

General Management Guidelines
for Natural Areas
and Agricultural Lands
Managed by the City of Fort Collins
Natural Resources Department

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**GENERAL MANAGEMENT GUIDELINES FOR
NATURAL AREAS AND AGRICULTURAL LANDS
MANAGED BY THE CITY OF FORT COLLINS
NATURAL RESOURCES DEPARTMENT**

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INTRODUCTION

The Natural Areas Policy Plan (NAPP), adopted by City Council in October 1992, proposed a 5-year action plan to implement the plan's goals, objectives, and policies. One strategy of the action plan stated, "Implement management and maintenance programs for natural areas that will conserve natural resource values, accommodate multiple uses, be flexible to meet site needs, and minimize ongoing costs."

The goal of natural areas management is to maintain and enhance sensitive wildlife and plant communities, as well as to protect sensitive geological and archaeological features. However, natural areas are not in ecological balance in the urban environment due to such factors as lack of predators and confined area of expansion. Best management practice may at times use intervention to simulate natural processes (e.g., limited prairie dog control to minimize conflict with adjacent property owners and to manage grassland features).

In 1994, the Open Space/Natural Areas Management Team developed the *General Management Guidelines for City-owned Open Spaces and Natural Areas*. That document covered general management guidelines for all types of open space in Fort Collins including not only natural areas, but also parklands and greenways. The *General Management Guidelines for Natural Areas and Agricultural Lands Managed by the City of Fort Collins Natural Resources Department* supercedes that 1994 document only for those natural areas managed by the Natural Resources Department. The 1994 document was reviewed extensively by the public. The present document represents primarily implementation of, rather than a departure from, the natural area management guidelines in the 1994 document. Therefore, public review of the present document was not considered necessary.

The *General Management Guidelines for Natural Areas and Agricultural Lands Managed by the City of Fort Collins Natural Resources Department* identifies natural area management classifications and addresses issues of resource management, recreation, education, and maintenance. This document provides the guidelines upon which specific site management plans are based. The term "natural areas" or "City's natural areas, or City-owned natural areas" in this document refers only to the natural areas managed by the City's Natural Resources Department.

MANAGEMENT CLASSIFICATION

Each natural area is placed in one of three management classification categories, based on the site's natural features.

- Sensitive** Sites that have sensitive plant or animal species, or geological features, that need special consideration when developing a site management plan. These include sites that support rare plants, unique native plant communities, concentrations of large raptors, rare nesting birds, concentrations of migratory bird species, and key areas for wintering deer, as well as fragile rock outcrops or other geological features that can be impacted by high visitor use. This designation carries with it the understanding that the primary function of management is the maintenance and protection of those sensitive species and features.
- Urban** Sites that provide good wildlife habitat and areas for people to escape, even in a minor way, the developed environment, but do not have any particular sensitive plant or animal species or geological features that need special consideration when developing a site management plan. These sites are usually close to, and surrounded by, more developed areas of Fort Collins or have been more impacted by recreational, agricultural, or other human land uses than sensitive natural areas. Sites are often composed of greater amounts of exotic plants than sensitive areas are. These sites may be managed as multiple use areas, but a priority is placed on maintaining and enhancing the natural character of the site.
- Restorative** Sites currently undergoing restoration or sites that currently do not fit into above two categories, but are slated for restoration or enhancement in the future so that they will fall into the urban or sensitive category. The restorative category serves as an early planning tool and way to inform adjacent landowners of future intended site management (i.e., "natural area"--less maintenance than "greenway" or "parkland"). This is a temporary classification until the site is upgraded to another classification upon successful completion of restoration activities.

The following tables show the classification of each natural area and indicate the natural features that determined the classification.

MANAGEMENT CLASSIFICATION OF CITY-OWNED, NATURAL RESOURCES DEPARTMENT-MANAGED NATURAL AREAS (Site numbers relate to map on page 8.)		
SITE NAME (ACREAGE)	KEY NATURAL AREA FEATURES	OTHER FEATURES/ MANAGEMENT ISSUES
NATURAL AREA MANAGEMENT: <i>SENSITIVE</i>		
Foothills Sites		
1. Reservoir Ridge Natural Area (291 ac.)	Raptor area; native shortgrass prairie; key winter deer habitat; foothills ridge; city backdrop.	Natural surface trails; parking lot.
2. Maxwell Natural Area (279 ac.)	Raptor area; native shortgrass prairie; key winter deer habitat; city backdrop; prairie dog colony.	Natural surface trails; prairie dog barriers.
3. Pineridge Natural Area (618 ac.)	Raptor habitat; rare plant (Bell's twinpod); native shortgrass prairie; key winter deer habitat; foothills ridge; prairie dog colony; could support burrowing owls; red-tailed hawks nest in pines.	Natural surface trails; parking lot; vault toilet; prairie dog barriers.
4. Coyote Ridge Natural Area (1,118 ac.)	Rare plant (Bell's twinpod); raptor area; native shortgrass prairie; key winter deer habitat; foothills ridge; prairie dogs have begun to move in.	Natural surface trails; parking lot; vault toilet; accessible trail loop (by appointment); interpretive features.
Poudre River Sites		
5. Springer Natural Area (23 ac.)	Rare plant (American black currant); key migratory songbird habitat; rare butterfly habitat; natural floodplain; Stormwater wetland creation site on degraded area to improve water quality.	Interpretive feature east of Lemay; paved trail. High use by transients.
6. Riverbend Ponds Natural Area (225 ac.)	Former osprey release site; rare plant (prairie gentian); key bird nesting and feeding area; key migratory bird habitat; natural floodplain.	Natural surface trails; parking lots; vault toilet; interpretive features; benches; boardwalk; fishing pier.
7. Cattail Chorus Natural Area (40 ac.)	Naturalized gravel-mined ponds; high diversity of songbirds and wetland birds; winter night roost for great blue herons.	Benches; interpretive feature; pedestrian-only natural surface trail; paved trail.
8. Cottonwood Hollow Natural Area (93 ac.)	Was initially an NBS/City/Western Mobile cottonwood forest/wet meadow restoration site at gravel pit; high use by waterfowl and waterbirds.	Natural surface trail; parking lot (permission to use CSU's ELC parking lot); interpretive features; benches.
Fossil Creek Sites		
9. Cathy Fromme Prairie Natural Area (1,006 ac.)	Key raptor habitat; rare plant (Bell's twinpod); native shortgrass prairie; prairie dog colony; burrowing owls (some years); coyote dens.	Paved trail; parking lots; vault toilet; raptor observatory; interpretive features. On-going graffiti and vandalism problems.

MANAGEMENT CLASSIFICATION OF CITY-OWNED, NATURAL RESOURCES DEPARTMENT-MANAGED NATURAL AREAS (Site numbers relate to map on page 8.)

SITE NAME (ACREAGE)	KEY NATURAL AREA FEATURES	OTHER FEATURES/ MANAGEMENT ISSUES
NATURAL AREA MANAGEMENT: <i>SENSITIVE</i>		
10. Colina Mariposa (199 ac.)	Native grassland on ridge; prairie dogs on lower land (previously in agriculture); some use by wintering raptors; high butterfly diversity on ridge; abundance of fossils.	Name means butterfly hill. Site not open to public as of March 2001.
11. Redtail Grove Natural Area (45 ac.)	Native grassland on hillside; unique fossil deposits; red-tailed hawk nesting site.	Site not open to the public as of March 2001.
12. Prairie Dog Meadow Natural Area (88 ac.)	Key area for raptors, particularly wintering bald eagles and ferruginous hawks; grassland and wetland area; site also used by grassland nesting birds, coyotes, foxes, and jackrabbits.	Prairie dog barriers. Site not open to the public as of March 2001.
13. Fossil Creek Wetlands Natural Area (275 ac.)	Key waterfowl and waterbird migratory stopover habitat; raptor area; prairie dog colony; burrowing owls some years; site also used by grassland birds, coyotes, foxes, and rabbits.	Prairie dog barriers. Site not open to the public as of March 2001.

MANAGEMENT CLASSIFICATION OF CITY-OWNED, NATURAL RESOURCES DEPARTMENT-MANAGED NATURAL AREAS (Site numbers relate to map on page 8.)

SITE NAME (ACREAGE)	KEY NATURAL AREA FEATURES	OTHER FEATURES/ MANAGEMENT ISSUES
NATURAL AREA MANAGEMENT: <i>URBAN</i>		
Poudre River Sites		
14. #96P1 ("Hyde Property") (24 ac.)	River corridor grassland and cottonwood area along abandoned RR track; includes small portion of river and bank.	Future location of paved trail; not open to the public as of March 2001.
15. North Shields Pond Natural Area (10 ac.)	Pond; fishing area; river corridor; cattail marsh; high use by migratory waterfowl and other waterbirds; good mix of wetland habitat for nesting waterbirds.	Natural surface trail; parking lot; interpretive features; fishing pier.
16. Hickory Natural Area (11 ac.)	Wooded small stream; part of old river meander; small pond; site used by a variety of songbirds, woodpeckers, owls; ponds used by urban ducks; heavy Russian olive invasion and pasturegrass/wced invasion.	
17. McMurry Natural Area (45 ac.)	Ponds and grassland; site used by a variety of songbirds; ponds used by urban ducks and geese; City Natural Resources assumed management spring 2001.	Natural surface trail; parking lot; benches.
18. Salyer Natural Area (24 ac.)	River corridor; grassland primarily introduced pasture grasses; ditch with variety of native woody species.	Paved trail. High use by transients.
19. Legacy Natural Area (5 ac.)	River corridor; wooded site with a variety of native plant species; high use by a variety of songbirds, woodpeckers, and owls.	Natural surface trails. High use by transients.
20. Gustav Swanson Natural Area (12 ac.)	Old dump that has undergone active restoration (1985-95); canal has been realigned to resemble stream; wildlife plantings.	Paved trail; benches; parking lot; interpretive signs. High use by transients.
21. Williams Natural Area (2 ac.)	River corridor; most of site is grassland that is primarily introduced pasture grasses; some use by grassland songbirds, deer, migratory songbirds, raccoons.	Two large billboards (one at river's edge is actually not on the natural area); paved trail.
22. Prospect Ponds Natural Area (25 ac.)	Ponds; fishing area; river corridor; high waterfowl use.	Paved and natural surface trails; parking lots; benches; interpretive signs.
23. Arapaho Bend Natural Area (278 ac.)	River corridor; old gravel ponds; ditches; mature cottonwoods and willows with excellent understory of native shrubs along river; variety of songbirds, woodpeckers, and owls; resident and migratory waterfowl and waterbirds.	Natural surface trails; parking lots; benches; interpretive features.
Spring Creek Sites		
24. Red Fox Meadows Natural Area (38 ac.)	Ditches; grassland primarily introduced pasture grasses; wetland; pond; abundant noxious weeds (thistle, spurge) and exotic pest trees (Russian olive); resident small herd of mule deer; fox; pheasant; songbirds; ponds used by herons and other urban waterbirds.	Natural surface trails; heavily used as an education site for school classes. On-going graffiti problems.

MANAGEMENT CLASSIFICATION OF CITY-OWNED, NATURAL RESOURCES DEPARTMENT-MANAGED NATURAL AREAS (Site numbers relate to map on page 8.)

SITE NAME (ACREAGE)	KEY NATURAL AREA FEATURES	OTHER FEATURES/ MANAGEMENT ISSUES
NATURAL AREA MANAGEMENT: <i>URBAN</i>		
25. Ross Natural Area (31 ac.)	Urban wildlife corridor; grassland primarily introduced pasture grasses; Spring Creek and oxbow wetland; ditch.	Paved trail; benches; parking lot. On-going graffiti problems.
26. Fischer Natural Area (11 ac.)	Urban wildlife corridor; grassland primarily introduced pasture grasses; ditch.	Paved trail; benches.
27. Spring Park Natural Area (2 ac.)	Natural stream channel restored with native vegetation.	Paved trail.
Fossil Creek Sites		
28. Ridgeview Natural Area (3 ac.)	Ponded area of Mail Creek.	

MANAGEMENT CLASSIFICATION OF CITY-OWNED, NATURAL RESOURCES DEPARTMENT-MANAGED NATURAL AREAS (Site numbers relate to map on page 8.)

SITE NAME (ACREAGE)	KEY NATURAL AREA FEATURES	OTHER FEATURES/ MANAGEMENT ISSUES
NATURAL AREA MANAGEMENT: <i>RESTORATIVE</i>		
Poudre River Sites		
29. Udall Natural Area (25 ac.)	River corridor; site is primarily a Stormwater water quality improvement and wetland restoration project; presently used by waterfowl, shorebirds, and songbirds.	High use by transients. Site not open to the public as of March 2001.
30. Bignall Natural Area (2 ac.)	River corridor; house and associated structures on property; grassland primarily introduced pasture grasses; many exotic trees, shrubs, and forbs on site.	Paved trail. Site will ultimately be incorporated into Nix Natural Area.
31. Nix Natural Area (28 ac.)	Historic farm; Natural Areas maintenance facility being developed on the site (completion anticipated for 2002).	
32. Kingfisher Natural Area (159 ac.)	Old deposits of sugar beet lime; grasslands dominated by exotic weed kochia; migratory songbirds and waterfowl use river corridor; waterfowl and waterbirds use ponds.	Paved trail; parking lot; benches; art in public places feature.
33. Running Deer Natural Area (260 ac.)	Includes cropland on former Resource Recovery Farm (being gravel-mined; will be restored to wetland by 2007); MBI property on Prospect (to be restored after lease expires in 2002); about 95 acres of wetlands and uplands; Boxelder Creek; mule deer; resident herd of about 12 white-tailed deer; prairie gentian habitat (plant not currently on site).	Natural surface trails; parking at Welcome Center; site is between two portions of ELC property.
Spring Creek Sites		
34. The Coterie (5 ac.)	Small prairie dog colony bounded by visual barrier; site undergoing restoration to native grasses and native shrubs to build a natural barrier.	Paved trail.
Fossil Creek Sites		
35. Hazaleus Natural Area (218 ac.)	Agricultural land; smooth brome pastures need to be restored; 50 acres may be sold for affordable housing site currently leased for cattle grazing (as of March 2001.)	
36. #01FC1 (Provincetowne property) (160 ac.)	Includes Robert Benson Lake; pelicans; Swainson's hawk nest; prairie dogs; burrowing owls some years; introduced grasses.	Prairie dog barrier and plantings; dam must be rebuilt; Not open to the public as of March 01.
Miscellaneous Sites		
37. Redwing Marsh Natural Area (6 ac.)	Part of site is Stormwater wetland restoration/detention project; presently used mostly by songbirds and urban waterfowl; fox den on site.	Crusher fines trail.
38. McKee Property (973 ac.)	Leased for agricultural purposes; anticipated that it will be taken out of agriculture and restored as a natural area beginning in 2005.	

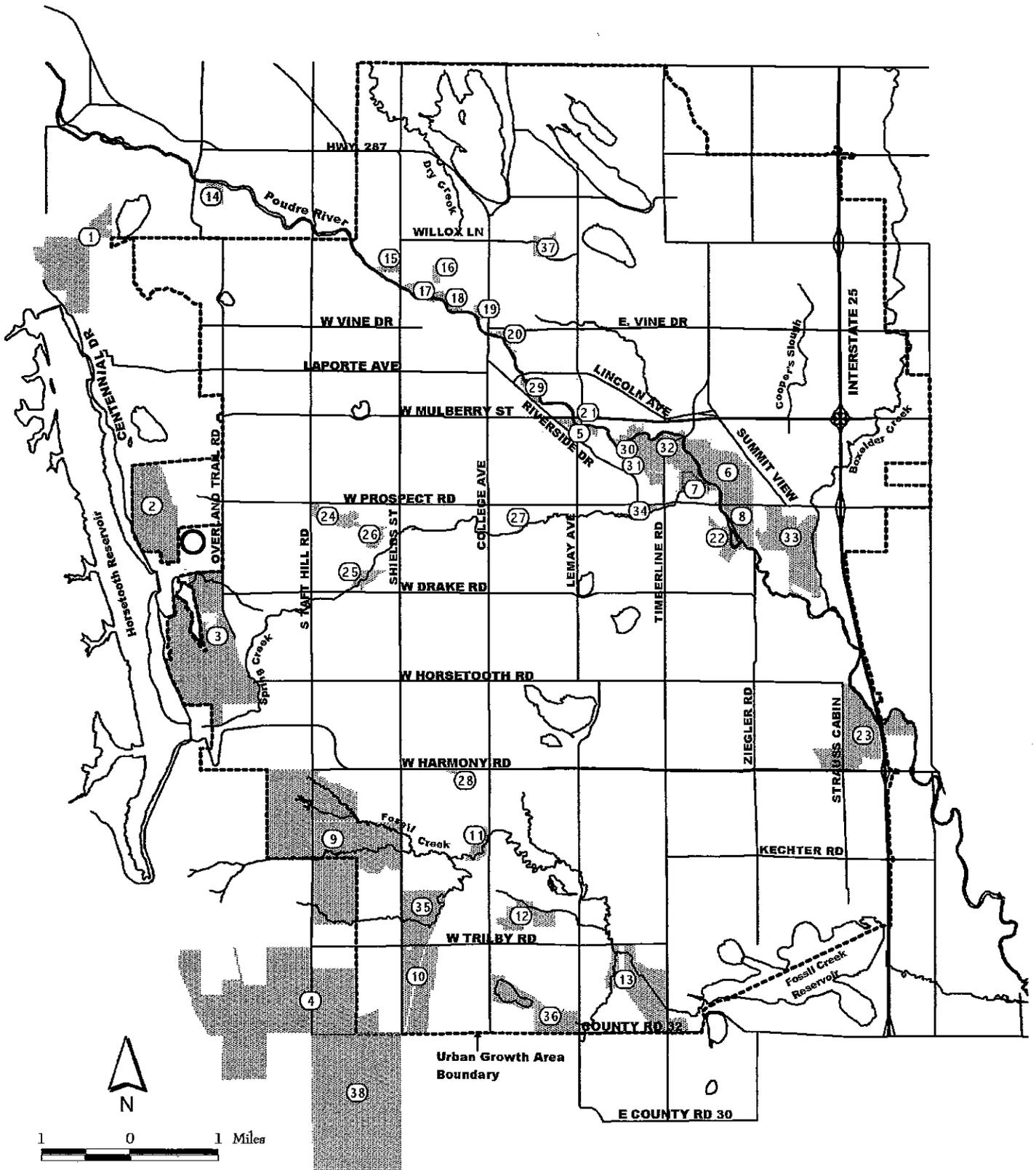


Figure 1. Locations of natural areas managed by the City of Fort Collins Natural Resources Dept.

MANAGEMENT GUIDELINES

Vegetation

Due to previous uses and the proximity to the urban environment, both native and exotic vegetation (grasses, trees, shrubs, forbs, weedy plants) are present on most of Fort Collins' natural areas. Ideally, each site would have only species that are native to that site. That ideal will never be realized in this urban setting, but that goal drives management and restoration practices.

Mowing Mowing occurs several times a year along trails and roadways. Mowing is also done periodically to control noxious weeds and as a management technique to enhance ground cover (e.g., to help establish native grassland meadows).

Weeds Weed management philosophy for natural areas is summarized here. For details, refer to the *Integrated Weed Management Plan*, written by the Natural Resources Department in April 2000.

There are several reasons to manage weeds: State and local laws require that certain weeds be controlled; weeds often choke out native plants; weeds often are unsightly. Because of previous uses and the urban environment, all Fort Collins natural areas have some degree of weed infestation.

The *Integrated Weed Management Plan* identifies five goals:

- Reduce the acreage of natural areas infested with weedy exotic plant species by using an integrated weed management approach.
- Prevent the establishment of new populations of weedy exotic plant species.
- Guide natural areas employees in creating an annual weed management work plan.
- Establish an inventory and monitoring program that provides useful information in an efficient manner.
- Create mutually beneficial partnerships with other interested parties.

As described in the *Integrated Weed Management Plan*, weeds in natural areas are controlled using any, or a combination (Integrated Pest Management [IPM]), of the following methods:

Biological: Use of one life form to limit the growth or spread of another. This typically involves the release of insects native to the same region as the problem plant. It also may involve grazing animals such as goats or cattle.

Chemical: Use of man-made chemical products (herbicides).

Cultural: Cultivation of desirable plants (native species) to compete with the undesirable plants.

Mechanical: Mowing, pulling, burning, tilling, chaining, root plowing, flooding.

Noxious Weeds

The Undesirable Plant Management Act (CRS 35-5.5) signed into state law in 1991 and amended in 1996 mandates the control of noxious weeds. Now known as the Colorado Noxious Weed Act, it states that local governments are directed to take the necessary steps to manage the undesirable plants in their respective jurisdictions. As of 1996, Larimer County has designated eight weeds as noxious: leafy spurge (*Euphorbia esula*), Canada thistle (*Cirsium arvense*), musk thistle (*Carduus nutans*), diffuse knapweed (*Centaurea diffusa*), Russian knapweed (*Acroptilon repens*), spotted knapweed (*Centaurea maculosa*), dalmatian toadflax (*Linaria genistifolia*), and yellow toadflax (*Linaria vulgaris*). The Fort Collins City Code lists another 32 species of weeds. Among these species, kochia (*Kochia scoparia*) and purple loosestrife (*Lythrum salicaria*, *L. virgatum*) are problematic on City natural areas.

Leafy spurge: This weed is native to Eurasia and was brought into the United States as a seed impurity about 1827. Leafy spurge is prevalent in natural areas along the Poudre River, but also found on many other natural areas. Typical control consists of mechanical (mowing, weed whipping) methods in spring, followed by a fall application of herbicide. Flea beetles (*Aphthona flava*) have also been introduced to five sites, most classified as sensitive, to control this weed.

Canada thistle: A native of southeastern Eurasia and introduced to Canada as a contaminant of crop seed in the late 18th century, Canada thistle is present on all natural areas. Typical control consists of mechanical (mowing, weed whipping) methods in spring, followed by a fall application of herbicide. No insects are used for biological control because of the potential to impact populations of native thistle on natural areas.

Musk thistle: A native of Eurasia and introduced to the United States in the early 20th century, musk thistle is not as dense or as extensive on City natural areas as Canada thistle. Typical control consists of mechanical (mowing, weed whipping) methods in spring and fall. No insects are used for biological control because of the potential to impact populations of native thistle on natural areas.

Knapweeds: Diffuse knapweed is a native of Eurasia and was introduced to the United States in the late 19th century. This species occurs on only a few natural areas; spotted and Russian knapweeds are not yet a problem on City property. Typical control consists of mechanical (mowing, weed whipping) methods in spring and fall.

Toadflaxes: Dalmatian toadflax is a native of southeastern Europe and was introduced to the United States, probably as an ornamental. This weed is beginning to invade the foothills natural areas, as well as the Cathy Fromme Prairie. Control consists of mechanical (hand-pulling) methods in spring with an early summer herbicide application. Yellow toadflax is not yet a problem in City natural areas.

Kochia: A native of Asia, kochia has escaped from cultivation as an ornamental and is now found throughout North America along roadsides and on degraded lands. This weed is prevalent on Kingfisher Point Natural Area, where the land had been used in the past for deposition of sugar beet products. It also occurs on some of the other natural areas that have been over-grazed in the past (e.g., Prairie Dog Meadow).

Purple loosestrife: Introduced from Eurasia as an ornamental, purple loosestrife is particularly invasive. In natural areas, individual plants are removed and destroyed annually by cutting above-ground plant material and either digging roots out of the ground or using herbicide to kill lower stems and roots. All portions of plants are placed in sealed bags and discarded in the landfill.

Undesirable non-native trees and shrubs

Russian olive, saltcedar, and Siberian elm are particularly invasive non-native trees and shrubs. No new plantings of these species are permitted. As funding permits, existing plants are removed and replaced with native woody species if appropriate for the site. The first priority is to remove from sensitive natural areas; removal from urban natural areas is second priority. In restorative natural areas, removal is a part of site restoration.

Plant Collection and Plantings

Downed wood may not be removed from, or rearranged upon, a natural area by the public without a permit [Municipal Code Sec.23-193(d) (6)]. Permits may be granted for activities that benefit the entire community and/or if Natural Resources Department personnel determine that the activity will benefit the natural values of the site. Permits also may be granted for appropriate educational activities. Natural Areas maintenance staff may remove or rearrange wood if it is beneficial to the site.

Seed or plant collecting, which also includes cuttings of trees, shrubs, vines, grasses, wildflowers, or other plants, is prohibited by the public without a permit [Municipal Code Sec.23-193(d)(7)]. Permits may be granted for activities that propagate native plants for restoration or enhancement of natural areas; or assist in vegetation management; and/or provide educational benefits (provided the benefits cannot be realized on a site other than a natural area, unless the natural area from which the collection is made has education as a primary purpose of the site); and activities will be conducted so as to have the least negative impact possible; and on sensitive natural areas, activities are conducted from the trail if possible. For woody species, permission also must be obtained from the city forester. Natural Areas maintenance staff may collect seeds or plants for the purpose of propagation of native species or for removal of undesirable species.

Planting: The City generally plants native species on natural areas to improve wild-life habitat, restore native plant communities, and restore disturbed areas. Planting of any plants by anyone other than staff of the Natural Resources Department is prohibited except by permit [Municipal Code Sec.23-193(d)(8)]. A permit may be granted if the Natural Resources staff has determined that the planting(s) will benefit the natural area; and the species are native to the site or area (unless staff approves non-native species). Permits will not be granted for vegetable gardening or other non-natural area type plantings. Planting of woody materials also requires permission from the city forester.

Wildlife

Management of wildlife in and around urban areas can be complicated. Issues involve not only protecting wildlife and their habitat from human intrusion, but also educating natural area neighbors about what to expect from interactions with wildlife, educating natural area visitors about enjoying wildlife in a manner that is safe for both wildlife and humans, and, at times, controlling wildlife movement so they do not excessively encroach on developed property. There also are issues associated with controlling wildlife that are impacting water flows and dealing with exotic wildlife species.

Artificial structures	The intent is for natural areas to have natural, rather than artificial, function when possible. Therefore, structures such as perches, bird houses, bat houses, and artificial nest structures are limited to only those needed to enhance or protect use of the site by endangered species, threatened species, or Colorado Species of concern. Artificial structures may occasionally be installed for educational purposes.
Endangered or threatened species/ Colorado species of concern	On sensitive and urban natural areas, habitat used by these species is enhanced and protected. On restorative natural areas, habitat that has the potential to support these species is enhanced and protected if such action is compatible with the restoration goal.
Exotic species	Such exotic species as bull frogs and carp are controlled on natural areas if targeted for special removal projects.
Feeding	Wildlife feeding (other than native plantings) is not allowed in natural areas except by permit [Municipal Code Sec.23-193(d)(12)]. A permit may be granted to an agency conducting a special wildlife project and/or for a project beneficial to existing wildlife of the site or the area. Feeding may also require the approval of Colorado Division of Wildlife (CDOW).
Native species reintroductions	The City will cooperate with CDOW on certain native species reintroduction projects.
Beaver	Beaver are generally a desirable component of the natural area ecosystem and are only removed where protective barriers or other control methods are not feasible or cannot effectively protect desirable features. Removal examples include potential property damage due to flooding, disruption of irrigation water flow, and excessive damage to desirable vegetation or animal populations.
Coyotes and red fox	On natural areas, coyotes or foxes that are preying on domestic animals or on critical nesting birds will be controlled only if mandated by CDOW.
Deer	Deer are controlled on natural areas only if mandated by CDOW for optimal population or resource protection.
Mountain lions and bears	These animals are controlled on natural areas, through capture or relocation, by CDOW if determined to be a threat to humans, pets, or livestock.
Norway rats	Norway rats are controlled as needed for human health protection. Rodenticides are used to control target populations.

Prairie Dogs

Management of prairie dogs is very controversial. While prairie dogs are a keystone species in the shortgrass prairie ecosystem, they also create problems when they migrate from natural areas onto private property, particularly into urban backyards. Controversy arises over whether and how to control prairie dogs. The City uses various techniques to discourage prairie dogs from migrating off of natural areas: solid vinyl barrier fences, shrub plantings, and predator perches. When extermination is required, the only legal method is fumigation. In most instances, City staff prefers not to relocate the animals because of human health risks, stress/death of relocated animals, impacts to receiving areas when animals from a distant location introduce new diseases, disruption of prairie dog social structures, lack of viable relocation sites, and the perception that relocation is a viable control option.

The goals of prairie dog management on natural areas are as follows:

On sites classified as **sensitive** (generally, the presence of prairie dogs will cause a site to be classified as sensitive), existing large prairie dog colonies are maintained. Control occurs in the following circumstances:

- (1) When animals are within buffer areas along adjoining property and City staff determines control is necessary to prevent damage to such property;
- (2) When necessary for grassland restoration;
- (3) If mandated by Larimer County Environmental Health Department for plague outbreak in the colony on the site.

If prairie dogs occur on natural areas classified as **urban**, they are removed unless a small, controlled colony is designated to provide educational or research values.

Prairie dogs on sites classified as **restorative** are removed unless the restoration goal for that site includes creating or maintaining a large colony.

In March 1998, the *Prairie Dog Policy for City Natural Areas* was updated. It specifies the conditions under which various control measures can be used. The document should be consulted for details of prairie dog management strategy on the City's natural areas.

Skunks and Raccoons

These animals are controlled on natural areas only if mandated by Larimer County Health Department due to disease outbreak on-site, or if identified as being a definite threat to a sensitive resource (e.g., ground-nesting birds).

Geese

There is a large population of Canada geese in Fort Collins. Winter populations can exceed 80,000 individuals. Goose management generally falls under CDOW policy. On natural areas, there is no active goose management, either for population reduction or enhancement. Therefore, no goose nesting structures are installed on natural areas.

Other waterfowl

No active management on most sites. However, sites are sometimes designed with waterfowl in mind, e.g., the gravel mines at Cottonwood Hollow were specifically restored to provide waterfowl and shorebird habitat.

Raptors (hawks, eagles, owls)

Raptors are highly valued by the Fort Collins community and often fall under federal regulations. The presence of raptors, especially if nesting, often causes a natural area to be classified as sensitive. On all classifications of natural areas, the habitat for these birds is enhanced and protected if appropriate for the site.

Native songbirds

Habitat is enhanced and protected as appropriate for site characteristics.

Fish

Stocking occurs in natural area ponds, lakes, and streams in cooperation with CDOW as appropriate for recreational, management, or enhancement needs of the site.

Habitat Enhancement activities are targeted for special projects to enhance recreational use or native fish populations.

Snakes

There is no control of either poisonous or non-poisonous snakes.

Mosquitoes

Mosquitoes may be controlled by Larimer County Environmental Health Department in the case of a serious human or domestic animal health threat due to disease outbreak (e.g., encephalitis).

Recreation

The City's *Natural Areas Policy Plan* identifies passive recreation as an important reason for having natural areas. Recreation must be appropriately managed to ensure protection of the resources and to protect certain recreational opportunities. For example, many people go to the Cathy Fromme Prairie to watch eagles and other raptors. If visitors are allowed to bike, hike, and otherwise recreate off trail throughout the site, the very wildlife people come to watch will be driven from the site. Therefore, the recreation management goal is to provide visitor enjoyment and safety, as well as to protect natural area values. In 1999, the City adopted regulations to assist in achieving those goals.

In 1997, the City's Natural Areas and Trails Ranger Program began. The program's goal is to help visitors enjoy natural areas and to help them be aware of, and comply with, natural areas regulations. Rangers are commissioned by the Chief of Police to enforce Municipal Code (violations of which are misdemeanors) in the natural areas and along the recreational trail system. Fort Collins Police provide back-up on anything involving criminal activity (felonies) or any situation in which rangers feel a need for armed officer assistance. Details of the ranger program's policies can be found in the Natural Resources Department's *Natural Areas and Trails Ranger Program Personnel, Law Enforcement, and Emergency Policies and Procedures* and the *Natural Areas and Trails Ranger Program General Guidelines*.

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| General recreation | In general, passive recreational pursuits are permitted in natural areas. These include, but are not limited to, walking/hiking, jogging, wildlife viewing, photography, horseback riding, even dog walking in most natural areas (as long as the dog is on a leash). Passive recreation is defined as something that generally can be done by one person and does not include team-oriented activities or require specialized equipment. Some low level active recreation (e.g., bicycling) is permitted on roadways and designated trails in most natural areas. However, horseback riding, bicycling, skateboarding, etc., must not be done in a reckless or unsafe manner [Municipal Code Sec.23-193(a) (16)]. |
| Aircraft | Municipal Code Sec.23-193(d)(4) states that, without a permit, it is illegal to land or launch in a natural area, or fly lower than 500 feet above a natural area, any type of aircraft, including hot air balloons and hang gliders, except within takeoff or landing airways of a commercial airport or in emergency situations. Under Municipal Code Sec.23-194, exceptions may be permitted for public safety or research activities (e.g., Colorado Air National Guard has a permit to practice skydiving on the McKee property). |
| Alcoholic beverages | In a natural area, it is illegal to possess or consume any alcoholic beverage or possess any container, whether open or unopened, that contains or has been used to contain any alcoholic beverage [Municipal Code Sec.23-193(a)(12)]. |
| Bicycling | Unless otherwise posted, bicycling is allowed in natural areas but must occur only on a roadway or designated trail [Municipal Code Sec.23-193(a)(9)] and in a safe manner [Municipal Code (Sec23-193(a)(16)]. |

- Boating** Non-motorized boats, e.g., canoes and rowboats, are allowed unless posted otherwise.
Motor boats: The only motorized boats allowed on natural areas are those with wakeless, electric trolling motors [Municipal Code Sec.23-193(d)(3)] unless a permit has been issued for another type of motor boat. A permit may be issued for activities that are necessary, can only be done on the requested natural area, and cannot be conducted with a non-motorized boat.
- Camping** Camping in natural areas is prohibited by Municipal Code Sec.23-193(a)(15).
- Curfew** Natural areas are closed to the public between the hours of 11:00 p.m. and 5:00 a.m. [Municipal Code Sec.23-193(d)(1)]. A permit may be obtained for access during these hours for specific events if the goals of such event (e.g., wildlife surveys, astronomy classes) cannot be reached other than in a natural area during curfew hours. Permits will not be issued for activities that require any lighting other than flashlights or bicycle lights.
- Dog Walking** Unless otherwise posted, dogs are allowed on natural areas if they are on a leash; persons walking dogs must immediately remove feces deposited by their dogs [Municipal Code Sec.23-193(a)(17)(i)]. Under Sec.23-194, an exemption is allowed for public safety-related training activities (e.g., Search and Rescue training which the Natural Resources Department permits on specified sites).
- Firearms** It is illegal to discharge firearms on natural areas in the city limits or any other natural area that is open to the public [Municipal Code Sec.23-193(a)(17)(v)]. Discharge of firearms includes guns, pistols, crossbows, bows and arrows, slingshots, BB guns, pellet guns, or any other firearm or weapon. Natural areas outside the city limits, and not open to the public, are posted, “no trespassing,” “no hunting,” or “no discharge of firearms.”
- Fires** Campfires, or any other fires, are allowed on natural areas only by permit [Municipal Code Sec.23-193(d)(10)]. A permit may be granted if the fire would enhance vegetation (e.g., grassland burning). Maintenance personnel may conduct grassland fires for vegetation management. Such fires will be controlled as mandated by Poudre Fire Authority. Fires on natural areas require a permit from Poudre Fire Authority.
- Fireworks** Article 78 of the Fire Code bans fireworks in the City Limits. This applies to natural areas in the City Limits and those that are outside City Limits but open to the public. Fireworks are not banned in the County. However, fireworks on natural areas that are outside the City Limits but closed to the public are effectively banned by the “no trespassing” posting.
- Fishing** General: With a valid license required by the Colorado Division of Wildlife, it is permissible to fish in waters of natural areas. However, all Colorado Division of Wildlife requirements must be followed (including size and creel limits) [Municipal Code Sec.23-193(a)(13)].
Ice Fishing, unless posted otherwise, is not allowed [Municipal Code Sec.23-193(b)(1)]. As of March 2001, no natural areas allow ice fishing.

Flying discs, balls, boomerangs	Kicking, hitting, or throwing flying discs, balls, or boomerangs in, onto, or over a natural area is not allowed, except within a fenced area designated and posted to allow dogs off-leash (dog park) [Municipal Code Sec.23-193(a)(6)]. As of March 2001, there are no dog parks in natural areas, nor are any anticipated.
Glass	It is illegal to bring any glass container into a natural area or possess a glass container while in any natural area except when removing them during site clean-up activities [Municipal Code Sec.23-193(a)(2)].
Group events	Events involving groups of 15 or more persons on natural areas require a permit [Municipal Code Sec.23-193(d)(14)], and depending on aspects of the event (e.g., traffic impacts) may require a permit from Police Services. A natural area permit may be granted for events of interest to natural area users and/or those that promote natural areas education. Participants of permitted events are required (unless otherwise permitted) to stay within identified boundaries (e.g., on a sensitive site, participants must stay on trail).
Horseback riding	Unless otherwise posted, horseback riding is allowed only on, and within 10 feet of, trails, unless unavoidable circumstances require that a horse be ridden beyond the 10-foot limit briefly to avoid imminent danger to other persons [Municipal Code Sec.23-193(b)(4)]. Municipal Code Sec.23-193(a)(16) also requires that horses be ridden in a safe manner.
Ice skating	Unless a sign is posted indicating that the waters of a natural area, or a portion thereof, are open for recreation, it is not permissible to ice skate on, or in any other way go onto the ice surface of, a natural area [Municipal Code Sec.23-193(b)(1)].
Kite flying	Kite flying is not allowed in natural areas [Municipal Code Sec.23-193(a)(5)].
Model rockets	Model rockets cannot be launched in, onto, or over a natural area [Municipal Code Sec.23-193(a)(8)].
Motorized model vehicles	Operating a model boat, car, truck, aircraft, or other motorized model vehicle is not allowed [Municipal Code Sec.23-193(a)(7)]. Under Sec.23-194, an exemption is allowed for research or public safety-related activities.
Off-road motorized vehicles	Operating or parking any motor vehicle or other motorized means of conveyance, including without limitation, a motorized scooter, snowmobile, all-terrain vehicle, motorized bicycle or motorized skateboard, anywhere in a natural area other than on established roadways and in designated parking areas is not allowed unless a permit has been obtained for such activity [Municipal Code Sec.23-193(d)(2)]. A permit may be issued for an activity that is necessary, can only be done on the requested natural area, and cannot be conducted without a motor vehicle. Motorized wheel chairs are exempt from this regulation. Maintenance and enforcement vehicles are driven on the trails in the course of routine operations.
Restrooms; drinking fountains	These facilities are provided at or near parking lots or trails only as needed and as funds are available.

Roller skating/blading, skateboarding Unless otherwise posted, roller skating, roller blading, and skateboarding are allowed in natural areas but must occur only on a roadway or designated trail [Municipal Code Sec.23-193(a)(9)] and in a safe manner [Municipal Code (Sec23-193(a)(16)].

Signs Signs are used where needed to provide regulatory communication, interpretation, and directional and site layout information. To avoid “sign pollution,” an attempt is made to keep the number, and where appropriate, size of signs to a minimum while meeting communication and information needs. (Also see “Education” section).

Skiing, sledding, tubing **Sledding, tubing, downhill skiing, and snowboarding** are not allowed in natural areas unless a sign has been posted indicating that the site, or portion of the site, is open for such use [Municipal Code Sec.23-193(b)(3)].
Cross-country skiing in natural areas classified as sensitive is allowed only on or beside trails. In other natural areas, cross-country skiing is allowed in any area where recreational activity is allowed.

Swimming Unless a sign is posted indicating that the waters of a natural area, or a portion thereof, are open for such use, it is not permissible to swim in the waters of natural areas [Municipal Code Sec.23-193(b)(2)]. As of March 2001 no sites are, or are anticipated to be, open to swimming.

Trails **Paved trails:** Paved trails may include (but not be limited to) concrete or asphalt. Where appropriate, paved trails are constructed on natural areas to facilitate recreation, non-motorized alternative transportation, and accessibility needs (wheelchair access). Placement of paved trails is designed to cause as little impact as possible to the natural and aesthetic resources (vegetation, wildlife habitat, wildlife use, visual impacts) of the site.

Unpaved trails: Unpaved trails may include (but not be limited to) natural surface, crusher fines, or gravel. Unpaved trails more closely match the natural environment of the site than do paved trails. Where appropriate, unpaved trails are constructed to facilitate recreation and, where feasible, accessibility needs. Informal unpaved trails created by visitor use, rather than intentionally created by Natural Resources Department staff, may be closed if such trails cause negative site impacts (erosion, wildlife disturbance, habitat damage, undesirable aesthetics).

Trapping The public is not allowed to do any trapping in natural areas within the city limits, or any other natural area that is open to the public, except for special circumstances to trap nuisance wildlife or conduct research in cooperation with Police, CDOW, or Humane Society of Larimer County [Municipal Code Sec.4-120(a)]. Natural areas outside the city limits, and not open to the public, are posted, “no trespassing,” thereby disallowing trapping by the public.

Natural Areas maintenance staff occasionally trap prairie dogs for relocation.

General Regulatory

Concessions/ vendors	Commercial activity is not allowed in natural areas unless a permit has been granted for the activity [Municipal Code Sec.23-193(d)(15)]. A permit may be granted for commercial activity that is part of a larger permitted event (e.g., Poudre River Fest). Such activity also would require a separate City vending/sales tax permit.
Disturbing the peace	Disturbing the peace [Municipal Code Sec.17-121], disorderly conduct [Municipal Code Sec.17-124], and unreasonable noise [Municipal Code Sec.20-22] are not allowed.
Littering/ waste disposal	It is illegal to release any waste or hazardous substance in a natural area or in a manner likely to result in the entrance of such material into or upon a natural area except for the disposal of incidental trash in receptacles provided and marked for disposal of trash [Municipal Code Sec.23-193(a)(1)].
Loitering	Loitering is prohibited by Municipal Code Sec.17-122.
Posting notices	Notices cannot be posted in natural areas without a permit [Municipal Code Sec.23-193(d)(13)]. This includes fastening cards, posters, or other materials on bulletin boards, fence posts, or any other feature on a natural area. A permit may be granted for an event that is related to use or management of natural areas or for a lost or found notice. Details of size and time frame limitations are identified in the Natural Areas Permit Conditions.
Vandalism	It is illegal to remove, destroy, mutilate, modify, or deface any building, structure, water control device, fence, gate, notice, sign, survey or section marker, vegetation, insect, bird, animal, or any other object in a natural area except during approved activities (e.g., clean-up events) [Municipal Code Sec.23-193(a)(11)].
Washing or bathing	It is illegal to bathe or wash persons or objects in the waters of a natural area, or in a manner likely to result in the release of any waste or hazardous substance into the waters of a natural area [Municipal Code Sec.23-193(a)(3)].

Easements

As of March 2001, the Natural Resources Department was developing an easement policy for natural areas.

Leases

Leases on natural areas are granted under special considerations if they do not conflict with site management goals and lands are still accessible to the public for intended uses.

- Agriculture** When agricultural sites are purchased, they are often leased out for agricultural activities until the City is ready to begin natural area restoration activities.
- Billboards** Occasionally, a site is purchased on which there are existing billboard leases (e.g., Arapaho Bend Natural Area). Usually, the billboards are allowed to stay until the leases expire, with either the City getting the revenue or the property seller getting the revenue, depending on the purchase agreement. New billboard leases are not granted.
- Buildings** Buildings are occasionally leased when appropriate. For example, when the City purchased Nix Natural Area the existing tenants were allowed to lease the houses until the City was ready to begin maintenance facility development activities. Buildings may also be leased out for the purpose of providing a caretaker for the property.
- On agricultural sites, persons with farming or grazing leases also are sometimes allowed to lease houses or outbuildings on the site, (e.g., Hazaleus).
- Grazing** Leases have occasionally been granted for grazing of goats for vegetation management (e.g., at Gustav Swanson Natural Area and Coyote Ridge Natural Area). On an interim basis, a previous tenant has been granted a lease to graze horses at Nix Natural Area until the Natural Areas Program assumes management of the site. A grazing lease for cattle is in effect at Hazaleus Natural Area until Natural Resources Department begins site restoration.
- Mining** On some sites, property is purchased with the understanding that leases will be permitted for gravel mining (e.g., Running Deer Natural Area).

General Maintenance

Adopt-a-Natural Area	Organizations such as businesses, families, schools, etc., may adopt a natural area, usually a site of their choice. Responsibilities of adoption include a one-year commitment to pick up litter, keep a record of volunteer hours, and coordinate all adoptive activities with the Natural Resources Department. Adoptive organizations also may grow native plants from seeds, plant native species, care for new plants, remove weeds, and perform other enhancements as needed.
Archaeologic, geologic, paleontologic materials	Such materials are not allowed to be removed without a permit [Municipal Code Sec.23-193(d)(5)]. A permit may be issued for educational, historic preservation, or research purposes if such purposes cannot be realized by leaving the materials on the site.
Fencing	<p>Fencing is used where needed to protect the resource or to direct recreational use. The natural areas program has established the buck and rail fence as the “signature fence” of natural areas. At times, however, site uses or aesthetic needs may result in the use of some other type of fencing material.</p> <p>For wildlife safety, barbed wire fencing is replaced with a non-barbed fencing material unless the fence separates a natural area from an adjacent pastureland. Within the city limits, barbed wire is prohibited by City Code, unless a variance is obtained.</p>
General site clean-up	<p>Trash cans are placed at all parking lots and site entrances. Cans are emptied at least weekly.</p> <p>Dog feces pick-up bags are located at most parking lots and site entrances.</p> <p>Litter clean-up is done by service organization volunteers (e.g., Scout groups) and community service crews.</p>
Incident clean-up	Certain incidents, usually weather related (e.g., high wind or high water events), require special clean-up. When these events cause litter and other debris to be deposited on natural areas, the natural areas maintenance crews conduct the clean-up.
Insecticides	Insecticides are used only for devastating pests (e.g., gypsy moth outbreaks).
Structures	<p><u>Historic structures</u> in reasonable condition are retained on site if they are not in conflict with natural area protection goals for the site.</p> <p><u>Non-historic structures</u> are removed from natural areas unless they serve the public good or meet recreational or site management purposes.</p> <p><u>New structures</u> are rarely built on natural areas. They may be built only if needed to meet site needs (e.g., wildlife viewing facility at Cathy Fromme Prairie, maintenance facility at Nix Natural Area).</p>

Education

The mission of the City's Natural Areas Education Program is to increase the public's awareness of natural areas, promote understanding of natural systems, and foster each individual's realization of the importance and meaning natural places add to our lives.

Goals

- Seek to instill a sense of stewardship toward natural areas. This sense of stewardship may manifest as appropriate behavior while visiting natural areas; appropriate behavior toward elements in nature; a willingness to take action to assist in the conservation and management of natural areas; a desire for some passive types of recreation (bird watching, reflecting); and in many other large and small influences in each person's life. The sense of stewardship toward natural areas is expressed differently for each person, but may encompass educational, economic, aesthetic, spiritual, recreational, ecological, scientific, historical, and cultural values.
- Seek to help all citizens, even those who do not visit natural areas, become aware of the overall values realized by the preservation of natural areas in our urban setting.
- Take a primarily interpretive approach to educational activities: presentations, brochures, signage, and displays to stimulate that sense of stewardship. This means taking technical concepts and language of natural science and making it meaningful to non-scientists - even those who may not necessarily be very interested. The goal is to arouse people's interest, make this information relevant to them, encourage participation, and reveal meanings and relationships in our local natural heritage.
- Provide scientifically accurate information.
- Integrate education with recreation in natural areas to further promote awareness. Attending a guided nature walk allows families, newcomers, seniors, and others to explore and discover natural areas that are close to home in a relaxed setting.
- Provide diverse materials on a variety of topics concerning natural areas.
- Provide experiential and participatory learning situations.

Master Naturalist Program

The education program offers significant volunteer opportunities through the Master Naturalist Program. Master naturalists are citizens who receive extensive training in the ecology of Fort Collins' natural areas and then volunteer to conduct interpretive field trips, class presentations, and other programming in the natural areas education and outreach program. These presentations are available to classes, Scout groups, service organizations, and other groups who contact the Natural Resources Department for presentations about natural areas, wildlife, and related topics.

Interpretive features

For many natural areas, interpretive plans are developed that define the interpretive goals for the specific site, including implementation strategies. These strategies often include interpretive signs. An attempt is made to balance the desire and need for information with the desire to avoid "sign pollution," which for many people interferes with the aesthetic look and feel of the natural area experience.

Agricultural Lands

Agricultural lands are occasionally acquired by the Natural Resources Department, usually with the intent of eventually restoring the land to a natural area. Until restoration can occur, the sites are often leased out for agricultural purposes. During these lease periods, certain guidelines apply. In addition to the following guidelines, unless specified otherwise, management guidelines throughout this document also apply to agricultural lands.

Agricultural crops	Typically, sites being held in agriculture until natural area restoration are used for grazing, haying, or winter wheat.
Billboards	None may be installed on the site. If existing billboards are in place, the City may allow them to stay until current leases expire.
Fencing	Depending on site uses (e.g., grazing), it may be necessary to fence off wetlands and marsh areas to protect the areas. Barbed wire will not be used for any fencing on the site unless required because of grazing animals.
Ornamental and non-agricultural plantings	Any non-agricultural plantings must be approved by the Natural Resources Department and, unless there are compelling reasons otherwise (such as for critical windbreaks), only native species will be planted. The extent to which they are to be native (site, Fort Collins, region, Front Range, state, etc.) shall be determined by the Natural Resources Department.
Prairie dog control	Any needed prairie dog control will be done according to the City's prairie dog policy.
Public access	Sites will be posted "no trespassing" to restrict access to only those with legitimate business on the site. No hunting, off-road recreational vehicles, or other public recreational activities will be allowed on the site.
Stewardship goals	Stewardship goals for each site are identified and are used to determine aspects of site management during agricultural operations.
Structures	<p><u>Historic</u> structures are to be maintained in the condition required by the City's Historic Preservation Department.</p> <p><u>Non-historic</u> structures in useable condition are to be maintained in good condition. Non-historic structures in dilapidated condition should be removed.</p> <p>Responsibility for building maintenance will be defined in leases.</p>
Trash and debris	Lessees are required to keep sites reasonably clear of trash, litter, and debris.
Weeds	Agricultural tenants are required to control noxious weeds on the site. Herbicides (preferably species-specific, not broad spectrum), burning (with PFA permit), mowing, grazing, and/or biological control (e.g., spurge-eating insects) may be used as control measures. In or near wetlands, only EPA wetland-approved herbicides may be used.