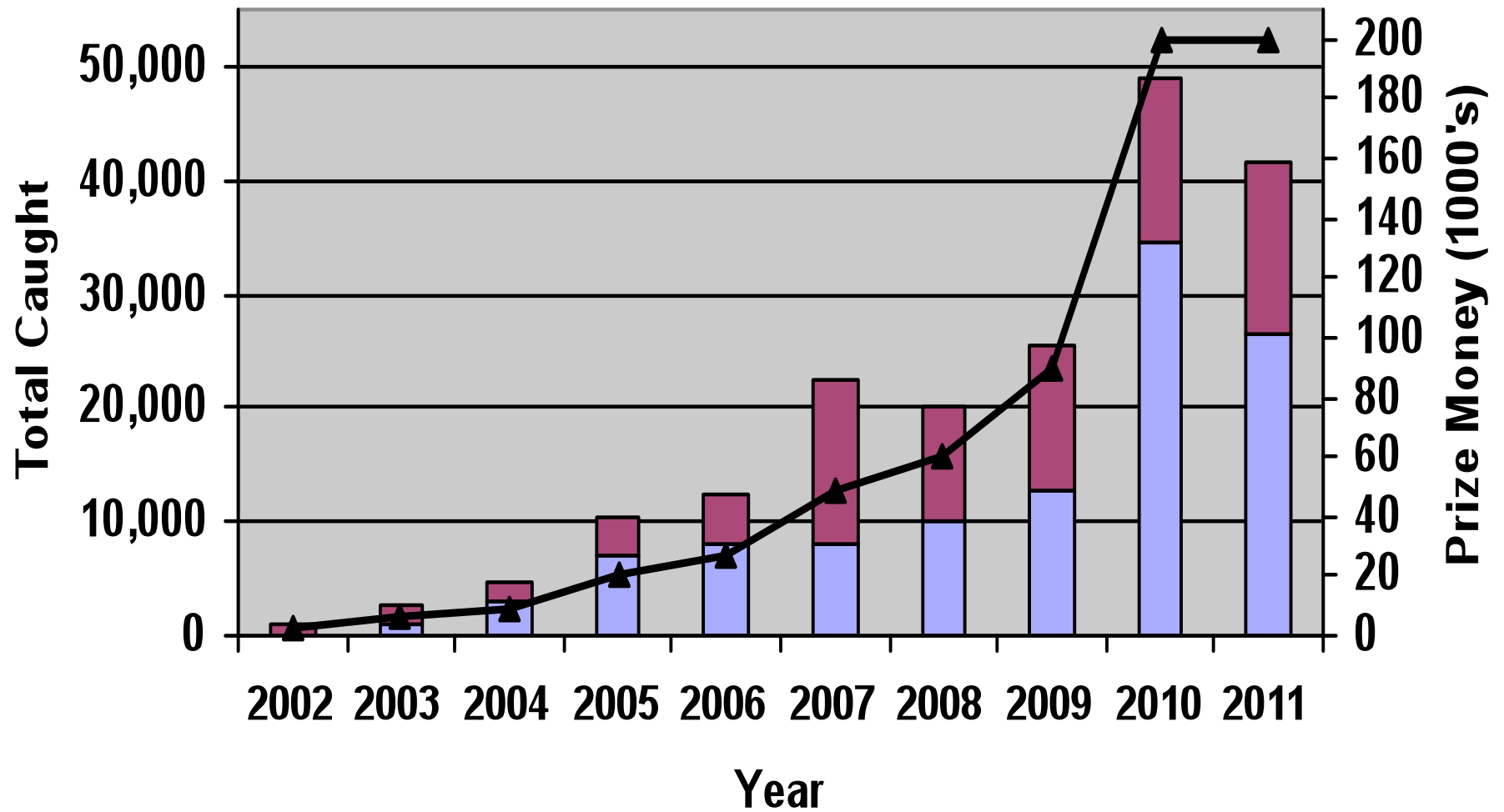
FISHING CONTESTS







Harvest in Spring and Fall Fishing Contests



“There is high likelihood that lake trout will completely eliminate bull trout in Flathead Lake over the long term”.

**Dr. David Beauchamp,
University of Washington**



Washington

Pries

Flathead

Chela

Montana

Pend O'reille

Yellowstone

Oregon

Idaho

Wyoming

Bea

Flaming Gorge

Granb

Tahoe

Nevada

Utah

Blue Mesa

Pointer 43:25:01.25° N 113:16:20.57° W elev 5051.0

Streaming 100%

Eye all 670.75 mi

ENVIRONMENTAL IMPACT STATEMENT

STRATEGIES TO REDUCE LAKE TROUT NUMBERS

Examine all Methods:

Commercial, Bounty, Netting

NEPA Analysis

Evaluate:

Changes in Predation Rates

Changes in Fishery

Changes in Local Economy

CONTROVERSIES

Fear of Lost Fishing Opportunity

Native Fish are Fine

Expensive to Implement

Secondary Effects on Local Economy



Aubree Benson