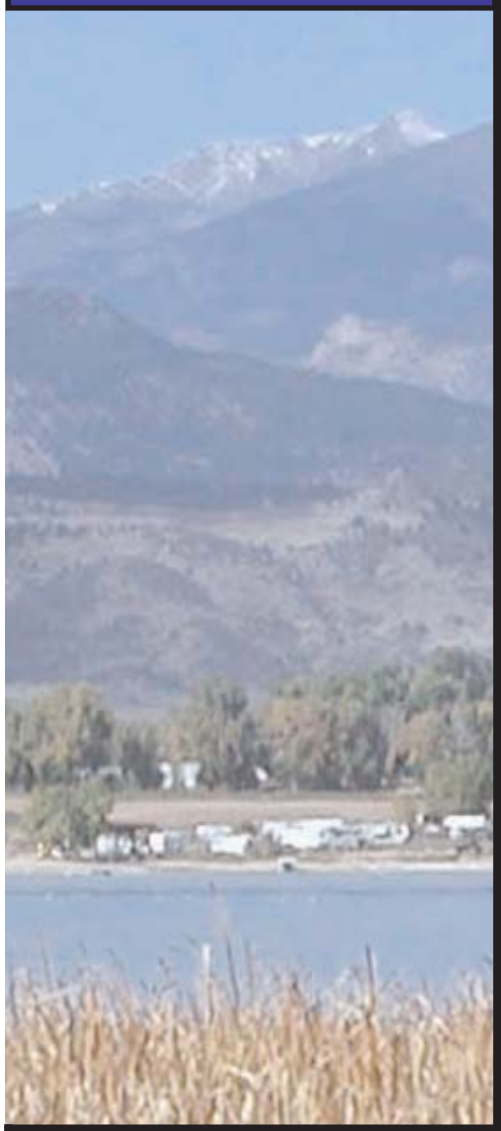
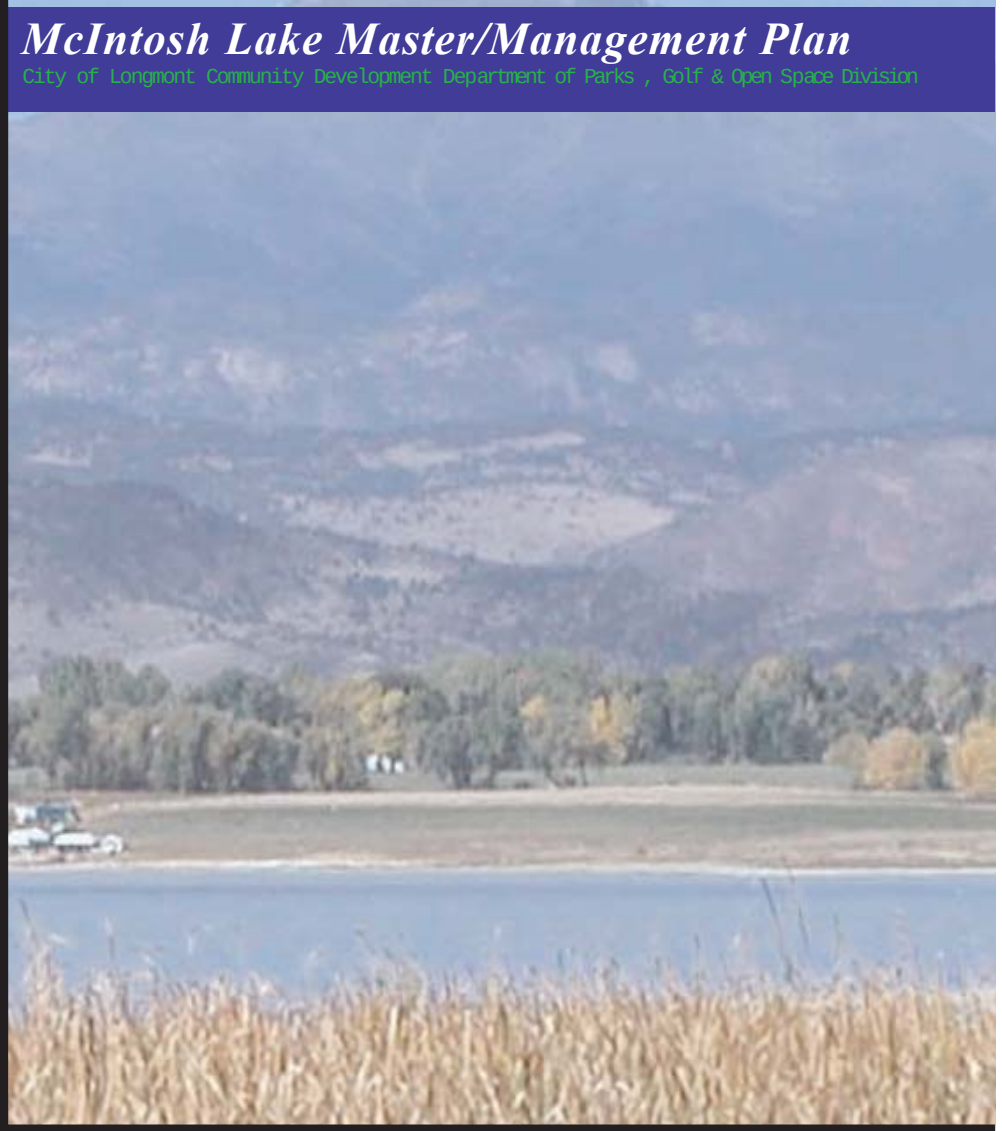
McIntosh Lake Master/Management Plan

City of Longmont Community Development Department of Parks , Golf & Open Space Division





McIntosh Lake

Master/Management Plan

July 8, 2003

Prepared For: **City of Longmont Parks, Recreation & Golf**

Prepared By: **Shapins Associates, ERO Resources Corporation**

Acknowledgements

This document represents the collaborative process between the citizens of the City of Longmont, the City of Longmont Staff and various public organizations. This effort could not have been successful without the contributions from the following individuals that participated in public meetings and reviews, and who generously shared their time during the planning process.

Staff Advisory Team

Dan Wolford, Open Space and Trails Superintendent–Project Leader
Don Bessler, Parks and Open Space Director
Gene Kraning, Parks and Forestry Superintendent
Helene Brown, Executive Assistant
Joe Olson, Senior Civil Engineer–Transportation
Ryan Kragerud, Senior Planner
Ron Holmes, GIS Analyst
Wes Lowrie, Senior Water Resource Technician
John Brim, Union Reservoir Ranger/Site Manager
Jeff Friesner, Recreation Superintendent
Jon Clarke, Neighborhood Resource Coordinator
Tom Fixmer, Police Commander
Rich Koopmann, Boulder County Parks and Open Space
Randy Van Buren, Colorado Division of Wildlife, NE Regional Fisheries Biologist
Mark Cousins, Colorado Div of Wildlife, District Wildlife Manager, Longmont Area
Bob Schlagel, Lake McIntosh Reservoir/Highland Ditch Company

City Council Members

Julia Pirnack, Mayor
Doug Brown
Greg Winger
Tom McCoy
Fred Wilson
Roger Lange
Marty Block
Bill Carlson

Parks and Recreation Advisory Board

Sharon O'Leary
Jim Wardell
Randy Earl
Ann Henson
Glenn Carriere
Ginny Sue Hayden
Michael Swedeburgh

Focus Group

Richard Vick (DDA)
Victor Love (NGL)
Gloria Klug (Senior)
Kevin Thomas (Youth)
Don Heath (Daily Times-Call Editorial Board)
Graham Fowler (School Resources Officer, City of Longmont)
Michael Swedeburgh

A special thanks is extended to the US Fish & Wildlife Service for the use of their photographs in this document.

Executive Summary

Recently the City of Longmont entered into a five-year lease for the surface water rights to McIntosh Reservoir. This lease satisfies the City's longstanding desire to develop the site as a district park. The first step in the development of the park was preparation of a Master/Management Plan. This plan establishes a program for recreational activities and resource preservation as well as provides a blueprint to immediate and long-range facility improvements and operations and management strategies.

The McIntosh Lake master planning effort was spearheaded by City of Longmont staff and included a Staff Advisory Team comprised of various public agency stakeholders and project consultants. In addition to the Staff Advisory Team, there was an extensive public participation process where community input was utilized to define issues, establish alternatives and develop a preferred master plan. All of the public meetings were well attended by residents of nearby neighborhoods. In order to provide a more rounded cross section of community desires, a small focus group was assembled to discuss the plan prior to the public presentation. This focus group was comprised of a diverse collection of Longmont residents who represented various interests not directly related to the McIntosh Lake master planning effort

The planning process included an extensive analysis of existing resources, facilities, park operations, issues and opportunities. The consulting team also discussed planning and management strategies with the supervisors of numerous regional reservoir facilities. Alternatives were developed that explored a variety of planning scenarios ranging from resource preservation to maximum recreation. With Staff Advisory Team feedback, a draft master plan was developed that addressed public desires and City of Longmont needs. The final steps in the planning process included presentations of the plan to the Longmont Parks and Recreation Advisory Board and adoption of the plan by Longmont City Council.

The McIntosh Lake Master Plan addresses both the City's and public's desire to provide recreation that is compatible with the unique natural and cultural resources of the site. Preservation and enhancement of wildlife habitats was a primary consideration. Other considerations included minimizing the development of man-made structures, maintaining views, and providing passive recreation opportunities that are compatible with the site and surrounding neighborhoods

The program developed for McIntosh Lake provides for passive recreation opportunities including non-motorized boating, fishing, walking/biking, picnicking and associated facilities including ADA accessible structures. Education and interpretation of site resources would also be emphasized.

A significant portion on the west side of the park would be established for wildlife habitat. Trails and other human encroachment into these areas would be limited. A buoyed lake protection zone would be established along the west shore for the protection of shorebird habitat. Enhancements to wetland and upland vegetation would be incorporated to improve the ecosystem for wildlife. Habitat improvements would also include fish structures on the lake bottom to provide spawning areas and protective cover.

Vehicular access and parking has been provided at a number of appropriate locations around the reservoir to disperse use and minimize neighborhood impacts. Existing on-street parking would remain in its current location. Small (10 to 20 space) parking lots would be provided to allow easy access to the park while minimizing impacts to the adjacent neighborhoods. Gravel boat launches would be located as close to parking areas as possible. In most cases, a portage of 500 to 1000 feet would be required.

In order to ensure safe boating while not exceeding the capabilities of the facilities, a strict definition of non-motorized boating and a carrying capacity would be implemented. This definition regulates the types of vessels that are permitted on McIntosh Lake:

> *A recreational vessel of no more than 18 feet in length (excepting tandem, sea going or touring kayaks up to 24 feet in length), non-motorized (gas or electric), multi-compartment (chamber) inflatable craft (no inner tubes), non-commercial; subject to U.S. Coast Guard and Colorado safety standards.*

The carrying capacity establishes the number of boats permitted on the lake at one time. For the protection of wildlife and sensitive resources and to ensure a quality experience for park visitors, a limit of 25 boats has been adopted for McIntosh Lake.

Fishing would be permitted from boats and at desig-

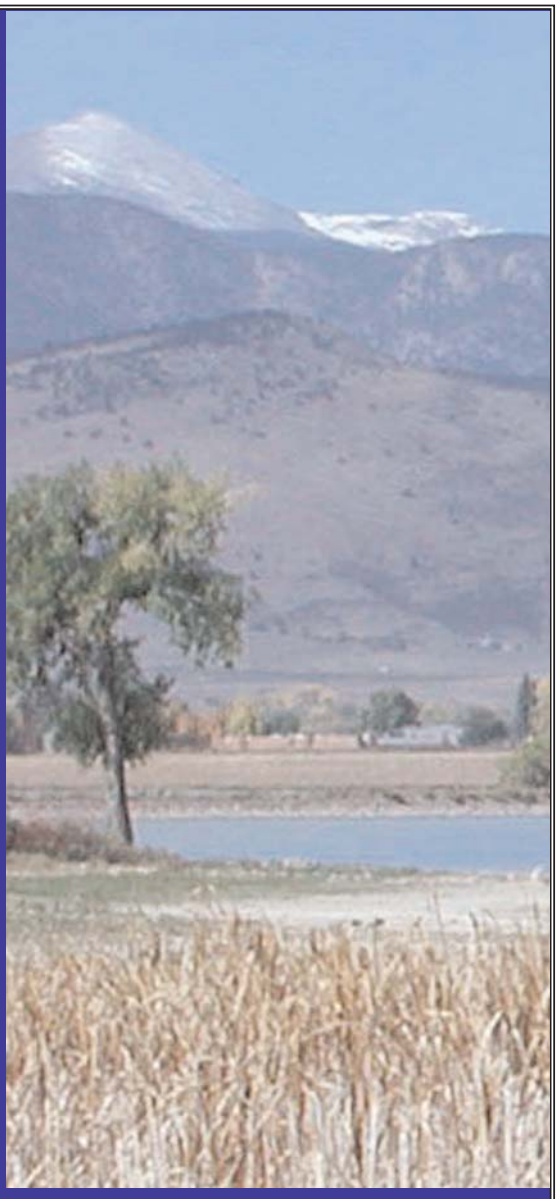
nated locations along the lakeshore. The dam face and both Dawson and Flanders Parks would allow for shoreline fishing. An accessible fishing pier would be provided on the west end of Dawson Park. Fishing would not be permitted within the lake protection zone or in sensitive wetland areas along the eastern shore.

Additional recreation facilities would include a multi-use trail that encircles the lake and provides regional trail connections. This trail would include hard surface segments on the east side; connecting existing paved walks in Dawson and Flanders Parks. Soft surface crusher fine paths would be provided on the western end of the lake connecting the neighborhood parks as well as the Boulder County Agricultural Heritage Center. Regional trail linkages would include attached sidewalks along Airport Road and North Shore Drive and an underpass connection to Westview Middle School. In addition to the trail segments, an interpretive boardwalk would be provided through the wetland area along the eastern shore.

General operating procedures for the park would include dusk to dawn closure, leash laws for pets, on-site management during peak times and an increased law enforcement presence.

Implementation of the plan would require considerable capital expenditures for facilities, restoration, land acquisition and ongoing management. Several alternatives have been developed for project phasing including one, two and five year plans. Additionally project partners, grants and other outside funding sources would be sought.

McIntosh Lake Master/Management Plan



EXISTING CONDITIONS

I. INTRODUCTION

PURPOSE & NEED FOR THE PLAN

Since 1974 the City of Longmont has planned to develop McIntosh Lake (also known as Dawson Lake) as a district park. Recently the City entered into a 5-year lease agreement with the McIntosh Reservoir Company to lease the surface rights for McIntosh Lake. It is the City's desire to provide water-based and land-based recreation use that is compatible with the surrounding neighborhoods and the significant natural resources of the site.

The first step in the establishment of a district park at McIntosh Lake is the development of a Master/Management Plan. This plan guides future development by defining a program for long-term growth, including the quantity, pattern and character of new and existing facilities, natural resources and trails. The plan will also assist the City of Longmont in developing management practices for day-to-day operations of the park.

PLANNING PROCESS

With the help of planning and environmental consultants, as well as specialists from key government agencies, the City of Longmont developed a master planning process that included a Staff Advisory Team, in addition to an extensive public participation process. The Staff Advisory Team was comprised of Longmont Staff, the consulting team and specialists from Boulder County Parks and Open Space, Colorado Division of Wildlife, McIntosh Reservoir Company, Platte River Power Authority and a neighborhood representative. During the course of the master planning effort, four Staff Advisory Team meetings were held prior to major milestones in the planning process. These meetings provided an avenue for understanding the spectrum of stakeholder and neighborhood needs and concerns, gathering and understanding pertinent data, generating strategies and working toward consensus recommendations.

The public participation component included three public meetings as well as a Longmont Parks and Recreation Advisory Board meeting and a City Council meeting. In addition to a dedicated web site, public displays, community interest group meetings, questionnaires, emails and letters were received throughout the process. The public was given the opportunity to comment during each phase of master plan development. Feedback from these meetings guided development of the master plan.

In addition to the Staff Advisory Team and public meetings, a Focus Group was assembled to provide an objective and unbiased look at the Draft Master Plan prior to it being presented to the public. This group was comprised of a diverse collection of Longmont residents who represented various interests not directly related to the McIntosh Lake master planning effort. Their input served as a check and balance to ensure the plan addressed the issues and desires of the entire Longmont community.

II. EXISTING CONDITIONS

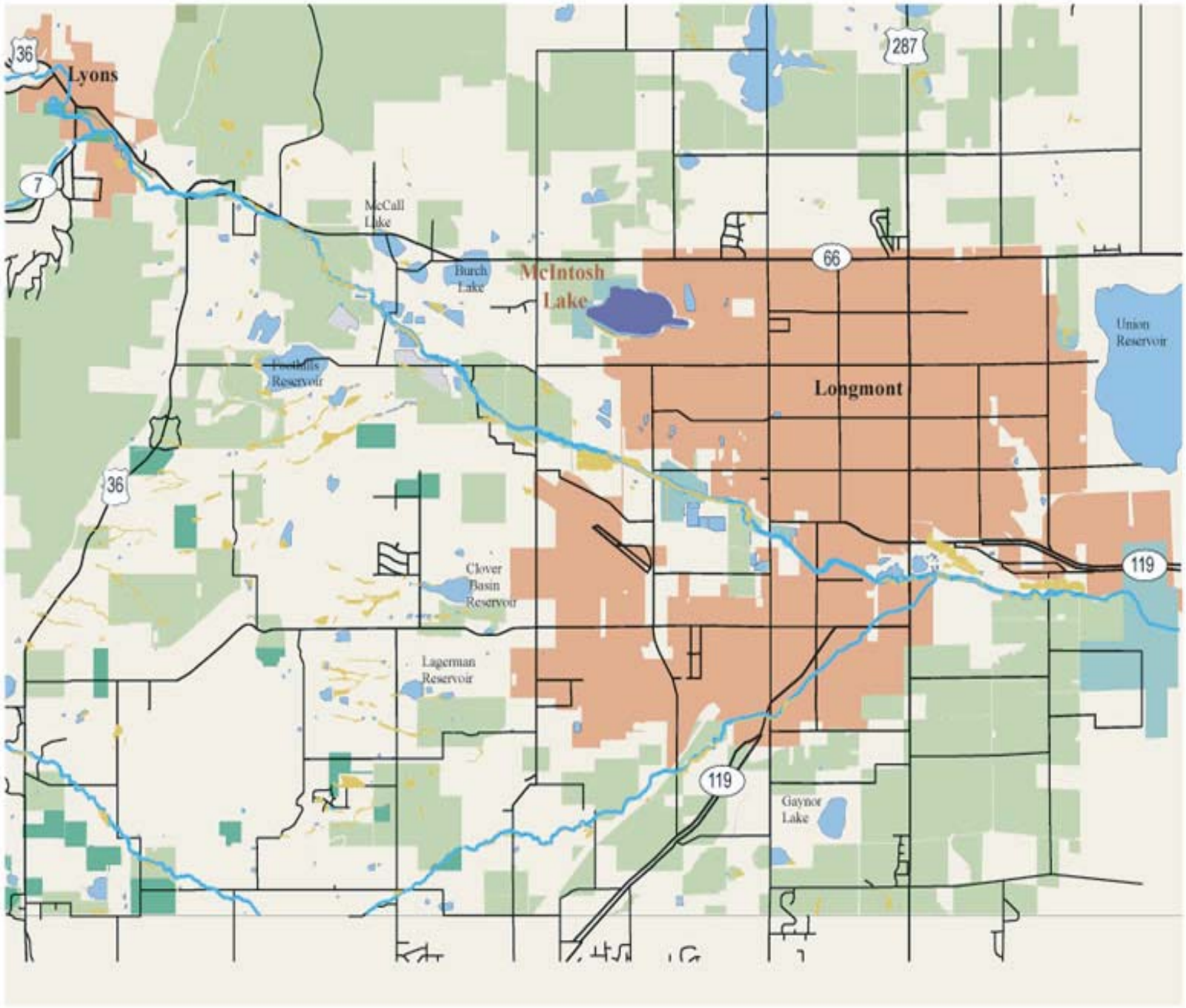
AREA CONTEXT (See Site Context Map)

McIntosh Lake is located adjacent to Boulder County in northwest Longmont. The lake is located south of State Highway 66, north of Hygiene Road, west of North 75th Street and east of Hover Road. The lake is approximately 1-1/2 miles north of the St. Vrain Creek, from which it derives its water through a series of ditches.

EXISTING LAND USE AND OWNERSHIP (See Land Use Map)

The eastern end of the lake abuts residential development, including the neighborhoods of Lake McIntosh Farms, Lake Shore and The Shores, and numerous outlying residential areas. All of the neighborhoods directly adjacent to the lake are comprised of single-family houses.

In addition to residential neighborhoods, the City has two public neighborhood parks located along the eastern edge of the reservoir.



Legend

February 5, 2003

- McIntosh Lake
- Reservoirs & Lakes
- Creeks
- Wetlands & Marshes
- City Boundary
- Longmont Parks & Open Space
- Boulder County Open Space
- Other Open Space
- State & Federal Lands
- County Gravel Resources
- Roads

Disclaimer:
Mapped, edited and published by Shapins Associates. This map depicts a graphical representation of geographic information compiled from City of Longmont and Boulder County data sets. This map is for planning purposes only and may not depict accuracy required by land surveying standards.

OPEN SPACE
LONGMONT, COLORADO

McIntosh Lake Master/Management Plan

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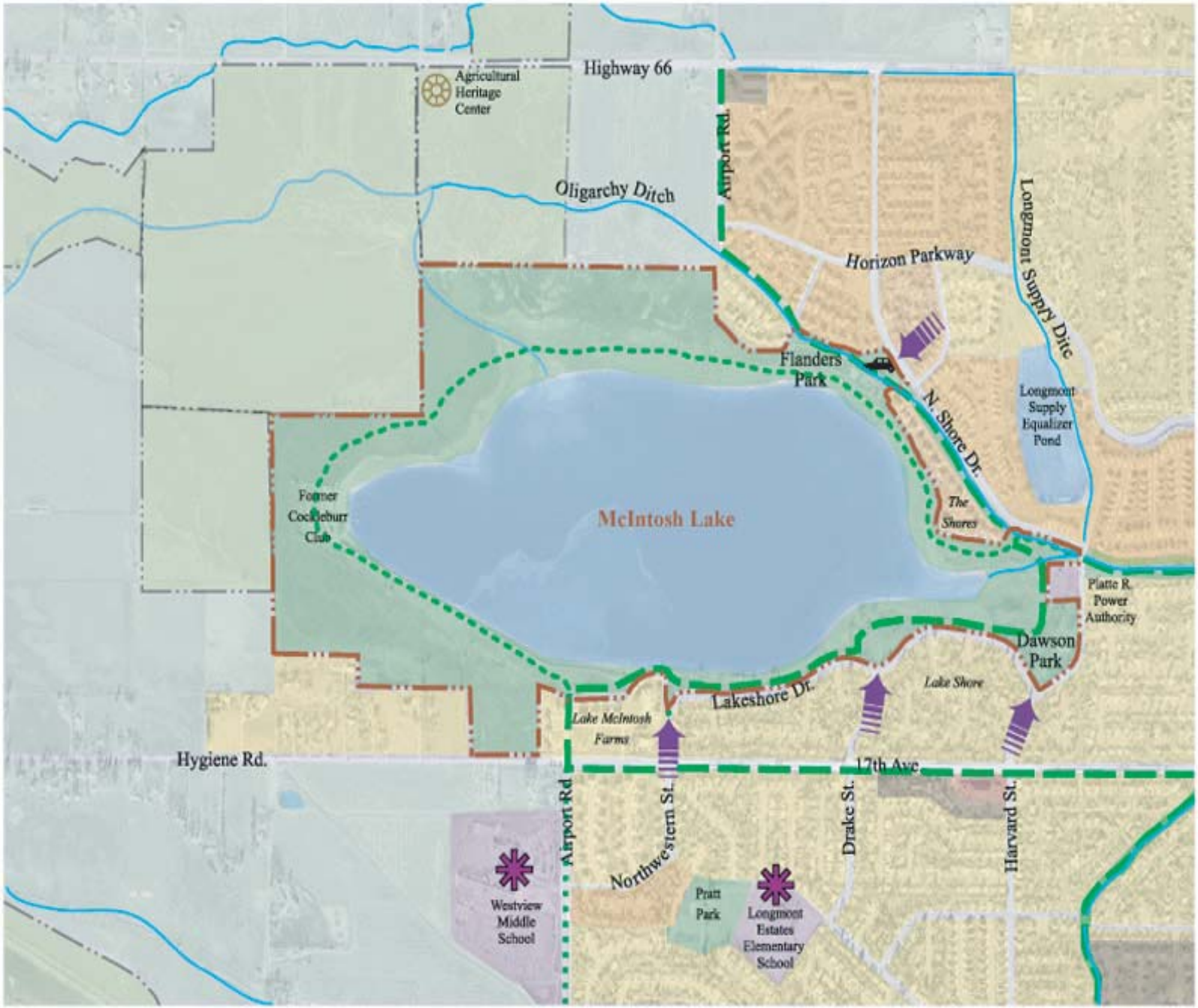

Land Use Map

Legend

February 5, 2003

- McIntosh Park Study Area
- Irrigation Ditches
- Primary Access Points
- Low Density Residential
- Medium Density Residential
- High Density Residential
- Commercial
- Public
- Longmont Open Space, Parks, & Greenways
- Surrounding Boulder County Open Space
- Agricultural Land
- Schools
- Agricultural Heritage Center
- Existing Off-Street Bikeway
- Proposed Off-Street Bikeway
- Existing Parking Lot

Disclaimer
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OPEN SPACE
LONGMONT, COLORADO

McIntosh Lake Master/Management Plan

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These parks include Dawson Park (+/-17 acres) and Flanders Park (+/- 7 acres). These irrigated turf parks offer a variety of active and passive recreation opportunities. Both have restroom, picnic and playground facilities. Adjacent to Dawson Park, the Platte River Power Authority operates an electric substation along Harvard Street near the reservoir's outlet. The western end of the reservoir is primarily undeveloped. The City of Longmont has extensive open space properties along the north and west shores of

the Lake. Boulder County owns and leases agricultural lands adjacent to Longmont Open Space. This land is used primarily for grazing and agriculture. At the far west end of the reservoir is the site of the former Cockleburr Club. The Cockleburr Club was a 30 to 40 member club that leased the lake and had exclusive use of the facility. The club offered year-round recreation including motorboating, camping, fishing and hunting 24 hours a day. Although the club's recreation lease was not renewed, many facilities still remain at the site including picnic shelters, boat ramps, floating docks, boat slips, and hunting blinds.

In addition to Longmont and Boulder County lands, there are several private holdings on the west side of the reservoir including the 40-acre Dirks' property at the southwest corner of Highway 66 and Airport Road, and the Fowler properties on the west and south sides of the reservoir. Boulder County and the City of Longmont jointly hold a conservation easement on the eastern most Fowler parcel.

NATURAL RESOURCES (See Natural Resources Map)

McIntosh Lake is located in an area of rolling plains in northeastern Boulder County. Until recently, much of the acreage in the area has been irrigated cropland. In recent years, the eastern end of the reservoir has undergone extensive residential development. Still, the reservoir and surrounding environment provides habitat for a wide range of wildlife species. The lake also offers outstanding views of the Front Range including the Indian Peaks, Mt. Meeker and Longs Peak.

Natural Resources

Legend

February 5, 2003

- McIntosh Park Study Area
- Irrigation Ditches
- Wetlands
- Park Turf Grass
- Grass/Herbaceous Cover
- Alkaline Flats
- Disturbed Areas
- Active Prairie Dog Colonies
- Riparian Habitat*

** Select areas along riparian corridors may be potential Preble's Meadow Jumping Mouse habitat*

OPEN SPACE
LONGMONT, COLORADO

McIntosh Lake Master/Management Plan

0 125' 350' 700'

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Water Resources (See Aerial Photo)

The 265-acre McIntosh Lake was constructed in 1903, and has been used primarily for agricultural irrigation since its development. The reservoir is fed from the west side via the Oligarchy Ditch. This ditch derives its water from the St. Vrain Creek, located several miles to the south. In addition to the Oligarchy Ditch, there are several storm sewer pipes that drain into the north end of the reservoir from the adjacent residential neighborhoods. The reservoir's outflow is a gated pipe located just west of the Platte River Substation. The dam is located at the southwest corner. This earthen dam, constructed in 1903, has a gravel access road that connects to the western end of the reservoir. There are several abandoned ditches and distribution pipes located along the reservoir's east shore.

Presently, the McIntosh Ditch Company owns the body of water and the vessel (underlying land) that holds the water. The recently formed Lake McIntosh Reservoir Company is a collection of shareholders who own rights to the water. McIntosh Reservoir operates as an exchange facility for other reservoirs. Surplus water is stored temporarily in McIntosh until it is transferred to other locations. As a result, water levels fluctuate greatly depending upon the need downstream.

The elevation of the lake varies from year to year and season to season. Generally, water levels are highest during spring-runoff in late May or early June and the lowest in late fall. After a particularly dry year in 2002, winter lake depths were found to be less than 6 feet. Over the course of the past 100 years, the reservoir has slowly been silting in. Therefore, its holding capacity has been reduced significantly. There are no immediate plans to dredge the facility.

The fluctuating depths of the lake and the particularly soft silty bottom limits water-based recreation opportunities and the quality of the fishery.

Recently water quality tests were preformed on samples from McIntosh Lake. These test indicated that the water quality meets City of Longmont requirements.

Wetlands

Wetland descriptions are based on the site visit from February 10, 2003, and do not represent a jurisdictional determination. Wetlands in the study area consist of those generally associated with the open water and littoral zone of McIntosh Lake. The alkali flats on the north side of McIntosh Lake are part of a larger wetland complex that includes the lake itself. This wetland may be the result of natural drainage and a perched water table from the clay soils. The cattail marsh below the dam is probably the result of seepage from the McIntosh Lake dam. Smaller wetland areas can be found along the northern and east ends of the reservoir.

Waters of the U.S., such as stock ponds and other open waters are jurisdictional when they are located within natural drainages. Stock ponds and other open waters are non-jurisdictional when they are constructed in upland areas into which no natural drainage flows. The U.S. Army Corps of Engineers considers alkali flat areas as special aquatic sites that fall under its jurisdiction. A formal survey would need to be conducted to determine the full extent of jurisdictional wetlands in the study area.

Wetland communities dominated by broad-leaved cattail and narrow leaf cattail occur on the east side of McIntosh Lake and below the dam. Smooth brome, intermediate wheatgrass, and Canada thistle dominate the margins of these wetland communities.

Vegetation

At the time of the site visit, the lake level was low due to the recent drought, exposing mud flats around the perimeter of the lake. Dense stands of Cattails (*Typha latifolia and T. angustifolia*) occur on the eastern and northeastern banks of the lake. In general, the vegetation along the edges of the lake is dominated by Saltgrass (*Distichlis spicata*), with Three-square bulrush (*Scirpus americanus*), Soft stem bulrush (*Scirpus lacustris*), and Sandbar willow (*Salix exigua*) occurring in scattered areas around the lake margin. Plains cottonwood (*Populus deltoides*) and Tamarisk (*Tamarix ramosissima*) seedlings are present in the mudflats bordering the lake. Drier upland areas are dominated by Saltgrass, Kochia (*Kochia scoparia*), and Intermediate wheatgrass (*Agropyron intermedium*). Numerous wildflowers can be observed throughout the site durning the spring and summer months. A park with mowed, irrigated lawns and picnic tables is located on the southern bank of the lake.

The Oligarchy Ditch is bordered by a narrow band of riparian vegetation, including Plains cottonwood, Emory's sedge (*Carex emory*i), Showy milkweed (*Asclepias speciosa*), Crack willow (*Salix fragilis*), and Russian olive (*Elaeagnus angustifolia*). A few stands of Sandbar willow also occur along the ditch. A list of plant species identified during the field visit appears in Appendix A.

Cropland.

The croplands south of the dam are dominated by Smooth brome (*Bromus inermis*). Also present in these croplands are Orchardgrass (*Dactylis glomerata*), Canada thistle (*Cirsium arvense*), and Field bindweed (*Convolvulus arvense*).

Alkali Flats.

Alkali Flats dominate a good portion of the northern part of the site between the Qligarchy Ditch and McIntosh Lake. These are areas where salt has risen to the surface as a result of irrigation and water leaching from the Oligarchy Ditch. Soils in the community are poorly drained and alkaline.

Native vegetation including Alkali sacaton (*Sporobolus airoides*) and Inland saltgrass (*Distichlis spicata*) occurs within the community. Other species include Prickly lettuce (*Lactuca serriola*), Netseed lambsquarters (*Chenopodium berlandieri*), Canada thistle, Curly dock, Intermediate wheatgrass, and Crested wheatgrass. The community has been disturbed due to its location within an agricultural field. Ground water is likely shallow and near the surface. Some areas clearly had alkali on the surface indicating a shallow water table when evapotranspiration rates are high. Animal prints in these areas would also suggest that the soil is saturated at times. The alkali flats likely provide sediment and nutrient retention, recharges ground water and provides habitat for insects and small
mammals.

Rare Plants and Plant Communities

No rare plants or plant communities have been identified in the study area.

State Noxious Weeds

Nine noxious weed listed by the State occur in the study area:

- Tamarisk (*Tamarix ramosissima*) seedlings are present in the mudflats bordering the lake.
- Canada thistle (*Cirsium arvense*) occurs scattered within the alkaline flats and is abundant below the dam and along the margins of the wetland in the east side of the study area.
- Russian olive (*Elaeagnus angustifolia*) individual trees are scattered along the Oligarchy Ditch.
- Downy brome (*Bromus tectorum*) is scattered along roads and near buildings in the study area.
- Field bindweed (*Convolvulus arvense*) is scattered throughout the study area.
- Musk thistle (*Carduus nutaans*) is scattered along the dam.
- Cutleaf teasel (*Dipsacus laciniatus*) is scattered along the dam.
- Kochia (*Kochia scoparia*) is found throughout the study area.

Wildlife

The wetland habitat, irrigation ditches, shoreline of McIntosh Lake, and uplands in the study area contain potential habitat for a variety of wildlife species. Large cottonwoods along the Oligarchy Ditch provide nesting sites for raptors, as well as denning sites for mammals such as raccoons. Migratory shorebirds may be found along McIntosh Lake's edge in search of crayfish and other invertebrates. Common species seen near the lake may include American avocet (*Recurvirostra americana*), common snipe(*Gallinago gallinago*), willets (*Symphemia spp.*), Wilson's phalaropes (*Phalaropus tricolor*), various Sandpipers (*Calidris spp.*), Semipalmated plovers (*Charadrius semipalmatus*) , and long-billed dowitchers (Limnodromus scolopaceus). Bird species observed during the site visit include Canada goose (*Branta canadensis*) and Bald eagle (*Haliaeetus leucocephalus*).

Small rodents that probably occur in wetland habitat or along the irrigation ditch in the study area Deer mouse (*Peromyscus maniculatus*), Prairie vole (*Microtus ochrogaster*), Meadow vole (*Microtus pennsylvanicus*), House mouse (*Mus musculus*), and Western harvest mouse (*Reinthrodontomys megalotis*). Other mammals that occur or are likely to occur in the study area include Coyote(*Canis latrans*), Red fox (*Vulpes vulpes*), Striped skunk (*Mephitis mephitis*), and Raccoon (*Procyon lotor*). All of these species probably frequent the wetland habitat or habitat along the irrigation ditch, although coyote may be more common in more open areas.

Threatened and Endangered Species, including Candidate Species

According to the NDIS database, there are no threatened and endangered species in the study area. However, the Bald eagle, a threatened species, was observed during the site visit, and an additional threatened species that has the potential to occur in wetland habitats in the study area is the Ute ladies'-Tresses orchid (Spiranthes diluvialis). The Black-tailed prairie dog (*Cynomys ludovicianus*), a candidate species for listing as threatened under the Endangered Species Act, is present in the northeast corner of the study area.

Fishery

In May of 2003, the Colorado Division of Wildlife set nets in McIntosh Lake to determine the quality of the lake's fishery. The results were disappointing but not unexpected given the shallow depth of the reservoir and the lack of protective cover, habitat and spawning areas.

The vast majority of fish taken were mature carp and bullhead from 1 or 2 year classes (hatched during the same year or possibly over two years). In addition, there were smaller populations of white crappie, black crappie, sunfish walleye, catfish and small-mouth bass. Many of these fish were believed to have been leftovers from previous stocking efforts by the Cockleburr Club. The lack of immature fish conveyed

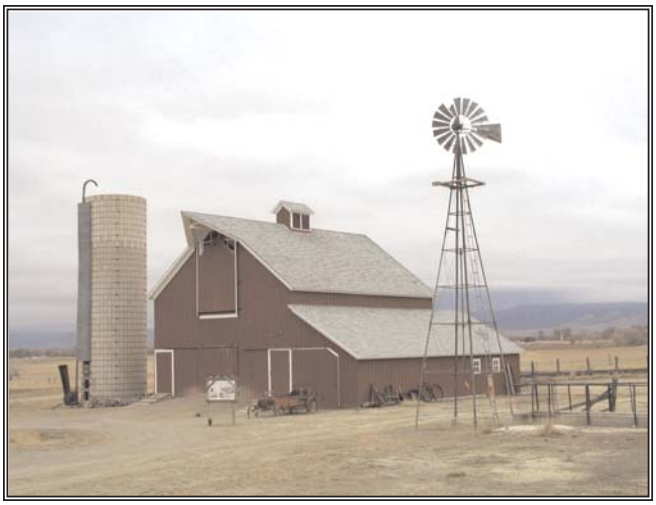
the poor quality of the fishery. Adult carp have prevented other more desirable species from multiplying. Based upon these findings, DOW concluded that without significant modifications to the reservoir, McIntosh Lake would never be more than a marginal warm water fishery. Under these conditions, there would be no justification for introducing trout and other cool water species.

CULTURAL RESOURCES

Boulder County has established an Agricultural Heritage Center at the former Lohr/McIntosh Farm on the north side of McIntosh Lake. The farm was homesteaded by George McIntosh in 1865. Mr. McIntosh had a cattle operation, orchards and grew feed crops to supply travelers along the Ute Trail wagon route (present day Hwy. 66). McIntosh's decendents, the Lohr family, lived on the farm until the early 1950's. Concerned about encroaching development, the Lohr family sold the property to Boulder County in 1985, stipulating that the property be left in perpetuity for preservation and educational purposes.

The farmhouse and some of the outlying structures have recently undergone restoration. The site offers opportunities to learn about the region's rich agricultural history and historic farming and ranching practices. Boulder County hopes to expand interpretive opportunities at the site to include farming demonstrations and living history.

Lake McIntosh was constructed for the McIntosh family and area neighbors for cattle and irrigation. In later years, the Lohr family used the lake for recreation including skating, hunting and picnics. Historically, the uncultivated fields around the farm



would have been tall-grass prairie teaming with wildlife including elk, buffalo antelope, raptors, heron and other waterfowl.

In addition to the McIntosh/Lohr farm, there are several ditches that date from 1866 of historic significance including the Oligarchy Ditch.

ACCESS TRANSPORTATION AND PARKING

Currently, vehicular access to the site is through surrounding residential neighborhoods along the eastern end of the lake. Most of these streets are residential and neighborhood collector streets. Traffic volumes on an average weekday on streets adjacent to McIntosh Lake were as follows:

North Shore Drive 1300 vehicles
Harvard Street (North of Oligarchy Ditch) 1400 vehicles
Harvard Street (South of Oligarchy Ditch) 2100 vehicles
Lakeshore Drive 400 vehicles
Drake Street 300 vehicles

The only existing road with direct access to the reservoir is a gravel road located on the reservoir's dam. Although this road provided access to the former Cockleburr Club, it is now restricted to City of Longmont and Ditch Company maintenance vehicles.

Existing parking at McIntosh Lake includes on street parking along Lakeshore Drive and a 40-space parking lot in Flanders Park. There are no other parking areas with convenient access to the lake.

REGIONAL TRAIL CONNECTIONS

McIntosh Lake has been identified as a primary destination in the City of Longmont's Comprehensive Plan. It is the City's desire to connect the lake to surrounding neighborhoods and the proposed St. Vrain Greenway.

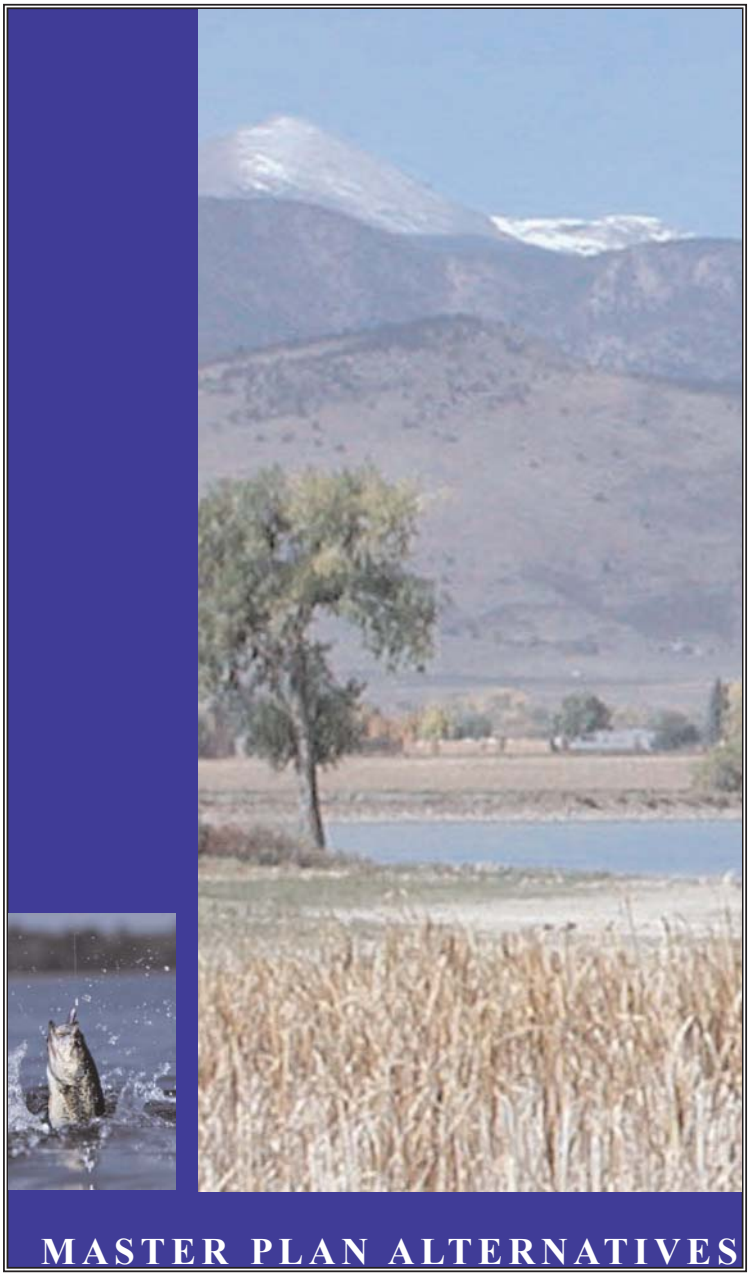
Currently, there are several hard surface paths and sidewalks that provide community linkages to the lake. The Oligarchy Greenway is approximately 5.1 miles of trail that follows the Oligarchy Ditch. This trail connects the lake to neighborhoods to the north and east.

The south side of the lake is linked to the community by way of several attached sidewalks and on-street bikeways. 17th Avenue (a busy east-west arterial) presents difficult pedestrian and bike access to the south side of the lake. There are only a few stoplights that provide safe access from the neighborhoods to the south. The lake's proximity to Westview Middle School and Longmont Estates Elementary School presents a wonderful opportunity for education and interpretation-provided a safe connection can be made between the two sites. Additional existing connections include a concrete sidewalk between the south side of the lake and the Lake McIntosh Farms neighborhood.

The City of Longmont has already constructed an extensive path system in Dawson and Flanders Parks. In addition, the City has acquired a strip of open space through the subdivision dedication process to complete a linkage between the two parks.

This linkage is located between the northeast shore of the lake and The Shores neighborhood. An all weather hard surface path would allow for year round use with low maintenance.

Boulder County expressed interest in having a soft surface trail connection from the Agricultural Heritage Center to McIntosh Lake. However, they did not want this connection to be utilized as an approach to the reservoir. It is their desire to see a trail connection on the far east side of the property.



MASTER PLAN ALTERNATIVES

III. MASTER PLAN ALTERNATIVES

COMPARABLE FACILITY ANALYSIS

Prior to the development of master plan alternatives, the consulting team discussed planning and management strategies with numerous regional reservoir site supervisors including those at Union Reservoir, Barr Lake, Boyd Lake, Boulder Reservoir, Lake Loveland, Carter Lake, St. Vrain State Park, Pella Crossing and Lagerman Reservoir. Collectively, these facilities offered a diverse range of water and land-based recreation as well as resource protection and interpretation. Their staffs provided valuable information and insight into the issues and opportunities at McIntosh Lake.

Through analysis and a comparison of reservoir size, desired character, and the opportunities and constraints, a program and carrying capacity for each Master Plan Alternative was developed.

OPPORTUNITIES & DESIRES

The vast majority of neighborhood residents expressed a desire to see wildlife preserved and protected at the site. Many suggested that all or portions of the site be established as a wildlife refuge. Numerous people wanted the site preserved in its natural state while others wanted improvements to the resource including trees and expanded wetlands.

Trails were the recreation amenity requested most often. However, there were varying opinions about whether or not the trail(s) should be multi-use, encircle the reservoir, be paved, soft surface or a combination of the two.

There were numerous proposals for how boating might work on the reservoir. Many people liked the idea of permitting non-motorized boating from restricted launch sites. A few people suggested motorboats and jet skis be permitted during restricted hours. Still, others wanted no boating whatsoever.

Many respondents expressed the desire to allow fishing at the reservoir, including improved habitat and fishing piers. Others wanted fishing permitted at designated locations only, while some wanted no fishing at all.

Several members of the public felt it was important that the site remain day-use only.

There were several respondents that did not want McIntosh Lake to change at all. Some suggested that no recreation improvements or activities should be accommodated at the site. Others wanted no public access at all.

ISSUES

After the initial data gathering and site analysis effort, the first of three public meetings was held. This meeting plus questionnaires and emails provided the public with the opportunity to voice their concerns and issues regarding the master planning effort. Of utmost concern to the meeting participants was access and parking around McIntosh Lake. Others expressed concern over increased traffic, speeding and the loss of privacy in adjacent neighborhoods. For many, safety and neighborhood security was a major concern. Several people cited the lack of law enforcement and multiple jurisdictions within the project area as a primary concern. Others conveyed problems associated with previous activities at the lake including: noise, wildlife disturbance from people and boats, hunting near residential areas, alcohol and drug consumption, unleashed dogs, loitering, littering, fires and vandalism. Many people expressed concern over the protection and preservation of site resources including open space, wetlands, wildlife and views. The public also raised concerns regarding air, water and light pollution. Several people suggested that water depths in the lake and the low filling priority posed significant limitations to water-based recreation. Many people felt there was a need to develop lake carrying capacities, control access points and limit the types and hours of usage. Other issues to be addressed included liability, staffing, fees and per-

mits. Public recreation had proponents and detractors for most activities. Boat use garnered most of the public's attention followed by trails, swimming and fishing.

MASTER PLAN ALTERNATIVES (Next Two Pages)

Based upon the public's feedback, Staff Advisory Team workshops, and discussions with resource and management experts, Master Plan Alternatives were developed. These alternatives explored a range of resource enhancement and recreation opportunities for McIntosh Lake. In order to compare the pros and cons of each alternative and to gauge the public's desires, the planning team developed alternatives that were distinct yet provided recreation opportunities that were compatible with the proposed level of resource protection

The alternatives ranged from a master plan that emphasized wildlife preservation and resource enhancement to a plan that maximized recreation opportunities on McIntosh Lake. The intermediate plan offered a balance of habitat restoration and low impact recreation.

Alternative A:
Wildlife Refuge, the vast majority of the site would be conserved as a wildlife area. Wildlife and fish habitat preservation and enhancement would be emphasized. No boating would be permitted on the lake and, although the existing trail system would be expanded, it would not circle the lake. The entire north and west sides of the park would be designated as a "wildlife refuge" where habitat would be protected and restored and public access prohibited. Fishing would be allowed only along the south shore. Education and interpretation would be emphasized with exhibits provided at key natural and cultural resource areas. To enhance educational opportunities and provide safe access to the park, an underpass would be constructed at 17th Street with a link to Westview Middle School. Several dispersed parking lots would be provided near different parts of the lake.

Alternative B:
Restoration and Recreation would preserve and enhance prime wildlife areas while allowing more recreational uses than shown in Alternative A. A trail would be developed around the entire lake. The sections of the trail near residential developments would be paved, with unpaved trails provided along the outer edges of the park. On the north side, three unpaved trail options would be considered. Either one or all three of these trails could be built, depending upon agreements decided between the City and several adjacent landowners. Non-motorized, carry-in boating would be allowed and gravel boat ramps would be provided. Fishing would be permitted along much of the shoreline and within the water. A northern section of the lake and shore would be designated a "lake protection zone" and would be off limits to visitors in order to protect wildlife and their habitat. As in Alternative A, several small-scale dispersed parking lots would be provided along with a pedestrian underpass at 17th Street.

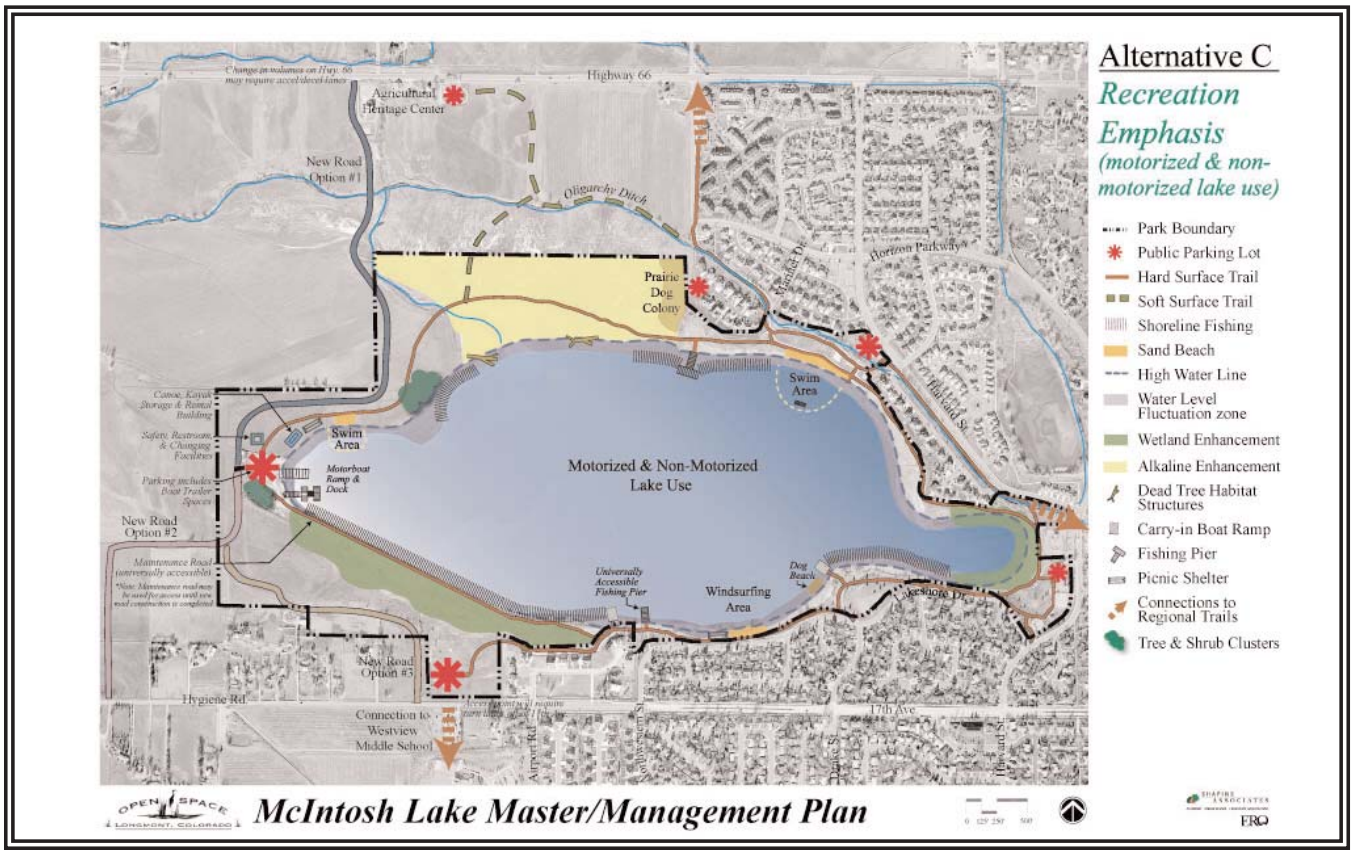

Alternative A
Wildlife Refuge
(no boat use)
Refuge Boundary
Public Parking Lot
Hard Surface Trail
Soft Surface Trail
Shoreline Fishing
High Water Line
Water Level Fluctuation Zone
Wetland Enhancement
Shoreline Bird Habitat Enhancement
Upland Vegetation Restoration
Alkaline Enhancement
Fish Habitat Structures
Dead Tree Habitat Structures
Observation Deck
Interpretive Node
Connections to Regional Trails
Tree & Shrub Clusters
Highway 66
Agricultural Heritage Center
Agriculture Interpretation Trail
Oligarchy Ditch
Airport Rd
Prairie Dog Colony
Horizon Parkway
Harvard St
No Boat Use
Restored Disturbed Area
Maintenance Road (universally accessible)
Wetland Interpretive Loop Trail
Lakeshore Dr
Hygiene Rd
Underpass Connection to Westview Middle School
McIntosh Lake Master/Management Plan

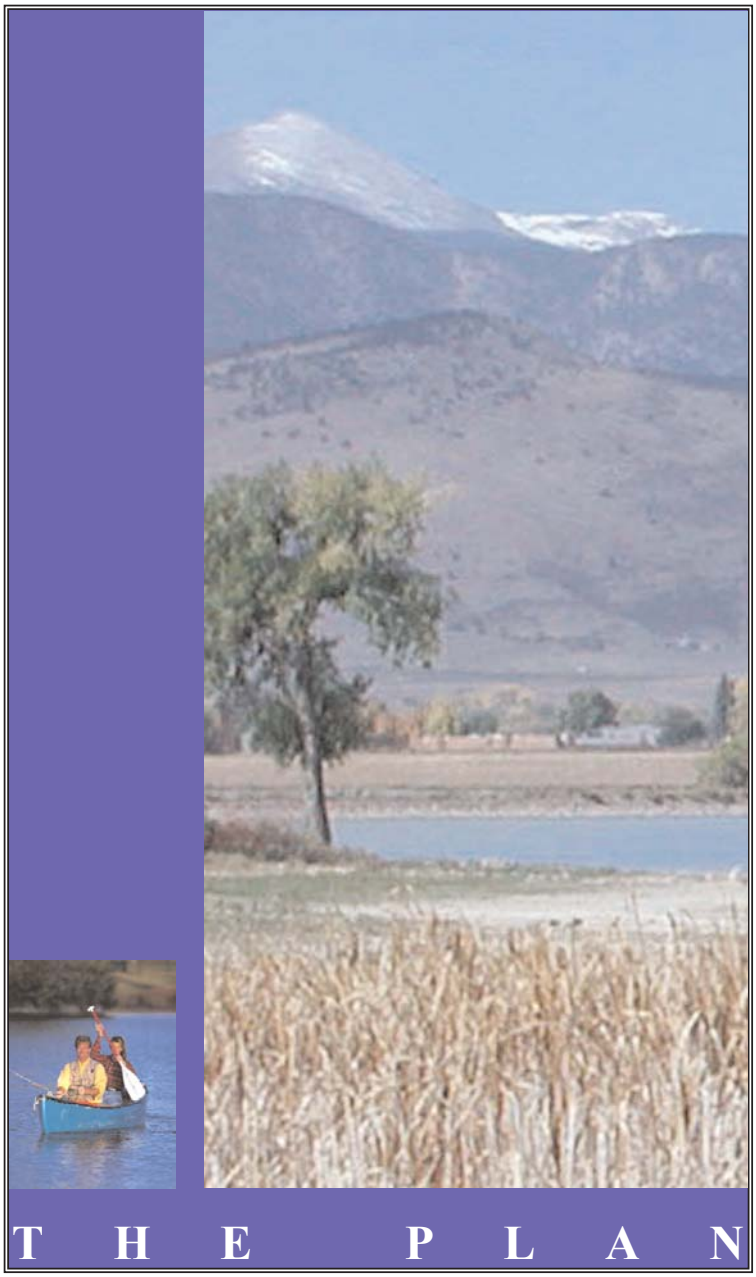

Alternative B
Restoration & Recreation
(non-motorized, carry-in boats only)
Wildlife Area
Public Parking Lot
Hard Surface Trail
Soft Surface Trail
Interpretive Boardwalk Trail
Shoreline Fishing
High Water Line
Water Level Fluctuation zone
Wetland Enhancement
Shoreline Bird Habitat Enhancement
Upland Vegetation Restoration
Alkaline Enhancement
Fish Habitat Structures
Dead Tree Habitat Structures
Gravel Boat Ramp
Connections to Regional Trails
Tree & Shrub Clusters
Highway 66
Agricultural Heritage Center
Trail Option #2
Trail Option #1
Trail Option #3
Oligarchy Ditch
Airport Rd
Wildlife Area
Prairie Dog Colony
Horizon Parkway
Lake Protection Zone
Harvard St
Canoe, Kayak Storage & Rental Building
Restored Disturbed Area
Non Motorized, Carry-In Boats Only
Maintenance Road (universally accessible)
Universally Accessible Fishing Pier
Lakeshore Dr
Hygiene Rd
Underpass Connection to Westview Middle School
McIntosh Lake Master/Management Plan

Alternative C:
Recreation Emphasis would provide for the greatest diversity of recreational uses and limited wildlife preservation and enhancement. Both motorized and non-motorized boating would be allowed on the lake. However, due to the small scale of the water body, motorized and non-motorized uses would occur on different days of the week. In addition, two sandy swim beaches, a designated windsurf area, a dog water park, a water ski course and a paved trail around the entire lake would be provided. Fishing would be allowed from several places along the shore and within the water. Additional access and road improvements on the west side of the lake would be provided either off of Highway 66 or 17th Street. The west side would be developed with a large parking lot, a multi-use building, a boat launch ramp, a fishing pier, a canoe rental, storage facility and a sandy swim beach.

PUBLIC REACTION TO THE MASTER PLAN ALTERNATIVES

The second of five public meetings was held to discuss and comment on the Master Plan Alternatives. The majority of meeting participants felt Alternative B; the Restoration and Recreation (non-motorized boating) concept was the most preferable. The second most desired concept was Alternative A - which focused on creating a Wildlife Refuge. By far the fewest people desired Alternative C, which was the Recreation Emphasis concept and focused on providing diverse recreation opportunities including motorized boating with few wildlife habitat preservation and enhancement areas.





THE PLAN

V. MASTER PLAN

VISION STATEMENT AND GOALS

Prior to the development of the Draft Master Plan, the project team and the City of Longmont staff developed a vision and goals for the plan. These statements were derived from the desires and sentiments expressed by the public during the planning process. The vision and goals guided development of the master plan and ensured we were fulfilling the public intentions for the site.

VISION STATEMENT

Recognized as a natural oasis within the City of Longmont, McIntosh Lake is enjoyed by recreation enthusiasts and inhabited by native wildlife. Sensitive recreation facility development and habitat restoration efforts will ensure that McIntosh Lake provides all Longmont residents with peaceful recreation opportunities along the shore and in the water while minimizing impacts to resident and migratory wildlife.

Goals

Natural

- Protect, restore, and enhance the wildlife habitats (e.g. wetland, alkaline flats, fisheries, shorebird, upland vegetation) along the lakeshore and within the lake.

- Provide interpretive signage to educate visitors about the park's natural resources and the ongoing restoration efforts.

Recreational Use and Facilities

- Provide visitors with a variety of recreational opportunities (non-motorized boating, hiking, biking, wildlife observation) so they can experience the serenity, beauty, and natural character of the park. Balance the impacts of recreation on wildlife and their habitat.

- Develop accessible recreation facilities so people from diverse backgrounds, ages and abilities can use the lake's shoreline and water for fishing, non-motorized boating, hiking and a variety of other uses.

- Partner with adjacent entities to create a trail system around the lake that provides a diversified experience for recreationalists while preserving significant wildlife habitats and agricultural areas in and adjacent to the park.

- Provide safe non-motorized trail linkages to the Westview Middle School, Boulder County Agricultural Heritage Center and surrounding regional trail systems.

Cultural

- Preserve and interpret the agricultural heritage of the area.

Surrounding Land Uses

- Locate visitor facilities and uses in a manner that will retain the quiet and peaceful qualities of the neighborhood.

Interpretation

- Utilize a variety of interpretive means to educate visitors about the unique natural, cultural and scenic resources in and around the park.

Transportation

- Utilize existing parking facilities and add additional facilities in several areas around the park to disperse visitors while allowing quality access to the park.

- Work with neighborhood residents to ensure that the traffic flow patterns in the area are safe and do not significantly impact residents.

Partnerships

- Partner with a multiple entities to preserve and enhance the park and adjacent area's fish and wildlife habitats; connect the park to regional trail linkages; interpret the unique qualities of the site and related areas; and preserve the cultural heritage of the area.

- Partner with Lake McIntosh Reservoir Company / Highland Ditch Company to ensure that uses and facilities at the park remain compatible with ditch company operations.

PROGRAM

The program developed for McIntosh Lake provides passive recreation opportunities including non-motorized boating, fishing, walking/biking, picnicking and associated facilities including ADA accessible facilities. There would be no equestrian use permitted at the reservoir due to limited parking and irrigated turf grasses. A major component of the plan would include education and interpretation of site resources.

Due to safety issues, winter activities are not anticipated to be permitted on the lake.

MASTER PLAN

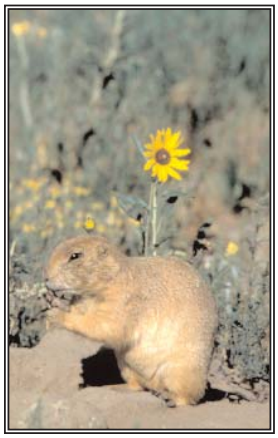
A significant portion on the west side of the park would be established for wildlife habitat. Trails and other human encroachment into these areas would be limited. A buoyed lake protection zone would be established along the west shore for shorebird habitat. Enhancements to wetland upland and alkaline flat vegetation would be incorporated to improve the ecosystem for wildlife. Noxious weeds would be eradicated from the site. Shoreline improvements would include dead logs and edge planting materials. Habitat improvements would also include fish structures on the lake bottom to provide spawning areas and protective cover.

The site of the former Cockleburr Club would be restored. All existing structures would be removed and the site would be grades, seeded and planted with cottonwoods and other native vegetation.

Vehicular access and parking has been provided at a number of appropriate locations around the reservoir to disperse use and minimize impacts to surrounding neighborhoods. Existing on-street parking would remain in its current location. Small (10 to 20 space) parking lots would be provided to allow easy access to the park while minimizing impacts to the adjacent neighborhoods. It is expected that the proposed park will bring about 600 additional trips a day to the area around the lake. The street system in the area will be able to handle the traffic, but it is likely that the increased traffic will be perceived to be a detriment to the quality of life of adjacent residents. This is expected to be especially true on Lakeshore Drive where the biggest percentage increase in traffic is projected. Gravel boat launches would be located as close to parking areas as possible. In most cases a portage of 500 to 1000 feet would be required.

Fishing would be permitted from boats and at designated locations along the lakeshore. The dam face and both Dawson and Flanders Parks would allow for shoreline fishing. An accessible fishing pier would be provided on the west end of Dawson Park. Fishing would not be permitted within the lake protection zone or in sensitive wetland areas along the eastern shore.

Additional recreation facilities would include a multi-use trail that encircles the lake and provides neighborhood and regional commuter trail connections. This trail would include hard surface segments on the east side; connecting existing paved walks in Dawson and Flanders Parks. The all weather surface would accommodate winter snow removal. Soft surface crusher fine paths would be provided on the western end of the lake connecting the neighborhood parks as well as the Boulder County Agricultural Heritage Center. These accessible soft surface trails would have a rural feel and would preclude user types that are not compatible with sensitive wildlife. Regional trail linkages would include attached sidewalks along Airport Road and North Shore Drive and an underpass connection to Westview Middle School.



Draft Plan

Habitat Restoration & Passive Recreation

- Wildlife Area
- Public Parking Lot & Visitor Orientation
- Hard Surface Trail (hiking & bike use)
- Soft Surface Trail
- Interpretive Boardwalk
- Interpretive Node
- Protection Zone
- Shoreline Fishing
- High Water Line
- Water Level Fluctuation Zone
- Wetland Enhancement
- Shoreline Bird Habitat Enhancement
- Upland Vegetation Restoration
- Alkaline Enhancement
- Potential Easement Acquisition Area
- Fish Habitat Structures
- Dead Tree Habitat Structures
- Gravel Boat Ramp
- Connections to Regional Trails
- Tree & Shrub Clusters

OPEN SPACE
LONGMONT, COLORADO

McIntosh Lake Master/Management Plan

0 125 250 500

ERO

In addition to the trail segments, an interpretive boardwalk would be provided through the wetland area along the eastern shore.

NON-MOTORIZED BOATING & LAKE CARRYING CAPACITY

In order to ensure safe boating and while not exceeding the capabilities of the facilities, a strict definition of non-motorized boating and a carrying capacity would be implemented. This definition regulates the types of vessels that are permitted on McIntosh Lake:

A recreational vessel of no more than 18 feet in length (excepting tandem, sea going or touring kayaks up to 24 feet in length), non-motorized (gas or electric), multi-compartment (chamber) inflatable craft, non-commercial; subject to U.S. Coast Guard and Colorado safety standards.

Under this definition sailboards, small sailboats and bellyboats would be permitted on Lake McIntosh while inner tubes would not.

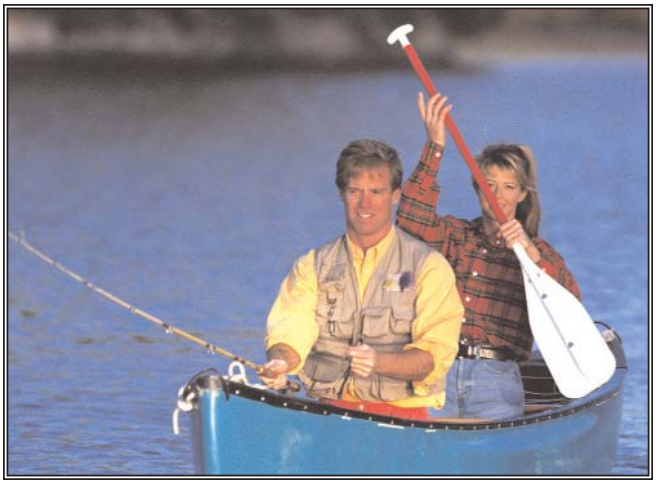
The lake protection zone will be identified with warning buoys attached to steel cable. This cable will run the entire length of the closure area. Resource protection areas would be identified with signage located along the shoreline. In addition, all reservoir maps will identify areas that are closed to boating.

The carrying capacity establishes the number of boats permitted on the lake at one time. For the protection of wildlife and sensitive resources and to ensure a quality experience for park visitors, a limit of 25 boats has been adopted for McIntosh Lake. Based upon the quality of the fishery, access to McIntosh Lake and the distance of the portage none of the regional reservoir supervisors felt the 25 boat carrying capacity would be an issue at McIntosh Lake. The anticipated distribution of non-motorized boat use on the lake is expected to be:

Sailboards	25%
Rowboats/inflatable	20%
Canoes/kayaks	40%
Belly boats	15%

A monitoring program should be established to track the impacts boating is having on the resource and the overall quality of the reservoir experience. Adjustments to the carrying capacity should be made according to the monitoring system.

Due to existing water rights, the City cannot guarantee water levels. Closure will be enacted when conditions (ice, water levels, fire, etc.) or ditch company operations warrant.



PARK EXPANSION OR EASEMENTS

The City of Longmont will need to form agreements with several entities to provide a trail on portions of the west and south sides of the lake. The proposed trail would cross portions of the Dirk's, Boulder County and the Oligarchy Ditch Company's property. Other property agreements or possible acquisitions could include expansion of the parking area and lake access on the Fowler property. The City would also need to obtain easements or purchase property for the underpass south of 17th Avenue. In addition, the City would need to work closely with Boulder County and the Colorado Department of Transportation to ensure the underpass meets their standards

MANAGEMENT RECOMMENDATIONS

General operating procedures for the park would include dusk to dawn closure, leash laws for pets, on-site management during peak times and an increased law enforcement presence.

Management of McIntosh Lake would require one fulltime City of Longmont Parks staff person. This person would oversee day-to-day operation of the reservoir, provide public contact and education, perform routine maintenance and have law enforcement and emergency medical training. A staff person would be at the site during all peak use times and on call during off peak seasons, similar to the operation at Union Reservoir.

Establishment of recreation at McIntosh Reservoir should include implementation of a monitoring program. The purpose of this program is to determine whether or not existing recreation facilities are meeting recreation needs and to provide a management system to track use patterns, monitor the impacts recreation is having on facilities and resources and to establish a database for safety and law enforcement issues. The monitoring system would ensure that informed facility, resource and management decisions would be made at McIntosh Lake. Typically data is gathered through visitor use surveys, facility and resource monitoring and compiling law enforcement and safety records and contacts. If monitoring indicates a need, institute a fee for non-motorized boating.

The City of Longmont would develop an education campaign to inform visitors about park regulations including resource protection. The City would also implement seasonal closures during nesting seasons and resource protection.

Currently, a variety of City and County statutes are in effect at McIntosh Lake. A single set of park rules and regulations would be established and posted at the reservoir at appropriate locations. Longmont police would be given the authority to enforce these regulations, regardless of property ownership.

The City of Longmont should install several 911 emergency call boxes around the reservoir. An emergency rescue boat with appropriate equipment should be available and in good working condition during the boating season.

COST ESTIMATE AND PHASING

Implementation of the plan would require considerable capital expenditures for facilities, restoration, land acquisition and ongoing management. The anticipated cost for implementation of the plan is $1,958,562 (does not include land acquisition or annual maintenance and staffing costs). Annual maintenance and staffing costs are anticipated to be $ 91,598 this includes a one time truck and equipment expenditure.

Several alternatives have been developed for project phasing including one, two and five year plans.

Option 1 (1 Year Plan)
Implementation 2004

Option 2 (2 Year Plan)

Phase 1 (2004)
Interim Management
Design/ConstructionElement
Land Acquisition
Resource Protection
Hard Surface Trails
Parking Facilities

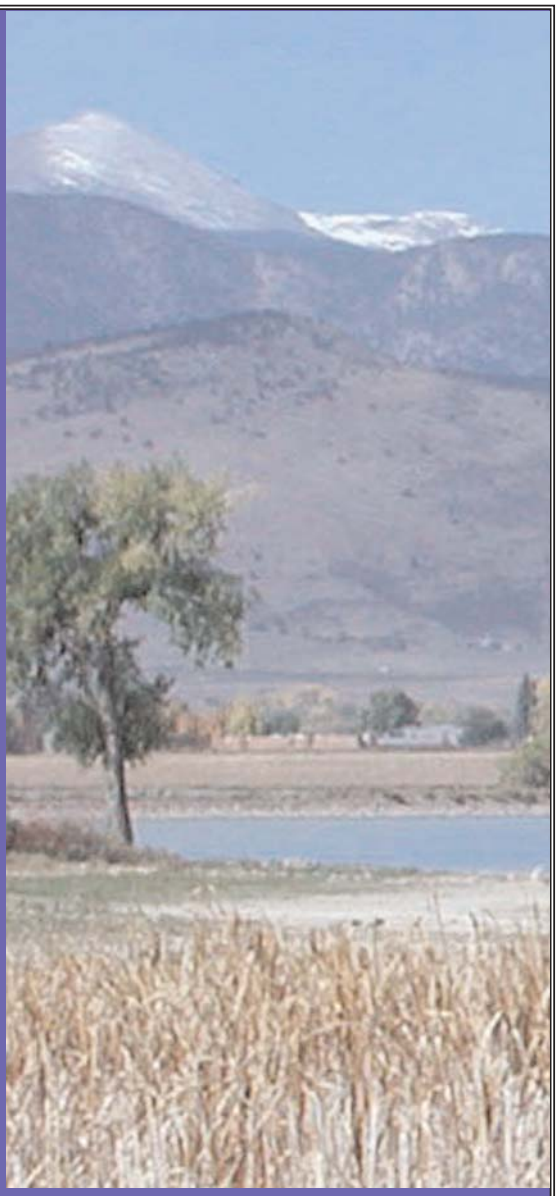
Phase 2 (2005)
Plantings /Enhancements
Wetlands
Soft Surface Trails
Interpretive Signs
Grade separated crossing
Boardwalk
Restroom

Option 3 (5 Year Plan)
Same priorities as Option 2 only phased over 5 yrs.

* See Cost Estimate; page 20 for approximate Capital Develoment and Operations and Maintenance Costs.

Cost Estimate

	Unit Cost	*Qty.*	*Cost*
Habitat Improvement			
Fish Structures	$100.00 ea.	12	$1,200.00
Fish Stocking (no charge if public)			
Wetland Enhancements	$13,200 ac.	9	$118,800.00
Upland Enhancements	$1,000.00 ac	14	$14,000.00
Trees (Cottonwood)	$115.00 ea.	170	$19,550.00
Restoration of Cockleburr Club	$17,000.00 lump	1	$17,000.00
Invasive Plant Mitigation	$95.00 ac.	35	$3,325.00
Recreation Improvements			
Observation Decks/Docks	$30,000 ea.	1	$30,000.00
Boat Ramp gravel	$1000 ea.	3	$3,000.00
Soft Surface Trails (6' wide)	$ 9.00 lf.	16,500	$148,500.00
Hardsurface Trails (8' wide)	$32.00 lf	5200	$166,400.00
Boardwalks (6' wide)	$65.00 lf	650	$42,250.00
Interpretive Signage	$400.00 ea.	6	$2,400.00
Restroom Facility	$85,000 ea.	1	$85,000.00
Infrastructure			
Asphalt Parking (curb & gutter)	$825.00 per sp.	60	$49,500.00
Asphalt Access Road 28' wide	$75.00 ft.	1750	$131,250.00
Signage (regulatory, directional)	$250.00 ea.	8	$10,000.00
Grade Seperated Crossing	$500,000.00	1	$500,000.00
At Grade Crossing 17th Ave.	$7,000.00 lump		
Construction Subtotal			**$1,342,175.00**
Design Fees 12%			$161,061.00
Contingency 15%			$201,326.25
CONSTRUCTION TOTAL			**$1,704,562.25**
Maintenance and Staffing			
Annual Maintenance Labor		1 FTE/1 PTE	$47,423.00
Annual Maintenance Materials			$5,175.00
One Time Expenditures	vehicle, misc hand tools, utility truckster		$39,000.00
O&M TOTAL			**$91,598.00**



APPENDIX