

## Introduction

The purpose of this section of the web site is to provide PLIA members and other interested parties current information on some measurements of Platte Lake water quality.

Figure 1 shows the Platte River watershed. Rainfall within the watershed may flow directly into various streams and the Platte River or may percolate into the groundwater. The groundwater provides the source of flow for various streams and the River flow during dry weather periods. The annual average flow of the Platte River at the USGS stations is 124 cubic feet per second (cfs). This flow increases about 150 cfs at M22 near the canoe launch site.

The Platte River State Fish Hatchery is the only point source in the watershed. The outflow from the hatchery discharges into the Platte River upstream of the village of Honor, Michigan. The hatchery is located 17.7 km upstream of Big Platte Lake and 29 km upstream from Lake Michigan. The DNRE Fisheries Division and PLIA are working together on a program to control the hatchery phosphorus discharge and maintain the phosphorus concentration in Big Platte Lake below 8 mg/m<sup>3</sup>. However to meet this goal, additional watershed scale efforts are needed to maintain the water quality of the lake over the long-term. Thus, the DNRE and the PLIA and other groups are working together to reduce non-point phosphorus loading to the lake through comprehensive watershed management programs.

Big Platte Lake and the Platte River are sampled by Hatchery staff approximately 2 times per month all year. One of these measurements is Secchi Depth. This is a measure of the clarity of the Lake water. It is measured using an 8 inch circular plate, which is lowered into the water until it is no longer visible. High Secchi depths indicate clear water; whereas low Secchi depths indicate cloudy or turbid water. This is a Figure 2 shows current measurements of Secchi depth as well as historical high and low values of data collected between 1990 and 2010.

Figures 3 and 4 show current and historical high and low measurements of the temperature of surface and deep (75 feet) waters of Big Platte Lake. Although temperature has scientific applications because it is a regulating factor for many chemical and biological reactions, it is provided here to support the recreational interests of PLIA members.

The information presented in Figures 1, 2, and 3 will be updated as data becomes available.

# Platte River Subwatersheds and Monitoring Station Locations







