Argonne National Laboratory WATER Model

http://www.anl.gov/articles/argonne-model-analyzes-water-footprint-biofuels

Developed by Argonne National Laboratory, WATER calculates spatial-explicit water footprint of biofuels produced from conventional (corn grain, soybean) and cellulosic biomass feedstock (corn stover, wheat straw, switchgrass, miscanthus, forest wood residue) via various conversion processes (fermentation, transesterification, gasification, pyrolysis) at county, state, and region level for the U.S. The tool provides assessment for corn grain ethanol and soybean biodiesel based on historical data. It also estimates water use for cellulosic biofuels using projected future scenarios (e.g. Billion-ton report, DOE 2011). Output from the tool includes green, blue, and grey water use per unit of biofuel produced for a defined feedstock and production pathway at selected location, which allows users to analyze and compare various choices in project planning for informed decision making. The major feature of this version is a newly added forest resource based biofuel pathway with thirteen feedstock combination scenarios and two conversion pathways. The work is supported by Department of Energy, EERE Office, Bioenergy Technologies Office.