

# Thunderbird Lake at Burke Park—Adaptive Lake Management Plan

Boulder, Colorado



In 2002, low water levels caused a fish kill in Thunderbird Lake, and water levels have remained low since that time. Biohabitats was contracted in September 2007 to investigate long-term options for lake management. Public meetings were conducted to educate the community, discuss options, and solicit input. Because of the aesthetic desires of many residents in the community, the focus of

the study was to investigate possible sources of water to refill the lake and maintain it at its former level. In addition to aesthetics, water quality, costs, water rights, and wildlife habitat were considered. The options included repairing the tile drain, redirecting storm-water, installing a groundwater well, and continuing adaptive management. Eight monitoring wells and a surface water station were installed to assist

*Adaptive lake management practices help maintain desirable water quality, valuable wetlands, and community resources in the face of mounting challenges to shallow lake ecosystems in the semi-arid west.*

in evaluating the interrelationship between groundwater and surface water and selection of viable, sustainable options.

An Adaptive Management Plan prepared by Biohabitats set a framework for monitoring and adjusting management practices based on a series of evaluation criteria and response actions. Annual monitoring reports were provided to the City to assist them in evaluating their progress and adjusting their management practices. After a three-year monitoring and pilot period, the citizens and City Council were able to make an informed decision about the cost and long-term approaches for maintaining this neighborhood resource.

In addition to the adaptive management project, Biohabitats worked with the City and a nearby school on an outreach and education effort that included the students in park planning. In 2015, Biohabitats assisted the City in updating the Adaptive Management Plan (2016-2019) and is assisting the City with implementation. Activities include monitoring groundwater and lake elevations, mapping wetland and riparian vegetation, and evaluating trends and options for improving water quality and lake bottoms.

## SERVICES

- Inventory & Assessments
- Planning
- Public Outreach

*conservation planning  
ecological restoration  
regenerative design*



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