Floyd-Campbell LWQMA

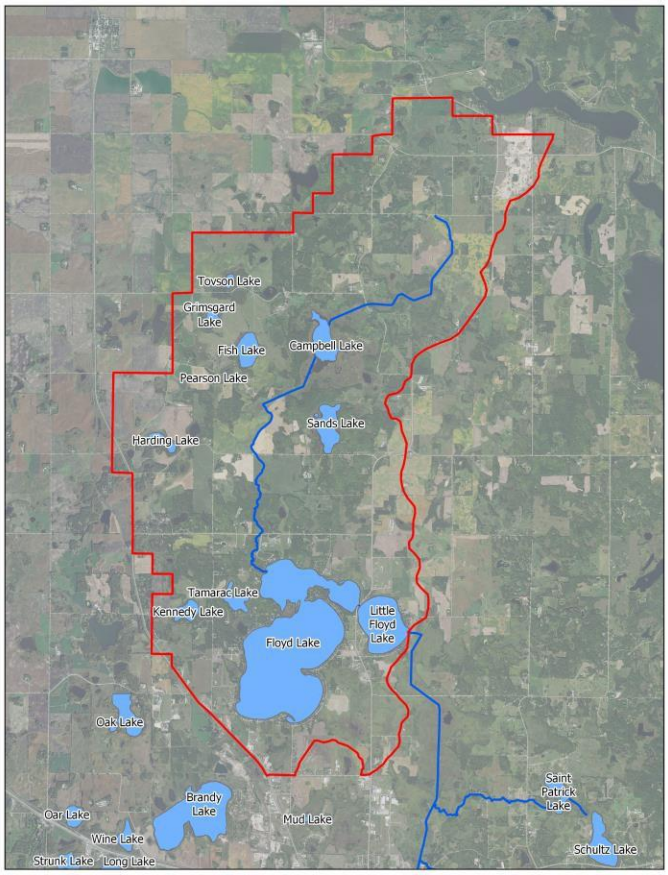

Figure 5-2. Floyd-Campbell LWQMA.

The Floyd-Campbell LWQMA consists of 17,000 acres that drain towards the Floyd Lakes, which are among the most valuable recreational lakes in the area (**Figure 5-2**). The prominent water bodies within the Floyd-Campbell LWQMA include Floyd Lake (which has two basins locally known as North Floyd and Big Floyd Lakes), Little Floyd Lake, and Campbell Creek (which includes Ditch 11 and Ditch 12). However, the Floyd-Campbell LWQMA also includes several smaller lakes such as Campbell Lake, Fish Lake, Harding Lake, Sands Lake, Kennedy Lake, and Tamarac Lake, as well as several ditches (public and private) and natural waterways.

The Floyd-Campbell LWQMA is approximately one third forested, with most of the remaining land used for agriculture or left as wetland. Little land in the Floyd-Campbell LWQMA is developed, with only about 5 percent impervious cover. That said, much of the development that does occur takes place along the shores of the Floyd Lakes. The District's rules certainly influence how development happens on these shorelines and in the LWQMA generally, but the rules of other authorities can sometimes prevail, which are not always protective of water quality.

The Floyd Lakes are heavily used for game-fishing, boating and other summer and winter recreational activities. Big Floyd has very good water quality compared to other District Lakes. Most of the time its water is clear, with moderate phosphorus and algae concentrations, and with good game fish populations and moderate vegetation growth. Occasionally the lake experiences algae blooms in September or October. In contrast, North Floyd suffers high phosphorus concentrations, severe algae blooms, and poor water clarity in the summer, as does Little Floyd because it is directly downstream of North Floyd. The Floyd Lakes also contain Zebra mussels, an aquatic invasive species.

The poor water quality in North Floyd is likely a result of several factors. First, North Floyd receives large phosphorus and sediment loads from Campbell Creek. Before reaching North Floyd, Campbell Creek passes through highly erodible soil and loses almost 80 feet of elevation in 2 miles. As a result, streambank erosion occurs and causes Campbell Creek to carry large sediment loads to North Floyd Lake. Campbell Creek also drains several nutrient-rich wetlands and agricultural fields, which also contribute phosphorus to North Floyd Lake. In addition, internal loading occurs in North Floyd Lake, transferring dissolved phosphorus

from the lake sediments to the water column during mid- to late summer. Finally, shoreline development and septic system use likely contribute further phosphorus loads to the Floyd Lakes.

Small lakes in the Floyd-Campbell LWQMA, such as Campbell Lake, Fish Lake, Harding Lake, Sands Lake, Kennedy Lake, and Tamarac Lake, are mostly shallow, subject to winterkill, and have little shoreline development. Little is known about the water quality and ecological integrity of most of these lakes.

The District's main goals for the Floyd-Campbell LWQMA are to prevent degradation of Big Floyd, to improve the condition of North and Little Floyd, and to manage degradation to Campbell Creek to limit pollution to Floyd Lakes. There are many action items throughout Chapter 4 that work towards achieving this goal.