

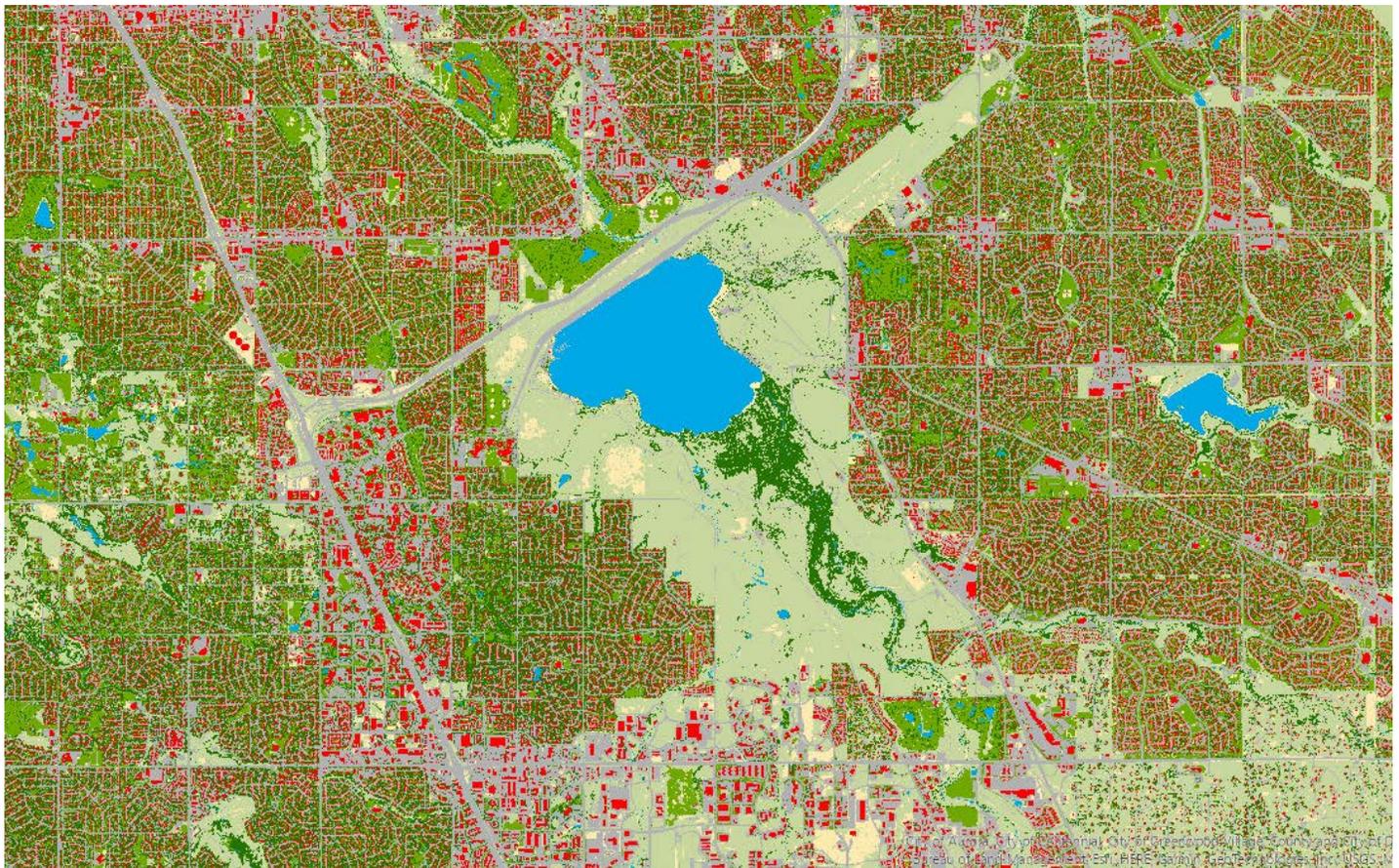
# Using land cover data to determine the effects of lawn fertilizers on downstream water quality

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**B**arr Lake and Milton Reservoir Watershed Association is a nonprofit watershed group focused on reducing phosphorus loads to Barr Lake (Barr Lake State Park) and Milton Reservoir. Its goal is to reduce nutrient loads coming from the watershed of 2.5 million people in the Denver region. Both reservoirs are vital to the agricultural community for irrigation. Barr and Milton are also used for drinking water, recreation and fisheries.

The association has identified as important a project related to source control through the use of phosphorus-free lawn fertilizers. DRCOG's 2018 land use land cover project has been vital in the efforts to estimate the amount of irrigated lawns in the urban area and how they might affect nutrient loading to the South Platte River and Barr and Milton reservoirs. Non-point sources of phosphorus from urban lawns can be enough to trigger large algal blooms during the summer.



Barr Lake and Milton Reservoir Watershed Association launched the statewide initiative to encourage lawn owners to use phosphorus-free all-purpose lawn fertilizers when it makes sense. By using the data from the land use land cover project, Metro Water Recovery was able to estimate that there are roughly 90 square miles of turf in the watershed. If a typical fertilizer of 20:10:5 was applied to those 90 square miles of lawn, it would equal close to 4,000 tons of nitrogen and another 2,000 tons of phosphorus annually.

Barr Lake and Milton Reservoir Watershed Association is building a major outreach campaign around phosphorus-free lawn fertilizers. A highly detailed understanding of land use and cover is important in showing the overall effects on downstream waters. With over 2.5 million people living in the Barr and Milton watershed, it is easy to blame water quality problems on everyone, and that can lead to the perception that the situation is hopeless. But with detailed watershed land cover data, 2.5 million people can now see that they can also be the solution to water quality problems.

Percent area turf by jurisdiction

