



Twin Lakes Open Space

Draft Resource Evaluation & Management Plan

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Parks & Open Space**

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SUMMARY

Great blue herons, red-winged blackbirds, Northern Harriers, Red-tailed hawks, coyotes, fox, and other birds and mammals use the Twin Lakes area to satisfy some of their habitat needs. The reservoirs and irrigation ditch corridors have become man-made refuges with increasing importance as development expands. They also are peaceful settings for walking, wildlife viewing, and dog exercising that are in the back yards of many neighbors.

The Boulder County Parks and Open Space Department's (BCPOS) mission encompasses the goals of conserving natural resources and providing public uses that reflect sound resource management and community values. For Twin Lakes, management recommendations revolve around protecting the best areas of wildlife habitat by focusing access points and imposing minor restrictions on dog activities. The plan recommends that dog access at the East Lake be limited to dogs on leash, and that dogs be allowed to continue to have off leash access to the West Lake.

1.0 INTRODUCTION

Twin Lakes, a 42-acre open space property containing two reservoirs, was purchased in January 2002. The reservoirs are used by the Boulder & Left Hand Irrigation Company (B&LHIC) to store and transport agriculture water. The lakes, surrounding wetlands, and irrigation ditches are habitat and travel corridors for wildlife. Neighbors walk, jog, view wildlife, and enjoy the lakes' scenic values.

Twin Lakes Open Space is located within the developed area known as Gunbarrel. A majority of the residences are in the unincorporated county while the commercial and industrial uses have been annexed into the City of Boulder. The Boulder & Left Hand Irrigation Company has been operating the reservoirs since 1910. In 1957 IBM purchased nearly 500 acres of agricultural property north of the Gunbarrel area. Residential and commercial development began in response to the development of the IBM plant in 1965. The Gunbarrel neighborhood grew and people started to use the reservoirs for recreation, trespassing onto private property and raising liability concerns for B&LHIC. In 2002 Boulder County and B&LHIC reached an agreement in which the county would purchase fee interest in the land and the recreation rights on the reservoirs while B&LHIC would retain the right to use the reservoirs to store water.

Legitimizing public use of Twin Lakes requires balancing wildlife requirements, historic recreational use, and Boulder County's mission and goals. Twin Lakes Open Space is a unique property requiring special consideration for management because of its ecological characteristics, patterns of previous use and proximity to urban development.

Dogs and their behavior on open space present wildlife sustainability concerns as well as conflicts with other users. Twin Lake's informal system of dog use at the time the county purchased the property evolved from years of neighborhood use and did not include any formal leash regulations. The development of this management plan is a result of Boulder County's purchase of the property, resource protection goals and policies for open space, public feedback and specific dog management recommendations that reflect Twin Lake's unique context and history.

1.1 Twin Lakes Open Space Survey

Along with assembling site information for the management plan, a neighborhood survey was completed in spring 2002 to collect opinions of property owners, surrounding business employees, and open space users regarding future management options. The survey results indicated the most heavily used access points, the reasons users appreciated Twin Lakes (such as its natural setting, proximity, and wildlife) and the importance of Twin Lakes to retain its neighborhood identity. The survey revealed that the property is consistently used throughout the day and over the week and a high percentage of users have dogs. Additionally, the survey results implied support for leash controls. A separate countywide phone-survey of 512 registered voters was conducted in July 2002 by an independent organization. Ninety-two percent of respondents of that survey indicated that protecting habitat for wildlife is very or fairly important. Sixty-eight percent agreed with the County policy requiring dogs to be on leash. See *Appendix 1* for a summary of survey results.

1.2 Interim Management Guidelines

In April 2002 staff developed interim management guidelines to manage the property until a final management plan was adopted. The recommendations included addressing health and safety issues such as removal of exposed re-bar in the concrete rubble and rope swings at the shoreline; general maintenance of the trails around the lakes; review of social trail access points for consolidation; initiation of a voluntary dog excrement pick-up program with newspaper plastic-bag recycling stations; enforcement of BCPOS rules and regulations; and prohibition of dogs from entering the lakes due to safety concerns. The Parks and Open Space Advisory Committee reviewed and recommended adoption of the interim guideline recommendations on April 22, 2002, after considerable public input.

The Board of County Commissioners adopted the interim management guidelines with the exception of the provisions on enforcement of the leash regulation. The Board directed staff to form a neighborhood advisory group to review and recommend dog management policies for Twin Lakes.

1.3 Twin Lakes Advisory Group

Dog management can be a significant concern among open space users and due to the unregulated, historic use of Twin Lakes it emerged as a prominent issue for recreational users and neighbors of Twin Lakes. This led the Board of County Commissioners to direct BCPOS staff to develop a Twin Lakes neighborhood advisory task force to formulate a dog management recommendation that would at a minimum “provide for wildlife protection and some accommodation for users that prefer not to encounter dogs off-leash.” The Twin Lakes Advisory Group (TLAG) was formed from a pool of applicants living in the vicinity of Twin Lakes representing differing viewpoints about dog management at Twin Lakes. The group was facilitated by BCPOS staff and included two members of the Parks and Open Space Advisory Committee.

The Twin Lakes Advisory Group met six times between April and December 2003. Over the course of the six meetings, TLAG followed a process that resulted in a consensus dog management recommendation. The process consisted of the following steps.

- A vision exercise: What would you like to see at Twin Lakes in five years? What would the community like to see?
- Development of evaluation criteria to use for evaluating dog management proposals
- Submission of dog management proposals by individual members followed by evaluation by the group.
- A decision tree exercise to develop priorities and identify trade-offs in order to further evaluate and narrow down proposals
- Consensus recommendation

In addition to the process listed above, with BCPOS staff assistance, TLAG researched and reviewed documentation related to the dog management issue locally, statewide and nationally. They explored the possibilities of creating a dog park on a different open space property in the area, but it was ultimately agreed that an enclosed dog park could not offer the same opportunities for people to walk and exercise near water with their dogs, features that Twin Lakes has available. Throughout the discussions, wildlife values and impacts of human and dog use were weighed for this site.

2.0 RELEVANT GOALS AND POLICIES

The Boulder County Comprehensive Plan outlines goals and policies that are relevant to the Twin Lakes Open Space. These goals and policies, identified in *Appendix 2*, provide direction for land classification and natural resource planning and management; relevant topics include open space and environmental resources.

3.0 MANAGEMENT GOALS

The location of Twin Lakes within an urbanized area lends itself to providing neighborhood passive recreational opportunities, such as dog exercise, walking, jogging, and wildlife viewing. However, these activities must be compatible with the B&LHIC's water storage and delivery rights and protecting plant and animal communities dependant on Twin Lakes.

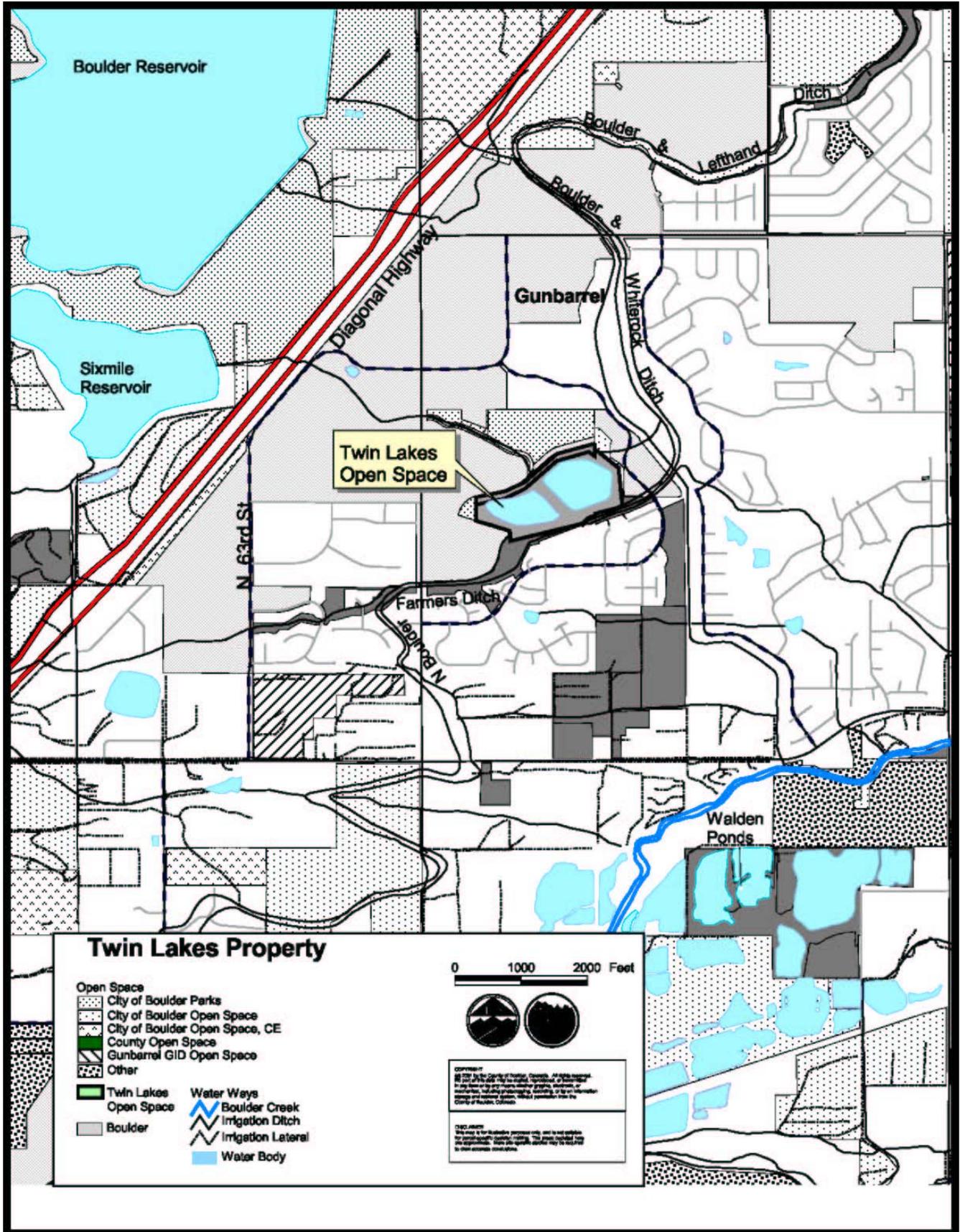
The primary management goals for Twin Lakes Open Space include:

1. Manage the historic recreational use of Twin Lakes.
2. Minimize and mitigate the recreational impacts on the B&LHIC's storage and water delivery rights.
3. Protect and enhance existing plant and wildlife communities.

4.0 GENERAL DESCRIPTION OF THE PROPERTY

Twin Lakes Open Space is approximately 42 acres, adjacent to the Gunbarrel area of the City of Boulder. The property consists of two reservoirs—a.k.a. Davis No. 1 (East Lake) and No. 2 (West Lake)—covering 27 acres, surrounded by trails, marshes, wetlands, upland and deciduous forest. Twin Lakes Open Space is virtually surrounded by commercial and residential development. Two irrigation ditches that also serve as wildlife corridors abut the south side of the lakes and one runs between the lakes. The Twin Lakes Open Space property shares boundaries with City of Boulder Parks and Recreation, City of Boulder Open Space and Mountain Parks, County Open Space, and private landowners.

Figure 1: Location Map



4.1 Acquisition History

Boulder County purchased the underlying fee interest plus the recreation rights to the reservoirs from the B&LHIC in January 2002 as the result of an effort to legitimize public recreational use of the property. The purchase price was \$130,000, which included recreation rights but not water rights. Separately, the County was already a substantial shareholder of water in the ditch company. The purchase is subject to the reserved rights of the B&LHIC to continue to operate the water storage vessel and water delivery system outlined in the *Water Storage and Delivery Easement*. Additionally, a *Restrictive Covenant Running With the Land* states that the B&LHIC and Boulder County will use portions of the property jointly for recreational/open space and the operation and use of irrigation facilities as a part of the acquisition. The agreement allows for a minimum pool of water to remain in the reservoirs in the event a fishery is established in the future, and so long as the BCPOS does not claim the water as a carryover storage right.

4.1.1 History of Ditch Company Operations

The Boulder and Left Hand Irrigation Company has always used the Twin Lakes as an equalizer for direct flow deliveries within the ditch system. Water brought in through the inlet is released back to the ditch further downstream as needs dictate. Providing irrigation water to the agriculture shareholders is the primary function of the company. The water originates from Boulder Creek with the headgate located at the Broadway Street bridge in Boulder. Delivery of Colorado Big Thompson water is also available to shareholders of the B&LHIC.

Prior to residential development around the lakes, there was a period of time when the recreational rights were leased to a hunting and fishing club. The property was out in the country at the time so access was easily controlled with perimeter fencing and signage. However that began to change after the first condos were built in 1969 north of the lakes and construction began on the homes south of the lakes in the late 1970s. The private club gave up the lease when they could no longer control the general public from accessing the property and the ditch company was subsequently unable to find any other potential lessees interested in enforcing the trespass concerns in exchange for the exclusive recreational rights to the lakes.

Lee Forsyth was the irrigation ditch rider from 1976 until his death in 2000. After the newer residential units were constructed east of the lakes in the 1980s, Mr. Forsyth gave up trying to keep the increasing numbers of people out of the property (personal communication). His attempts with signage, fences and/or barriers were futile as they disappeared within a matter of days. Forced accommodation then became the operational mode of the company for the use on the property.

In 1994, with liability concerns as a major issue, the Board of Directors for the B&LHIC approached Boulder County about the possibility of leasing the Twin Lakes property to legitimize and help control all the public recreational use. State Law changes allowed for limited governmental liability to apply to private

irrigation facilities if those facilities were leased to public agencies for outdoor recreational purposes.

4.1.2 Boulder County Response

The BCPOS Department decided the request was worth consideration because of the considerable public use of the property, the adjacent open space already under management by the Department, the responsibilities of the BCPOS Department to provide non-urban recreational opportunities for residents of the unincorporated county, and the continued liability exposure of the ditch company, of which Boulder County was a significant shareholder.

After several attempts at structuring an equitable recreational lease for the property, the parties could not reach an agreement and the process was discontinued in 1998. Three years later, discussions began again for the county to purchase the underlying fee interest plus recreation rights to the reservoirs. The purchase was completed January 2002.

4.2 Physical Characteristics

4.2.1 Location and Access

Twin Lakes Open Space is located in southeast Boulder County, adjacent and to the south of the Gunbarrel area of the City of Boulder, in Section 11, Township 1N, Range 70W.

Twin Lakes can be accessed from Nautilus Dr. on the north, from the Twin Lakes Regional Trail to the south, and social trails connecting from Twin Lakes Road. There are approximately 10 unmarked spaces around the perimeter of the Nautilus Drive cul-de-sac that are used for public parking for Twin Lakes and the adjacent Eaton Park property.

Eleven existing access points were presented in the *Twin Lakes Neighborhood Survey*. The survey revealed that most users accessed Twin Lakes Open Space from Twin Lakes Road and the Twin Lakes Trail, south of the lakes. Neighbors also access Twin Lakes from the northeast across Eaton Park and along the outlet channel from the east lake. The Red Fox Hills subdivision has two private open space access points to the Twin Lakes trail.

4.2.2 Adjacent Land-Use and Ownership

Prior to 1969, when the first multi-family residential complexes were built north of the lakes, the surrounding land was farmed. Now, there is residential development adjacent to the east and south sides of the lakes, Twin Lakes Technological Park offices to the west, the private Country Day School to the northwest, and Eaton Park (a City of Boulder Park) to the north. Both the Archdiocese of Denver and the Boulder Valley School District own vacant property south of the lakes and there are a number of vacant lots in the Twin Lakes Technological Park to the northwest.

The Twin Lakes Technological Park, Eaton Park and Twin Lakes and Brandon Creek Condominiums are in the city limits of Boulder while Red Fox Hills and the Twin Lakes subdivisions south and southwest of the lakes are in the unincorporated county.

In the mid 1990s Boulder County constructed a segment of the regional trail adjacent to the south side of the lakes. The Twin Lakes Regional Trail currently extends from Spine Road through the Willows Open Space on the west to Twin Lakes Road on the east. The *Boulder County Comprehensive Plan* calls for this trail to eventually connect Boulder with the City of Longmont.

In addition to Eaton Park on the north, there are a number of other publicly owned properties in the vicinity of the lakes. The regional trail is within the Twin Lakes and Red Fox Hills Open Space dedications; A second Red Fox Hills Open Space parcel is to the southeast; and the Twin Lakes Technological Park dedication is west and northwest.

4.2.3 Current Leases, Easements, and Rights of Way

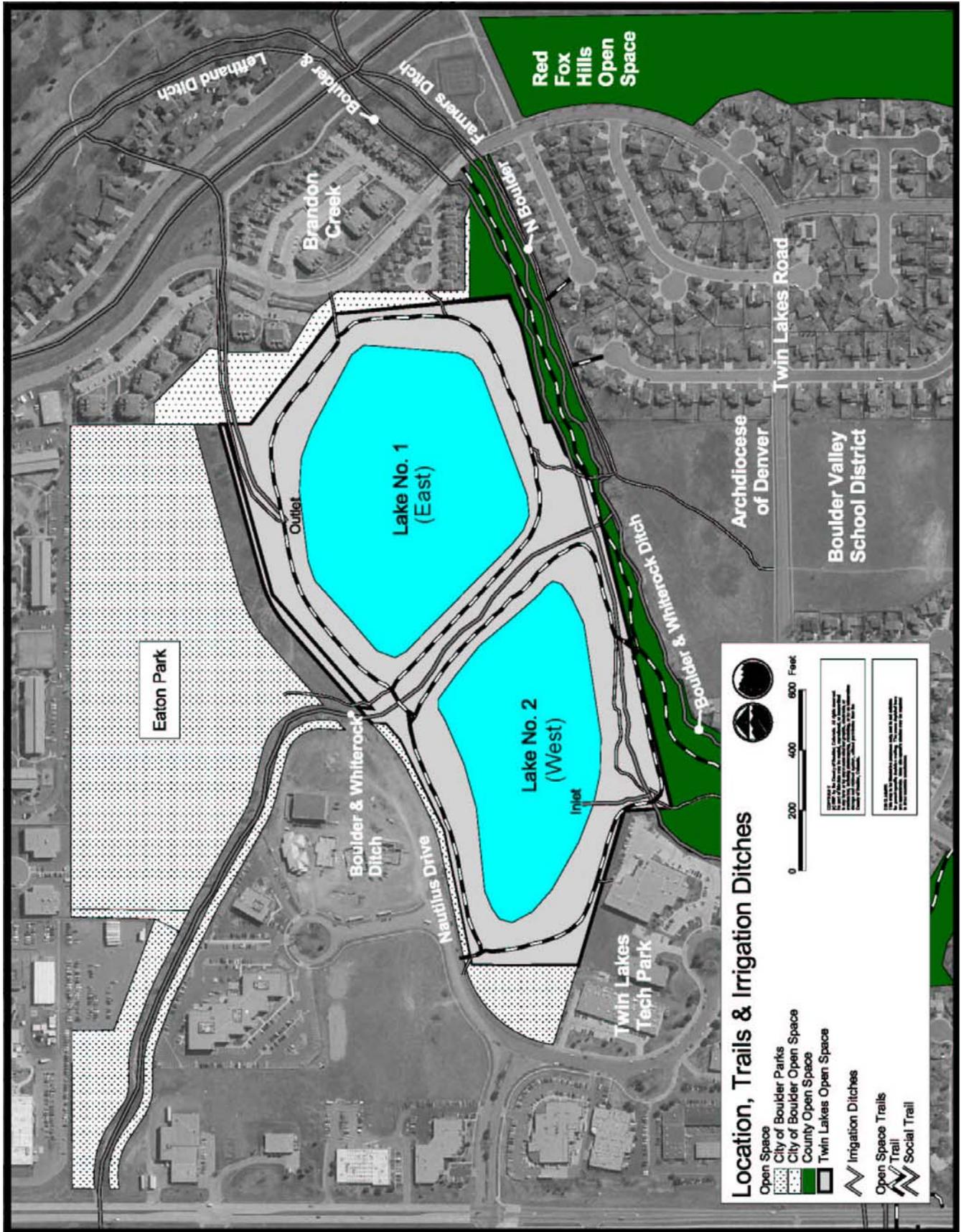
- Water Storage and Delivery Easement held by the Boulder and Left Hand Irrigation Company (the Seller of the Twin Lakes property)
- Restrictive Covenant Running with the Land
- Right-of-way for ditch purposes to the Boulder and Left Hand Irrigation Company
- Right-of-way for gravel road, pedestrian trail, concrete ditch structure, bridge, storm sewer manhole, and box culvert to N. Boulder Farmer's Ditch
- A 50-foot ditch easement for the Boulder and White Rock Ditch Company
- A 60-foot ingress and egress easement for the Boulder and Left Hand Ditch Company accessing the east lake from Nautilus Drive at the northwest edge of the lake.
- A 60-foot ingress and egress easement for the Boulder and Left Hand Ditch Company accessing the west lake from Nautilus Drive at the northeast edge of the lake.

4.2.4 Climate

Warm summers and cool winters characterize the climate along Colorado's Front Range and high plains. The average high temperature in July is 88.5° and the average low temperature in January is 11.5° (Weatherbase, 2002). Variations in temperature are the result of the absence of a large body of water that would act to regulate temperature extremes (Mutel and Emerick, 1984).

Rising from the plains, only eight to ten miles west of Twin Lakes, are the foothills of the Rocky Mountains. Peaks over 14,000 feet compose the shield of the Continental Divide causing rain clouds to drop their moisture, creating a rain shadow over the high plains. The average yearly precipitation is only 13.8" with most of the precipitation falling in May. The average snowfall is 35.5". Intensifying the effects of low precipitation are the drying winds channeled down

Figure 2: Location, Trails, & Irrigation Ditches



from the Continental Divide. These conditions produce a semi-arid climate on the high plains on which mainly grasses and herbs survive.

4.2.5 Topography

Gently rolling hills and seemingly flat land sloping imperceptibly to the east make up the topography of Colorado's high plains. Residing at an elevation of 5,180 feet due in part to the dam, the Twin Lakes reservoirs are slightly higher than Gunbarrel's commercial center. Wetland depressions and marshes surround portions of the lakes. Pasture grasses are preserved in open space areas south of the reservoirs.

4.2.6 Geology

Seventy to eighty million years ago a shallow Cretaceous sea covering all of Colorado was depositing layers of thick gray mud. Sea creatures were swimming around in these warm waters and leaving evidence of their existence through fossilized teeth, skeletons, or shells in muddy sediments. Underlying the Twin Lake reservoirs is thousands of feet of Pierre Shale bedrock made up of the muddy sediments left behind by retreating seas.

4.2.7 Soils

Nunn soils, formed on terraces and valley side slopes in loamy alluvium, a mixture of clay, sand, and silt deposited by streams, make up the soil composition of the Twin Lakes reservoirs. The well draining soils cover slopes of 0-9%. The slopes the Twin Lakes Open Space are 0-3% and 5-9%. The soils reach to a depth of 60 inches or more and vary from grayish brown clay loam to pale brown clay and clay loam. Short and mid grasses grow on Nunn soils (USDA Soil Survey, 1975).

4.2.8 Hydrology

Three ditches flow south of the Twin Lakes reservoirs, the North Boulder Farmer's Ditch, the Boulder and Left Hand Ditch, and the Boulder and White Rock Ditch. To the north of the east lake is Eaton Park (a City of Boulder Park). A wetland occupies approximately 14.2 acres of that park, which in part is energized from lake seepage. Northeast of the east lake is a marsh area, created by seepage from the lake, and wetlands continue around the east and south of the east lake.

The southwest corner of the west lake is the inlet from the Boulder & Left Hand Ditch. There is also a wetland on the west side of the west lake that is fed by street runoff from the adjacent industrial development. It is released from the detention area into the lakes.

4.2.8.1 Ditch Company Water Rights

The first direct flow water rights for the B&LHIC were appropriated off Boulder Creek June 1, 1862. An additional 82.8 cfs was appropriated December 1, 1873 and adjudicated June 2, 1882.

The first storage rights for the Twin Lakes carry an appropriation date of April 18, 1910. The present enlargement and increase in the height of the dam were a result of an additional appropriation October 30, 1947. The combined capacity of the two reservoirs is 218 acre-feet of storage. Over the past twenty years the average annual delivery to Twin Lakes has been 145 acre-feet.

The Twin Lakes are separated by the Boulder and White Rock Ditch easement. The inlet for the lakes is located in the southwest corner of the west reservoir and the gated outlet is on the north side of east reservoir. A siphon tube under the B&WR Ditch connects the two lakes. The east lake is 16 surface acres with a capacity of 137 acre-feet and maximum depth of 12 feet. The impoundment has a state dam rating of class 2, for which there could be significant property damage if there is dam failure. The west lake is approximately 11 surface acres with a capacity of 81 acre-feet. In most years this lake is drawn down during the irrigation season, exposing extensive mudflats by fall.

The Boulder and Left Hand Irrigation Company is a Colorado Mutual Ditch Company with 130 shares of stock issued; Boulder County owns 54.6 shares. The service area of the Ditch Company includes approximately 2,000 acres of farmland. The average annual delivery of water to stockholders (direct and storage rights) is 19 acre-feet per share.

5.0 RESOURCE EVALUATIONS

5.1 Historic Ecology

Enormous expanses of short grass prairie divided by cottonwoods and willows lining permanent watercourses covered the high plains prior to Euro-American settlement. Pronghorn antelope, foxes, coyotes, numerous small mammals, reptiles, and an estimated sixty million bison foraged in the shadow of the Rocky Mountains and across the plains (Costello, 1969). The sea of grass provided food and shelter for wildlife and there were few physiographic obstacles for the animals to contend with.

Agriculture and grazing altered the plains dramatically and growing cities covered open land. In the Gunbarrel/Boulder Reservoir area the once extensive wetlands have been transformed for industrial, agriculture, and residential uses. Remnants of native riparian and wetland ecosystems remain and artificial waterways create new habitat.

Wetlands and riparian areas provide food, denning and nesting sites, and respite from the hot sun or gusting winds. A diversity of flora and fauna are found in this ecosystem from water-dependent plants to migratory birds that use them for resting places.

5.2 Vegetative Resources

5.2.1 Vegetative Communities

Wetland fringe, forested riparian, and upland grass communities comprise the vegetation surrounding Twin Lakes. These communities are heavily disturbed and the predominant vegetative covering is weedy species and pasture grasses.

Covering the dry upland is primarily introduced pasture grasses such as cheatgrass (*Bromus tectorum*) and smooth brome (*Bromus inermis*). Native buffalo grass (*Buchloe dactyloides*) and blue grama (*Bouteloua gracilis*) are present. Native wetland species include Emory's sedge (*Carex emoryi*), marsh milkweed (*Asclepias incarnata*) and three square (*Schoenoplectus pungens*), forbs include curlycup gumweed (*Grindelia squarrosa*), Indian hemp (*Apocynum cannabinum*), wild licorice (*Glycyrrhiza lepidota*), and broadleaf cattails (*Typha latifolia*). Cattails are abundant in the marshy areas around the lakes.

The intermediate and over-story include Plains cottonwoods (*Populus deltoides*), peach-leaf willow (*Salix amygdaloides*), wild plum (*Prunus americana*) and chokecherry (*Padus virginiana*).

5.2.2 Exotic Species and Noxious Weeds

Weed species are the predominant covering at Twin Lakes. Common teasel (*Dipsacus fullonum*), prickly lettuce (*Lactuca serriola*), kochia (*Kochia scoparia*), common ragweed (*Ambrosia psilostachya*) are present. Canada thistle (*Cirsium arvense*), knapweed (*centaurea diffusa*) and Russian olive (*Elaeagnus angustifolia*) are noxious weeds found in limited quantities.

5.3 Wildlife Resources

By the late 19th and early 20th centuries, much of the native prairie ecosystem in what is now Gunbarrel had been converted to agricultural habitats. The dryland and irrigated crops and pastures replaced the native grasses and ditches and small lakes were added for distribution of irrigation water and stock watering. The new blocks of habitat were more fragmented and better suited to use by habitat generalists vs. specialists, "edge" vs. "interior" species, and species tolerant of human influence. Additionally, from the 1950's thru the 1980's gravel mining and reclamation along Boulder Creek, 1 mile south, has provided hundred's of acres of pond, riparian and wetland habitat that did not exist previously.

Twin Lakes is also an artificial system but it provides habitat for a variety of avian species and mammals relatively tolerant of close human proximity and adaptable to an urban context. Waterfowl, migratory songbirds, and small mammals are most common. Cattails and marshes provide resting places and shelter, and irrigation ditches serve as travel corridors for movement to nearby open space and rural landscapes.

With reference to the Boulder County Comprehensive Plan, there are no critical wildlife habitat, critical stream corridor designation, high quality aquatic habitat, rare plants or designated ECA's identified for Twin Lakes. The occasional Bald Eagle

noted at the property is the only Federally listed T&E species and it has been proposed for delisting by the US Fish & Wildlife Service because it has recovered sufficiently to no longer be in danger of extinction.

Parks & Open Space staff analyzed the existing habitat on the Twin Lakes property and developed a wildlife values ranking (see figure 4). Those areas with the highest overall ratings warrant some measure of protection from human and canine encroachment.

5.3.1 Mammals

Small mammals that adapt well to urban areas are the most common mammals in Twin Lakes Open Space. Species include meadow voles (*Microtus pennsylvanicus*), raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), and red fox (*Vulpes vulpes*). Introduced fox squirrels (*Sciurus niger*) are common. Coyotes (*Canis latrans*) will also use this riparian habitat occasionally although they are more common in open areas. In recent years, trapping for the Preble's Meadow Jumping Mouse has been undertaken as part of the development of Eaton Park and no individuals were found. Mammalian species, some more common than others, are listed in *Appendix 3*.

Figure 3: Vegetation

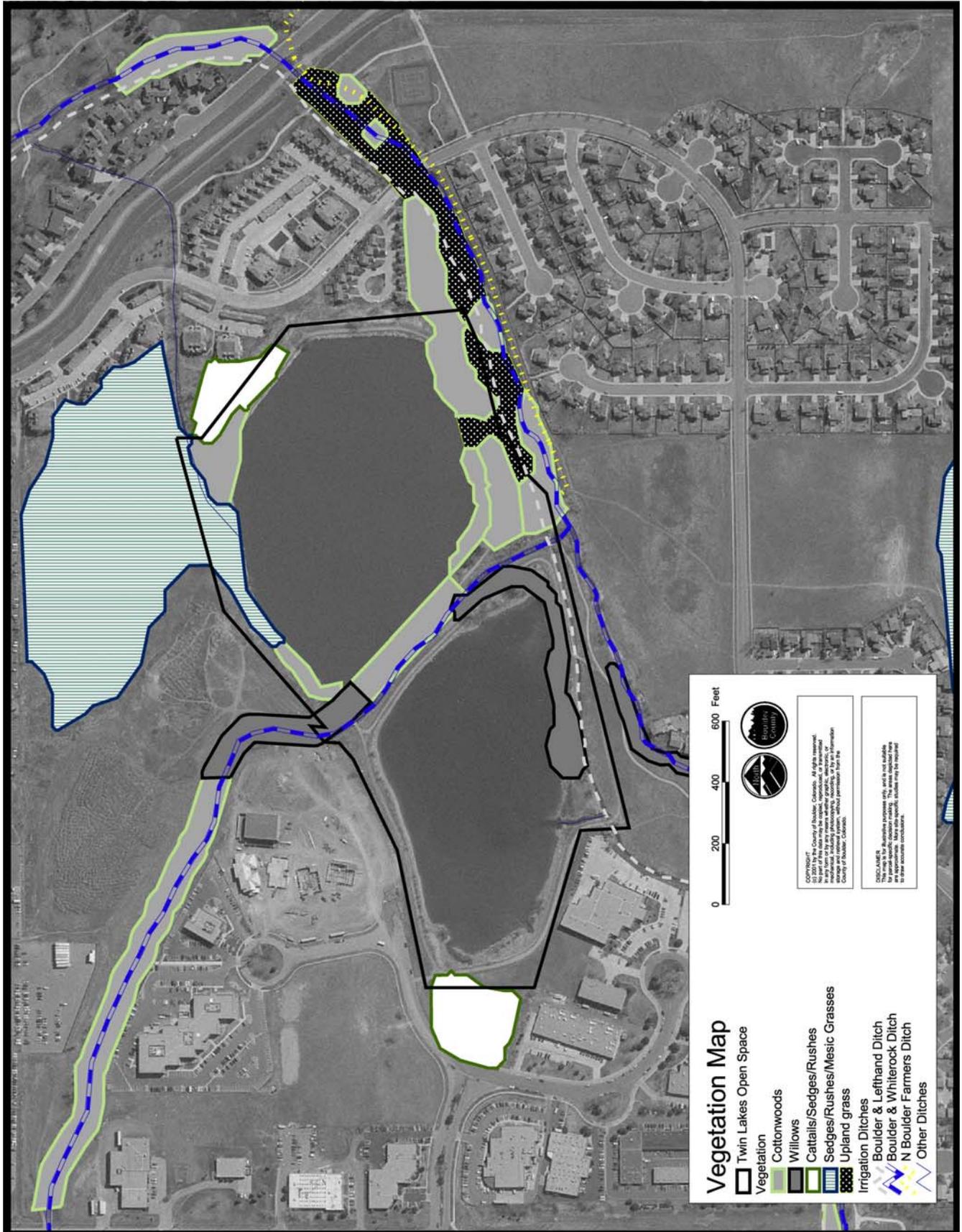
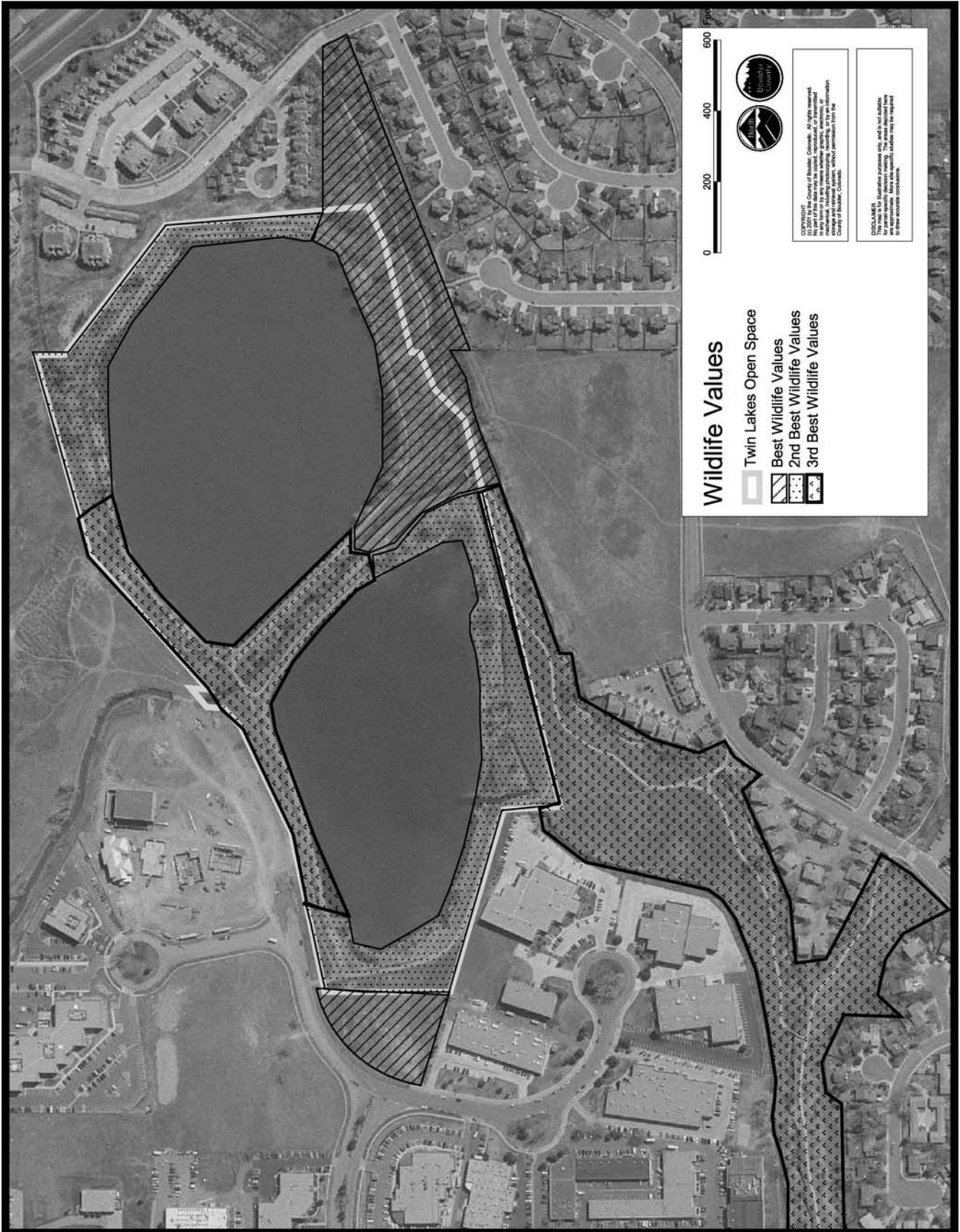


Figure 4: Wildlife Values



5.3.2 Birds

The avian habitats for Twin Lakes include open water, marshes and cattails, irrigation ditches, and forested areas that provide resting areas and sheltered nest sites. Waterfowl, shorebirds and wading birds are found at Twin Lakes and neotropical migrants stop over to rest during long flights. Both lakes provide open water for waterfowl however the east lake has a deeper bowl and retains water throughout normal years. Common species include red-winged blackbirds (*Agelaius phoeniceus*), mallards (*Ana platyrhynchos*), Canada geese (*Branta canadensis*), common snipe (*Gallinago gallinago*), killdeer (*Charadrius vociferous*), and the belted-kingfisher (*Ceryle alcyon*). For a list of potential avian species see *Appendix 4*.

While all native birds are protected by the Migratory Bird Treaty Act, the Colorado Division of Wildlife and Boulder County maintain a list of Species of Special Concern that include those who are present infrequently or in small numbers; are undergoing a significant regional, national or global decline; or are limited to specific, small or vulnerable habitats. Those bird species of concern that may frequent Twin Lakes are noted with an * in *Appendix 4*.

5.3.3 Ecological Values of East Lake

- Vegetation and trees on south side provide wildlife refuge
- Better potential fishery due to deeper bowl relative to west lake
- Large continuous wetlands starting in Eaton Park on the north and surrounding the east lake to the east and south are valuable habitat

5.3.4 Ecological Values of West Lake

- Wetlands along west shoreline provides value to ground nesting birds
- Lower aquatic habitat value due to fluctuations in water level compared to east lake
- More natural shoreline sustaining wetland fringe, and wetland plant communities
- Better winter habitat for waterfowl due to the shallow depth of the lake
- Trail turns inland along south side of the west lake allowing for a less disturbed shoreline area

5.4 Recreation Resources

According to the user survey, walking is the most common recreational activity at Twin Lakes Open Space. Wildlife viewing, jogging/running, bike riding, dog exercising in and out of the water, bird watching, and nature study are other activities that users pursue at the property. Additionally, the 1.9-mile Twin Lakes Regional Trail, south of the reservoirs, provides further recreation opportunities. The maintenance road around the lakes provides 1.2 miles of trail for recreational users. The lakes are adjacent to picnic tables and an informal BMX dirt bike area at Eaton Park to the north. The City of Boulder is planning a number of educational signs interpreting wetlands along the trail at the southwest side of Eaton Park.

6.0 MANAGEMENT DIRECTION

The general management direction for this property includes balancing protection of the natural environment with the interests of dog owners, general recreationists and the irrigation company. Factors including surrounding development, historic uses and contractual agreements became important elements in the management objectives for this property:

1. Protect the scenic quality and undeveloped nature of the property.
2. Provide passive outdoor recreation opportunities that do not adversely impact biological resources or the water delivery or storage rights of the B&LHIC.
3. Manage vegetative communities by maintaining and encouraging desirable native species, restoring degraded areas and controlling undesirable exotic species.
4. Manage wildlife habitat by maintaining natural food, cover, nesting and roosting areas.
5. Consolidate management of public property to the extent possible.
6. Manage the property to retain the existing neighborhood character.
7. Provide a good neighbor policy to the B&LHIC and adjacent landowners.

6.1 Reservoir Management

The B&LHIC will continue to be responsible for maintaining the structural integrity of the dam and the maintenance of the irrigation ditches. The *Restrictive Covenant Running with the Land* includes a provision that allows for a minimum pool of water to remain in the east lake to perpetuate a potential fishery.

6.2 Vegetative Management

Encouraging native species through weed control is the recommended vegetative management strategy. As management partners, the irrigation companies should be consulted up front to determine any impacts on water delivery or storage such actions might have. Similarly, the City of Boulder Parks and Recreation Department should review any control action contemplated on land adjacent to Eaton Park.

In the *Restrictive Covenant Running with the Land* the County agrees not to plant trees or other vegetation that would interfere with the B&LHIC's water delivery. The Boulder & Left Hand Irrigation Company also reserves the right to remove vegetation as necessary for unimpeded flow of irrigation water and preventative maintenance of irrigation facilities.

6.2.1 Noxious Weeds

Noxious weed infestations are not severe on the Twin Lakes Open Space, however efforts should be made to keep potential problems at a minimum. Controlling infestations must be accomplished in coordination with the ditch company to ensure the structural integrity of the dam. Recommendations for managing weed infestations are:

- Spot spraying Canada thistle and teasel with an herbicide
- Mowing trailside areas to keep the annual broadleaf weeds to a minimum
- Working with the ditch company to halt the growth of Russian Olive by cutting trees and encouraging the growth of native trees such as cottonwoods and willows away from dam.
- Coordinating efforts with City of Boulder Parks & Recreation to control the spread of weed species across adjoining properties.

6.3 Wildlife Management

Managing wildlife values on the Twin Lakes Open Space should center on protecting important areas from human and canine encroachment. Each lake has different wildlife significance. The east lake is bordered by a continuous wetland at the base of the dam along its north and east sides providing significant habitat. The west lake has a more natural shoreline. It is also less accessible to human and canine disturbance along its south side because of willow thickets and the larger distance between the trail and lake shoreline.

Discouraging or preventing people and dogs from using important wildlife areas (indicated on Figure 4) are the most effective management tools to protect wildlife values on this property. Fencing will be used to define appropriate recreation areas and access points minimizing canine and human encroachment into wildlife habitat. This could result in some improvement in species diversity for the property.

The Boulder & Lefthand Irrigation Company has the responsibility, as outlined in the *Restrictive Covenant Running with the Land*, to remove burrowing rodents from the dam as may be necessary for preventative maintenance and to allow the unimpeded flow of irrigation water through the facilities.

The gallery deciduous forest along the south side of the property will be managed to discourage human or canine encroachment through the use of fencing (may be temporary) and signage as needed

6.4 Recreation Management

Managing recreation in Twin Lakes Open Space requires a change in historic visitor use. Prior to the purchase of the property by the county recreational use had evolved into a laissez faire, non-regulated or enforced system. Recreation management of the property will include oversight of health and safety issues, site planning to focus human access, and dog management. Management recommendations will reflect the importance of retaining the feel of a neighborhood-gathering place.

6.4.1 Twin Lakes Advisory Group Dog Management Recommendation

The Twin Lakes Advisory Group was formed at the direction of the Board of County Commissioners. The group used a process of vision exercises to develop evaluation criteria, submit individual dog management proposals, evaluate the proposals as a group, and identified and prioritized solutions. Balancing the habitat requirements of wildlife and the impacts of humans and dogs were central

considerations. The Twin Lakes Advisory Group developed three guiding principles that aided in their consensus recommendation.

- 1) The Twin Lakes area should retain the feeling of a neighborhood-gathering place.
- 2) The Twin Lakes should be a place where a broad diversity of people could enjoy the outdoor setting in relative harmony.
- 3) The physical infrastructure in the Twin Lakes area should support a casual atmosphere, and build on the historic traditions of the area.

6.4.1.1 Recommendation

Twin Lakes Advisory Group’s recommendation is that upon completion of the management plan, the County permits one lake to have an off-leash regulation while enforcement of the County’s on-leash regulation occurs at the other lake. This recommendation also extends to dogs being allowed in the water on the corresponding side, i.e. dogs are allowed in the water on leash on the East Lake and dogs are allowed in the water off-leash in the West Lake.

Twin Lakes will not be the only Boulder County Open Space property where specific dog management measures have been structured. Dogs are not permitted at Heil Valley Ranch, Hall Ranch and Caribou Ranch while Reynolds Rogers near Nederland and the Blue Jay Mine property near Jamestown permit dogs to be off-leash. Below is a summary of TLAG’s recommendation. See *Appendix 5* for the complete recommendation.

6.4.1.1.1 Definition of “Off-Leash”

For the purposes of off-leash regulations, TLAG recommends that Boulder County define dogs off-leash as dogs that are not physically connected to the human they are accompanied by.

6.4.1.1.2 Designation of “Off-Leash” Lake

Twin Lakes Advisory Group discussed many of the variables that should be considered in deciding which lake should have the off-leash designation. They summarized variables and decided to defer to Boulder County POS staff within the context of the broader management plan and TLAG’s guiding principles.

Each lake has important ecological and recreational values. Protecting the best wildlife habitat from human and canine encroachment is a priority. In addition, open space management must strive to serve the public interest of all Boulder County citizens who provided the opportunity to purchase and preserve open space. Designating one lake as off-leash must take into account these factors.

To reach a decision designating which lake will be off-leash BCPOS staff analyzed wildlife habitat, vegetative communities, access, visitor use, management of adjacent properties, and TLAG’s guiding principles. A

consensus was reached designating the east lake as on-leash, and the west lake as off-leash. The following factors influenced this decision.

- The best overall wildlife values are along the south side of the east lake. Leash requirements and focused access could also increase the wildlife habitat potential along the east and northeast wetland/marsh area.
- The east lake has the most continuous wetland below the dam and extending from Eaton Park, along the east side of the lake to the gallery forest stands along the south side.
- Eaton Park to the north, the City of Boulder Mountain Parks and Open Space property to the east, Twin Lakes Regional Trail to the south, and City of Boulder leash laws in the City jurisdiction all require dogs to be on-leash. Visitors with dogs should already have their dogs on-leash when accessing the east lake from these sides. Designating the east lake as on-leash would be a continuation of the rules and regulations of the surrounding property.
- A significant number of residences and access points are located near the east lake. All visitors, including those wishing not to encounter dogs off-leash, could use this area.
- Although scenic values are comparable the east lake provides a slightly more expansive view of the mountains from its east shoreline.
- The west lake is mostly devoid of an armored shoreline and is more conducive to dog access to water.
- Water levels fluctuate considerably in the west lake, lowering aquatic habitat values.
- Both lakes will likely freeze over in the winter. However, the west lake is shallower and will likely have less ice surface for safety concerns.
- Willow stands protect the south side and southeast corner of the west lake. The trail moves away from the lake on this side thereby allowing for some habitat effectiveness.

See *Appendix 6* for a Preliminary Site Plan.

6.4.1.1.3 Evaluation Period

Boulder County Parks and Open Space and TLAG recommends that the off-leash designation be monitored and evaluated after the management plan adoption and implementation. The purpose of the resource-based evaluation is to determine if the off-leash designation is

working adequately or if adjustments to the policy or its implementation are needed. Monitoring and evaluation would begin after the infrastructure improvements are in place (e.g., fencing and signage).

The evaluation period would be two-phase: a check-in after one year, and a more formal evaluation after five years. After the first year, the check in would review evidence of compliance, number and nature of tickets issued, number and nature of complaints, habitat degradation and any other available anecdotal evidence. The success of voluntary excrement removal, adequacy of parking and potential adjustments with neighboring property agencies would also be reviewed. Adjustments or refinements in the infrastructure or the policy implementation would be recommended based on this information.

The five-year evaluation would be more thorough, and might include more formal evaluation of habitat conditions and compliance with leash regulations on the east side as compared with other BCPOS properties. This longer time frame would allow the BCPOS interpretive staff to include Twin Lakes in their five-year visitor study. This study, which is based on personal interviews at most BCPOS parks, focuses on visitors' experiences. The next study cycle is slated for 2005. Finally, this time period would allow the development of a neighborhood "Friends of Twin Lakes" to develop and work from the grassroots level.

6.4.2 Visitor Amenities

Visitor amenities should be limited at the Twin Lakes reservoirs to reflect TLAG's guiding principle of physical infrastructure supporting a casual atmosphere and building on the historic traditions of the area. Currently, a trash receptacle and plastic bag recycling station are located at the access from Nautilus Drive. A kiosk placed near the Nautilus Drive access, central to users of either lake, would provide a location to post information about the lakes, rules and regulations, a map, information about the area's unique management, and brochures. Benches placed along the trail may be desirable amenities in the future.

Stocking the reservoirs with fish and installing fishing pier amenities are often supported by grants offered by the Colorado Division of Wildlife. Despite the fluctuation of the water levels in the reservoirs, these urban fishing opportunities should be pursued in the future.

Due to the relatively small size of the reservoirs, fluctuating water levels, desires of the neighborhood and no formal, supported fishing program, there should be no boats or bellyboats permitted at this time on either lake.

6.4.3 Visitor Access, Fencing, Trails and Parking

Focusing visitor access can aid in protecting wildlife values around Twin Lakes by establishing consistent areas and patterns of use away from valuable wildlife areas and thereby potentially increasing habitat effectiveness. Site planning includes locating access points and fencing to protect significant natural

resources as well as addressing safety concerns by making improvements to bridge crossings.

One of the guiding principles of TLAG is the desire that Twin Lakes retains its feel as a neighborhood-gathering place. Any infrastructure addition will reflect this principle.

Access: Historically, visitors have accessed Twin Lakes by numerous social trails. The desire is to close and revegetate about ½ of those access points, focusing instead where there is the least environmental impact, where there are logical openings in fences and across bridges, and where many recreationists currently enter the property. Many of the current social trails have caused erosion on the dam face, cut through environmentally sensitive areas or are unnecessary duplicates.

Designated access points would be signed with BCPOS rules and regulations. The existing access points at both the B&LHIC maintenance roads from Nautilus Drive as well as from Twin Lakes Trail will continue to be used. Drop gates should be installed to provide visitor and vehicle access. Improving trail access from Nautilus Drive by building trail beds, grading using methods that will not impact the structural integrity of the dam, and using crusher fines would improve access and minimize compacted areas that are muddy after rains or snow melt.

Currently the primary access from the Twin Lakes Regional Trail feeds into Twin Lakes at two points on the south side of the west lake. These would continue. Constructing a trail and bridge from the Twin Lakes Regional Trail to the east lake at the regional trail bridge over the Boulder & White Rock Ditch would provide users wishing not to encounter dogs off-leash a new access to the on-leash lake.

Trail access from the east side of the property is desired and should be formalized, subject to a number of constraints. First, the trail would cross City of Boulder Open Space and Mountain Parks property so coordination will be necessary; full management by the county would be preferred. Second, the trail crosses a wetland area that may require a permit to install a boardwalk. Third, accessing the trails requires recreationists to walk up the dam face. Some form of engineered trail or stairs that do not compromise the structural integrity of the dam would need to be built.

Fencing: Fencing can be used to protect important natural areas and habitat and to define visitor use areas. At Twin Lakes fencing would be used to:

- Define appropriate access locations
- Protect important natural resource features around the west side of the off-leash (west) lake from human and canine encroachment
- Delineate boundaries between the off-leash and on-leash areas and between city and county property

- Direct visitor use patterns away from important natural areas

Temporary fencing and signage should be used to discourage use of social trails until they are re-vegetated and new visitor use patterns are established.

Trails: The existing east and west loop trail system adequately serves the current and projected needs of visitors to the Twin Lakes Open Space. As a result, only minor modifications to this system are desired in order to provide an alternate route into the east lake at the southwest corner and to upgrade trail surfaces.

All bridges in the system need improvements including railings. A new bridge crossing in the southwest corner of the east lake will be needed when the new connector segment of trail is constructed.

Continued vehicle access by the B&LHIC ditch rider on the same trail system is anticipated.

Parking: If use of Twin Lakes remains relatively status quo then vehicle parking is adequate. A moderate growth in visitation can likely be accommodated with existing on-street parking. However, if documented parking problems occur or if Twin Lakes becomes a destination park and there isn't enough parking, review of additional parking options will be necessary.

See *Appendix 6* for the Preliminary Site Plan and *Appendix 7* for Site Photos.

6.4.4 Education and Outreach

Effective forms of outreach and non-personal interpretation such as signs can be used to educate users on natural resources, in particular riparian and wildlife values, dog management policies and BCPOS rules and regulations. Outreach will be conducted through personal contact by Park and Open Space staff primarily during the beginning of the trial period and at the implementation of the dog management plan.

A kiosk will be centrally located between the two lakes informing and educating visitors about the regulations in place as well as information on the property. The City of Boulder will be installing a series of interpretive signs on wetland ecology along their trail in the southwest side of Eaton Park. There may be opportunities to expand these types of trailside interpretive panels at Twin Lakes in the future.

6.5 Emergency Services

Emergency response is provided by a number of agencies, organizations, and fire protection districts with the primary jurisdiction by the Boulder County Sheriff's Department.

6.5.1 Law Enforcement

Boulder County Sheriff's Deputies, a number of whom are assigned full-time to patrol open space properties, and County Open Space Rangers will provide patrol and law enforcement services.

Rules and Regulations for Twin Lakes Open Space are the same as for other POS properties, the only exception being for the off-leash allowance of the west lake area. In order to allow dogs off-leash, the county can use existing regulations, which would permit off-leash use at Twin Lakes by posting the appropriate side of property as a designated off-leash area. See *Appendix 8 for Boulder County Parks and Open Space Rules and Regulations, Appendix 5 for "Elements of an "Off-Leash" regulation" in TLAG's Dog Management Recommendation.*

6.5.2 Fire Protection

Twin Lakes Open Space is within the Boulder Rural Fire Protection District.

APPENDICES

Appendix 1: Twin Lakes & Open Space Management Survey Results

BOULDER COUNTY PARKS AND OPEN SPACE TWIN LAKES NEIGHBOR SURVEY 2002

		OVERALL	SURVEY VERSION	DO YOU HAVE DOGS	
			Mail Survey	YES	NO
WHAT IS THE TOTAL NUMBER OF PEOPLE IN YOUR HOUSEHOLD	One	30%	30%	23%	35%
	Two	37%	37%	38%	36%
	Three	13%	13%	15%	12%
	Four	15%	15%	19%	12%
	Five	4%	4%	4%	4%
	Six	0%	0%	1%	0%
TOTAL		100%	100%	100%	100%
Average		2.3	2.3	2.5	2.1
Median		2.0	2.0	2.0	2.0
n =		678	678	294	380
HOW MANY CHILDREN ARE IN YOUR HOUSEHOLD	None	51%	51%	48%	53%
	One	20%	20%	19%	21%
	Two	23%	23%	27%	20%
	Three	6%	6%	6%	5%
	Four	1%	1%	1%	0%
TOTAL		100%	100%	100%	100%
Average		.9	.9	.9	.8
Median		.0	.0	1.0	.0
n =		468	468	225	243

10 Apr 02

Source: RRC Associates

**BOULDER COUNTY PARKS AND OPEN SPACE
TWIN LAKES NEIGHBOR SURVEY 2002**

		OVERALL	SURVEY VERSION	DO YOU HAVE DOGS	
			Mail Survey	YES	NO
IF YOU HAVE CHILDREN, WHAT ARE THEIR AGES	0	5%	5%	5%	5%
	1	8%	8%	10%	5%
	2	7%	7%	11%	3%
	3	7%	7%	6%	9%
	4	7%	7%	7%	6%
	5	7%	7%	5%	10%
	6	8%	8%	7%	9%
	7	7%	7%	7%	8%
	8	9%	9%	7%	11%
	9	6%	6%	4%	7%
	10	11%	11%	11%	12%
	11	12%	12%	9%	16%
	12	12%	12%	14%	10%
	13	14%	14%	14%	14%
	14	9%	9%	10%	8%
	15	12%	12%	14%	11%
	16	8%	8%	9%	7%
	17	10%	10%	12%	8%
	18	5%	5%	7%	4%
	19	4%	4%	4%	5%
	20	3%	3%	5%	1%
	21	1%	1%		2%
	22	0%	0%		1%
TOTAL		175%	175%	179%	170%
	n =	227	227	116	111

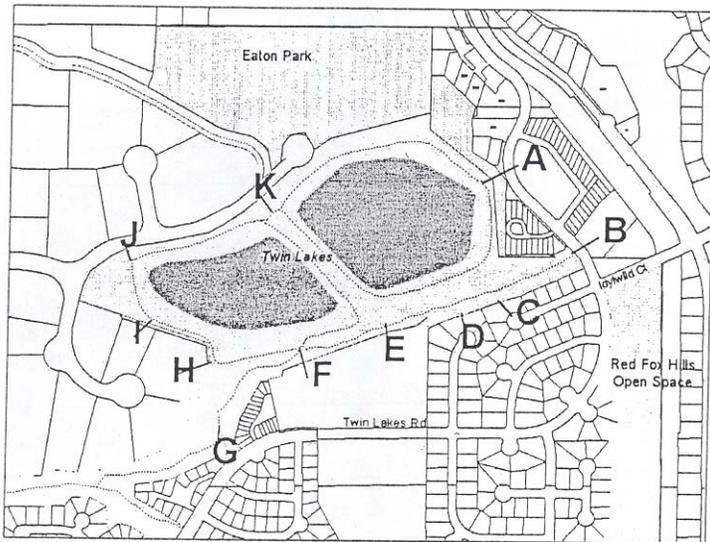
10 Apr 02

Source: RRC Associates

**BOULDER COUNTY PARKS AND OPEN SPACE
TWIN LAKES NEIGHBOR SURVEY 2002**

		OVERALL	SURVEY VERSION		DO YOU HAVE DOGS	
			Mail Survey	On-Site Survey	YES	NO
DO YOU HAVE PET DOGS	Yes	46%	44%	64%	100%	
	No	54%	56%	36%		100%
TOTAL		100%	100%	100%	100%	100%
	n =	761	676	85	349	412
IF YOU HAVE PET DOGS, HOW MANY DO YOU HAVE	One	72%	72%	74%	72%	
	Two	24%	25%	17%	24%	
	Three	3%	2%	6%	3%	
	Four	0%	0%		0%	
	Five	0%		2%	0%	
	Six	0%		2%	0%	
TOTAL		100%	100%	100%	100%	
Average		1.3	1.3	1.5	1.3	
Median		1.0	1.0	1.0	1.0	
n =		345	292	53	345	0
DO YOU FEEL DOG WASTE IS A PROBLEM	Yes	30%		30%	15%	57%
	No	70%		70%	85%	43%
TOTAL		100%		100%	100%	100%
	n =	84		84	52	30

10 Apr 02
Source: RRC Associates



**BOULDER COUNTY PARKS AND OPEN SPACE
TWIN LAKES NEIGHBOR SURVEY 2002**

		OVERALL	SURVEY VERSION			DO YOU HAVE DOGS	
			Mail Survey	Employee Survey	On-Site Survey	YES	NO
DO YOU USE THE TWIN LAKES AREA	No	7%	6%	17%	1%	4%	7%
	Yes	93%	94%	83%	99%	96%	93%
TOTAL		100%	100%	100%	100%	100%	100%
	n =	870	679	106	85	349	411
HOW DO YOU ACCESS TWIN LAKES	G	48%	52%	35%	33%	45%	55%
	B	23%	26%	16%	11%	23%	25%
	A	16%	17%	7%	13%	20%	14%
	F	13%	14%	9%	7%	17%	9%
	J	11%	8%	32%	11%	8%	8%
	K	10%	8%	22%	15%	9%	9%
	E	9%	10%	6%	9%	11%	8%
	D	8%	9%	3%	8%	11%	7%
	H	6%	4%	26%	4%	3%	4%
	C	4%	4%	4%	5%	4%	5%
	I	3%	2%	7%	4%	2%	3%
	L	0%	0%	1%		0%	0%
TOTAL		152%	155%	168%	120%	154%	147%
	n =	669	525	69	75	289	310

10 Apr 02
Source: RRC Associates

BOULDER COUNTY PARKS AND OPEN SPACE
TWIN LAKES NEIGHBOR SURVEY 2002

		OVERALL	SURVEY VERSION			DO YOU HAVE DOGS	
			Mail Survey	Employee Survey	On-Site Survey	YES	NO
WHAT ACTIVITIES DO YOU PURSUE AT TWIN LAKES	Walk	90%	90%	94%	89%	89%	91%
	View wildlife	54%	56%	43%	46%	52%	57%
	Jog/run	52%	52%	41%	68%	58%	50%
	Ride my bike	49%	55%	15%	41%	51%	55%
	Exercise my dog(s)	41%	42%	17%	56%	91%	2%
	Bird watch	31%	33%	23%	25%	30%	34%
	Exercise my dog(s) in water	22%	22%	11%	35%	48%	2%
	Study nature	21%	23%	9%	19%	22%	23%
	Other	5%	6%	3%	5%	5%	6%
	Fishing	5%	5%	3%	7%	4%	6%
	Ice skate	3%	3%	6%	2%	3%	3%
	Boating, including belly boats	3%	2%	2%	9%	3%	3%
TOTAL		377%	389%	268%	404%	456%	332%
	n =	806	633	88	85	334	380
WHEN DO YOU USE TWIN LAKES	Weekends	67%	74%	20%	59%	72%	74%
	After work	50%	54%	19%	49%	59%	49%
	Weekdays during the day	39%	39%	31%	49%	43%	37%
	Early weekday mornings	38%	38%	11%	63%	50%	32%
	After dinner/evenings	36%	41%	5%	32%	41%	39%
	Noon time/lunch break	25%	16%	81%	35%	23%	14%
TOTAL		254%	262%	167%	288%	288%	245%
	n =	801	632	88	81	329	379

10 Apr 02
Source: RRC Associates

BOULDER COUNTY PARKS AND OPEN SPACE
TWIN LAKES NEIGHBOR SURVEY 2002

		OVERALL	SURVEY VERSION			DO YOU HAVE DOGS	
			Mail Survey	Employee Survey	On-Site Survey	YES	NO
HOW MANY TIMES PER MONTH DO YOU VISIT TWIN LAKES ON AVERAGE	1 time	5%	7%	1%		3%	9%
	2 times	8%	9%	5%		6%	10%
	3 times	4%	5%	1%		3%	5%
	4 times	10%	11%	8%	7%	8%	13%
	5 times	1%	1%			1%	1%
	6 times	1%	1%	3%		1%	1%
	8 times	14%	15%	13%	12%	12%	17%
	10 times	0%	0%			0%	1%
	11 - 15 times	18%	17%	28%	18%	15%	18%
	16 - 20 times	22%	20%	39%	25%	22%	19%
	More than 20 times	16%	15%	2%	37%	29%	7%
TOTAL		100%	100%	100%	100%	100%	100%
Average		13.7	13.0	12.6	20.4	17.7	10.5
Median		12.0	12.0	12.0	20.0	16.0	8.0

BOULDER COUNTY PARKS AND OPEN SPACE
TWIN LAKES NEIGHBOR SURVEY 2002

		OVERALL	SURVEY VERSION			DO YOU HAVE DOGS	
			Mail Survey	Employee Survey	On-Site Survey	YES	NO
WOULD YOU SUPPORT THE LEASH REGULATION	Yes	62%	62%	76%	46%	38%	81%
	No	38%	38%	24%	54%	62%	19%
TOTAL		100%	100%	100%	100%	100%	100%
n =		815	645	88	82	339	382
WOULD YOU SUPPORT OCCASIONAL WILDLIFE CLOSURES	Yes	83%	84%	83%	78%	77%	88%
	No	17%	16%	17%	22%	23%	12%
TOTAL		100%	100%	100%	100%	100%	100%
n =		833	655	96	82	337	395

10 Apr 02

**BOULDER COUNTY PARKS AND OPEN SPACE
TWIN LAKES NEIGHBOR SURVEY 2002**

		OVERALL	SURVEY VERSION			DO YOU HAVE DOGS	
			Mail Survey	Employee Survey	On-Site Survey	YES	NO
DO YOU NOTICE ANY PROBLEMS AT TWIN LAKES	None	34%	33%	40%	39%	38%	30%
	Litter	19%	20%	8%	23%	22%	19%
	Dog waste	18%	18%	17%	14%	11%	24%
	Dogs off leash	16%	17%	8%	20%	11%	23%
	Lake concerns/ water level	12%	12%	17%	11%	10%	12%
	Trail conditions	11%	12%	12%	3%	8%	14%
	Other	9%	11%	3%	4%	12%	8%
	Human use concerns	6%	6%	4%	13%	10%	4%
	Environmental concerns	6%	6%	6%	4%	6%	5%
TOTAL		132%	134%	114%	131%	128%	139%
	n =	678	530	77	71	282	317
WHAT ARE THE BEST THINGS ABOUT TWIN LAKES	Natural setting	33%	34%	28%	35%	31%	36%
	Proximity	33%	34%	32%	26%	28%	37%
	Quiet, peaceful, uncrowded	29%	29%	28%	26%	27%	31%
	Wildlife	25%	27%	16%	14%	18%	33%
	Trails	22%	22%	25%	16%	19%	24%
	Dogs can be off leash	16%	15%	9%	25%	32%	2%
	View	14%	15%	9%	10%	11%	18%
	Recreational opportunities	13%	13%	12%	16%	15%	12%
	Undeveloped open space	11%	13%	4%	6%	13%	11%
Other	11%	9%	14%	19%	12%	8%	
TOTAL		206%	211%	177%	194%	206%	212%
	n =	729	571	81	77	313	330

10 Apr 02
Source: RRC Associates

BOULDER COUNTY PARKS AND OPEN SPACE
TWIN LAKES NEIGHBOR SURVEY 2002

		OVERALL	SURVEY VERSION			DO YOU HAVE DOGS	
			Mail Survey	Employee Survey	On-Site Survey	YES	NO
WHAT CAN BE IMPROVED AT TWIN LAKES	Other	22%	24%	11%	12%	23%	23%
	Improve trails	18%	18%	23%	11%	14%	21%
	Remove litter	17%	16%	13%	26%	19%	16%
	Improve access	14%	15%	15%	7%	12%	16%
	Enforce dog waste control/add dog waste containers	14%	14%	13%	12%	16%	12%
	Nothing	11%	11%	9%	14%	16%	7%
	Leash regulations	11%	12%	6%	9%	4%	20%
	Add benches/picnic areas	9%	9%	8%	12%	3%	15%
	Add/maintain water levels	9%	9%	15%	4%	8%	10%
	Install trash containers	8%	9%		11%	13%	5%
	Improve natural setting	8%	9%	13%	4%	6%	10%
	Voice/sight control regulations	3%	3%		5%	5%	2%
	Stock lake with fish	2%	2%	2%	7%	2%	3%
	TOTAL	148%	152%	126%	133%	141%	159%
n =	566	456	53	57	249	261	

10 Apr 02
Source: RRC Associates

Excerpt of results related to open space management, from telephone survey conducted by The Public Information Corporation in July 2002.

How the Survey Was Conducted

The Public Information Corporation of Littleton, Colorado, conducted a random opinion survey of active voters in Boulder County, Colorado, in July 2002. Interviewing took place in two periods extending from July 1 through July 15. No interviews were conducted during the Independence Day holiday period extending from July 4 through 7.

A total of 512 interviews were conducted. Confidence factor in this survey is 4.2 percent or better, plus or minus, in 95 out of 100 cases.

Calling lists were extracted from a file of all active voters provided by the office of the Boulder County Clerk and Recorder...Demographic balancing was utilized throughout the interviewing phase so that the 512 respondents collectively resembled the makeup of all persons in the active voter file by residency, party affiliation, gender and age. Demographic quotas were determined from totals shown in the county file with one exception -- age. Dates of birth are provided, but for our data processing it is necessary to sort them into six age brackets which are assigned numerical codes.

We drew an "every nth" sampling from the registration file to determine the frequency within each of those age brackets. It would have been simpler to use the profiles from the 2000 census, but that is not valid because the demographic characteristics of active voters are appreciably different from those of the population as a whole.

We use the actual questions from the questionnaire, minus some introductory statements and instructions to interviewers, as a framework for this report. Some of the tables presenting countywide results also show how respondents in each of four geographical zones feel about particular questions. The zones consist of (1) the City of Boulder; (2) the City of Longmont; (3) the Cities of Lafayette, Louisville, Superior and Erie; and (4) towns and unincorporated areas.

Instances in which residents of any of those zones feel appreciably different than do Boulder County active voters as a whole may be seen in those tables. When those differences are greater than 5 percent plus or minus compared with the countywide result on a given question we term them "demographic anomalies" and highlight them in the analysis. In addition, we report on many anomalies that turn up in the other demographic groupings including political party affiliation, gender and age brackets.

All told there are 16 demographic groupings.

Questions 8-11 -- Importance of Open Space Activities

Open space is a broad subject that includes a variety of activities and values . . . Please tell me whether you feel the following activities of Boulder County Open Space are very important, fairly important, not very important or not important at all.

Question 8. What about protecting habitat for wildlife?

Very important . . .	68%	Not important at all	2
Fairly important. . .	24	No response	1
Not very important	5		

Question 9. What about preserving farms and ranches?

Very important . . .	55%
Fairly important . . .	30
Not very important	10
Not important at all	4
No response	1

Question 10. What about nature study?

Very important . . .	36%
Fairly important . . .	40
Not very important	17
Not important at all	5
No response	1

Question 11. What about preserving historic mining and farm structures?

Very important . . .	28%
Fairly important . .	39
Not very important	24
Not important at all	8
No response	1

One of the purposes of this series of questions, in which the order in which the questions were asked was rotated to avoid possible order bias, was to provide a direct comparison of the relative importance of the four activities/values to respondents. The following consolidated table was prepared for that purpose:

	<u>Q8. Wildlife Habitat</u>	<u>Q9. Farms & Ranches</u>	<u>Q10. Nature Study</u>	<u>Q11. Historic Structures</u>
Very important	68%	55%	36%	28%
Fairly important	24	30	40	39
Not very important	5	10	17	24
Not important at all	2	4	5	8
No response	1	1	1	1

Discussion

None of the activities and values could be described as unpopular, but with two of them, protecting habitat for wildlife and preserving farms and ranches, more than half of the 512 respondents described them as “very important.” Nature study was well-regarded, but support for preserving historic mining and farm structures was relatively lukewarm.

The responses to questions 8 through 11 were further processed to provide another kind of comparison. We assigned numerical values to each of the response categories as follows: Very important, 3 points; fairly important, 2 points; not very important, 1 point; and not important at all or no response, 0 points. We applied those values to the frequencies of all question responses, added them and divided by 512. A perfect score would have been 3.00. The results were:

Question 8 --	Protecting habitat for wildlife	2.72
Question 9 --	Preserving farms and ranches	2.46
Question 10 --	Nature study	2.09
Question 11 --	Preserving historic mining and farm structures	1.87

Demographic Anomalies

Due to the format of the questions, which did not use two distinctly positive and two distinctly negative response categories as was case previously in the questionnaire, we present only instances with the four questions where anomalously high results occurred with “very important.” The 512-response percents are shown in parentheses.

Question 8 -- Protecting habitat for wildlife

Women, 78 percent (69); Democrats, 79 percent; persons who are 18 to 24 years of age, 75 percent; persons who are 25 to 34 years of age, 85 percent.

Question 9 -- Preserving farms and ranches

Women, 62 percent (56); and persons who are 35 to 45 years of age, 62 percent.

Question 10 -- Nature study

Democrats, 44 percent (38); residents of towns and unincorporated areas, 47 percent; women, 45 percent; and persons 18 to 34 years of age, 48 percent.

Question 11 -- Preserving historic mining and farm structures

Persons who are 18 to 24 years of age, 49 percent (26).

Questions 12 -14 -- Dogs in Space (Open)

Questions 12 and 14 were asked of all respondents. Question 13 was asked only of persons who said they do own a dog.

<i>Question 12 -- Do you own a dog?</i>	Yes	47%
	No	53
	No response . . .	1

Discussion

There were a number of demographic anomalies when it comes to Boulder County dog ownership, although not where party affiliation is concerned. Dog ownership appears to be apolitical, because no anomalously high or low numbers turned up there, although Unaffiliated persons were a bit more likely to be dog owners than were members of either major party.

City of Boulder residents are much less likely to say that they own a dog than are persons who live in other areas, and it is unusual that all four geographical zones are anomalously high or low compared with the countywide average of 47 percent. The results were: City of Boulder, 30 percent; City of Longmont, 54 percent; Southeast cities, 55 percent; and towns and unincorporated areas, 48 percent.

The age brackets also produced some sharp divergences, with only one grouping -- those who are between 25 to 34 years of age -- in the average range. In fact they were right on the average. The largest concentration of dog owners was persons between 35 and 54 years of age -- 55 percent. The youngest and oldest groupings are least likely to own dogs. It was 40 percent for 18-to-24-year-olds; 38 percent for those 55 to 64; and 34 percent for persons 65 and older.

<i>Question 13 -- How often do you take your dog onto open space?</i>	Frequently	31%
	Occasionally	22
	Rarely	24
	Never	22
	No response	0

Discussion

City of Boulder active voters may be least likely of the geographical zone residents to own dogs, but the ones who do are most likely to take them onto open space, with a particularly large 49 percent indicating that they do so frequently. Next were persons who live in the southeast county cities, at 43 percent. Only 17 percent of Longmont residents say they take their dogs onto open space frequently, and 32 percent say they rarely do, compared to 24 percent countywide. Again, there isn't a partisan pattern among active voters who take their dog onto open space frequently.

Persons in the two youngest age groupings are the most likely to take dogs onto open space, and it's by a considerable margin. Forty-two percent of persons who are 18 to 24 say they do frequently. Among 25 to 35-year-olds it's 59 percent, and in fact, nearly one-third of all persons who say they take dogs onto open space are in that age bracket.

Only 12 percent of the 65 and older dog owners say they frequently take their pets onto open space, and 40 percent say they never do.

<i>Question 14 -- Currently it is County policy that dogs are required to be on a leash at all times they are on County open space. How do you feel about (that policy)?</i>	Agree strongly	54%
	Agree mildly	14
	Disagree mildly	14
	Disagree strongly	14
	Other	3
	No response	2

Discussion

It's obvious from this table that more than half of the 512 respondents agree strongly with the county's leash policy on open space and the other three response categories couldn't possibly be more clustered. "Other" responses, which were volunteered and not solicited, consisted almost entirely of observations that exceptions should be made when dogs are well-trained and under firm voice control.

The people least affected by the leash policy are most vehement in their support of that policy. Sixty-nine percent of persons 65 and older agree strongly with the policy.

And, people most affected by the leash policy are least in favor of it. Only 38 percent of those who are 25 to 34 years of age agree strongly. But all told more of them are in agreement than are in disagreement with the leash policy in open space, with 54 percent agreeing either strongly or mildly versus 34 percent who disagree either mildly or strongly.

Persons in the three main partisan groupings aren't quite as much in lock-step as was the case with questions 12 and 13. Republicans and Democrats are close to the 512-respondent "agree strongly" result, but Unaffiliateds drop back to 47 percent. However, when degree of agreement or disagreement isn't considered Republicans, Democrats and Unaffiliateds are within three percent of one another, which is statistically insignificant.

Appendix 2: Boulder County Comprehensive Plan: Goals and Policies

Goals

Those goals in the Boulder County Comprehensive Plan (as amended, 1999) of particular relevance to the Twin Lakes Open Space include:

- **Environmental Management**

- B.5** Wetlands, which are important to maintaining the overall balance of ecological systems, should be conserved.
- B.9** Riparian ecosystems, which are important plant communities, wildlife habitat and movement corridors, shall be protected.

- **Parks and Opens Space**

- C.1** Provision should be made for open space to protect and enhance the quality of life and enjoyment of the environment.
- C.5** The private sector, non-county agencies, and other governmental jurisdictions should be encouraged to participate in open space preservation and trails development in Boulder County.

- **Residential Goals**

- D.2** Quality residential areas, which function as integral neighborhood units with schools, parks and other similar facilities as centers, should be encouraged.

- **Public Involvement**

- H.1** The county shall encourage public participation in the making of decisions by public and quasi-public bodies which significantly affect citizens.

Policies

Those policies in the Boulder County Comprehensive Plan (as amended, 1999) of particular relevance to the Twin Lakes Open Space include:

- **Resource Management**

- OS 2.03** The county shall provide management plans and the means for the implementation of said plans for all open space areas that have been acquired by or dedicated to the county.

OS 2.03.01 The foremost management objectives of the individual open space lands shall follow directly from the purposes for which the land was acquired.

OS 2.03.02 Management of county open space lands shall consider the regional context of ecosystems and adjacent land uses.

OS 2.04 The county, through its Parks and Open Space Department, shall provide appropriate educational services for the public which increase public awareness of the county's irreplaceable and renewable resources and the management techniques appropriate for their protection, preservation, and conservation.

OS 2.05 The county, through its Weed Management Program, shall discourage the introduction of exotic or undesirable plants and shall work to eradicate existing infestations through the use of Integrated Weed Management throughout the county on private and public lands.

- **Recreational Use**

OS 4.03.01 Recreational use shall be passive, including but not limited to hiking, photography or nature studies, and, if specifically designated, bicycling, horseback riding, or fishing. Only limited development and maintenance of facilities will be provided.

- **Trails**

OS 6.01 Trails and trailheads shall be planned, designed, and constructed to avoid or minimize the degradation of natural and cultural resources, especially riparian areas and associated wildlife habitats.

OS 6.04 Trails shall provide for pedestrian, equestrian, bicycle, and/or other non-motorized uses, where each is warranted. Incompatible uses shall be appropriately separated.

- **Public Decision Making**

OS 8.03 In developing management plans for open space area, Parks and Open Space staff shall solicit public participation of interested individuals, community organizations, adjacent landowners and the Parks and Open Space Advisory Committee. Plans shall be reviewed by the Parks and Open Space Advisory Committee, including public comment, and recommended for adoption after public hearing by the Board of County Commissioners.

Appendix 3: Potential Mammalian Species

ORDER MARSUPICARNIVORA

Didelphis virginiana (Virginia Opossum)

ORDER INSECTIVORA

Sorex cinereus (Masked Shrew)

Cryptotis parva (Least Shrew)

ORDER CHIROPTERA

Myotis lucifugus (Little Brown Bat)

Myotis volans (Long-legged Myotis)

Myotis leibii (Small-footed Myotis)

Lasiurus noctivagans (Silver-haired Bat)

Eptesicus fuscus (Big Brown Bat)

Lasiurus cinereus (Hoary Bat)

ORDER LAGOMORPHA

Sylvilagus floridanus (Eastern Cottontail)

ORDER RODENTIA

Sciurus niger (Fox Squirrel)

Castor Canadensis (Beaver)

Microtus pennsylvanicus ((Meadow vole)

Microtus ochrogaster (Prairie Vole)

Ondatra zibethicus (Muskrat)

Zapus hudsonius (Meadow Jumping Mouse)

ORDER CARNIVORA

Canis latrans (Coyote)

Vulpes vulpes (Red Fox)

Ursus Americanus (Black Bear)

Procyon Iotor (Raccoon)

Mustela frenata (Long-tailed Weasel)

Mephitis mephitis (Striped Skunk)

Lutra Canadensis (River Otter)

Felis concolor (Mountain Lion)

Felis rufus (Bobcat)

ORDER ARTIODACTYLA

Odocoileus hemionus (Mule Deer)

Odocoileus virginianus (White-tailed Deer)

Appendix 4: Potential Avian Species

Birds that may be found in Eastern Boulder County

BIRDS OF PREY

Kites, Hawks, Eagles & Vultures

- *Osprey – uncommon summer
- Bald Eagle –common winter
- Turkey Vulture –summer
- Sharp-shinned Hawk –a few year-round
- Red-tailed Hawk –common year-round
- Swainson’s Hawk –occasionally year-round, fairly common in migration
- Rough-legged Hawk –common winter resident
- *Northern Harrier –common year round
- Merlin –casual summer and winter
- American Kestrel –fairly common summer and winter

Owls

- Screech Owl – may find year round
- Great Horned Owl – may be resident year round
- *Long-eared Owl – historically common; uncommon last 20 years
- *Short-eared Owl – uncommon year round

BIRDS OF THE PONDS AND MARSHY AREAS

Year-round residents

- Pied-billed Grebe – most common in migration, occasional rest of the year
- Canada Goose – very abundant in migration, increasing in summer
- Mallard – abundant in winter, casual in summer
- Gadwall – common in migration

- American Coot –very common in migration, fairly common in summer, casual in winter
- Killdeer – common summer resident, casual in winter
- Snipe – fairly common in summer and winter
- Belted Kingfisher – common summer and winter
- Red-shafted Flicker – common summer and winter
- Downy Woodpecker – common year round
- Black-billed Magpie – conspicuous year round
- Starling – common
- Red-winged Blackbird – common year round, abundant in summer
- Song Sparrow – fairly common summer, few in winter

Summer residents – may indicate nesting

- Great Blue Heron – common March to October
- *Great Egret – rare summer
- Black-crowned Night Heron – probably find from April to September
- *American Bittern – decreasing
- Blue-winged Teal – fairly common April and early October in migration
- Cinnamon Teal – possible in summer
- Virginia Rail – probably find in summer
- Sora – probably find in summer

American Avocet – probably common in summer

Wilson's Phalarope – in migration

Mourning Dove – common in summer

Tree Swallow – nests

Yellowthroat – arrive first of May, probably nests

Yellow-headed Blackbird – occasionally common in thick marshy areas in summer

Bullock's Oriole – common in summer, numerous nests noted

Lark Sparrow – young may gather around ponds late in the summer

Winter residents

Horned Grebe – most common in migration, but occasionally occur in winter

Red-breasted Merganser – infrequent in winter

Herring Gull – common in winter on ponds

Ring-billed Gull – common in winter on ponds

Harris' Sparrow – few in winter

Migrants

Franklin's Gull

Pintail – common in migration, few in summer, arrive March leave early October

Green-winged Teal – common in migration, few year round

American Wigeon – common migrant, late May and again in October

Northern Shoveler – common migrant May, June, and again September and October

Redhead – casual in migration, few in summer and winter

Canvasback – casual in migration

Ruddy Duck – casual in migration

Common Merganser – common in migration and winter

Baird's Sandpiper – probably common in migration

Townsend's Warbler – few in spring and fall migration

White-crowned Sparrow – few in migration

BIRDS OF RIPARIAN STANDS

Year-round residents

Killdeer – common in summer and less so in winter

Common Snipe – fairly common summer and winter

Belted Kingfisher – common year round

Dark-eyed Junco – common in winter especially in weed patches

Tree Sparrow – fairly common in winter

Harris Sparrow – few in winter

Migrants

Baird's Sandpiper – common in migration

Least Flycatcher – regular spring and fall migrant

Cordilleran Flycatcher – probably occurs during migration

Swainson's Thrush – common migrant first half of May

Western Bluebird – occurs in small numbers in migration

Plumbeous Vireo – common in migration, May and again in October

Orange-crowned Warbler – fairly common in migration, late April early May

Virginia Warbler – fairly common in migration, arrive early May

Yellow-rumped Warbler – spring and fall migration, few stragglers in winter

Townsend's Warbler – may see a few in spring and fall migration

MacGillvary's Warbler – common in migration, nests in thickets along streams

BIRDS OF THE FLOOD PLAIN GRASSY AREAS

Year-round residents

Canada Goose- abundant in migration and winter, increasing in summer
Killdeer- common in summer and less so in winter
Red-shafted Flicker – very common year round
Downy Woodpecker – uncommon year round
Horned Lark – fairly common, though irregularly so, year round
Blue Jay – uncommon year round, apparently expanding its range westward, so expect to see them increasing in the Boulder area
Common Crow – year round resident
Black-billed Magpie – conspicuous year round
American Robin – common year round, more so in summer
Starling – common year round
House Sparrow – common year round around farmyards and barns
Western Meadowlark – common year round
Red-winged Blackbird – common year round
House Finch – common year round
American Goldfinch – few year round, especially in weed patches
Lesser Goldfinch – fairly common in summer, occasionally in winter

Summer residents – may indicate nesting birds

Mourning Dove – probably nests in the summer
Eastern Kingbird – probably nests
Say's Phoebe – probably nests
Cliff Swallow - probable
Barn Swallow – fairly common, especially around barns

House Wren – may find a few here in the summer, they prefer the streamside cottonwood groves, arrive in May
Bullock's Oriole – common in summer, found many nests
Brewer's Blackbird – probably fairly common in summer, nests
*Lark Bunting – rare in summer
Savannah Sparrow – few in the summer
Grasshopper Sparrow – infrequent in small numbers
Vesper Sparrow – probably common breeder
Lark Sparrow – probably find a few in the summer
Chipping Sparrow – probably find a few in thickets in the summer, fairly common migrant
Clay-colored Sparrow – infrequent in small numbers
Brewer's Sparrow – infrequent in small numbers
Dickcissel – irregularly common in summer

Winter residents

Common Raven – occurs regularly in small numbers in winter
Cedar Waxwing – irregular in large flocks in winter
Bohemian Waxwing – irregular in large flocks in winter
Northern Shrike – winter resident
Dark-eyed Junco – fairly common winter resident, especially in weed patches
Tree Sparrow – common in winter

Migrants

Mountain Bluebird – spring and fall
Western Bluebird – occurs in small numbers in migration March and April
Red-shafted Flicker – common year round
Blue Jay – uncommon year round, expanding its range westward apparently, so expect it to increase its numbers in the future

Black-billed Magpie – conspicuous year round
 Black-capped Chickadee – common year round
 White-breasted Nuthatch – common year round
 Mockingbird – uncommon year round, expanding its range westward apparently, so expect it to increase its numbers in the future
 American Robin – common year round, more so in the summer
 Starling – common
 House Sparrow – common around farmhouses and barns, along creeks year round
 Red-winged Blackbird – common year round
 House Finch – common year round resident
 Lesser Goldfinch – fairly common in summer, occasionally in winter
 Song Sparrow – fairly common in summer, few in winter

Summer residents – indicates nesting birds

Mourning Dove – probably breeder along creek bottoms
 Eastern Kingbird – arrives in early May, possibly nests in the area
 Western Kingbird – arrives in early May, possibly nests in the area
 Say’s Phoebe – probably nests, arrives late March, early May
 Traill’s Flycatcher – probably breeds along stream banks
 Western Wood Pewee – probably nests, nesting begins mid-June, probably arrives mid-May
 Tree Swallow – probably nests, arrives mid-April
 House Wren – common in summer, probably nests, arrives early May
 Catbird – uncommon

*Brown Thrasher – a few may nest in dense thickets
 Red-eyed Vireo – common in migration, probably nests
 Warbling Vireo – arrived mid-May, likely breeder
 Yellow Warbler – very likely nester
 Yellowthroat – arrive first week of May, possibly nests
 Bullock’s Oriole – common in summer, definite nester
 Brown-headed Cowbird – probable in summer, known to parasitize some of the birds on this list
 Black-headed Grosbeak – arrive early May, possibly nests

Winter residents

Common Raven – occurs in small numbers in winter
 Mountain Chickadee – will come down during harsh weather in winter
 Brown Creeper – common in small numbers in winter
 Dipper – common in small numbers in winter,
 Townsend’s Solitaire – fairly common in winter
 Cedar Waxwing – occurs irregularly in winter
 Bohemian Waxwing – occurs irregularly in winter
 Cassin’s Finch – occurs regularly in winter

#NOTE: The faunal inventory is a compilation of data from the Colorado Division of Wildlife, Boulder County Audubon, Thorne Ecological Institute and Boulder County. The above species are documented for eastern Boulder County but all may not necessarily be found on this property.

Appendix 5: TLAG Dog Management Recommendation

To: Parks and Open Space Advisory Committee
From: Twin Lakes Advisory Group (TLAG): Erick Brunner, Darryl Dargitz, Barbara Hawke, Ruth Merriman, Christine Quinlan, Susan Winter, Frank Zygmunt
RE: TLAG Recommendation
Date: January 12, 2003

Background

Who is TLAG? We are Boulder County residents selected from a pool of applicants who live in the vicinity of Twin Lakes and appointed to the Twin Lakes Advisory Group (TLAG) by the Boulder County Board of Commissioners. Our primary task was to formulate a recommendation for dog management at Twin Lakes.

We, as TLAG members, represent differing viewpoints about best management for the Twin Lakes. Some of us are long-time residents, some more recent; some are dog owners and some are not. A common thread of our involvement is that we care about Twin Lakes and its future.

TLAG met six times between April and December 2003. Over the course of these six meetings, TLAG followed a process lead by BCPOS staff that resulted in our dog management recommendation. The process consisted of the following steps:

- Vision exercise: what would you like to see at Twin Lakes in 5 years? What would the community like to see at Twin Lakes in 5 years?
- Develop evaluation criteria to use for evaluating dog management proposals (See Attachment A).
- Submit individual dog management proposals and evaluate them as a group.
- Decision Tree Exercise to develop priorities and identify trade-offs in order to further evaluate and narrow down proposals.
- Consensus Recommendation (See below).

In addition to the process listed above, with Boulder County Parks and Open Space (BCPOS) staff assistance, TLAG researched and reviewed documentation related to the dog management issue locally, statewide and nationally.

Although we have different opinions about how to balance the interests of humans, dogs, and wildlife, we share certain hopes and guiding principals for the future of Twin Lakes:

- The Twin Lakes area should retain the feeling of a neighborhood gathering place
- The Twin Lakes should be a place where a broad diversity of people could enjoy the outdoor setting in relative harmony
- The physical infrastructure in the Twin Lakes area should support a casual atmosphere, and build on the historic traditions of the area

Recommendation

TLAG's consensus recommendation is that the County allow one lake to have an off leash regulation and to implement the County's leash regulation at the other lake upon completion of the Twin Lakes Management Plan. Details and timeline are discussed below.

Discussion

- 1) **Define "Off Leash"**. For purposes of off leash regulations, TLAG recommends that Boulder County define dogs off leash as dogs that are not physically connected to the person they are accompanied by.
 - TLAG recommends that the County limit the number of off leash dogs to two per person. This would not restrict the number of dogs a person could have on leash.
 - The off leash designation would extend to the lakes: e.g. it would allow dogs to be off leash in the water at the lake which has the off leash designation, and it would allow dogs to be on leash in the water at the lake which has the on leash designation.
 - TLAG discussed whether the accompanying person should be required to have a leash with them for each off leash dog, and prefers that this requirement be part of the new regulations, provided it is deemed to be legal. TLAG will defer to the BCPOS law enforcement and legal staff for their recommendation.
- 2) **Elements of an "Off Leash" regulation**. TLAG looked at characteristics of off leash areas locally and around the country. Some areas require special licensing, and some areas require annual fees. Many are operated as dog parks for training opportunities.

An excerpt of BCPOS Regulations pertaining to dogs is included below. In order to allow dogs off leash, the county can use existing regulation 5(a), which would allow the off leash use at Twin Lakes and any other property deemed appropriate for such designation by posting the property as a designated off leash area. Paragraph 5(b) can also be modified to include language regarding the necessity of carrying a leash, if that is deemed appropriate.

Regulation 19 outlines unacceptable behavior for humans and domestic animals. This regulation applies to all dogs whether or not they are leashed. BCPOS staff feels this regulation gives them the necessary power to address problems that may occur with unleashed dogs.

TLAG feels that voluntary dog excrement pick up works well and is not currently a problem at Twin Lakes, aided by the pick up bags and trash can that were installed in 2003. TLAG recommends that voluntary dog excrement pick-up be evaluated along with the off leash designation after the new regulations have been in place (see discussion under paragraph 4). If necessary, the county can adopt a resolution regarding excrement pick up as provided for in paragraph 5(b).

Boulder County Parks and Open Space Regulations, Resolution No. 2001-50

5. (a) Any dog or other domestic animal within a Boulder County Park and Open Space area shall be restrained by a leash, cord, rope or

chain and under physical control of a person, except as otherwise provided for in this paragraph or posted with approval from the Board of County Commissioners.

- (b) The Director may adopt dog restrictions on specific trails, parks or open space areas that would require any person who brings a dog into a Boulder County Park and Open Space area to pick up, carry out and dispose of that dog's excrement.

19. It shall be unlawful for any person or their domestic animals to engage in disorderly conduct or any activity within a County park or open space area which interferes with the health, safety and welfare of the users or the neighbors in the area, or which creates a nuisance (including amplified sound). ...

- 3) **Which lake should be designated as Off Leash?** TLAG discussed many of the variables that should be considered in deciding which lake should have the off leash designation, summarized below. TLAG recommends that the off leash designation decision be made in the context of the management plan, so that all the relevant factors will be considered. TLAG will defer to the BCPOS staff for the recommendation, but would like the staff to consider TLAG's guiding principles (enumerated in the Background section of this memo), the evaluation criteria developed by TLAG (See Attachment A), the considerations listed below, in addition to technical information.

West Lake:

- West shoreline provides value to ground nesting birds due to wetlands
- More likely to dry out due to shallower "bowl"
- Lower aquatic habitat value (compared to East Lake) due to fluctuations in water level
- Better natural access barriers
- Better vegetative value on interior of trail around the lake
- Fewer entry points minimizes signage needs
- Closer to tech park (most employees are not dog walkers)

East Lake:

- Vegetation and trees on south side provide wildlife refuge
- Adjacent to Eaton Park wetland on north side
- On leash regulation would be consistent with adjacent Eaton Park management
- Better fishing opportunities compared to East Lake, due to deeper bowl
- Rip rap-stabilized shorelines means less shoreline impacts resulting from dogs
- Boat ramp provides dog access to water.
- Larger continuous wetlands of Eaton Park and wetlands surrounding East Lake are more valuable than the habitat around West Lake.

Variables that could be argued for either on leash or off leash designation include proximity of lake to residential neighborhoods and scenic values.

- 4) **Evaluation Period.** TLAG recommends that the off leash designation be monitored and evaluated after the management plan adoption and implementation. The purpose of the evaluation is to determine if the off leash designation is working adequately or if adjustments to the policy or its implementation are needed. Monitoring and evaluation would begin after the infrastructure improvements are in place (fencing, signage).

TLAG agreed with BCPOS staff that there should be a two-phase evaluation period: a check-in after one year, and a more formal evaluation after five years. After the first year, the check in would review evidence of compliance, number and nature of tickets issued, number and nature of complaints and any other available anecdotal evidence. The success of voluntary excrement removal, adequacy of parking and potential adjustments with neighboring property agencies would also be reviewed. Adjustments or refinements in the infrastructure or the policy implementation would be recommended based on this information.

The five- year evaluation would be more thorough, and might include more formal evaluation of compliance as compared with other POS properties. This longer time frame would allow the BCPOS interpretive staff to include Twin Lakes in their 5-year visitor study. This study, based on personal interviews at most BCPOS parks, focuses on visitors' experiences. The next iteration is slated for 2005. Finally, this time period would allow the development of a neighborhood "Friends of Twin Lakes" to develop and work from the grassroots level.

- 5) **Interim Management Actions.** The Twin Lakes Management Plan is slated for completion in fall of 2004. During the interim period, dogs will continue to be allowed off leash at both lakes. TLAG recommends that POS install temporary signage that will inform the public about how dogs are being managed in the interim period, about the upcoming management plan changes, and also to remind people about dog etiquette. TLAG also recommends that the BCPOS staff provide outreach to involve the surrounding community during the interim management period and leading up to the off leash designation. There was an expectation among TLAG members that some guidance or assistance from BCPOS staff would be needed to form and sustain this group.

Twin Lakes Time Line (Dates are Approximate)

- December 11: final TLAG meeting to review/refine and adopt recommendation
- January 2004: Update to POSAC on TLAG recommendation
- Winter/Spring/Summer 2004: install interim signage; engage in outreach activities
- Fall 2004: Twin Lakes Management Plan to POSAC and BOCC for adoption. BCPOS Staff is currently working on developing all the components of the management plan, aside from the dog management piece
- 2005: Implement infrastructure as recommended in Twin Lakes management plan
- Jan 2006: Begin enforcing leash law upon completion of fencing and signage
- Jan 2007: Schedule a “check-in” with POSAC to review how the regulation is working one year after enforcement begins, with courtesy notification to TLAG members
- 2012: 5-Year evaluation

Attachment A
TLAG Evaluation Criteria Dog Management Proposals

Operational Characteristics:

- Is the proposal easy to understand, remember and enforce?

Neighborhood Characteristics:

- Does the proposal primarily encourage neighborhood use (as opposed to destination visits)?
- Does the proposal create a safe environment?
- Does the proposal retain the current character of the neighborhood?

Environmental Characteristics:

- Does the proposal reduce impacts to wildlife?
- Does the proposal reduce impacts to existing vegetation?
- Does the proposal have the potential to improve wildlife habitat and vegetation?
- Does the proposal reduce potential health hazards?

User Experience Characteristics:

- Does the proposal provide a positive recreational experience for a variety of users?

County Commissioner's Request:

- Does the proposal satisfy BOCC's direction to "provide some accommodation for users that prefer not to encounter dogs off leash and for wildlife protection"?

Appendix 6: Site Plan



RECOMMENDED SITE PLAN
for
TWIN LAKES OPEN SPACE



OCTOBER 14, 2004

Appendix 7: Site Photos



East Lake, view of boat ramp to east



Boulder & Whiterock Ditch between lakes, view to southeast



East Lake trail, view to northeast, Eaton Park north of trail



Social trail accessing East Lake along outlet ditch, recommending closing trail



East Lake. view to west



City of Boulder Open Space & Mountain Parks property, east of East Lake primarily wetlands, cattails



Proposed east access, crosses City of Boulder Open Space & Mountain Parks wetland property



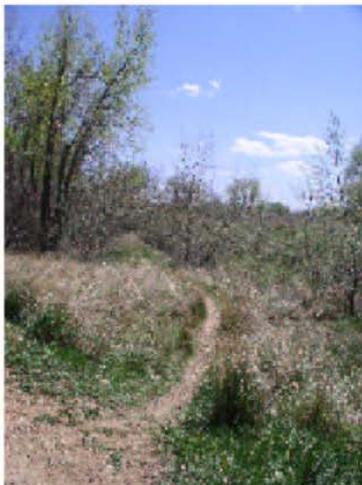
Social trail accessing east lake from Brandon Creek Drive, recommending closing



South side of East Lake trail, view to west, best wildlife values area south of trail



Social trail accessing East Lake from Twin Lakes Trail across wetland, recommending closing trail



Social trail accessing East Lake from Twin Lakes Trail across diversion structure, recommending installing a new bridge and formalizing access.



West Lake, north shoreline, view to west



West Lake, northwest 'corner,'



Northwest access to West Lake, recommending installing a drop gate for ditch rider and public access



West Lake, south shoreline



West Lake, south shoreline



West Lake, south shoreline



West Lake, inlet channel



Social trail accessing West Lake from Twin Lakes Trail, recommending formalizing trail and permitting dogs off-leash between Twin Lakes Trail and Boulder & Lefthand Ditch



Access to West Lake from Twin Lakes Trail, recommending trail improvements



West Lake, view to southwest

Appendix 8: General Boulder County POS Rules and Regulations

- Properties that are open for public use are open from sunrise to sunset. Overnight camping is prohibited.
- Collecting, removing, destroying, or defacing any natural or man-made objects within parks and open space is not permitted.
- Discharging or carrying firearms, crossbows, fireworks, or projectile weapons of any kind is not permitted (except law enforcement officials and as allowed by the Board of County Commissioners to carry out a wildlife management program).
- Ground fires are not permitted. Fires may only be built in established grills and fireplaces in picnic areas. Fires may be prohibited entirely by order of the Board of County Commissioners, the Boulder County Sheriff, or the Director of Parks and Open Space by posting special notices or notification through the press.
- Feeding, disturbing, trapping, hunting, or killing wildlife is not permitted (except as allowed by the Board of County Commissioners to carry out a wildlife management program).
- Motorized vehicles are not permitted (County, emergency, and agricultural lessees on official business are excepted; exceptions may also be granted to persons with disabilities, by written permission from the Parks and Open Space Department, for the use of single-rider, motorized vehicles adapted for recreational use by people with disabilities).
- It is unlawful to place rock bolts, install gates, establish or construct trails or other facility for public or private use without the written permission from the Parks and Open Space Department.
- The Parks and Open Space Department may temporarily close areas to public use for repairs or due to wildlife, vegetation, and/or public safety concerns. It shall be unlawful for the public to enter such areas.
- It is unlawful to consume, possess, or serve alcoholic beverages, as defined by state statute.
- Activities that unduly interfere with the health, safety, and welfare of the users or the neighbors in the area, or that create a nuisance or hazard to the use and safety of persons using or neighboring such areas are prohibited. Disorderly conduct (including amplified sound) shall be prohibited.
- Swimming, wading, boating, ice skating or ice fishing are permitted only where posted.
- Obey all fishing regulations at the specific open space property. A valid Colorado fishing license is required for all persons 16 years of age or older whenever fishing in ponds, lakes, creeks and rivers.

Appendix 9: Twin Lakes Open Space Management Team

Boulder County

Sara Melena, Resource Planning Intern
Ron Stewart, Director, Parks and Open Space Department
Therese Glowacki, Resource Management Manager
Rich Koopmann, Manager, Resource Planning Division
Jeff Moline, Natural Resource Planner
Patrick Malone, Natural Resource Planner
Peter Conovitz, Water Resource Specialist
Kristi Van Den Bosch, GIS/GPS Technician
Tim D'Amato, Weed Management Coordinator
David Bell, Lead Ranger
Mark Brennan, Wildlife Specialist
Dave Hoerath, Wildlife Specialist
Claire DeLeo, Plant Ecologist
Jennifer Kesler, Plant Ecologist
Kathy Kron, Landscape Architect
Tina Nielsen, Open Space Assistant

Twin Lakes Advisory Group (TLAG)

Boulder County Parks and Open Space Staff

David Bell
Rich Koopmann
Kathy Kron
Sara Melena
Tina Nielsen

POSAC Liaisons

Barbara Hawke
Christine Quinlan

Neighborhood Representatives

Erick Brunner
Darryl Dargitz
Ruth Merriman
Susan Winter
Frank Zygmunt