MnTAP Wastewater Modeling Tutorial Preface:

Wastewater modeling software was used in this work to first create a baseline computer simulation model of the mechanical wastewater treatment facilities. Once this model was created and deemed to accurately represent the influent, effluent, and operating conditions of the facility, it can then be modified to represent operational changes resulting in biological nutrient removal. This allowed the team to simulate low-cost operational changes in order to find the best options to achieve better treatment for nutrient pollution.

These tutorials include the basic information of how this process can be completed, mirroring what was taught to the student interns who led the individual wastewater modeling assignments. They are meant for wastewater operators or engineers interested in learning the wastewater modeling process.

Acknowledgement:

The authors would like to acknowledge support for this project by the Minnesota Pollution Control Agency (MPCA) with funding provided by the Minnesota Environmental and Natural Resources Trust Fund as recommended by the Legislative-Citizen Commission on Minnesota Resources (LCCMR). The Trust Fund is a permanent fund constitutionally established by the citizens of Minnesota to assist in the *protection, conservation, preservation, and enhancement of the state's air, water, land, fish, wildlife, and other natural resources.* Currently 40% of net Minnesota State Lottery proceeds are dedicated to growing the Trust Fund and ensuring future benefits for Minnesota's environment and natural resources.

