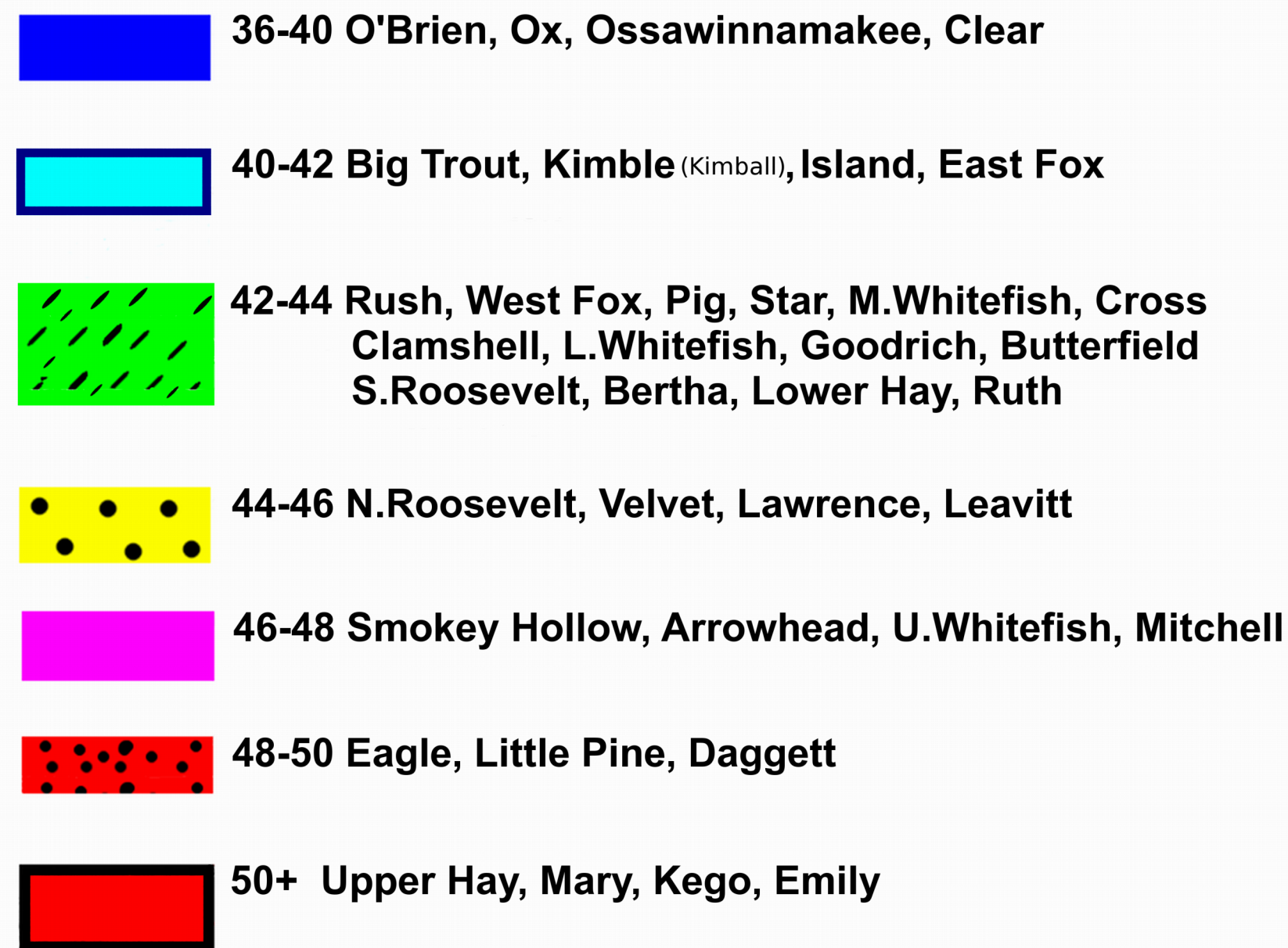


whitefish area property owners association average trophic state index values* for sampled lakes 2005-2009

TSI RANGE



TSI less than 40 = Clear water and good oxygen levels

TSI 40-50 = Low oxygen levels at the bottom likely in summer

TSI 50 + Low oxygen in summer and abundant aquatic plants

All lake water contains algae--tiny plants that are invisible to the naked eye.

The TSI number estimates algal concentration by combining three different measurements.

A higher TSI means more algae in the water.

On the TSI scale a rise of 10 points means the amount of algae has doubled. So a lake with a TSI of 50 has twice as much algae as a lake with a TSI of 40.

A rise of just 1 point on the TSI scale is an increase of 10% in the algae content. So lake with a TSI of 43 has 30% more algae than a lake with a TSI of 40.

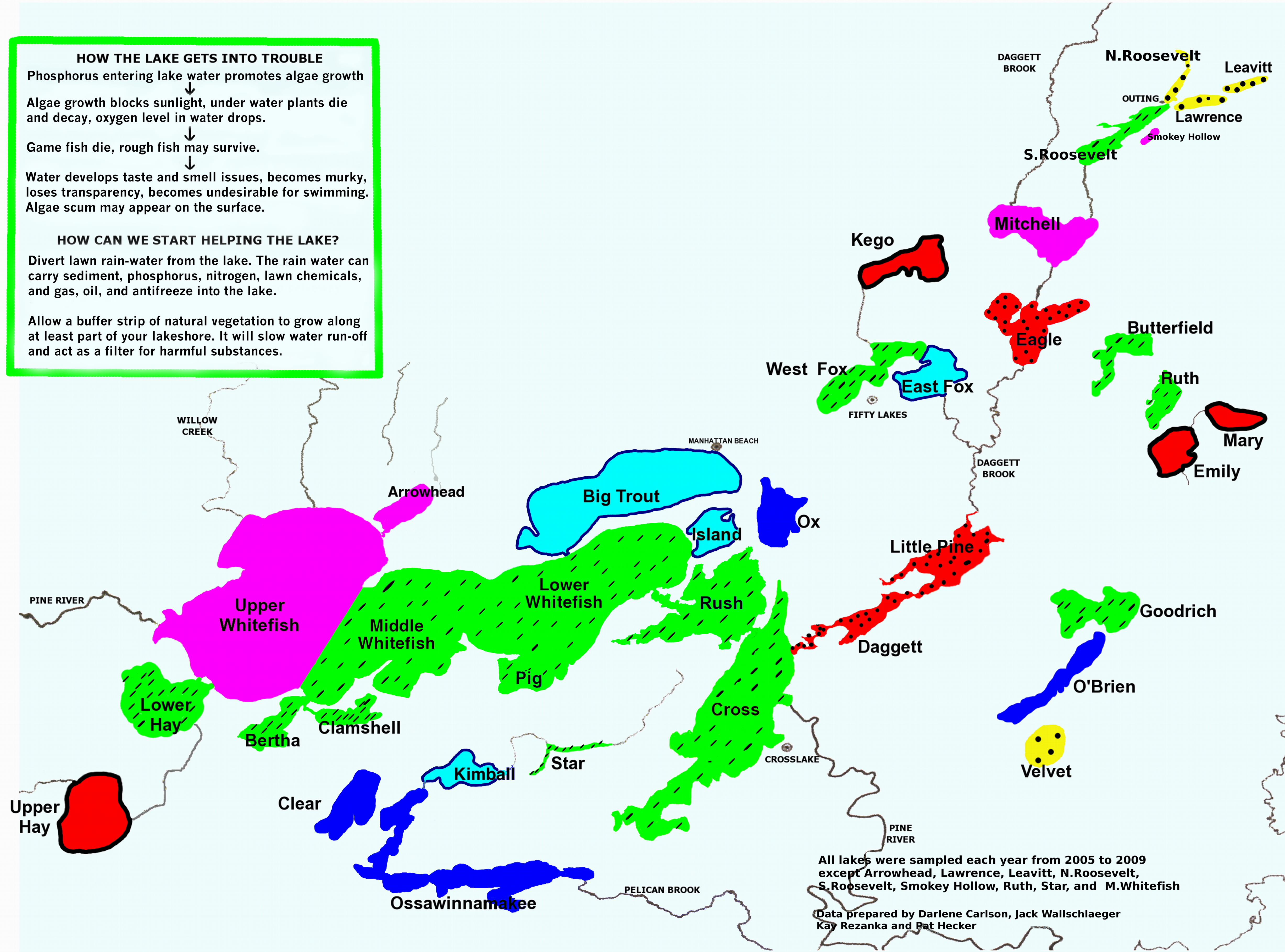
Base map courtesy of Minnesota Dept. of Natural Resources

* <http://www.pca.state.mn.us/water/lakecro.html>
created 2010

HOW THE LAKE GETS INTO TROUBLE
Phosphorus entering lake water promotes algae growth
↓
Algae growth blocks sunlight, under water plants die and decay, oxygen level in water drops.
↓
Game fish die, rough fish may survive.
↓
Water develops taste and smell issues, becomes murky, loses transparency, becomes undesirable for swimming. Algae scum may appear on the surface.

HOW CAN WE START HELPING THE LAKE?
Divert lawn rain-water from the lake. The rain water can carry sediment, phosphorus, nitrogen, lawn chemicals, and gas, oil, and antifreeze into the lake.

Allow a buffer strip of natural vegetation to grow along at least part of your lakeshore. It will slow water run-off and act as a filter for harmful substances.



All lakes were sampled each year from 2005 to 2009 except Arrowhead, Lawrence, Leavitt, N.Roosevelt, S.Roosevelt, Smokey Hollow, Ruth, Star, and M.Whitefish
Data prepared by Darlene Carlson, Jack Wallschlaeger, Kay Rezanka and Pat Hecker