Coming Soon

With financial support from the Legislative and Citizens Commission on Minnesota Resources and Minnesota Pollution Control Agency, and in collaboration with the Minnesota Supercomputing Institute, we are developing a highly automated, state-of-the-art system to download, process, and analyze satellite imagery for lake water quality measurements. The basic design of the system is illustrated in the figure below. It includes: (1) automated downloading of Landsat-8 and Sentinel-2 imagery covering the area of Minnesota; (2) removal of parts of the imagery with cloud cover and land surfaces to retain only open water pixels; (3) application of programs to re-calibrate and re-validate water quality models; and (4) provide the results to a dynamic database that will be readily accessible and viewable by agencies, researchers, and the public via the LakeBrowser.

Work on this initiative has been underway since the summer of 2018, and we expect beta testing of the system to begin in 2020, with full-scale operational capabilities in 2021. For further information on the project, contact either Leif Olmanson (olman002@umn.edu) or Ben Page (pagex135@umn.edu).