

Using land cover data to manage the Bluff Lake Nature Center

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Bluff Lake Nature Center is a nonprofit, 123-acre wildlife refuge and outdoor classroom on the border of Denver and Aurora. Its mission:

Bluff Lake Nature Center educates individuals to be engaged, resilient and curious; conserves a natural area in the city; furthers equity in outdoor access; and nurtures the health and well-being of communities and ecosystems.

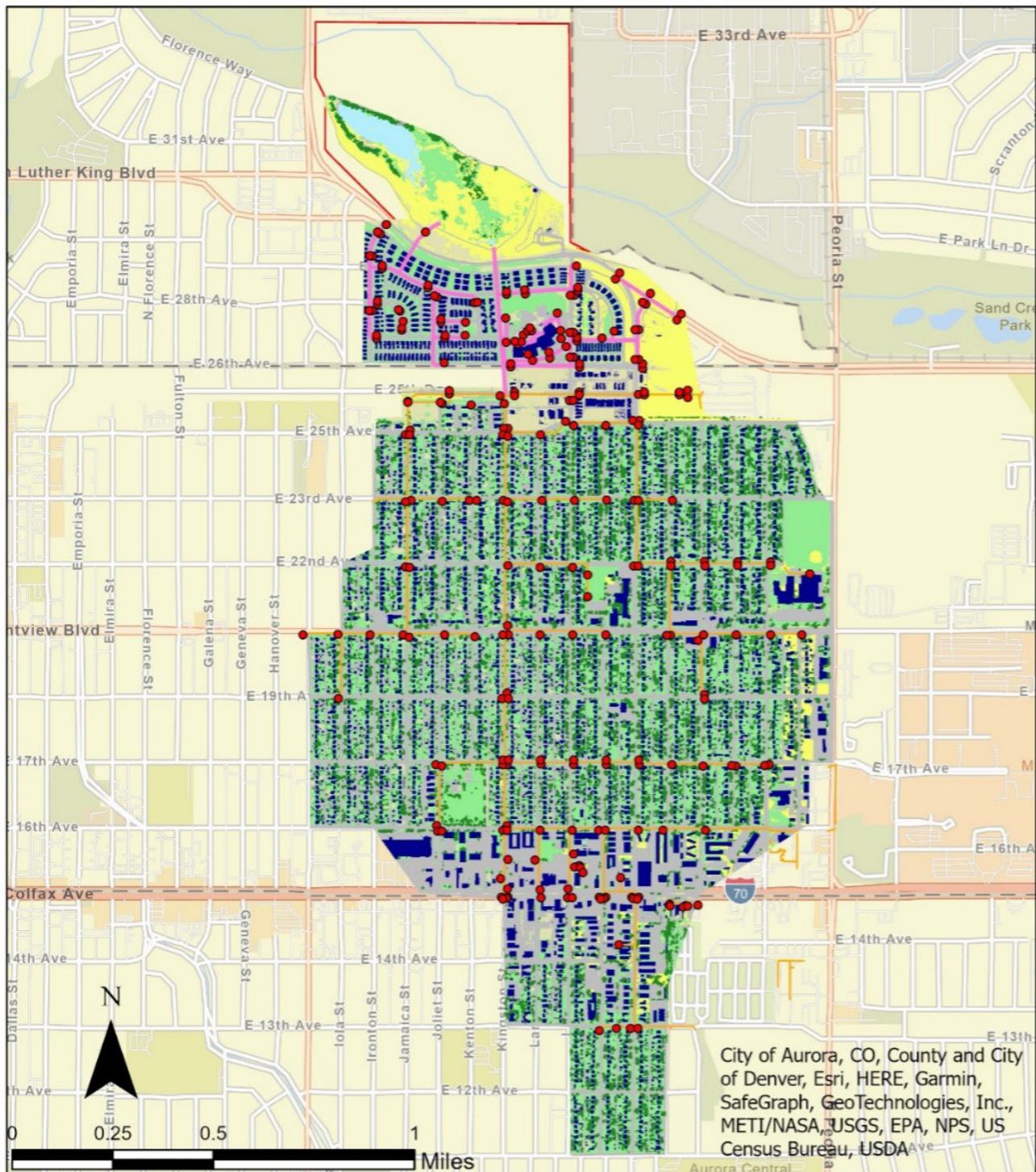
Originally on the edge of the old Stapleton airport, Bluff Lake Nature Center has had a dramatic increase in development on the lands surrounding it since it became a nonprofit in 1994. The Central Park neighborhoods, industrial development and the construction of correctional facilities abutting Bluff Lake have dramatically changed land use surrounding the refuge.

Bluff Lake Nature Center's namesake, Bluff Lake, is a 9-acre lake originally constructed in the late 1800s as an irrigation pond fed by creeks. Today, Bluff Lake is fed entirely by precipitation and stormwater coming off Denver and Aurora's city streets, from a 766-acre watershed

that is nearly 100% urban. Over 7 acres of cattails filter out many pollutants, and as a result, Bluff Lake provides valuable habitat in an otherwise urban landscape for resident and migratory birds alike. The birding community has documented 226 species on-site. As Bluff Lake Nature Center finalizes its lake management plan in 2022, it has relied on geographic information systems data to contextualize Bluff Lake's water quality and pollution-related impairments.

Bluff Lake Nature Center staff consider DRCOG's 2018 land use land cover project invaluable in quantifying the various types of land use within Bluff Lake's watershed and determining metrics that are essential for lake health, such as the proportions of impervious surfaces and lawns. The data will also help identify areas within the watershed that may have a significant effect on the lake should a chemical or fuel spill happen there. Finally, as Bluff Lake Nature Center staff considers public outreach and education efforts concerning the use of phosphorus-free fertilizers on lawns, the land use land cover data will help them identify the largest concentrations of lawn within the watershed. As a nonprofit, having access to high-resolution land use land cover data has allowed Bluff Lake Nature Center personnel to understand its relationship with its surroundings better than they would have been able to elucidate on their own.

Bluff Lake Watershed Land Use and Stormwater Infrastructure



- Storm Drains
- Denver Storm Mains
- Aurora Storm Mains
- Barren Land
- Cropland
- Impervious Surfaces
- Prairie/Grassland/Natural Cover
- Structures
- Tree Canopy
- Turf/Irrigated Land
- Water

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 Map Datum: WGS 1984
 Projection: UTM Zone 13N