

Recommendations for Hodgson-Harris Reservoir Habitat Preservation Open Space Advisory Committee (OSAC) Position Paper – updated August 2021

Executive Summary

Hodgson-Harris Reservoir (HHR), located in the northeast area of Superior and owned and managed by Boulder County, is a unique and important wildlife resource for Superior and a Boulder County-designated Critical Wildlife Habitat. One of OSAC's goals is "To promote the conservation and protection of wildlife, including providing input on development projects and conserving healthy wildlife resources, within the Town of Superior." As such, it is vital that any new development in the vicinity of HHR be planned and implemented carefully to minimize disruption to the existing habitat.

It has been OSAC's long-standing preference that the "Zaharias" property immediately north of HHR be preserved as natural open space. Any potential development, however, should be accompanied by efforts to steward this valuable ecological resource in order to foster a public conservation ethic, promote and protect wildlife, and provide environmental education and outreach opportunities for current and future generations. In preparation for the possibility of development on the Zaharias property, OSAC commissioned environmental studies of the HHR and Zaharias area. Based on these studies and other relevant information sources, OSAC developed the following high-level recommendations for habitat-sensitive development around HHR.

1. **Open Space Buffer:** The most important recommendation is for a wide buffer zone. It should span no less than 100 feet but preferably 300 feet from the closest human or pet access to the edge of the inlet and reservoir at its highest watermark. The buffer should be completely free of all human and pet access. The buffer should be owned by the Town, managed as natural open space, and be aesthetically fenced to prevent human and pet encroachment. Low profile shrubs that blend with the natural surroundings should be planted to help limit runoff into the HHR.
2. **Wildlife Education & Amenities:** Inclusive community enjoyment and regional education within this natural space would be improved by the installation of wildlife sanctuary-related amenities along the upper edge of the buffer zone. These may include an environmental education center located adjacent to the reservoir buffer, a wildlife-viewing blind or platform, a nature trail, public observation binoculars, interpretive signage, and possibly even an Audubon themed restaurant with outdoor seating and direct water views to satisfy the town's commercial platting.
3. **Pollution Mitigation:** Prevention of tainted water runoff as well as excessive light and sound pollution in and around HHR will be critical both during and after any construction activity to avoid damaging the reservoir ecosystem. Potential solutions include using in-place construction soils to build a berm along Highway 36 (or a sound wall should a berm not be possible), installing stormwater ponds and bio-swales across the property, and curbing of adequate height around the perimeter of the property to direct runoff to storm drains.
4. **Animal Relocation:** Should the Town of Superior agree to a development plan for the Zaharias property, OSAC strongly recommends that the prairie dogs on the property, some of the last remaining in Superior, be preserved or proactively relocated. They could be preserved at the south edge of the property's development area near the proposed environmental education center or proactively relocated elsewhere within Boulder County or Colorado, rather than exterminated.
5. **Habitat Enhancement & Management:** Restoration in and near the buffer zone would enhance and preserve the habitat and aesthetic of the HHR area. OSAC recommends replacement of invasive plants with native flora and trees, enhancing the existing wetland along the west side of the reservoir for nesting waterfowl, and installing bat roosts and bird / raptor nest boxes.

Introduction

The Hodgson-Harris Reservoir (HHR) was constructed in the 1880s to provide irrigation water to nearby farms. However, by the early 2000s the dam had begun to fail and the reservoir was subsequently allowed to go nearly dry. Following a collaborative effort between the Town of Superior, Boulder County, and several state agencies, the dam was reconstructed and the reservoir refilled by 2014. HHR now supports a diverse and growing population of breeding and migratory birds (including several Species of Concern). Over fifty potential and confirmed nesting species were observed there in spring 2021 and over 150 bird species have been recorded overall (Jones, 2021). HHR has also provided habitat for the threatened Northern Leopard Frog (Spaulding). Boulder County has designated it as a Critical Wildlife Habitat (BCCP).

It has been OSAC's recommendation for many years that the Zaharias property adjacent to HHR be acquired and preserved as Town of Superior open space. However, given the possibility of development immediately adjacent to HHR on the Zaharias property, OSAC has created a set of recommendations for habitat-sensitive development. These recommendations would help minimize disruption to the existing habitat and enhance the value of HHR for both wildlife and residents of Superior.

These recommendations are based on information in two environmental assessments that OSAC commissioned in 2018, one by Boulder County Parks and Open Space staff (Spaulding) and one by Smith Environment and Engineering (Smith). In addition, the recommendations draw on reports by other local groups and agencies (Jones, BPDS, BCCP), input from several Superior residents, and reflect the values, mission, and goals of the Town of Superior's Open Space Advisory Committee.

Recommendations

OSAC's strong preference is to preserve the Zaharias property as open space in order to:

- Help retain value for Superior's \$600K investment in the HHR restoration by maintaining an undisturbed reservoir environment, since nearby development could cause the habitat value to decrease significantly (Spaulding, p.10);
- Ensure public viewing access and enjoyment of an important open space asset;
- Allow for the creation of a substantial wildlife preserve around HHR that would be a regional draw analogous to the Waneka Lake - Greenlee Preserve complex in Lafayette; and
- Preserve the last remaining prairie dog colony in Superior, which could provide a focus for a "Prairie Dog Education Area" (PDMP, p.45).

If a development project is approved for the Zaharias property adjacent to HHR, OSAC recommends the following steps to enhance the value of the area as a public amenity and to mitigate impacts to wildlife and habitat at HHR. *Several of these would require coordination with Boulder County (indicated by "B") or Saddlebrooke ("S"). Some could be implemented by the developer ("D"), and some would likely be the responsibility of the Town of Superior ("ToS").*

I. Open Space Buffer

Most importantly, a wide buffer strip of natural open space between the edge of the high-water mark of the reservoir and the edge of any new development will be key for minimizing disturbance of the wildlife on and along HHR. Guidelines from the U.S. Environmental Protection Agency suggest a minimum buffer width of 100 feet for protecting the habitat of unthreatened wildlife species, while 200-300 feet is recommended if rare or threatened species are present (BPDS, p.13; Jones, 2018, p.14). In addition, the buffer area should:

- Be owned and managed by the Town, not a condo management company or HOA;
- Include not only a large physical space but also intermittent sight barriers such as large shrubs, a berm, or a low wall (Smith, p.5) [D, ToS];
- Be fenced to prevent human/pet access into the buffer area (Jones, p.14) [D, ToS].

It may also be worthwhile to consider additional sight/sound buffering between the existing Saddlebrooke community and the HHR shoreline (e.g., large shrubs) [S].

II. Wildlife Education & Amenities

New amenities would help enhance human enjoyment of the habitat in and around HHR. These may include a wildlife-viewing blind or platform, a nature trail, public observation binoculars, and interpretive signage. Additionally, an environmental education center located adjacent to the reservoir buffer would be an inclusive draw not only for the local residents but also for regional communities to provide education to diverse populations as afforded by the unique and valuable ecosystem within the HHR.

Such a center should be located outside of the buffer zone (i.e., 300 feet beyond the highest water mark) and be the closest building structure to the HHR to ensure optimal protection and enjoyment of the reservoir and its habitat [D, ToS]. OSAC has outlined funding sources and ideas in its [Open Space Summary Report](#) document.

Given the dense development of the Denver/Boulder metro, it is critical that communities and developers lead by example to highlight the nature native to our state and regions and to educate residents on how to be stewards of preservation. Notably, the following nearby communities have done so, establishing nature centers or preserves:

- [Lookout Mountain Preserve and Nature Center, Jefferson County](#)
- [Evergreen Nature Center – Evergreen Audubon | Evergreen Nature Center](#)
- [The High Plains Environmental Story - High Plains Environmental Center \(suburbitat.org\)](#)

Further ideas for an environmental center may include sharing the space with commercial entities in order to generate profit and satisfy the town's commercial platting. For example, plans could include an Audubon themed restaurant with outdoor seating and direct water views or a small venue rental space wherein local residents could host parties or meetings. Finally, the center could be inhabited permanently or temporarily by nonprofits or organizations with shared values, such as Boulder's Thorne Nature Experience, the Audubon Society, or the Botanic Gardens.

III. Pollution Mitigation

New development brings the possibility for detrimental water, light, and sound pollution to HHR and the adjacent tributary of Rock Creek. Mitigation actions should include:

- During construction - avoid contamination of HHR with construction debris, especially wind blown packaging and plastics. Also, scrupulously prevent construction runoff from entering the reservoir or nearby wetlands [D].
- After construction - prevent runoff water from the developed area from entering HHR or nearby wetlands. Consider using permeable surfaces such as paving stones for roads and parking areas. Consider adding a wetland buffer for runoff filtering. (Spaulding, p.5) [D].
- Lighting design to mitigate light pollution on the property [D].
- Create a berm, hedge, or other barrier between U.S. Hwy 36 and the buffer zone to reduce effects of noise pollution on wildlife habitat [D, ToS].

IV. Animal Relocation

The Zaharias property is home to several sensitive species, including prairie dogs and burrowing owls, among others. Prior to any construction on the Zaharias property, OSAC recommends that careful attention be paid to the Environmental Study regarding these species (Smith), further up-to-date review be conducted to identify these and other species that may be impacted, and that a plan for their relocation and preservation be developed in coordination with the Town of Superior. In particular, the developer should be required to do the following:

- Create a detailed prairie dog relocation plan specific to this parcel, including thorough preparation of the relocation site as well as followup care. If possible, relocate to a site in or near Superior. Humane euthanization of the prairie dogs should be allowed only as an absolute last resort after the developer has convincingly demonstrated that relocation is impossible [D].

Superior's most recent [Prairie Dog Management Plan](#) is from 2005. OSAC is also currently in the process of developing more specific guidelines, which will be referenced in this document as soon as completed.

- Survey for Burrowing Owls if any construction activity is scheduled to begin between March 15 - October 31. This should be done using a qualified wildlife consultant following Colorado Parks and Wildlife protocols (Smith, p.3; CPW) [D].

V. Habitat

A. Enhancement

Any changes to the properties around HHR would offer an opportunity to enhance the aesthetic and habitat values of the area through habitat restoration. Rehabilitation activities could include:

- Restoring flora in the buffer area with wildlife-attracting native grasses, forbs, shrubs, and trees. Removing invasive weeds (Smith, p.4; Jones, 2018, p.14) [B, D, ToS].
- Expansion and enhancement of the existing wetland along the west shoreline to improve cover for nesting waterfowl and other birds via manipulation of the elevation of the west bank and shoreline of the reservoir (Smith, p.4) [B].
- Planting of aquatic plants preferred by ducks in shallower depth zones of the reservoir and sedges and bulrushes in the wetland to improve the availability of food for waterfowl and enhance habitat quality for amphibians and fish (Smith, p.4) [B].
- Installation of bat roost and bird nest boxes (e.g., kestrel nest box on a pole in buffer area) in uplands adjacent to the reservoir to enhance species diversity (Smith, p.4) [ToS].

B. Management

Finally, ongoing habitat management and monitoring will be important to maintain high-quality wildlife habitat. Superior and Boulder County may consider:

- Managing reservoir water levels to accommodate shore-nesting birds and wintering/migrating birds (Spaulding, p.3,8-10) [B].
- Establishing protocols to monitor the physical and chemical characteristics and biota of the reservoir to inform management of water levels and any habitat enhancement efforts (Smith, p.7) [B].
- Developing an ongoing habitat maintenance plan, that includes weed control, and implementing soil and water conservation techniques [ToS]. Such a plan may include rain water harvesting (such as from building roofs), drip irrigation as opposed to spray, erosion reduction with use of ground cover and mulch, limitation and removal of non-native plants, lawn limitation, and avoidance of all chemical fertilizers and pesticides.

Conclusion

New development around HHR must proceed sensitively in order to avoid damage or disruption to important wildlife habitat in and near the reservoir. If done correctly, however, associated habitat restoration and addition of amenities could result in real improvements to the value of the reservoir for wildlife, residents of Superior, and the region. OSAC urges the Trustees to consider any development proposals with a careful eye to their impacts on habitat, and to require that final development plans incorporate the above recommendations and result in a net improvement for the overall quality of life in Superior.

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