

MDR land use change would jeopardize federal wetlands

Among the many important functions of wetlands are flood mitigation, wildlife habitat, and filtering of pollutants. There are four federally designated wetlands on or adjacent to the Twin Lakes properties. These Waters of the United States provide homes to diverse species, trap floodwater, and remove nitrogen and other pollutants. Development of the Twin Lakes properties would divert the groundwater that charges these wetlands and threaten their survival and health.

Policy 3.06 of the Boulder Valley Comprehensive Plan states that “The city will strive for no net loss of wetlands and riparian areas by discouraging their destruction or requiring the creation and restoration of wetland and riparian areas in the rare cases when development is permitted and the filling of wetlands or destruction of riparian areas cannot be avoided.” And Policy 3.28 of the BVCP states: “Surface and groundwater resources will be managed to prevent their degradation and to protect and enhance aquatic, wetland and riparian ecosystems.” Approving an Open Space designation and denying a MDR designation would align with these policies.

Important facts about the Twin Lakes wetlands

- These wetlands help protect flood-prone homes from additional inundation. One acre of wetlands can store up to 1.5 million gallons of floodwater.
- Soils in the Twin Lakes parcels are saturated for long enough durations that they are federally listed as hydric soils, characteristic of soils in wetland areas.
- Mountain rush (*Juncus arcticus*), a wetland grass that signifies ephemeral wetlands, has been mapped in large swathes on both the north and south fields. Mountain rush is an important food source for birds.
- Muskrat, a species present at Twin Lakes Open Space, use mountain rush for hut construction and food.
- Section 404 of the Clean Water Act protects ephemeral wetlands and wetland connectivity.
- The Boulder Parks & Recreation sign shown below talks about the cattails and rushes providing a safe environment for many animals. It also states: “Wetland habitats are extremely threatened. More than a quarter of all animals in Colorado depend on wetlands to survive.”



Ephemeral wetlands on the north field, March 2016



Eaton Park/Twin Lakes sign on the importance of wetlands

The Issue: The Twin Lakes properties have a high water table. The federally designated wetlands nearby are fed by the groundwater traveling through these fields. Development of these fields will affect the flow of water to these wetlands. Development will also require extensive mitigation of the high groundwater, greatly diminishing the fields' water-retention capacity. This displaced water has to go somewhere. The engineering that would be required to mitigate and divert water from the development and existing surrounding structures would change the flow of water to the wetlands on the properties and to those nearby. If the wetlands get too little flow, they will dry out. If they get too much flow, they will scour out, increasing sediment load and promoting erosion. A National Academies of Sciences study found that it is almost impossible to replicate the natural charging of wetlands. Maintaining and protecting these wetlands is critical for mitigating flooding and for providing habitat for the many wildlife species at the Twin Lakes Open Space.

Cross-jurisdictional impact: An almost certain loss of federal wetlands and increased risk of flooding.

References

- <https://www.epa.gov/cwa-404/protection-wetlands>
- https://www.plants.usda.gov/plantguide/pdf/pg_juar1.pdf