

**Parks, Recreation and Cultural Services Department
Memorandum #5-2011**

DATE: April 28, 2011

TO: Honorable Mayor Joyce Downing and City Council Members

FROM: William A. Simmons, City Manager *WAS*
Amanda J. Peterson, Director of Parks, Recreation and Cultural Services *ajp*

SUBJECT: CR41- Parks & Recreation Master Plan 2011 Revision

RECOMMENDATION: Attached to this memorandum is a Resolution which, if approved, would adopt the 2011 revisions to the City of Northglenn's Parks and Recreation Master Plan. The proposed plan complies with the obligations of the Parks and Recreation Advisory board, as described in section 17-2-7 of the Municipal Code. A recommendation to adopt the document was approved unanimously by the Parks and Recreation Advisory Board on April 11, 2011.

BACKGROUND: This document is subject to annual review and approval, and was most recently updated in 2010. City staff has worked with the Parks and Recreation Advisory Board to update the plan for 2010.

Although much of the information in the current revision of the Master Plan is similar to previous years, the plan has been reformatted for 2011 to focus on the inventory of existing Parks and Recreation Facilities and the funded and unfunded Capital Improvement Projects that are needed and/or desired in future years. Much of the previous-year reporting that was a part of the Master Plan has been removed, and is discussed in detail in the Annual Report.

Addendums to the plan include a copy of the most current Noxious Weed Management Plan and the Open Space Management Plan. No changes were made to either of these documents in 2011, the 2010 adopted plans will remain in place. The 2010 Annual Report for Parks, Recreation and Cultural Services is also included as an addendum to the Master Plan.

BUDGET/TIME IMPLICATIONS: The 2011 operating budget and CIP budget for the Parks, Recreation and Cultural Services Department includes adequate funds for implementation of the sections of the plan proposed for action this year. Other long-term commitments in the plan will be reviewed on an annual basis and included in future proposed budgets as appropriate.

STAFF REFERENCE: Please contact Amanda Peterson at apeterson@northglenn.org or by phone at 303.450.8950 for any further questions.

SPONSORED BY: MAYOR DOWNING

COUNCILMAN'S RESOLUTION

RESOLUTION NO.

No. CR-41
Series of 2011

Series of 2011

A RESOLUTION ADOPTING THE 2011 REVISED PARKS AND RECREATION MASTER PLAN

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF NORTHGLENN COLORADO, THAT:

Section 1. The 2011 Revised Parks and Recreation Master Plan, a copy of which is attached hereto and marked as Exhibit A, is hereby adopted by the City Council of the City of Northglenn, Colorado.

DATED at Northglenn, Colorado, this ____ day of _____, 2011.

JOYCE DOWNING
Mayor

ATTEST:

JOHANNA SMALL, CMC
City Clerk

APPROVED AS TO FORM:

COREY Y. HOFFMANN
City Attorney

**City of Northglenn
Department of Parks, Recreation &
Cultural Services**



Parks & Recreation Master Plan

2011 Revision

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Introduction

Purpose

As per Chapter 17-2-7(d) of the Northglenn Municipal Code, the Parks and Recreation Advisory Board has the following responsibility:

“To assist and advise the City Manager and the City Council in determining the community’s needs and desires for parks, programs and facilities in relationship to the Park’s Master Plan and to continually update the Parks Master Plan on a yearly basis to achieve an equitable balance, within reason, of parks, programs and facilities in the city.”

The following document is submitted in accordance with Chapter 17-2-7(d) of the Northglenn Municipal Code.

Background

In 1986, City Council adopted the City’s first comprehensive Parks and Recreation Master Plan. In addition, upon adoption of the Master Plan, the Council appointed a Task Force to develop a ten (10) year Implementation Plan for the Master Plan. Membership on the Task Force included representatives of City Council, the Parks and Recreation Advisory Board, the Planning Commission and City Staff. The ten (10) year Implementation Plan was adopted by City Council in 1987.

The authors of both the Master Plan and the Implementation Plan recognized that the parks and recreation desires and preferences of the community are continually evolving and recommended that

an annual evaluation be conducted to address and consider revisions to the plan. The Parks and Recreation Advisory Board are thus charged with conducting an annual review of the Master Plan and making recommendations for its update and revision.

The 2011 revision includes a new format, with a focus on compiling a complete, current inventory of existing parks and facilities, as well as a 5-year Capital Improvement Plan and an extended list of future capital improvement needs and desires.

Goals and Actions

This Master Plan seeks to complement City-wide efforts and organizational direction as it relates to the roles and functions of the Parks and Recreation Advisory Board and staff to achieve near-term and long-term capital improvements to the City’s parks, public grounds, and recreational assets and amenities. Existing plans and goals, such as the City’s Comprehensive Plan and City Council Goals are referenced to ensure consistency across departments.

It is hoped and anticipated that the community at large will support the efforts of staff and the public process that occurred to have identified and listed the noted and desired improvements to our recreational and leisure time assets. This document is intended to serve as a roadmap to guide staff toward the successful completion of multiple projects, pending the availability of required financial resources, to help assure the achievement of Council goals and the City Manager’s goals and the expressed wishes of the public, and in so doing

provide a contribution to achieving what we all cooperatively strive for. When applicable, projects described within this Master Plan refers to the current goals as stated below.

As most recently discussed in late 2010, the City Council Goals are:

Economic Development

- Back fill blighted areas (with pursuit of an additional grocer)
- 120th and Grant St. Development
- Retention of existing Businesses

Infrastructure

- Water Rights
- Waste Water Treatment Plant
- Recreation Center
 - Fire code compliance
 - Repairs and improvements
- Maintenance of city buildings, parks and roads - ongoing and deferred
- Fast Tracks

Safety

- Increased visibility of police department
- Community Policing/Neighborhood watch
- Water

Fiscally responsible city government

- Financial sound budget
- Improve financial situation
- Community governance with civic involvement
- Build and encourage strong teamwork

Develop a sense of Community

- Improve perception of the city through the eyes of the citizens, other municipalities and businesses
- Improve communications with the Public & Legislators

- Enhance Channel 8 Programming with important messages
- Enhance the Northglenn Connection
- Press Releases
- Citizen Survey
- Ward Meetings
- Website
- Meetings

The City Manager's Goals, as applicable to this document and as identified for 2011 are:

Financial Management

- Continue to provide accurate & timely financial information to City Council and the Public
- Actively pursue federal, state, local & private grants
- Complete inventory of unfunded capital improvements
- Propose plan for use of revenues from .05% sales tax approved at Nov. 2010 election

City Facilities and Infrastructure

- Complete Energy Audit for City Buildings and Facilities – Determine future action
- Complete Recreation Center Fire Code Compliance Improvements
- Consider other Capital Improvements to Recreation Center
- Complete Skate Park

Productive Work Environment and Employee Excellence

- Develop, coordinate and deliver monthly training programs to help staff and managers accomplish personal and professional goals while enriching the organization
- Implement an ongoing employee safety awareness program during

- first quarter 2011
- Provide an employee recognition program designed to recognize and reward employees and employee groups for excellence in support of the City’s mission and goals
 - Employ a continuous improvement philosophy at the City, by instilling enthusiasm and commitment to examining and improving processes on a regular basis from top to bottom

Citizen Communication & Engagement

- Develop and produce new City web site
- Continue to provide comprehensive information to Northglenn residents to educate the public on how their tax dollars are spent and to foster transparency in government. Continue to publish and distribute the Northglenn Connection monthly and issue news releases to the media
- Administer a Citizen Survey to measure citizen’s opinions about city services and their local government
- Provide three (3) city sponsored community and family friendly events by December 31, 2011, to include Kids Fishing Derby, July 4th Family Festival and Noel Northglenn
- Complete a comprehensive evaluation of citizen recognition at the City of Northglenn by July 31, 2011

General Administration

- Complete the ICS 200 National Incident Management System
- Build a more inclusive Northglenn

Parks & Facility Inventory

Parks

Alvin B. Thomas Park

This neighborhood park is located at the corner of Leroy Drive and Rosalie Drive. The park is composed of approximately 2.7 acres of turf, along with basketball courts, a children’s playground, a small picnic shelter with tables and a grill. The turf field is occasionally used for organized soccer practices. In 1981, this park was dedicated to former Mayor Alvin B. Thomas. This park is scheduled for renovation in 2011.

Eleanor M. Wyatt Centennial Park

This quiet, passive recreation space is located on Kennedy Drive and Melody Drive, just to the north of the Northglenn Marketplace. This park is the home of the Centennial Bell flower bed, a native flower bed and the Rose Garden, maintained by the Northglenn Garden Club. In dedication of the Nation’s 200th Anniversary and the State of Colorado’s 100th Anniversary, a time capsule is buried in the park, and is scheduled to be opened on August 1, 2026, and then re-buried until July 4, 2076. This park was originally named the “Civic Gardens,” and was re-named after Eleanor M. Wyatt in 1981 for her contribution and dedication to the Northglenn Metropolitan Recreation District and the Northglenn Garden Club.

Charles C. Winburn Park

This larger park is located on Huron, just south of 112th Avenue. This area is the home of the Winburn Ponds, a small gazebo and a large turf field. The turf field is utilized seasonally for football and rugby



Figure 1: Winburn Park Gazebo and Ascension sculpture

practices. This park is home to “Ascension,” a sculpture gifted to the City by the Northglenn Arts and Humanities Foundation. In 1987, the park was named in honor of former Mayor Charles C. Winburn.

E.B. Rains Jr. Memorial Park

The City’s flagship park, E.B. Rains Jr. Memorial Park is over 28 acres in size. Located just to the east of the Northglenn Recreation Center, this park offers fishing, walking trails, pedal boats, and the Sensory Playground. Amenities also include restrooms, barbecue grills and water fountains. This park is often used as a community gathering place for both private and public functions – on any given day throughout the year there may be a wedding, a birthday party or a city event taking place in one of the pavilions. This park hosts the Race for a Cure, the July 4th Family Festival, the Summer Concert Series and the Kids Fishing Derby on an annual basis. There are many flower beds cared for by volunteers, including the Peace Garden and the high-impact “Triangle” bed. This park is also the location of the City’s “Art on Parade” program, with six sculpture pads placed along the trail throughout the park. This park’s newest feature, a Skate

Park recommended to be named after former Parks & Recreation Advisory Board member Don Anema, is scheduled for completion in mid-2011. The playground is scheduled for minor renovations in 2010 and 2013, with a major playground replacement scheduled in 2018.

Fox Run – North, Central & South Parks

These three, two acre, parks located throughout the Fox Run Subdivision were established in 2000. Each of the parks primarily serves the surrounding neighborhood, and includes a children’s playground, picnic tables, benches and basketball courts. These three playgrounds are scheduled for renovation in 2013.



Figure 2: Fox Run North Park sign and flower bed with playground in background

Hugh Danahy Park

This park and playground are located at the corner of Roseanna Drive and Livingston Drive. The playground equipment and other park amenities are scheduled for renovation in 2012.

Huron Crossing Park

This small neighborhood playground and park consists of just under 2 acres of turf



Figure 3: Playground at Huron Crossing

and a children’s playground. There is also a basketball court, a small gazebo with a picnic table and a water fountain. The playground equipment was last replaced in 2009.

J.D. Cayton Park

This neighborhood park is adjacent to the playground at Hillcrest Elementary. There are several picnic tables with a fenced turf area that is occasionally utilized for youth sports practices.

Bill Goodspeed Happy Tails Dog Park

The City’s only off-leash Dog Park is located on the east side of Irma Drive at Leroy Drive. The Dog Park was established in 2003 and is an asset to the community and the many dogs and their owners who visit the park daily. Former Councilman William “Bill” Goodspeed was instrumental in the park’s conception. The park includes a fenced area, a shade structure, a water fountain and solar lighting.

Larson Glenn Park

This 1 acre park has a small picnic shelter and a basketball court, along with a parking lot to accommodate users. This park is not currently scheduled for renovation, though should be considered for minor improvements as there is cracked concrete and aging amenities.

Larson Park

This 3 acre park at 108th and Larson Drive has two large children’s play structures, an open turf area, basketball and several picnic tables. This playground is scheduled for renovation in 2014.

Malley Park

This space is adjacent to Malley Elementary School, and includes picnic tables and nearly 4 acres of turf.

Figure 4: My Buddy bronze sculpture at the entrance to the Bill Goodspeed Happy Tails Dog Park



Sperry Park

This well-utilized neighborhood park has nearly 3 acres of turf sports fields, often utilized for impromptu volleyball or soccer games. The space is occasionally used for organized youth sports practices. The playground equipment was last renovated in 2010 with forest-themed play structures. The park also has a basketball court and picnic tables.

Stukey Park

This 3 acre park is adjacent to Stukey Elementary, and consists of a large grassy area often used by students at the school for team sports.

Village Greens I & II

These two small neighborhood parks are each just over 1 acre in size, and are located at 116th and Sherman and 116th and Pennsylvania. There are picnic tables, flower beds, large grassy areas and children's playgrounds at each of the two parks. The playground equipment was last renovated in 2008.



Figure 5: Playground at Village Greens II

Wyco Park

The playground was a joint-use playground with Adams 12 schools, and was removed from this park in 2009 during a school

renovation. It is desirable for a playground to be replaced at some point in the future, though a timeline has not yet been established. It is possible that the replacement project would be in cooperation with Adams 12 Schools, as this site is currently being used as an elementary school.

Open Space

Grant Park

This park is located at 105th and Grant Drive alongside the C. A. "Gundy" Gunderson (Grant Ditch) Trail. The area is maintained in a natural state, with a picnic table and bench available for those utilizing the trail.

Scout Park

This park is located at 112th Place and Highline Drive adjacent to the property owned by the Community Reach Center. This space is undeveloped, but is occasionally used for archery practice.

Grange Hall Creek Trail Connection at Washington Street

Grange Hall Creek trail and the C.A. "Gundy" Gunderson Trail run east to west through Northglenn along Grange Hall Creek and generally provides the pedestrian or bicyclist easy passage without having to 'share the road' with motor vehicles. Two notable exceptions to this are at the crossing locations at Washington Street and at Irma Dr. Other street crossings exist but the traffic conflicts are much less.

Grant Ditch/C.A. “Gundy” Gunderson Trail at Grant Ditch

Grant Ditch, a corridor along the east side of I-25 between the Farmers Highline Canal and Grant Ditch and along Grant Ditch to the eastern limits of the City of Northglenn, was adopted as part of the State Trail System in October of 1973. In January 2010, City Council resolved to rename the Grant Ditch Trail the C. A. “Gundy” Gunderson Trail in honor of former Chief of Police, Carlisle “Gundy” Gunderson. A sign was erected identifying the C. A. “Gundy” Gunderson Trail at Grant Ditch and the 6,855 foot trail was dedicated to Chief Gunderson on May 12, 2010.

Nature Areas

Oscar Arnold Nature Area

The Oscar Arnold Nature Area is nestled alongside the athletic fields at Northwest Open Space on the northeast portion of the property north of the Farmers’ Highline Canal Trail running through the property and hosts a unique blend of wooded areas with mature cottonwoods, cattail marshes, and other wetland plants that are valuable resources for wildlife. A variety of species including foxes, coyotes, raccoons, hawks, pheasants, and owls, among others are residents of this area. The City adopted an Open Space Management Plan in 2002 that identifies a long-term maintenance and improvement program to the park’s natural area to control undesirable vegetative growth and enhance and preserve its standing as a wildlife habitat.

Croke Reservoir Nature Area/Bill Gillespie Nature Trail

The Croke Reservoir Nature Area is located at Huron and Naiad Streets and is home to a wide range of wildlife such as fish, snapping turtles, water fowl, herons, red-winged black birds, muskrats, raccoons, and an occasional fox. Willows and cottonwoods surround this area, providing a peaceful place to stop and rest. Fishing is permitted from April to mid-August, but is limited to lures and flies and is prohibited on the north side of the reservoir for environmental reasons. Croke Reservoir was rehabilitated in 2009 when the reservoir was drained and the shoreline stabilized. Many new amenities were added to the east side such as a walking path and pavilion with steps that lead to the water where you can sit and enjoy the view. Through the efforts of over 1200 volunteers, the following improvements were also made: removal of chain link gate near bridge, painting bridge railings, painting posts on entrance sign, trimming branches near bridge, painting metal railings, and replacement of 18 railroad ties



Figure 6: Monument sign, as seen looking west from Huron towards Croke Reservoir

on the fishing pier. The piece of sculpture, Hop To It!, found a new home here after the rehabilitation work was complete. The 3,988 feet of nature trail that wraps around the reservoir was renamed the Bill Gillespie Nature Trail on November 9, 2009 in honor of a former Councilman, resident and volunteer. Parks staff constructed a Memorial Sign identifying the Bill Gillespie Nature Trail and dedicated the trail to Mr. Gillespie on May 21, 2010.

Fox Run Nature Area

The Fox Run Open Space west of Fox Run Parkway was designated as the area to be renamed a Nature Area in April of 2007 from Planned Unit Development (PUD) to Open O-1. As defined, the Nature Area shall be protected from development, but may also be used for unimproved trails, buffering between land uses, defining the edges of urbanization and the preservation of valuable natural features and ecosystems. Utilities and existing improvements located in a nature area may be maintained as necessary, but reasonable efforts should be used to minimize environmental impacts.

Recreation & Sports Facilities

Recreation Center

The 40,000 square foot Recreation Center was built in 1974, and includes a swimming pool with starting blocks, gymnasium, locker rooms, racquetball courts, weight room, classrooms, senior center and a 300-seat performing arts theatre. The recreation center offers a variety of passive and active recreation activities annually for persons of all ages, abilities and interests, with over 200,000 visits to the facility each year.

Jaycee Ball field

The ball field at Jaycee Park is located on the east side of Irma Drive at Leroy Drive. This single ball field is used primarily for adult softball, and includes an electronic scoreboard, lights, a scorekeeper booth, a small supply shed and parking.

Kiwanis Pool & Park

The City's only outdoor pool is located on the southwest corner of Garland and Washington Street. In addition to the large pool with a diving board and slide, there is also a wading pool for the youngest users, a covered pavilion area and picnic tables. The aging bathhouse with a men's and women's locker room and cashier's station is aging and in need of renovation. The large pool was resurfaced in 2010, the kiddie pool was last resurfaced in 2006. The pool is open seasonally from June through August each year.



Figure 7: A summer day at Kiwanis Pool

Northwest Open Space

This 50 acre athletic complex located at Pecos Street and Roseanna Drive is utilized throughout the year for youth and adult soccer, football, cross-country, baseball and softball. The fencing, infield mix and backstops on the ball fields were replaced in 2010, along with the addition of a new soccer field. This park is home to two sculptures gifted to the City by the Northglenn Arts and Humanities Foundation, “Open Space” at the north entrance and “Orphans” at the south entrance, as well as another Plant Select xeric garden.

Rotary Park

Located at the corner of Pecos and Roseanna Drive, this ball field is also utilized for youth and adult baseball and softball. In 2010, some improvements were made to the infield and the fencing.

Right of Ways

104th Avenue

This stretch of 104th Avenue includes a meandering trail, irrigated turf and landscaped areas. In addition, fencing was added in 2002 and stained and sealed in 2009. The medians in this area were improved with both hardscape and plant material in 2003. As a major arterial road in Northglenn, this area also includes several monument signs welcoming visitors to the City of Northglenn.

106th Avenue RTD Area

In 2003, 106th Avenue between Melody and Huron was reconstructed to accommodate a new RTD bus stop area. This included landscaping and irrigation.

Community Center Drive Overpass

The overpass was completed in 2002, linking Community Center Dr with West 112th Avenue. This area is landscaped with xeric plant materials, along with some irrigated turf.

Croke Reservoir and Huron St

The area in front of Croke Reservoir, along Huron Street, includes entrances into the Croke Reservoir Nature Area and the Bill Gillespie Nature Trail at Croke Reservoir. The area includes a large pavilion area adjacent to Huron Street, and a monument sign identifying the area as a City of Northglenn facility.

Administration & Maintenance Facilities

City Hall

The City’s administrative offices are located at City Hall, 11701 Community Center Drive. The Parks and Recreation Advisory Board meets in City Council Chambers, located on the lower level of City Hall. The grounds surrounding City Hall, including the Veteran’s Memorial, are approximately 33 acres. The front of City Hall showcases a “Plant Select” xeric garden. The “Potato Man,” a sculpture gifted to the City through the Northglenn Arts and Humanities Foundation, resides in one of several flower beds at the Police/Court entrance.

Maintenance & Operations Facility

The Parks division’s administrative and maintenance offices are located at the Maintenance and Operations facility on Claude Court. Staff offices are in the administration building, with equipment and work space in the parks barn and several storage containers.

Water Treatment Plant

To increase efficiency, a small barn has been set up at the Water Treatment Facility to store tools and equipment that is used on the west side of town. This eliminates the need to transport equipment across town on a daily basis, reducing wear and tear on the equipment and increasing the amount of time the equipment is available for use.

Demographics

This portion of the Parks & Recreation Master Plan is excerpted from the Northglenn Comprehensive Plan, adopted in 2010.

This section of the Comprehensive Plan is intended to provide a snapshot of the current conditions in the city of Northglenn as well as perspective on trends and comparisons to other jurisdictions with similar attributes. In some cases, comparisons are made between the populations of Northglenn and Adams County (where the developed portion of Northglenn is wholly seated) or the entire Denver metro region. In other cases, comparisons are made between the city and the cities of Wheat Ridge or Englewood. These two communities are deemed to have similar attributes and challenges to that of Northglenn (inner ring suburbs, limited room for growth, interstate highway proximity, etc.). The goal is to help understand the various factors that make up the city today and will play a large part in its future direction.

Geography

Northglenn is a small Colorado city, located in the heart of the Denver Metro Region, encompassing approximately 7.45 square miles. The bulk of the city is located within Adams County (6.45 square miles) in an urbanized setting. One square mile is located in Weld County, approximately seven miles north of developed Northglenn. Northglenn is strategically positioned in the center of the growing northern portion of the Denver metro region, where access to all lifestyle elements (jobs, shopping, air travel, downtown Denver) is within a 30-minute drive. Additionally, the undeveloped portion of the city, in Weld County, provides unique opportunities for growth and development in the future.

Population

The 2007 American Community Survey (ACS) indicates that Northglenn has a population of approximately 35,000 residents. The city has seen a slight downward trend in population over the past three years, while Adams County and the Denver Regional Council of Governments (DRCOG) region continue to grow in population. In recent years, residential growth in the region has occurred outside of Northglenn's boundaries. The last major single-family development in Northglenn was the Fox Run community, which was developed during the late 1990s. Of the city's nearly 35,000 residents, approximately 24 percent are under the age of 18 and 11 percent are 65 or over. The median age of all residents in the community is 33.5, significantly younger than similar communities in the region. As we plan for the future of Northglenn, it will be important to keep in mind that nearly one out of every four

Northglenn residents is under the age of 18. To provide the opportunities for young people to conduct the various stages of life within the city, evaluation of their needs will be increasingly important as Northglenn changes and evolves (e.g. housing choices, recreation amenities, shopping opportunities).

Households

The nearly 35,000 residents of Northglenn live in approximately 14,000 households throughout the community. The average household size is 2.6 people, which is roughly comparable to the average household size for Colorado. Families comprise 64 percent of the households in Northglenn. This figure includes both married-couple families (48 percent) and “other” families (16 percent). Non-family households make up 36 percent of all households in Northglenn. Most of the non-family households are people living alone, but this figure also includes people living in households where no one is related.

Mobility

In 2007, 80 percent of Northglenn residents were living in the same homes a year earlier. Nine percent had moved during the past year from another residence in Adams County, 7 percent had moved from another county in Colorado and 5 percent had moved from another state. In all, one in five people had moved from some place outside of Northglenn in the previous year. The ever changing population of Northglenn provides unique challenges in fostering a sense of community. Alternatively, the data suggests that Northglenn is a highly desired destination where people find opportunities for housing, jobs, and changes in lifestyle.

Income

The median income of households in Northglenn was \$53,747 in 2007, approximately \$4,700 less than in 2000, adjusted for inflation. According to the ACS, eight percent of the total population are living in poverty. Thirteen percent of children under 18 are living below the poverty level, compared with seven percent of people 65 years old and over. Seven percent of all families and nine percent of families with a female householder and no husband present have incomes below the poverty level. These levels of poverty are less than both Adams County and the state of Colorado as a whole.

Education

As of 2007, 83 percent of people 25 years and older had at least graduated from high school and 18 percent had a bachelor's degree or higher. School enrollment for preschool through high school in Northglenn constitutes approximately 6,400 children, or about 18 percent of the total population. Nursery school and kindergarten enrollment is approximately 700 and there are approximately 5,700 children enrolled in elementary or high school. There are approximately 1,600 students enrolled in college or graduate school. Education attainment in Northglenn tracks closely with that of Adams County, but lags when compared to the entire state of Colorado. Northglenn's 2007 levels of educational attainment are slightly lower than data collected during the 2000 Census, but not significant enough to determine a downward trend. Continued partnerships and cooperation with Adams County School District 12, the Adams County Education Consortium and other higher education

partners will be critical in fostering growth in these indicators.

Forecasts

DRCOG provides municipal level forecasts through their regional modeling project. Through the year 2035, they forecast approximately 40,500 people living in Northglenn (13 percent increase) and approximately 14,800 jobs located in the city (26 percent increase). Accommodation of these increases will largely be dependent on the conversion of currently vacant land and redevelopment of targeted areas throughout the city. DRCOG's ability to coordinate each municipality's perspective of their respective future growth potential is a difficult task. Certain realities of local government legislation are not always taken into consideration when conducting a regional growth forecasting model. For example, the 1993 Intergovernmental Agreement (IGA) between Northglenn and the City of Thornton may have a significant impact on the future growth associated with Section 36.

Source: 2000 U.S. Census Source: U.S. Census and DRCOG estimates 2007 data are taken from the newly released ACS conducted by the U.S. Census Bureau between the years of 2005 and 2007. Other data is derived from previous decennial census programs, annual Census estimates, or the estimates provided by DRCOG.

1- The U.S. Census generally defines families as individuals living in a household that are related to one another by birth, marriage, or adoption. The Census defines a household as the following: a housing unit occupied either by a family or by non-family (nonrelated or single) members. Individuals

living in group quarters are not tallied as living in households.

-1990/2000 US Census and 2007 ACS

Needs Assessment

Property Acquisition

Unless the City experiences significant demographic changes, the acquisition of additional property for parks and recreation purposes remains to be a low priority. According to a report from the Department of Local Affairs, the standard for small Colorado communities is approximately 14 acres of park and recreation land per 1,000 residents. Throughout the nation, the largest cities range from 3 acres to 45 acres per 1,000 residents, with Denver at 11.5 acres per 1,000 residents.

The Northglenn parks and recreation system includes 337.76 acres of parkland, which includes 165.76 developed acres, 160 natural open space acres and 12 undeveloped acres. In addition, there are 216.72 acres of right of ways and trails. This equates to approximately 15.8 acres per 1,000 residents, or 64.5 acres in excess of the minimum standard.

One piece of land exists that has been identified as having potential for future acquisition. Eastlake Reservoir #1, located in the northeast corner of the City, would be an appropriate site for park and open space development. This 10 acre site would serve the recreational needs of the surrounding neighborhood, and potentially provide unique features that would serve the entire City. This parcel also serves to connect the Greenway Trail System to a segment of the trail constructed by the City of Thornton along the Farmer's Highline

Canal and an existing section owned and maintained by the City of Northglenn. Acquisition of the Eastlake Reservoir #1 should be considered at the time that adjoining development or a favorable economic climate becomes evident. The City of Thornton has shown past interest in taking possible lead on the development of a park in close proximity to this location.

Annual Review

This Master Plan identified long-term goals for Northglenn’s Park and Recreation system and provides direction for future development and renovation efforts. To ensure its relevance for future use, it needs to be updated and/or revised as necessary to reflect completed projects, new development opportunities or any changes in the community that may impact the direction of the development efforts.

To accomplish this, this Master Plan will be reviewed on an annual basis within the context of the five-year Capital Improvement Program and the budget preparation process. As projects and/or acquisitions are completed, or when new projects or proposals are considered, amendments to the Master Plan will be incorporated and presented to the Parks and Recreation Advisory Board and City Council for adoption.

Public Input Process

Public comment is welcomed and encouraged as it relates to parks and recreation programs or projects. The department has several established means of offering opportunities for public input. A public hearing is held at least one time each year, during the spring, to gather public

input regarding the programs and activities that are offered through the Recreation division. A public hearing is held at least one time each year, generally during the fall, to gather public input regarding the five-year Capital Improvement Program prioritization.

To increase community ownership and interest, and to allow for personal opinions to be shared in a productive manner, a public input process may be utilized prior to renovation of parks or recreation facilities. This process may include public meetings, gathering of survey data, focus groups or open comment periods. Notification of such opportunities will be made through existing marketing resources such as the Northglenn Connection, the Recreation brochure, Channel 8, www.northglenn.org, and community message boards. For projects that may impact a specific neighborhood, direct mailing may also be utilized.

Maintenance and Improvement Plan

Five-Year Capital Improvement Program

As a part of the annual budget preparation process, the City Manager prepares and submits to the City Council a proposed Capital Improvement Projects Program for the next five (5) fiscal years. The program incorporates a list of capital improvements proposed to be undertaken during the five year period covered by the program and identifies the necessity, estimated cost, method of financing, recommended schedules for each improvement and the estimated annual cost of operating and

maintaining the facilities to be constructed or acquired if applicable.

The Capital Improvement Projects program is adopted by the City Council following a public hearing on the proposed budget, with or without amendment.

The recommendations proposed in the Master Plan will be considered during this process and individual projects will be identified for construction or acquisition reflecting available resources, priorities and/or desires at the time of budget preparation.

The 5-year CIP is an established process that addresses the long-term needs of the parks and recreation program while providing the flexibility to investigate a variety of funding options for new development and redevelopment of parks and associated facilities. Citizen input into this decision making process is encouraged and provided for through an annual public hearing on the CIP program that is hosted in the early fall by the Parks and Recreation Advisory Board. Additionally, citizen input is also sought through a variety of more informal means such as through a variety of public meetings, special interest groups and other opportunities.

The five-year capital improvement program for parks and recreation has been developed with consideration to the funding that is anticipated through Adams County Open Space discretionary funds and the Conservation Trust Fund allocation. This plan has been developed primarily with near-term budget restraints and current conditions in mind, therefore, does not include identification of funding for some projects for which interest has been

expressed. However, a list of those projects exists in an effort to ensure that these desires are not forgotten in the future when new opportunities may present themselves. These projects, although identified as needs, have not yet been inserted into the Capital Improvement Program. Existing funding is available for some, though not all, of these projects and they will be prioritized and inserted into the program as appropriate in the years to come based on community interest and the impacts that exist as projects relate to one another.

As of 2011, estimates show revenue from the Adams County Open Space Sales Tax to be \$214,000 annually. The Conservation Trust Fund provides the City with approximately \$303,700 each year. The chart below identifies projects and cost estimates, as well as a year-end fund balance for each funding source.

Project Descriptions-Funded

Greenway Trail Concrete Replacement Program

This is an annual program to maintain the Greenway Trail. Degraded trail sections are documented by the Parks division throughout the year. The Greenway Trail Concrete Replacement program replaces these degraded sections to maintain a safe, accessible and aesthetically pleasing trail system. This program is typically combined with the annual street improvements project to obtain the best unit pricing.

Northglenn Recreation Center Fire Code Compliance

On June 2, 2008, the City received a Notice and Order to Comply from the North Metro Fire Rescue District (NMFDRD) regarding the Northglenn Recreation Center. Several fire

code violations were noted by the Fire District and the City was given specific deadlines (30 days, 60 days, 90 days or 3 years) for each violation beginning from the date of the Notice. All items on the lists with deadlines for 30, 60 or 90 days have been addressed. In 2010, Hughes and Associates completed a report for Performance Based Alternatives that address the outstanding fire code compliance items. The report has been reviewed and subsequently approved by NMFRD. Following the approval of the report, City Council approved \$1,025,000 to address the remaining fire code compliance items. These include a fire suppressive sprinkler system, separation of spaces in the theatre and senior center and back-up power for the elevator. It is now anticipated that the total cost for this project will be approximately \$400,000.

Senior Center Flooring Replacement

The carpet in the Recreation Center Senior Center is worn and stained from use and requires replacement. The tile and carpet will be replaced with a combination of hard surfacing and carpeting in an arrangement that will allow for better functionality with hard surfacing in the areas that food and drink are generally served, allowing for easier clean up. As has been done in other areas of the Recreation Center, carpet tiles will be used so that damaged areas can be replaced without necessitating replacement of the entire carpet area, which should increase the longevity of the floor coverings.

Irrigation System Central Control

This project will begin with analysis of the economic impacts and practicality of installing an irrigation central control

system. If determined feasible, implementation plans will be developed for all of the city's irrigation.

In the event of an irrigation line break, or during a large storm event, staff must shut numerous valves and/or clocks within a park in order to turn off the irrigation system. An irrigation central control system would automate the system, allowing staff to respond to situations more quickly, conserving staff resources as well as water. An irrigation central control system consists of a master control providing a single location to open or close irrigation valves. Central control systems also include rain sensors that detect the quantity of rainfall, and water accordingly. If the design shows potential for water savings and is cost effective, the design will be recommended for implementation throughout the park system during the next 5-10 years.

Recreation Center Heating, Ventilation and Air Conditioning

The replacement of the heating, ventilation and air-conditioning (HVAC) units and controls are a high priority. The entire system is in need of replacement; however, funding has only been identified at this time for approximately half of the units and controls. The units in the worst condition will be replaced first. Although well maintained, the current system is inefficient, utilizes an outdated control system, and has reached the end of its life expectancy.

Sensory Playground Equipment Repair

Due to the size and high usage of the Sensory Playground, some pieces of equipment have worn prematurely. In an

effort to preserve the remaining equipment and ensure the safety of children, this project includes the replacement of three pieces of equipment broken within the last three years (Big Blue, the Merry-go-Round, and Jacob's Ladder). This is not a complete replacement, and additional "wear and tear" replacement is scheduled for 2013 to ensure that this well-used facility is in good condition for use by park visitors.

Jaycee Ball field Improvements

This project includes renovation of the existing ball fields to include replacement of backstops, fencing, infield mix and basic amenities. The existing ball fields at Jaycee are prone to flooding and the existing infield mix is not at an appropriate level, causing flooding. The resulting compaction is a safety hazard and limits the use of the fields during wet weather. In addition, the fencing, bleachers, backstops and dugouts are damaged and require repair.

JD Cayton Park Fence Replacement

The fence at JD Cayton Park is old, dilapidated and a safety hazard. Installation of a new fence will provide a clear separation between the school and the park and will allow for maintenance access.

Although this project is currently part of the five-year CIP, staff is re-evaluating the need for this project. The fence is in better condition than other fences in the city and in-house repair may be possible.

Webster Lake Shoreline Stabilization

Since the completion of the Webster Lake Rehabilitation project in 1999, significant erosion of the exposed shoreline has been observed. Over 500 square feet of shoreline has been lost primarily due to wave action caused by the prevailing winds. The Webster Lake Rehabilitation project includes a combination of derrick stone (boulders) and wetland materials around the perimeter of Webster Lake. The majority of the wetland plants were unable to establish leaving those areas prone to continued erosion. Of the remaining exposed areas, the west shoreline between the calming cove and the boat house is the most impacted by the wave action. This project includes the stabilization of the shoreline along the west side of Webster Lake. The design and the majority of the construction are anticipated to be in place in 2010, but the plant material will not be installed until the spring of 2011 to allow the wetland plants time to establish.

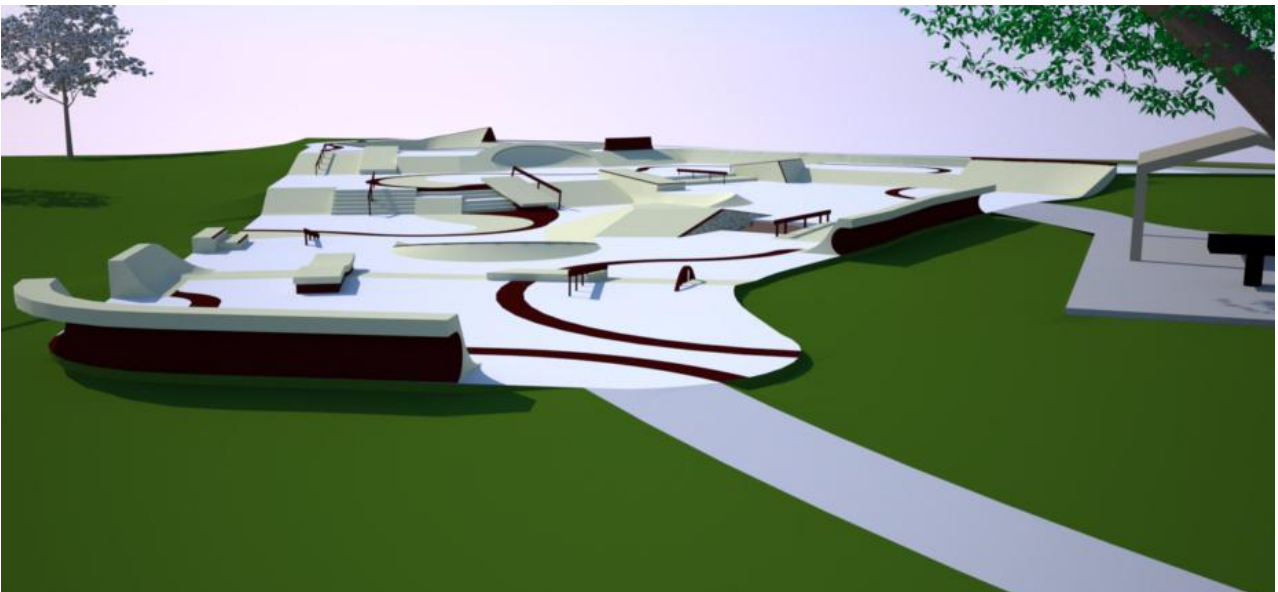


Figure 8: Artist's rendering of preliminary plans for the Skate Park

E.B. Rains Skate Park

This project was initiated based on continuous public support from both youth and adults and support from the Youth Commission and Parks and Recreation Advisory Board. The desire for this project has been included in the Parks and Recreation Master Plan. In 2010, a grant was approved from Adams County Open Space, in the amount of \$550,000 and the Youth Commission contributed an additional \$5,000 through fundraising. Additional funding was granted by GOCO in the amount of \$95,000 for lighting of the skate park. In addition, as a part of the grant application process, City Council approved the use of \$50,000 from the ADCO Open Space Tax and \$100,000 from the General Fund. The total project cost will be \$800,000 and completion is scheduled for summer 2011.

Recreation Center Fitness Amenities

This project includes the replacement of weight room equipment and the basketball backboards. In order to meet the needs of the recreation center customers as well as providing a safe environment to exercise, aging equipment must be replaced on a periodic basis. A few pieces of equipment in the weight room are old and outdated and require replacement. In addition, the basketball backboards in the gym are not adjustable for youth programs and manual adjustments are difficult and very labor intensive.

Recreation Center Gym Floor Replacement

The gymnasium floor is scheduled to be replaced in late August 2011. The

synthetic gym floor was last resurfaced in 1998 and the coating is now wearing away to the original floor. The proposed replacement is a wood floor with a rubber sub-floor to allow for more cushioning to accommodate the various uses of the facility.

Emergency Park Equipment Repairs

The playground equipment at the City's parks is replaced on a periodic basis due to normal wear and tear, vandalism, and unavailable replacement parts. However, in some instances the damaged equipment presents an unsafe condition and requires immediate removal. In the event a piece of equipment is damaged, it is more likely that replacement parts will still be available if that component is replaced immediately. A delay of a year or two increases the likelihood of complete equipment replacement due to unavailable parts and leaves facilities in an undesirable condition for park patrons. Funding for the Emergency Park Repairs will only be expended on an as needed basis. In the event little or no emergency equipment replacements are necessary in a specific year, the funds would remain in the fund balance.

Project Descriptions—Un-funded Northwest Open Space Improvements

Northwest Open Space is the City's largest athletic field complex, and is well utilized for soccer, football, rugby, softball, baseball and cross country. This facility, however, has no permanent facilities. The proposed improvements include restroom facilities, a children's playground, picnic shelters with tables and barbeque grills, a concession stand, replacing the existing asphalt trail

with concrete, and the addition of storage facilities for athletic equipment and maintenance equipment.

Kiwanis Pool Improvements

The bath house at Kiwanis has had few improvements since its opening in 1965. The bath house, which includes locker rooms and a cashier's station, is in need of a new roof, new plumbing and electrical, new lockers, sinks, toilets, showers and other fixtures, and repainting.

Currently, the pool drainage is not connected to the sanitary sewer, but rather drains to the stream system. In instances when large amounts of water are drained from the pool without sufficient time for de-chlorination, chlorinated water is discharged to the stream system. This is potentially harmful to the balance of the stream ecosystem. In addition, small amounts of chlorinated water are discharged regularly through the daily backwash process. Although this is an acceptable practice, it is not ideal. Connection to the sanitary sewer would alleviate this concern.

Although not necessary, a desirable addition to this space would be a splash ground, a commonly requested amenity amongst users.

Dog Park Improvements

The dog park is in need of new surfacing material to improve drainage and functionality, as well as improvements to the perimeter fencing and the addition of a small dog area. Other needs include repairs to the water fountain, landscaping on the outer perimeter of the park, lighting and irrigation.

Grange Hall Creek Trail Connection at Washington Street

Grange Hall Creek Trail and the C. A. "Gundy" Gunderson Trail run east to west through Northglenn along Grange Hall Creek and generally provides the pedestrian or bicyclist easy passage without having to "share the road" with motor vehicles. Two notable exceptions to this are at the crossing locations at Washington Street and at Irma Drive. Other street crossings exist but the traffic conflicts are much less.

As we look forward to improvements in light rail and a potential transit stop at Irma and 112th, there will be a greater need for alternate access routes through the city. And as pedestrian and bicycle traffic increases, so does the need for safe crossings of higher traffic volume streets. Mid-block crossings are necessary to create and keep a continuous trail along the creek.

Separated crossings are necessary to reduce and/or eliminate the conflicts between pedestrians, bicyclists and motor vehicles. Separated crossings are expensive but serve as the best protection of the public.

A pedestrian underpass is generally the best option. Such an option should be considered for the crossings of the trail at Washington Street and Irma Drive.

Recreation Center Renovation and Expansion

As discovered in the 2008 evaluation, the facility is in need of renovation beyond the roof, HVAC and fire-code compliance that is currently in process. This project consists of work throughout the building, to include a new pool liner, renovation of the locker

rooms, boiler replacement, renovation of the existing restrooms, replacing the moving wall in the senior center, interior painting, and replacing the remaining flooring throughout the building (excluding the gym, Mountainview, Parkview and the Senior Center.)

Although it would be preferred to complete all projects within a short period of time to avoid the costs incurred through phasing and to streamline the process so that new amenities are available to residents in a timely manner, these projects may be phased in as funding is available.

In addition, there is still a desire of the Parks and Recreation Advisory Board to explore the possibility of expanding the Recreation Center. The major components recommended for expansion are a main floor senior center with a kitchen, the addition of a leisure pool and updated locker rooms, along with other general upgrades throughout the facility.

Parks Maintenance and Storage Facility

The existing barn is in poor repair, with multiple holes in the exterior. This allows for animals and moisture in the facility, creating an unpleasant working environment. Work will be done on the barn in 2011 to ensure a safe work environment, but the only long-term solution is to replace the barn with a new facility that is insulated, sealed from the elements, meets all fire and building codes and allows for appropriate work and storage space for the parks division.

Senior Playground

It is important to keep our senior population physically active. The “senior playground” brings together fitness and fun in an outdoor area. The playground would consist of 5-8 pieces of outdoor fitness equipment, and is proposed to be located behind the recreation center.

Theatre Lighting, Seats & Carpeting

The seats in the theatre are original to the facility, and are due for replacement due to normal wear and tear. They were last refurbished in 1996. The fabric has begun to deteriorate, and the seat mechanisms no longer function as well as they once did. The carpet is also recommended for replacement due to normal wear and tear.

In 2009, a study was done to determine the feasibility of replacing the existing theatre lights with a LED system. It was determined that this technology is quite expensive, and is not yet fully functional in a theatre setting. The existing lighting and dimmer pack are beginning to fail, and in need of eventual replacement. Staff is in the process of creating a new set of specifications for this future project.

Trail Extension at Badding Reservoir

The Badding Reservoir site borders the City of Thornton, and the Reservoir itself is owned by the City of Thornton. As such, Thornton is seeking to have additional land to the south of the existing site dedicated as Open Space. It would be favorable to both Cities and the residents in the area to have the Greenway Trail extended through both the Northglenn and Thornton portions of this open space.

Replacement Vehicles

Vehicles have been rated using a scoring system to help determine which vehicles are due for replacement. This scoring system includes the age of the vehicle, its current condition, the type of use it receives, and the cost associated with existing needed repairs. For many years, the budget for these replacements has been limited, and the fleet is aging. It is recommended that in the future at least two vehicles are replaced each year to improve the condition of the fleet.

Playground Replacements

These projects include replacement of the play structure and/or other park amenities. The type of playground equipment and other park amenities that are installed will be selected through a public input process as identified in this Parks and Recreation Master Plan. The typical life span of a play structure is approximately 10 to 12 years.

Al Thomas

Al Thomas park equipment was last replaced in 2002, however some of the equipment has been removed due to vandalism and the remaining equipment is not currently ADA accessible.

Danahy

This project includes replacement of the play structure and associated amenities. Danahy park equipment was last replaced in 2002 and the typical life span of a park is 10 to 12 years.

The pavilion roof was replaced/repared through a volunteer effort. The concrete slabs, drainage, grills, and picnic tables and

other amenities are still in need of replacement.

The cost estimate still includes replacement of the pavilion as this work was just completed on 8/29/10. A new cost estimate will be developed in 2011, once the full scope is developed based on 2011 cost data.

Fox Run Playground Replacement

The playground equipment at the Fox Run parks was initially installed in 2001 and 2002.

Larson Park Playground Replacement

The playground equipment at Larson Park was last replaced in 2004.

Equipment Purchases

Although the estimates on most of these equipment purchases are not high enough to warrant inclusion as capital projects or capital outlay, they are unable to be purchased from regular operating funds without significant impact. These items are recommended as additions to the operating budget in the years to come.

Mowers

Evaluation has occurred with existing equipment, and it has been determined that additional large mowers are needed to efficiently maintain large turf areas such as those at Northwest Open Space and E.B. Rains Jr. Memorial Park.

Pool Inflatables

Large inflatables are used to add an interesting element to an otherwise basic pool. This is a fairly cost effective means of creating a leisure component in a lap

pool. Ideally, the pool would have two inflatables at all times, with rotating replacement every 5 years. At this time, there is only one inflatable.

Patio Furniture

The patio furniture at both the indoor and outdoor pool is due to be replaced. This includes picnic tables with umbrellas, chairs and lounge chairs.

Facilities Maintenance & Standards

The standards identified in this section include only basic, ongoing maintenance activities. Many additional tasks are completed throughout the year, but are not specified on this master schedule.

Additional detail regarding maintenance activities may be found in the attached Noxious Weed Management Plan, the Open Space Management Plan, or by contacting the Parks Foreman for information on the current detailed maintenance schedule.

Park Maintenance & Standards

Daily

- Trash cans emptied
- Restrooms cleaned
- Pavilions cleaned
- Playgrounds cleaned
- Ballfields prepped for play (if field is scheduled for use)

Bi-weekly

- Mowing
- Flower Beds Weeded
- Irrigation system checked

Weekly

- Playgrounds inspected
- Minor spot repairs completed
- Targeted weed control

Monthly

- Edging
- Minor Pruning
- Touch up/spot painting
- Irrigation clocks adjusted

Bi-Annually

- Fertilization of all turf
- Chemical & biological weed control

Annually

- Pruning & mulching trees
- Pruning shrubs and other perennial plant material
- Annuals planted
- Flowerbeds prepared for winter
- Painting restrooms
- Paint/repair/replace signage

Right-of-Way and Open Space Maintenance & Standards

Daily

- Trash cans emptied
- Conduct graffiti checks, removal if needed

Weekly

- Arterial Right-of-Ways mowed
- NWOS entrance mowed

Every three weeks

- Trails mowed
- Targeted weed control

Annually

- Trees and shrubs pruned
- Chemical & biological weed control

Nature Area Maintenance & Standards

Daily

- Trash cans emptied
- Conduct graffiti checks, removal if needed

Weekly

- General debris clean up

Bi-monthly

- Targeted weed control
Every three weeks
- Mowing of perimeter and fence line areas
-
- Bi-Annually
 - Chemical control of noxious weeds
- Annually
 - Biological control of noxious weeds
 - Pruning trees
 - Pruning shrubs and other perennial plant material

Funding & Implementation

Current Expenditures and Revenues

Operating Budget

The operating budget for Parks, Recreation and Cultural Services includes personnel, operating and capital outlay expenses, but does not include capital improvement project expenses. It is anticipated that the budget requirements associated with achieving the operating and maintenance needs of the department will be accommodated through the City’s general fund and supplemented through user and participation fees, as well as from outside funding sources when possible. It is anticipated that operating funding sources will remain relatively flat in upcoming years, and that the operating budget will be maintained in a manner consistent with current expenditures and revenues.

The current operating budget for the Department of Parks, Recreation and

Cultural Services is attached to this document.

Funding Alternatives

There are a variety of known alternative funding sources available, some of which provide annual disbursements, others which are available through the competitive grant process. A description of the City of Northglenn’s most accessible funding sources follows.

Adams County Open Space Funds

The Adams County Open Space sales tax has proved to be a consistent and dependable source of funds for the City’s park improvement efforts. This voter approved initiative, passed on November 2, 1999, originally called for a tax of 1/5th of one cent with the collected proceeds earmarked for the acquisition of undeveloped land for open space land preservation, wildlife habitat, trail development, conservation easements for farmland preservation, park development and improvements, recreation uses and environmental education projects. The original initiative called for a sunset of the tax to occur on December 31, 2006. However, on November 2, 2004 voters approved a 20-year extension on the tax, which is now set to expire on December 31, 2026. In addition, the tax was approved for an increase from 1/5th of one cent to 1/4th of one cent starting on January 1, 2007.

Operationally, 68 percent of the tax goes into a fund for competitive grants while 30 percent is returned to the cities of origin. These dollars can then be used at the discretion of the receiving agency as long as they are expended on appropriate efforts. The remaining 2 percent is retained by the

County for administrative overhead. In 2009, the City received \$550,000 through the ADCO competitive grant process for the Skate Park.

Conservation Trust Fund

The Conservation Trust Fund provides a consistent source of revenue for parks and recreation capital improvement projects from Lottery proceeds. The City's annual share of Lottery proceeds has ranged from \$155,000 to over \$300,000 per year since 1991. Popularity of the various Lottery games has recently led to consistent revenue projections of \$300,000 - \$325,000 annually, with current projections at \$303,700. It is anticipated that the Conservation Trust Fund will continue to be a consistent revenue source.

Great Outdoors Colorado

In 1992, Colorado voters approved the creation of the Great Outdoors Colorado Trust Fund. The GOCO trust fund is administered by a State Board and has the responsibility of assuring that trust fund revenues are expended in "substantially equal" shares through four funding categories, one of those categories being local governments, specifically Parks and Recreation Departments. Local governments are eligible to apply for competitive grants during specified periods and funding cycles. GOCO has a proven historical record of awarding funds for active recreation projects rather than those catering to more passive uses. Due to this indicator and their competitive nature, staff are selective of the projects it submits for consideration for GOCO funding. The most recent grant application submitted to GOCO was a request for \$95,000 for skate park

lighting. This request was fully funded by GOCO in 2010.

The GOCO funds available to local governments are highly competitive. Although GOCO funds are available, when granted, matching funds and/or in-kind contributions are required. Since GOCO funds are awarded as competitive grants, GOCO funds are considered as potential, and not as a consistent revenue source for planning purposes. Regardless, this continues to be a fund source of interest to the City and should be considered a viable option for securing the funds necessary to accomplish desired improvements.

Public Private Partnerships

An emerging trend in the funding of parks and recreation is public/private partnerships. Typically, these types of partnerships include the formation of non-profit foundations that benefit parks and recreation agencies, include corporate sponsorship recruitment, the formation of interest groups and organizations, the initiation of joint use and intergovernmental agreements and an effective volunteer effort.

The City of Northglenn continues to be active in each of the areas identified above. Examples of these types of partnerships include the Northglenn Community Foundation, Northglenn Build a Generation, the Northglenn Arts and Humanities Foundation, the Northglenn Youth Commission, the Northglenn Senior Commission, Partners with Parks and Adams 12 Five Star Schools.

Although these partnerships exist, if we intend to rely on them for significant and long lasting contributions to the

community's parks and recreation efforts, the City will need to assume and maintain a leadership role in creating a cooperative environment that nurtures and sustains such partnerships. The development of community pride and a willingness to look towards alternative methods and approaches to parks and recreation improvement efforts always requires an investment of time and resources. This is something that becomes an ever increasing challenge as job duties and responsibilities grow, while staffing levels remain consistent.

Addendum

Annual Report

Noxious Weed Management Plan

Open Space Management Plan

ANNUAL REPORT



Department of Parks, Recreation and Cultural Services January-December



2010

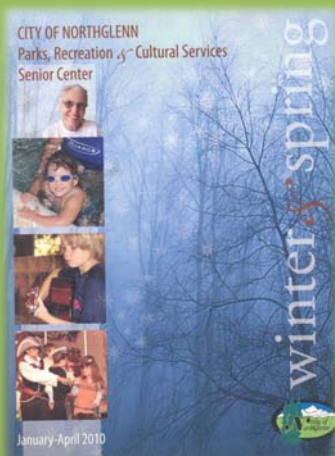


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2010 Mayor and City Council

Joyce Downing, Mayor

Carol Dodge, Ward I
Sheri Paiz, Ward I
Joe Brown, Ward II
Leslie Carrico, Ward II

Ervin Baker, Ward III
Susan Clyne, Ward III
Kim Snetzinger, Ward IV
Gene Wieneke, Ward IV

Arts and Humanities Foundation

Rosie Garner, President

Jill Parsons, Vice President
Doug Minard, Treasurer
Michael Stricker, Director
Diane Lewis, Secretary
Mel Walker, Advisor

Marian Kimsey, Board Member
Hillary Olson, Board Member
Kim Snetzinger, Council Ex-Officio
Kim Shaklee, Advisor

Northglenn Senior Organization Board

Mary Hermann, President

Gloria Mikan, Vice President
Maxine Foster, Secretary
Jo Dennis, Treasurer
Verda Keele, Membership
Mary Davis, Hospitality

Diana Jewett, Historian
Verna Sullivan, Birthdays
Rosie Garner, Community Services
Leslie Carrico, Council Ex-Officio
Olympia Pacheco-Refreshments

Parks and Recreation Advisory Board

Brian Swinbank, President/Ward I

Chris DeMay, Board Member/Ward IV
Joe Brown-Ex-Officio Member
At Large-Vacant

Cheryl Mendenhall, Board Member/Ward I
Donna Reagan-Clerk to Board
Ward III-Vacant

Youth Commission

Kurtis Alberi, President

Kyler McClelland, Director
Tyler Dodge, Director
Greyson Monroe, Director
Carol Dodge, Ex-Officio Member

Ciara Neill, Director
Carrissa Gonzales, Director
Connor Mercer, Director
Amanda Peterson, Staff Liaison

Supervisory Staff

Amanda J. Peterson, CPRP
Director of Parks, Recreation and Cultural Services

Donna Reagan
Administrative Assistant

Deb Lawson
Recreation Supervisor for Aquatics, Marketing and Youth

Brian Magnett
Recreation Supervisor for Operations, Sports, Fitness and Special Interest

Michael Stricker
Recreation Supervisor for Theatre, Culture and Seniors

Jim Mueller
Parks Foreman

2010 City Council Priorities and Goals

Top Priorities

- 120th Avenue Development
- Recreation Center
- Streets: Funding Strategy and Actions
- Water Rights and Services: Acquisition and Future Funding
- Vacant Grocery Stores: Strategy and Action

High Priorities

- Comprehensive Master Plan: Development
- Solid Waste Collection and Recycling: Direction
- City Services Plan
- Code Enforcement: Evaluation, Refinement
- Water and Sewer Infrastructure: Evaluation Report
- Financial Software: Direction

Moderate Priorities

- Northglenn Neighborhood Development Corporation
- Foreclosures
- The Marketplace: Evaluation, Long-Term Strategy
- City Cost Reduction Plan with Recommendations and Actions

Goal #1 – Fiscally Responsible City Government

- Objective 1: Adequate Financial Reserves for Uncertain Economic Times
- Objective 2: Financial Policies Reflected in Budget and Council Decisions
- Objective 3: Investing to Preserve or Enhance Existing City Facilities and Buildings, Infrastructure & Protecting City Assets
- Objective 4: City Services Provided in the Most Cost-Effective Manner
- Objective 5: Expanding and Diversifying Revenue Sources

Goal #2 – Upgraded City Infrastructure and Facilities

- Objective 1: Adequate Water Supply for Northglenn through Adequate Water Rights, Fresh Water Storage, Improved Water Treatment and Distribution
- Objective 2: Improved Recreational Buildings and Facilities
- Objective 3: Improved Street Quality and Traffic Flow
- Objective 4: Infrastructure Support Development of Weld County Property
- Objective 5: Uses of Utilities to Generate Revenues for the City of Northglenn

Goal #3 – Strong Competitive Businesses

- Objective 1: Stronger Sales Tax Base
- Objective 2: Fully Occupied and Healthy Business Centers Throughout the City
- Objective 3: Convenient Shopping for Residents
- Objective 4: Commercial Development/Redevelopment Consistent with Our Vision
- Objective 5: Businesses serving as a Regional Destination, Drawing New Dollars to the Local Economy

Goal #4 – Community Governance with Civic Partnerships

- Objective 1: Strong City Teamwork – Mayor and City Council, Boards/Commissions, City Manager and Managers, Employees, Volunteers
- Objective 2: Customer Service Valued and Practiced by Our Employees
- Objective 3: Strong Partnerships with community Organizations, Civic Groups, Neighborhoods, Schools
- Objective 4: Better Informed Citizens About the City and the Northglenn Community Through Effective Two-Way Communications
- Objective 5: Citizens Meaningfully Involved in City Governance and In Civic Affairs

Goal #5 – Clean and Beautiful City of Northglenn

- Objective 1: Improved Streetscapes and Entryways to Northglenn
- Objective 2: More Attractive Commercial Areas and Neighborhoods Throughout Northglenn
- Objective 3: More Attractive City Facilities, Parks and Buildings
- Objective 4: Well-Maintained Landscaping, Homes and Buildings Throughout Northglenn
- Objective 5: More Attractive Landscaping with Trees and Flowers, Emphasizing Xeriscapes

Goal #6 – Livable Neighborhoods and Homes

- Objective 1: Upgrade the Quality and Diversity of Housing Stock
- Objective 2: Increase Home Ownership
- Objective 3: Modernization of Old Homes
- Objective 4: Homes/Housing Units
- Objective 5: Convenient Access to Neighborhood and Community Parks

2010 Goals & Work Plan Review

- ✓ Work with Engineering Staff and Parks & Recreation Advisory Board to complete each of the following projects within the allocated budget:
 - Larson Park Fence-**Completed**
 - Huron Crossing Playground Replacement-**Completed**
 - Greenway Trail Concrete Replacement-**Completed**
 - Citywide Fence Maintenance-**Completed**
 - Sperry Park Playground Replacement-**Completed**
 - Ballfield Improvements at Rotary Park and Northwest Open Space-**In process, will be completed in early 2011**
 - Recreation Center Theatre Lighting -**On Hold**
 - Webster Lake Shoreline Rehabilitation-**In Process will be completed in early 2011**
 - Recreation Center Mountainview Room Carpet Replacement- **Completed**
 - Skate Park Design & Construction (final completion in 2011)
 - Kiwanis Pool Resurfacing--**Completed**

- ✓ Continue to pursue ongoing opportunities for public/private partnerships to create new or enhanced public recreation facilities and amenities for purposes of reducing public investment requirements in the same.
 - Work with Cornerstone Christian Academy to identify potential for developing an artificial turf field at Northwest Open Space -**On going dialogue**

- ✓ Seek ongoing sponsorship from a radio station for the Mudapalooza mud volleyball tournament. **Partnered with 92.5 the Wolf radio station for 2010**

- ✓ Introduce to the New American Red Cross Learn To Swim Program to all lesson participants in the summer of 2010.
 - Ensure all lifeguard instructors are fully certified in the new program prior to the beginning of the summer 2010 season-**Completed**

- ✓ Maintain strong recreational and competitive swim teams
 - Increase enrollment in the U.S.A. Swim Team to reach the maximum of 50 swimmers by December 2010- **Accomplished**
 - Maintain maximum enrollment in the C.A.R.A. Swim Team-**Accomplished**

- ✓ Re-establish strong participation in the Club 22 program.
 - Achieve an average attendance of 70 participants by June 2010-**Reached an average of 50 participants per event**
 - Achieve an average attendance of 85 participants by December 2010-**On going**

- ✓ Develop a grassroots lacrosse program for ages 6-12 years old.-*Not obtained due to C.A.R.A. not offering youth lacrosse in 2011*
- ✓ Apply for \$500 NRPA Grant to offer program which engages youth ages 5-18 in the fundamentals of archery. *Completed*
- ✓ Rental Expansion
 - Increase customer service and facility functionality to provide an exceptional client experience. Become a “yes” rental facility. *Made Change in 2010*
 - Improve sound equipment and quality through maintenance and possible (small) purchases. *Deferred to 2011*
 - Create seamless facility usage during structural upgrades and code compliance adjustments. *Deferred to 2011*
- ✓ Solicit organizations to fill in the vacant rental space in the Senior Center on Sundays to recover the loss of revenue. - *Completed* Contracted with an organization that is renting the Senior Center on Sunday mornings, starting in August of 2010 and they have signed a contract through June 2011
- ✓ NAHF Stabilization
 - Secure per capita funds- *Completed*
 - Secure highest possible financial award from SCFD within new criteria- *Completed \$49,130*
 - By-law overhaul-*Completed and Approved*
 - Recruit one additional member-*Completed*
 - Launch September fundraising event-*Added the Northglenn’s Got Talent Program*
- ✓ Reach out to community groups and businesses for sponsorship of Senior Center Programs
 - Secure funding in the amount of \$700 for the Senior Picnic by May 2010- *Completed and surpassed*
 - Secure funding in the amount of \$500 for other senior programs by December 2010-*Completed*
- ✓ Achieve an average of \$5,500 in revenue per month through the SilverSneakers® Fitness Program. *Achieved*
- ✓ Continue to expand Senior Center programs and the NSO into the class data base, utilizing the CLASS system to the greatest extent reasonable for senior programs
 - Enter all senior center classes and activities into the facility scheduling module of CLASS by January 2010-*Completed*
 - Enter and fully utilize CLASS for managing the user database by June 2010- *Completed*
Explore other efficiencies that can be implemented through CLASS by December 2010-*On going*

- ✓ Theatre & Cultural Programs Division Infrastructure
 - Increase volunteer base-**Completed**
 - Share accounting and attendance tracking between Supervisor and Theatre Coordinator- **Completed**
 - Use entire division for working produced shows-**Achieved**
 - Work with appropriate staff to refine group sales process-**Achieved**
 - Increase front desk knowledgebase **Completed**
 - Create a financially sustainable plan for hiring Theatre Assistant in future years – **Deferred to 2011**

- ✓ Increase involvement of the Parks & Recreation Advisory Board and other community members in the planning and implementation of Arbor Day events-**Completed**

- ✓ Continue to implement the Russian Olive Tree removal project
 - When feasible, utilize volunteers to the greatest extent possible-**On Going**

- ✓ Work with other department staff as well as City-wide staff to provide training in the areas of tree care and hazard tree management, as well as safety awareness-**On Going**

- ✓ Initiate and implement a hazard tree contract, utilizing the allocated budget for this project in an efficient and effective manner
 - Priority area one for 2010 is Croke Reservoir-**Completed**
 - Priority area two for 2010 is Highline Canal-**Completed**

- ✓ Prepare a complete inventory of the trees in the community, to include age, type, condition and location on city-owned property-**Completed**

- ✓ Improve the drainage at Northwest Open Space
 - North/West end of N.W.O.S has had a drainage problem since being built, we are attempting to alleviate some of the problem by building a rock drain channel. - **Completed**
 - Develop a budget and long-term plan for completing the project-**Completed**
 - Construct a French drain at the drainage box--**Completed**
 - Fill drainage channel with river rock (as money is available) –**On Going**

- ✓ Alleviate the raised lip on red field at Northwest Open Space
 - Provide a clean cut between the infield outfield transitions (sod cutter) - **Completed**
 - Add new infield mix to match the height of the outfield-**Completed**
 - Cut out the high points of the turf on the outfield line-**Completed**

- ✓ Top Dress/Over seed field F to repair damage
 - Aerate-**Completed, On-going**

- Over seed-*Completed, On-going*
- Top dress-*Completed*

- ✓ Provide better weed control in within all beds, athletic fields and hardscapes.
 - Pre Emergent herbicides-*Completed*
 - Post Emergent herbicides-*Completed*

- ✓ Continue to work towards the conversion of annual flower beds to perennial beds to maximize the use of resources. The following beds will be converted in 2010:
 - Centennial Bell-Turf and perennials-*Completed*
 - City Hall-“Wellness” and “Waterbill” beds-*Completed*
 - Danahy Sign-*Completed*
 - Jaycee Sign-*Completed*
 - NWOS Pecos Sign-*Completed*
 - Rains Memorial-*Completed*
 - Rains East Bed (North end) -*Completed*
 - Wyco Sign-*Completed*

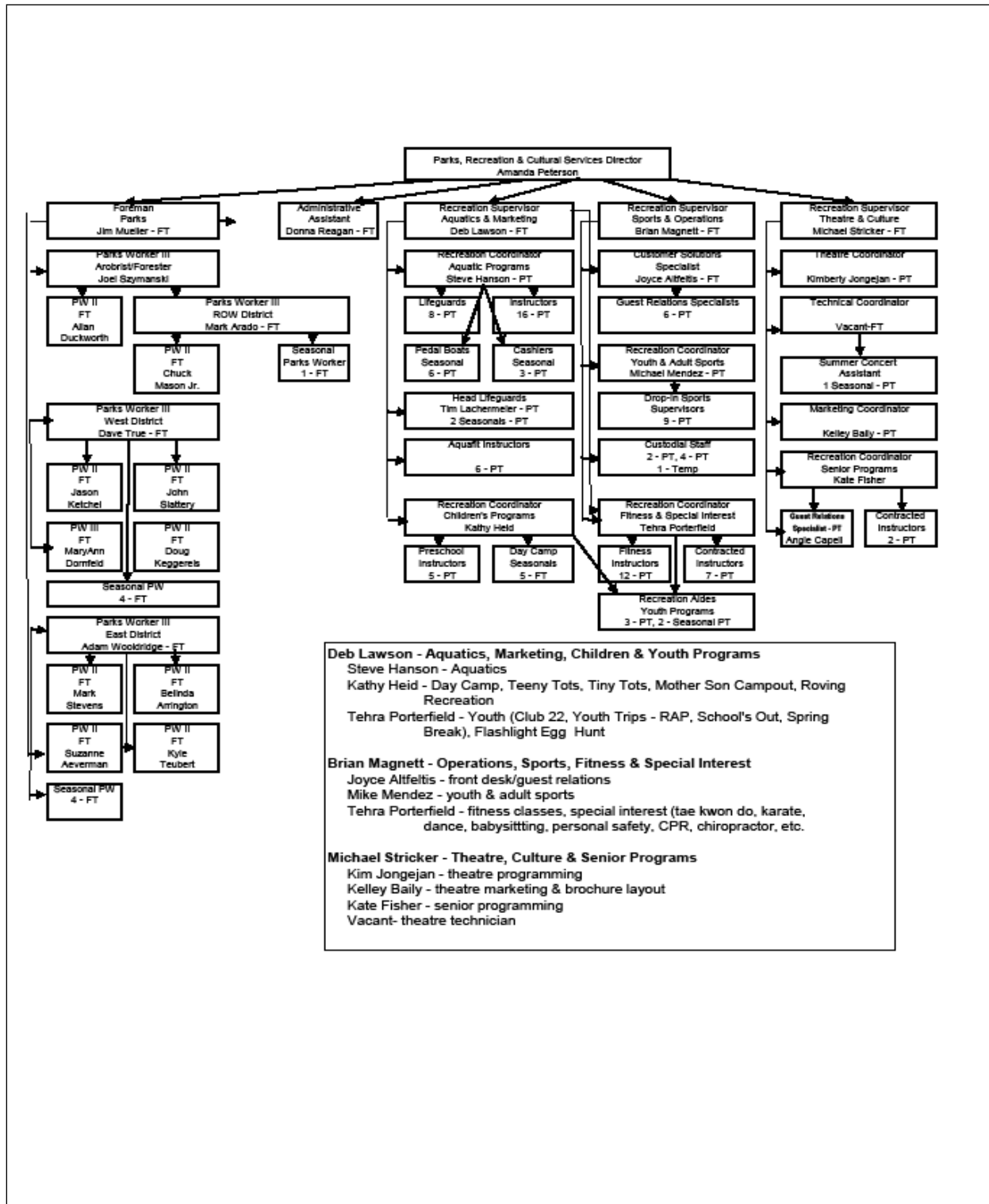
- ✓ Rebuild the Wyco Sign bed
 - Remove old timber perimeter of the bed (winter 2009-2010) -*Completed*
 - Replace timber with landscaping stones (March 2010) -*Completed*
 - Replace soil and plant bed (May 2010) -*Completed*

- ✓ Repaint the Centennial Bell (March 2010) -*Completed*

- ✓ Repair the area adjacent to the Police Department Entrance with new sod (May 2010) -*Completed*

- ✓ Replace mulch at the Recreation Center entrance (April 2010) -*Completed*

Organizational Chart



2010 Operating Budget

2010 OPERATING BUDGET SUMMARY Parks, Recreation & Cultural Services December

EXPENDITURES	2010	YTD		2010
DIVISION	Budget	Actual	Balance	Percent
		Expenses		Expended
Boards and Commissions	\$2,100	\$1,419	\$681	68%
Recreation Administration	\$550,886	\$458,795	\$92,091	83%
Aquatics Programs	\$318,632	\$324,737	-\$6,105	102%
Children's Programs	\$119,166	\$119,266	-\$100	100%
Youth & Teen Programs	\$64,615	\$31,255	\$33,360	48%
Recreation Center (NRC)	\$292,307	\$288,631	\$3,676	99%
Sports Programs	\$140,808	\$123,264	\$17,544	88%
Fitness	\$46,290	\$59,139	-\$12,849	128%
Special Interest Programs	\$33,108	\$36,988	-\$3,880	112%
Theatre/Arts	\$205,644	\$191,409	\$14,235	93%
Senior Programs	\$70,908	\$65,849	\$5,059	93%
RECREATION TOTALS	\$1,844,464	\$1,700,752	\$143,712	92%
Parks Administration	\$281,824	\$174,447	\$107,377	62%
Parks Maintenance	\$553,386	\$559,954	-\$6,568	101%
Arborist/Forestry	\$132,698	\$126,755	\$5,943	96%
Horticulture	\$132,238	\$125,234	\$7,004	95%
Rights-of-Way	\$184,904	\$116,164	\$68,740	63%
PARKS TOTALS	\$1,285,050	\$1,102,554	\$182,496	86%
DEPARTMENT TOTALS	\$3,129,514	\$2,803,306	\$326,208	90%

December	2010	YTD	YTD	Projected	
REVENUES	Projected	Actual	Percent	Revenue/	Cost
DIVISION	Revenue	Revenue	Revenue	Expense	Recovery
				Difference	
Aquatics	\$299,244	\$200,220	67%	(19,388)	62%
Children's	\$89,565	\$80,283	90%	(29,601)	67%
Youth & Teen	\$17,200	\$7,728	45%	(47,415)	25%
Northglenn Recreation Center (Includes Park Permit Fees and Pavilion Rentals)	\$221,000	\$248,577	112%	(71,307)	86%
Fitness	\$9,154	\$8,340	91%	(37,136)	14%
Special Interest	\$27,302	\$30,196	111%	(5,806)	82%
Sports	\$112,778	\$118,627	105%	(28,030)	96%
Seniors	\$61,965	\$69,367	112%	(8,943)	105%
Theatre and Arts	\$133,227	\$126,084	95%	(72,417)	66%
Recreation Administration	\$0	\$0	0%	(550,886)	0%
RECREATION PROGRAM TOTALS	\$971,435	\$889,422	92%	(320,043)	72%
PARKS TOTALS	\$0	\$0	0%	(1,285,050)	0%
DEPARTMENT TOTALS	\$971,435	\$889,422	92%	(2,158,079)	32%

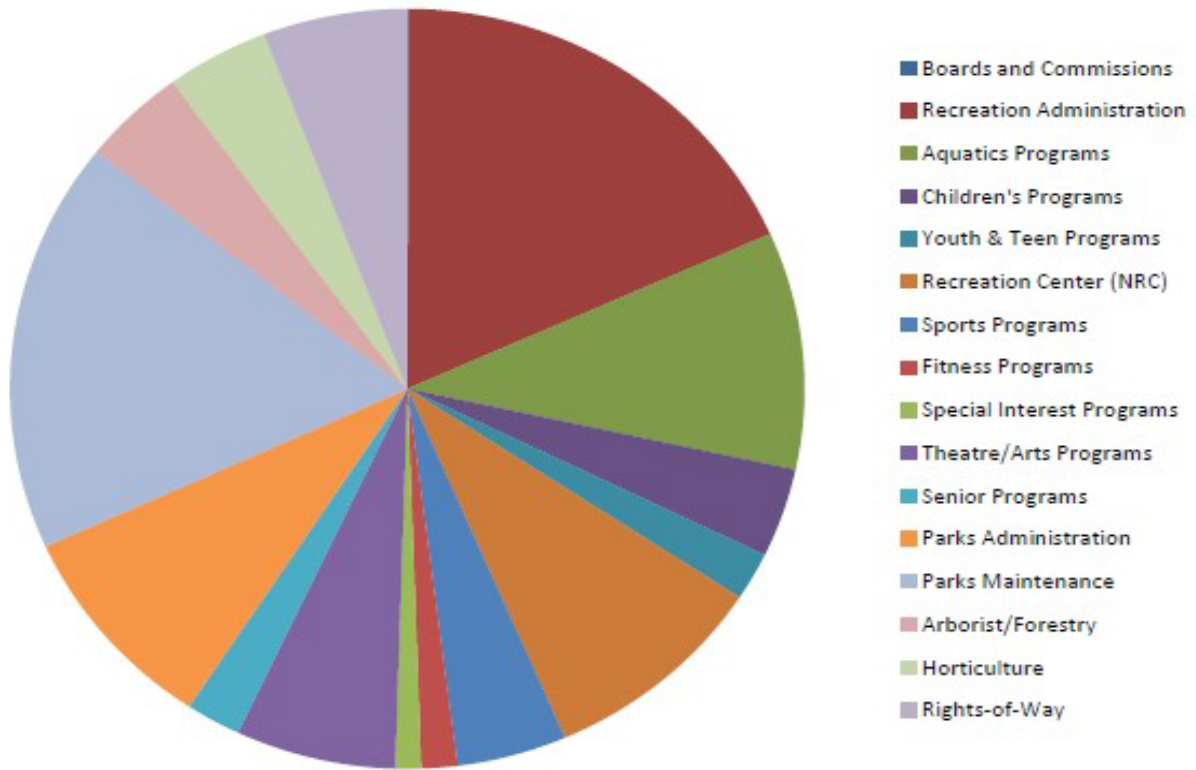
2009 OPERATING BUDGET SUMMARY - Parks, Recreation & Cultural Services December, 2009

EXPENDITURES	2009	YTD		2009
DIVISION	Budget	Actual	Balance	Percent
		Expenses		Expended
Parks & Recreation Advisory Board	\$2,120	\$2,183	-\$63	103%
CS Administration	\$63,453	\$46,861	\$16,592	74%
Aquatics	\$489,801	\$457,662	\$32,139	93%
Northglenn Recreation Center	\$741,412	\$695,808	\$45,604	94%
Generation Based Programs	\$430,550	\$141,749	\$288,801	33%
Theatre and Arts	\$290,037	\$273,975	\$16,062	94%
RECREATION TOTALS	\$1,951,800	\$1,569,194	\$382,606	80%
Parks Operations	\$1,256,831	\$1,177,491	\$79,340	94%
DEPARTMENT TOTALS	\$3,274,204	\$2,795,729	\$478,475	85%

REVENUES	2009	YTD	YTD	Projected	
DIVISION	Projected	Actual	Percent	Revenue/	Cost
	Revenue	Revenue	Revenue	Expense	Recovery
				Difference	
Aquatics	\$254,000	\$202,875	80%	(235,801)	44%
Northglenn Recreation Center	\$283,000	\$254,033	90%	(458,412)	37%
Generation Based Programs	\$232,300	\$199,073	86%	(198,250)	140%
Theatre and Arts	\$110,900	\$122,532	110%	(179,137)	45%
Parks Usage Fees (Athletic Fields & Shelters)	\$77,000	\$89,705	117%	(1,179,831)	8%
Recreation Division Totals	\$880,200	\$778,513	88%	(1,071,600)	50%
Department Totals	\$957,200	\$868,218	91%	(2,317,004)	31%

Year to Date Revenue & Expenditures

Boards and Commissions	\$2,100
Recreation Administration	\$575,886
Aquatics Programs	\$318,632
Children's Programs	\$119,166
Youth & Teen Programs	\$64,615
Recreation Center (NRC)	\$292,307
Sports Programs	\$140,808
Fitness Programs	\$46,290
Special Interest Programs	\$33,108
Theatre/Arts Programs	\$205,644
Senior Programs	\$70,908
Parks Administration	\$281,824
Parks Maintenance	\$553,386
Arborist/Forestry	\$132,698
Horticulture	\$132,238
Rights-of-Way	\$184,904



Parks & Recreation Department Overview

The Department of Parks, Recreation and Cultural Services offers recreational and leisure services, and maintains parks, right-of-ways and open spaces. Divisions within Parks, Recreation and Cultural Services include Parks Maintenance & Operations, Aquatics, Youth & Marketing, Operations, Fitness & Sports, Theatre, Culture and Senior Programs. The department has successfully worked through several staffing changes, as well as the code compliance requirements that were imposed during the past year. On the following page, charts showing the Parks & Recreation program registrations and the number of visits to the Recreation Center, as compared across seasons, can be found. The Recreation Center again saw over 206,600 visits in 2010, slightly exceeding visits to the facility in 2009.

PLAYFUL CITY USA

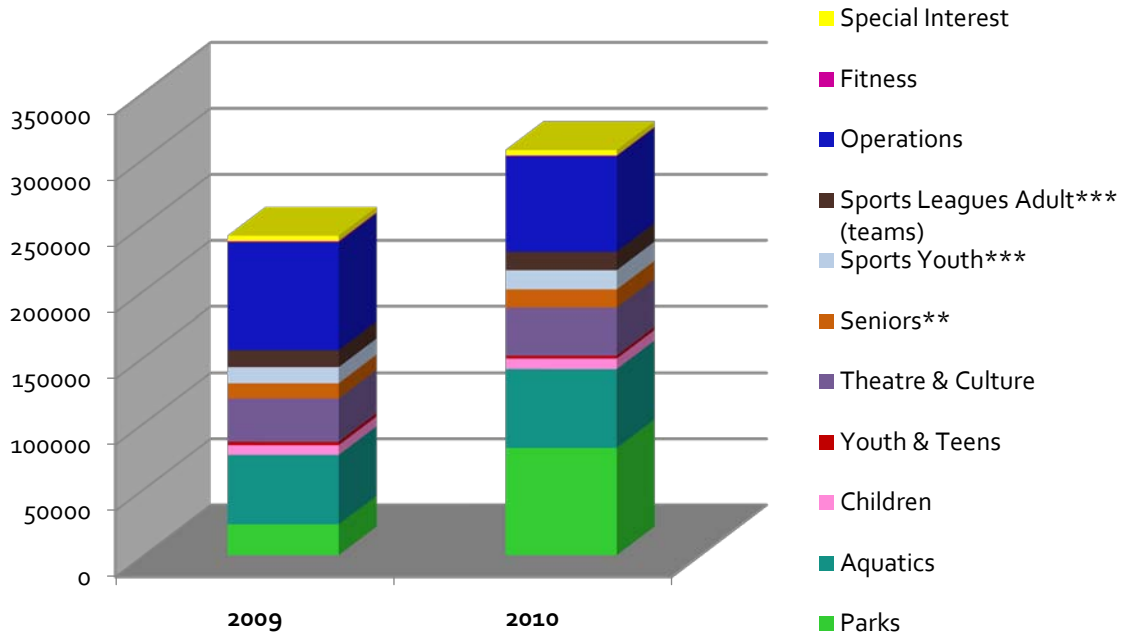


Through the efforts of staff, City Council, the Parks & Recreation Advisory Board and residents, the City became one of 118 cities across 35 states to be named “Playful City USA” in 2010! This marked Northglenn’s third consecutive year receiving the Playful City USA designation. This designation shows that our city places a high priority on making sure that children and families have safe places to interact and play. Be on the lookout for “Playful City USA” signs throughout our City, and information on the message boards in the parks throughout the summer months. A logo and slogan have been developed and incorporated into the brochure, again reminding residents to “go out and play.” In an effort to incorporate local schools within Adams 12 School District with the Playful City U.S.A. program, the City joined

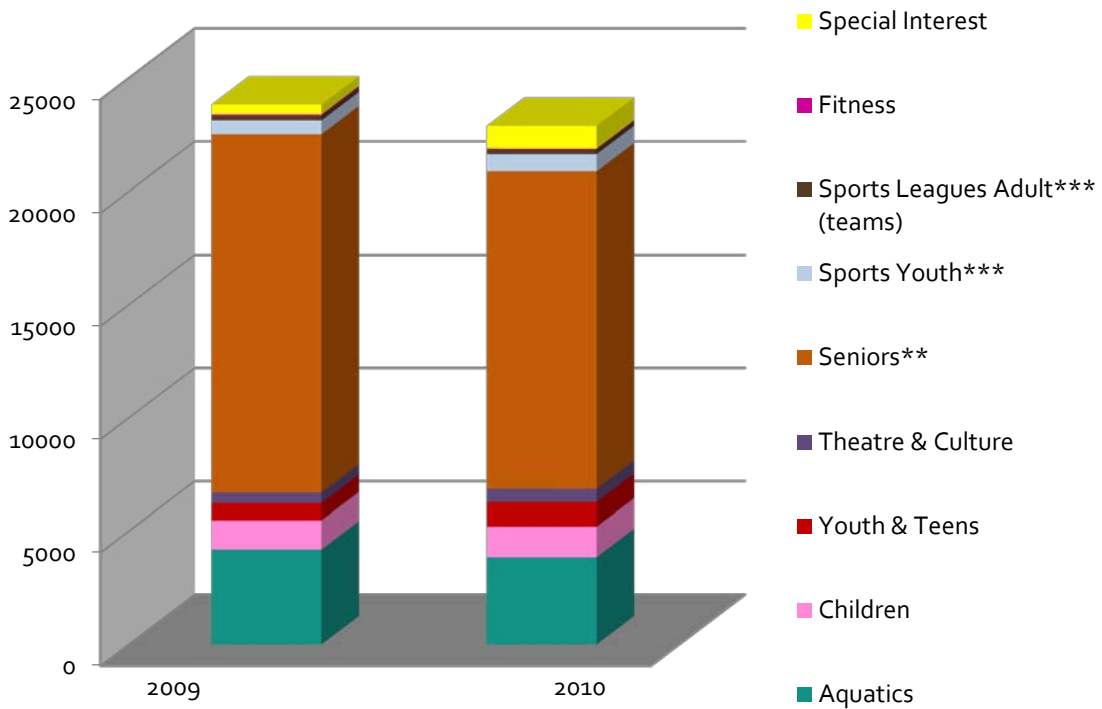
with Stukey Elementary School to clean up the school playground for everyone to use and enjoy playing safely. Whether it’s an organized activity, taking a child to a playground, or just taking a few minutes to walk around a park, we would like to encourage all of our residents to go out and play! Staff intends to reapply for this designation again in 2011.



Annual Visits 2009 - 2010



Annual Registrations 2009 - 2010



Aquatics, Marketing & Youth

Deb Lawson *Recreation Supervisor* Aquatics



The aquatics program in 2010 had continued to provide a wide range of aquatic programs to include, swim lessons, water fitness, and two swim teams. The Kiwanis outdoor pool located at 550 Garland Drive, received a brand new surface. Tile was placed around the perimeter to match the wader pool tiles. The stairs were also tiled in a matching color, to allow swimmers to see each step. Several participants commented on how beautiful the pool looked after this extensive re-surfacing was completed.

Snappers Swim Team

The Colorado Association for Recreational Athletics is a swim team style that emphasizes skills and development for youth under the age of 18. The team was full at 64 participants throughout most of the year.

There were several large regional swim meets held throughout the year that gave our swimmers the opportunity to compete with other recreational swimmers. In addition to Northglenn, other venues included Westminster and the Foothills Recreation District. The unique ability to run a recreational swim team year round gave the Snapper swimmers an opportunity to place in many meets. Due to the popularity of this program, current team members are given first priority for registration each season. Once the current team members have an opportunity to re-register for the new season, Northglenn residents are granted the first opportunity to register for any openings on the team. The City hosted a couple more C.A.R.A. home meets in 2010. All of the home meets welcomed an average of 250 visitors to the recreation center.





Fusion Swim Team

The Fusion swim team finished their second season in December. This is a U.S.A. competitive team. The team had an amazing second year. Several swimmers competed and finished with some of their best personal times. By the end of 2010, the team was at full capacity with 54 swimmers. As the team developed this year, some swimmers chose to move to Fusion from Snappers for a higher level of competition. Other swimmers who joined the team had previously swam with other U.S.A. competitive teams from Broomfield, Brighton, and North Jeffco. The team continues to flourish with the use of on-line swim meet software that allows swimmers to sign up for State swim meets, manage practices, and view race times via the internet.

Aquafit-Water Fitness

The indoor pool offers the most water fitness classes throughout the year. Four types of classes are currently offered, to include "Shallow Water," "Deep Water," "SilverSplash[®]," and "Arthritis."

Morning Aquafit classes maintained consistency all year, with approximately 25-30 participants attending each class. The SilverSneakers[®] SilverSplash[®] classes continued to be very well attended, with an average of 20 participants in each class.

Evening shallow water and deep water Aquafit classes remain consistent, with an average of 12 participants each evening, with participation on some nights up to 20.

The indoor pool hosts the Arthritis Foundation water fitness program. Participants who join the class regularly notice a difference when they exercise following the Foundation guidelines. The pool staff consistently keeps the water temperature range of 83-85 which falls within the "perfect" temperature range suggested by the Arthritis Foundation for this popular class.

American Red Cross Swim Lessons

The Learn to Swim Program abides by the high standards of the American Red Cross and continues to retain high participation, especially during the summer months. With the ever growing needs of two swim teams, the staff decided to program lessons slightly different during the summer months to accommodate several programs in two pools, rather than just utilizing the indoor pool. This allowed for greater usage of both the indoor pool and the outdoor pool, without over-crowding either pool at any given time during the season.

Private Swim Lessons

As in years past, private swim lessons generated a lot of interest. Although they are a more costly option, private lessons give participants the opportunity for one-on-one instruction. In 2010, the addition of semi-private lessons gave participants an opportunity to have up to two participants in a lesson with one instructor. After researching other aquatic programs in the North area, the staff found that this was a popular program.



Lifeguard Training

Lifeguard Training was offered twice in 2010. Two sessions had sufficient registration for the class to be held. This class is often an opportunity for individuals to receive the training necessary to apply for a position as a lifeguard, either with the City of Northglenn or with other entities. The revenue generated for both classes was \$1,775.

Kiwanis Pool

The summer drop-in participation started out slowly due to the cooler weather at the beginning of June. Outdoor aquatic programs saw a small drop in attendance for open swim. Day Camps that had advance reservations were able to move indoors on some days, while other camps cancelled their reservations. An evening family swim time was added on Tuesday and Thursday evenings from 7:30pm-9pm. Due to the cool weather in June; July and August saw a small increase in attendance, with about 20 people attending each evening. Several Day Camps booked again this summer with our open swim program. Group rates were given to area B.A.S.E. programs and other day care centers. The overall revenue for drop in swim was \$16,998.63. This includes concession sales and day camp group admissions.

Pool Parties: Pool parties were very popular once again, and were available for booking on Friday and Saturday nights. Total revenue generated for summer 2009 was \$3,824 and in 2010, it was \$4,965 which equates to a \$1,140 increase in pool rentals in 2010.



Kiwanis Swim Lessons: Our swim lesson program grew at Kiwanis this summer due to the addition of evening swim lessons. To help accommodate the growing needs of the Snappers Swim Team, evening swim lessons were moved to Kiwanis in order to leave the lap lanes available indoors and used for swim team practices. This change not only helped the swim team indoors, it allowed the staff to offer more lessons outdoors to those working parents. On those few nights when a thunderstorm rolled in, the instruction was centered on safety and all lessons were out of the pool until the storm cleared. Total swim lesson revenue produced at Kiwanis for the summer of 2010 was \$13,515.

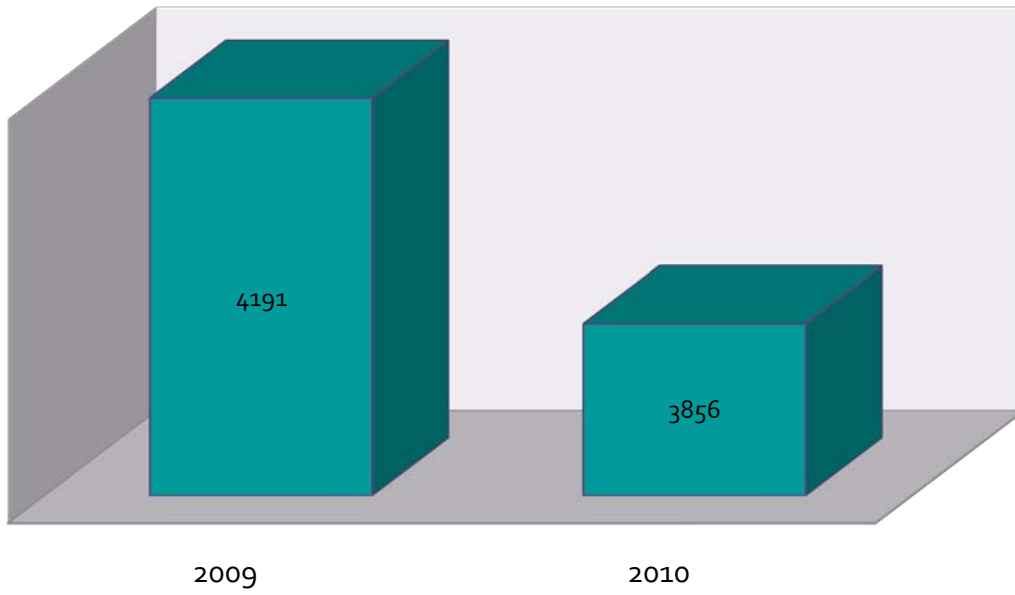
Pedal Boats

The Pedal Boat operation opened in May and ran through Labor Day in September. The operations are typically open on the weekends; however, in September they were closed due to the drainage of the lake and the start of the Webster Lake Shoreline renovation project. Several companies booked group rates when their picnics were held at one of the pavilions. The total revenue generated for pedal boats was \$36,783. This includes concessions and boat rentals.

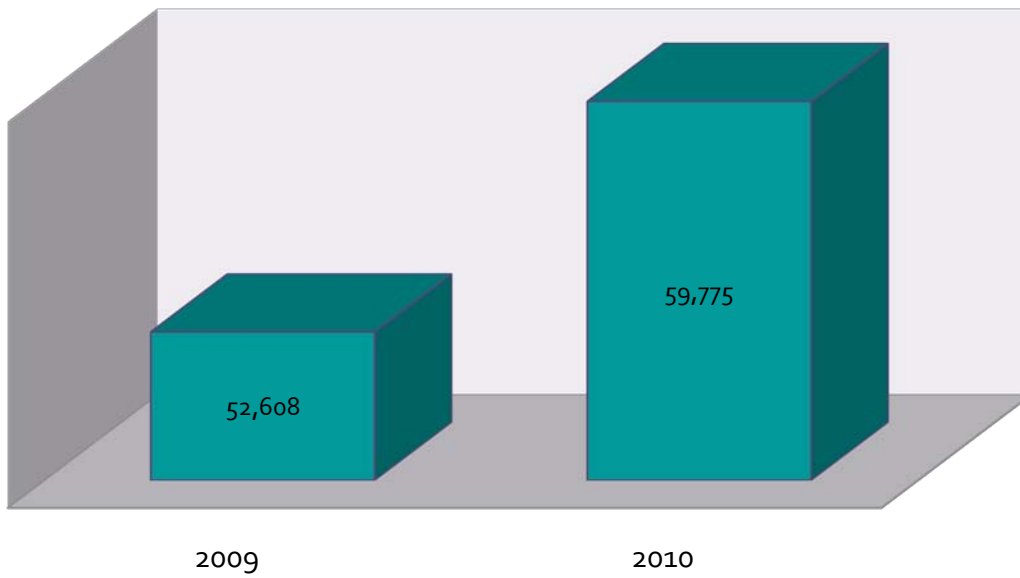


The traditional Fourth of July fireworks viewing from a pedal boat was sold out a few weeks before the event. However, due to severe thunderstorms that began earlier in the evening of the event, all boats were cancelled and full refunds were given.

Aquatics Registrations



Aquatics Visits



Children's Programs

Teeny Tots & Tiny Tots

One of the long standing children's favorites here at the recreation center has once again had a strong year. This State licensed school for children 3 years of age, which is called Tiny Tots offers age appropriate activities and materials. Some of the activities include arts and crafts, music and outdoor play. The Tiny Tot program for ages 4-5 year olds is also a State licensed preschool. The course outline includes art and literature. Concepts are introduced in this program involving colors, numbers and learning the alphabet. This is a program to prepare young children for kindergarten.

Day Camp

Day camp is available to youth ages 6-12, and operates from 7:15 a.m. – 5:45 p.m. Monday through Friday during the summer months. To allow working families an opportunity to register for day camp early, the registration was moved from April to February. Families took advantage of this early registration.

Day camp is a state licensed program for children ages 6 – 12 and each year the number of children in each age group varies. This summer a majority of our children fell into the 6 – 8 age range. With such a young group, the dynamics changed considerably. Staff was very adaptive and age-appropriate activities were provided.

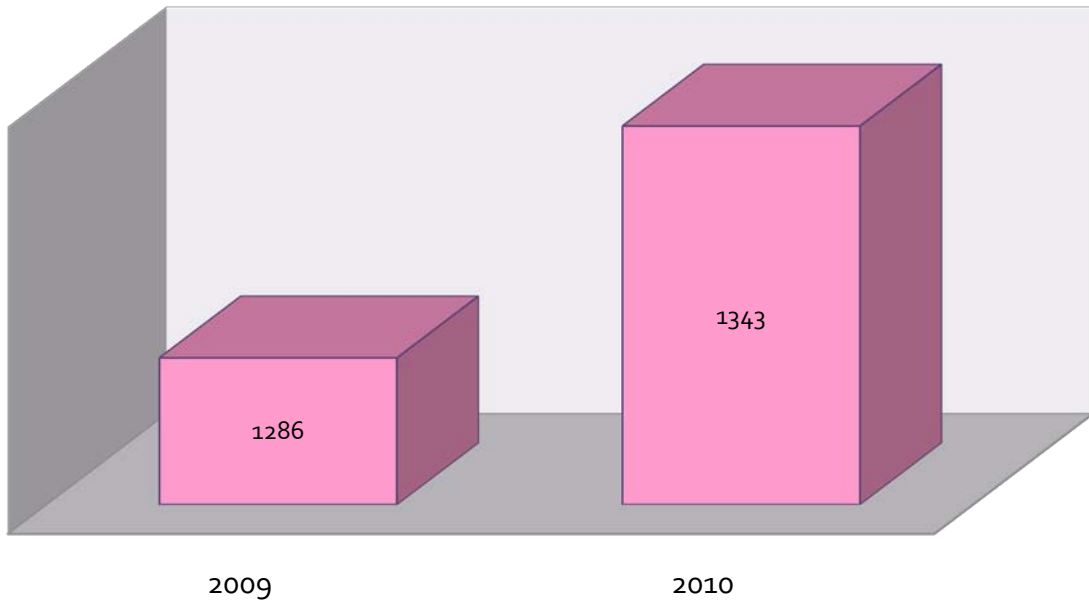
Our program maintained child to staff ratios as defined by the state licensing program, as well as abided by the room occupancy levels defined by the North Metro Fire Rescue District.

Mother-Son Campout

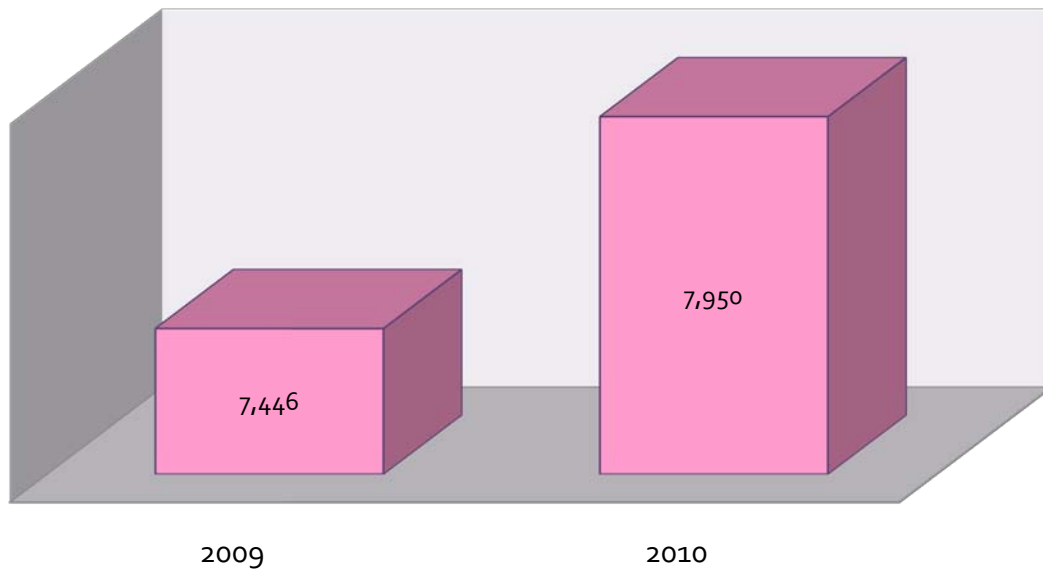


The annual Mother-Son Campout was held in August of 2010 instead of the later month of October. The event saw a decrease in this program in comparison to years past with 13 participants. This annual program invites boys aged 5-10 years old to have dinner, entertainment and fun activities with their moms. Activities for the evening included entertainment by Beth Epley who told stories and a pedal boat ride. There was an arts and craft project and dinner was catered by *Atlanta Bread Company*. A photo was taken of each pair and placed in a homemade frame as a remembrance of their momentous evening.

Children's Registrations



Children's Visits



Youth and Teens Programs

Youth programs are geared primarily towards participants ages 11-18, and include activities such as Club 22, Roving Recreation and the RAP Teen Adventure Series.

Roving Recreation - Fun in the Sun

During the summer months, Roving Recreation provides outdoor programming that is geared toward youth who are either entering or leaving grades 5-9. A staff consisting of one Leader and two Aides brought craft supplies, games and sports equipment to various parks in the community. This summer, the program rotated between Al Thomas Park, Central Park in Fox Run, Danahy Park & E.B. Rains Jr. Memorial Park from Monday through Thursday each week. Summer 2009 saw an increase in participants, with an average of 12 people visiting a park each day. In order to have a consistent number to plan for, a one-time pre-registration is required of participants. This Roving Recreation pass is \$20 for the entire summer and provides unlimited access to all of the Roving Recreation events in the parks.

Friday Fun Days

Each Friday in the summer, field trips were scheduled for youth entering or leaving grades 5-9. Trips included a Rockies Game, Hiking at Eldorado Canyon, Paintball, Volunteer Day, the Denver Zoo, Miniature Golf & Casa Bonita, Water World, a Bike Ride on the Greenway Trail, Elitches and a Pool Party. The average attendance was 12 participants per trip, nearly reaching the program capacity of 13 participants for each trip.

Adams County RAP Teen Adventure Series



One trip is offered each month to youth. The RAP (Recreational Alternative Programs) is for youth ages 11-18, and is a cooperative effort between the cities of Northglenn, Thornton, Broomfield, the Hyland Hills Parks & Recreation District, and Commerce City. The goal of the program is to provide activities that are “alternatives” to traditional recreation, exposing those youth who would not necessarily choose to join a sports league or the swim team to other activities that are socially engaging and physically challenging! Trips during the winter months of January thru May included tubing at Fraiser Mountain, Skiing & Snowboarding at Echo Mountain and watching the Nuggets play.

The summer trips of 2010 included a Rapids game in May which was cancelled due to a lack of registrants. In June the trip was river rafting at Clear Creek with 2 Northglenn participants. In July the group of 7 went on the annual camping trip to a “Primitive Site” near Chief Hosa outside of Evergreen, Colorado.

Each participant enjoyed two days of hiking, a high ropes course, and horseback riding. The weather was perfect and everyone had a memorable experience.

Club 22

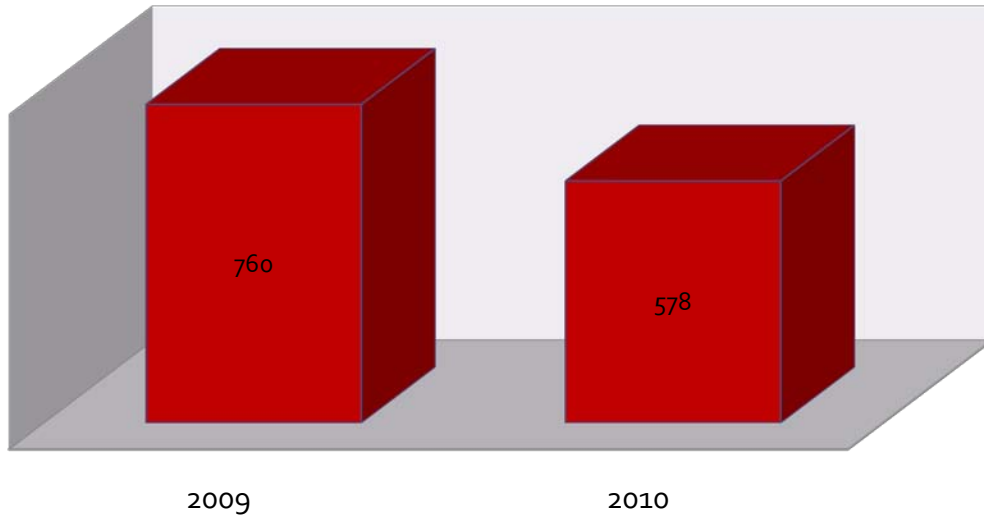
Club 22, which stands for “2” old for a babysitter but “2” young to drive, takes place on the 1st and 3rd Saturday of each month from 7-10:30 p.m. This program offers a safe, supervised, drug & alcohol free environment for youth in grades 5-9. There are three youth program staff on duty for each event. In addition to a “special event” planned for each Club 22, there is also a DJ playing music in the gymnasium, a weight trainer supervising safe age-appropriate workouts in the weight room, the pool is open, and there are video games in the lobby. In addition to these standard activities, a special event is also planned for each night. The fun and exciting events that were planned for the year included a Dance Contest, Henna Tattoos, Movie Night, the Fire Fighter’s Frenzy, Velcro Wall, Mat Ball Tourney, Northglenn Idol, Battle of the Bands, the Kops Vs. Kids Basketball Challenge, Inflatable Joust, Inflatable Obstacle Course, 3 on 3 Basketball Tournament, a Carnival, a Dive in Movie at Kiwanis Swimming Pool, Skate Night, Dodgeball Tournament, the Bungee Run, a Video Game Tournament on the big screen in the theatre, a Halloween Party, a giant Dual Slide, an “80’s” Night and a Holiday Craft Party.



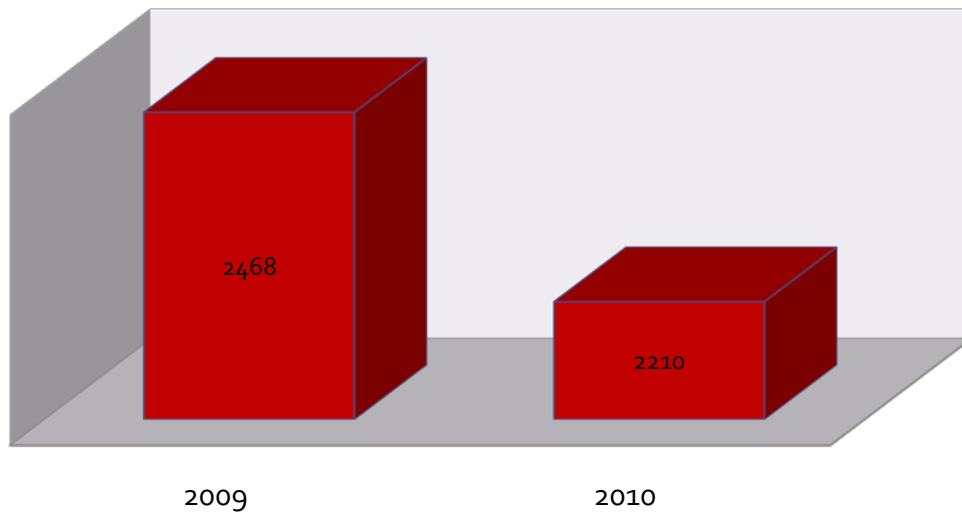
Flashlight Egg Hunt

The 5th Annual Flashlight Egg Hunt was held on Friday, April 10th. For the first time, there were over a 100 participants registered for the event. After dark, youth used flashlights to hunt for eggs hidden around the perimeter of the recreation center. Sponsors for this event included: Chick-fil-A, Boondocks, Applebees and Splitz Bowling Center; each of whom provided eggs, prizes or give-aways. Many volunteers assisted with hiding eggs and distributing the prizes.

Youth & Teen Registrations

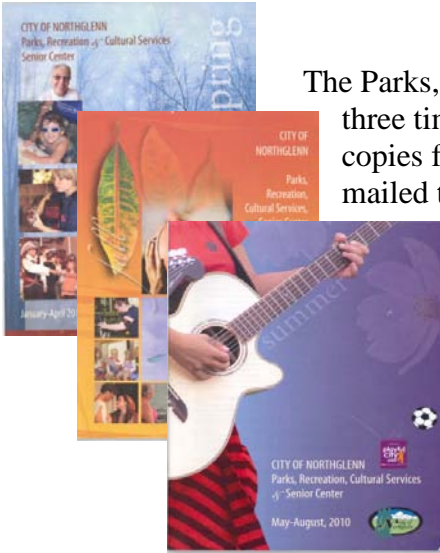


Youth & Teen Visits



Marketing

Brochure



The Parks, Recreation and Cultural Services activity brochure is produced three times each year. Cultural Services produces seventeen thousand copies for each 4 month cycle. Of the 17,000, the majority are directly mailed to residents of Northglenn and to those participants who are registered within the C.L.A.S.S. database. Once the brochure is printed, an electronic copy of the document is posted on the city's website, and a direct link is also available to those who would like to register online through RecXpress. Community events such as the Relay for Life held in August, and special events hosted by the Northglenn Historical Commission are also included.

Message Boards



Message boards are located throughout our parks and trails. The boards are used as a means of marketing programs to the community. The eight message boards are located at the entrances to the parks and trail systems of Northglenn, and feature upcoming programs each month. Information posted on the boards also includes special events and public meeting announcements. .

Additional marketing opportunities include community events through the neighborhood elementary schools at their field days and other events that are held at schools. This was also a key marketing tool for the Playful City USA application.

Sports, Operations, Fitness and Special Interest

Brian Magnett
Recreation Supervisor

Sports

The Sports programs division had its best year ever for revenue and participation. The total revenues from the sports programs in 2010 were \$118,626. The sports revenues increased by \$8,000 from 2009.

Adult Sports



The adult basketball leagues had 80 teams registered in 2010, up from 66 teams in 2009. Adult basketball leagues are offered year round, and Northglenn continues to have a positive reputation in the Denver Metro area for providing a high quality program. Revenue for the adult basketball league was \$35,100 for 2010. The adult volleyball leagues saw a decrease in the number of teams. In 2010, there were 17 teams registered, as compared to 25 teams in 2009 with total revenues of \$5,270. The adult softball leagues also decreased from 46 teams in 2009 to 35 teams in 2010, with revenues of \$17,325.

The 4th Annual Mud Volleyball tournament, Mudapalooza IV, was very successful. This program continues to grow in popularity each year. The tournament had 45 teams registered, up from the 28 teams in 2009. The tournament generated \$14,300 in revenue. The event had a \$2,000 cash sponsorship from the Colorado Lottery. In addition, there were \$3,000 in-kind donations from the 92.5 The Wolf radio station and Chick-Fil-A. The net profit on the event was \$7,255. The Leukemia/Lymphoma Society raised \$3,280 from the beer sales at the event.

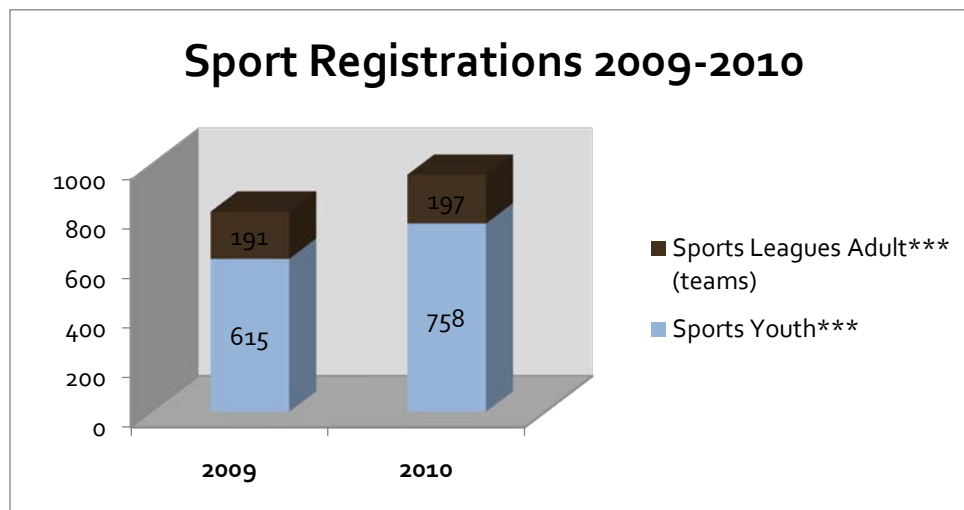
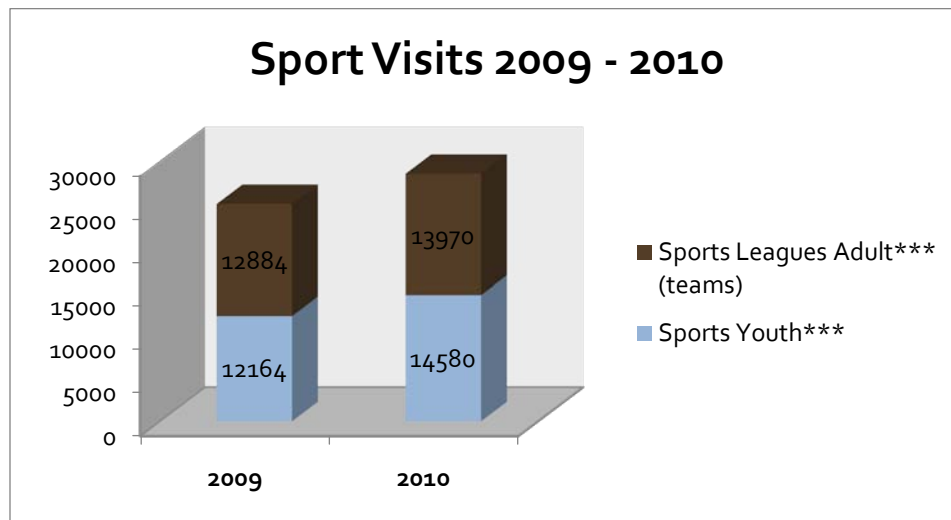


The 6th Annual Adult Wiffleball tournament was held on July 12th at Northwest Open Space and there were 12 teams registered, down 3 teams in 2009. The 6th Annual Dodgeball tournament was held in November and there were 8 teams registered, down 2 teams from 2009. The winning team won free Chick-Fil-A for a year which was donated by the Chick-Fil-A restaurant on 120th & Washington.

Youth Sports

The youth basketball program continues to stay very strong. In 2010, there were 479 players, up from 378 in 2009. The youth basketball program is available to youth in 1st through 9th grade, and is offered during the Winter, Spring and Fall. Total revenues from the three basketball leagues totaled \$30,000. The pre-school sports program for ages 3-6 had 192 participants in 2010, a decrease from 211 in 2009, with total revenues of \$7,466. The pre-school sports program consists of soccer, t-ball, basketball and a multi-sport program. The CARA cross country team, which is in its 3rd year, had 8 runners. In the five meets that were held in the Fall of 2010, all of the runners finished in the top three in their respective age groups.

The Northglenn CARA volleyball team is now entering the second year of competition and in the Spring season there were two teams with a total of 40 players. There was a recreation team and a competitive team and each team finished 2nd in the state tournament and in the fall season both teams finished in 3rd place in the state tournament.

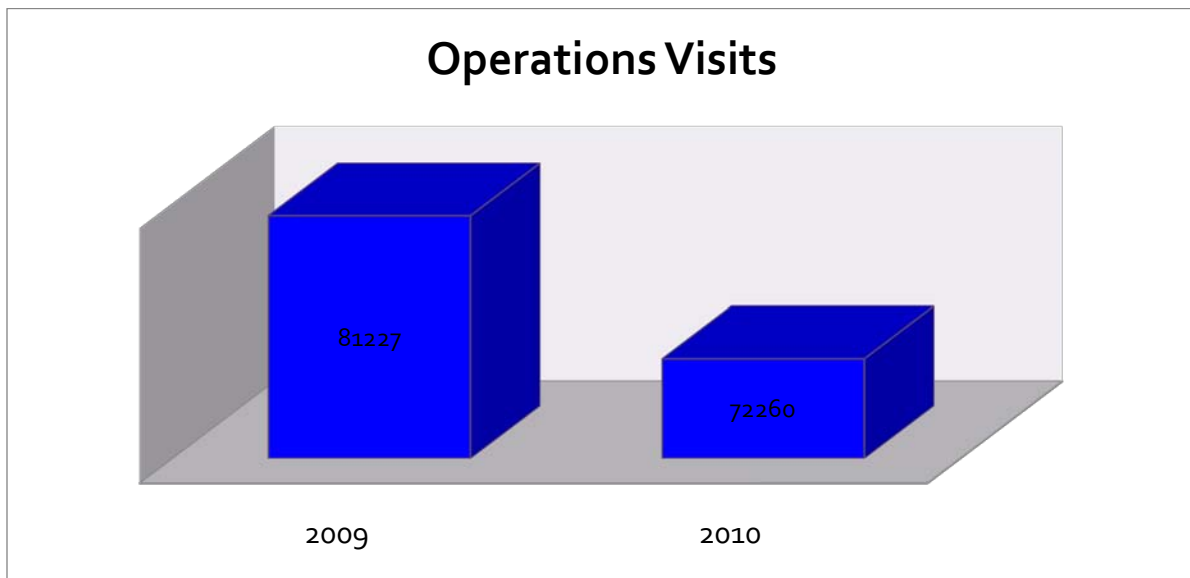


Operations

The recreation center had 9,945 drop-in participants using the various amenities such as the gymnasium, pool, racquetball courts, weight room, basketball, fitness classes, aquafit, etc. The total revenue from drop-in participants was \$31,336. In 2010 memberships continued to be steady in which there were 46,135 membership card scans with total revenue from memberships being \$70,462. In 2009, there were 46,645 scans with revenues of \$61,000. Membership plans offered include 20-punch passes, six month and annual passes, Pilates/Yoga 10 punch passes, and Judo passes. We continue to have an agreement with the hotels in the vicinity of the recreation center that their patrons are able to use our facility free of charge and the hotels reimburse us for the drop-in fee.

The Recreation Center rental revenue in 2010 increased by 14% compared to 2009. We now have three resident church groups that utilize the recreation center for their services. These groups include United Church of God, Dominion Life and The Ridge. These groups use various rooms on Saturdays and Sundays. The total rental revenue for the recreation center in 2010 was \$48,686 which was up \$6,800 from 2009, with most of the increase due to the addition of Dominion Life Church and a business networking group that meets in the Senior Center on Wednesday mornings. A variety of other rental uses include weddings, graduations, baby showers, business meetings, birthday parties and athletic tournaments.

The weight room equipment continues to be updated and upgraded to meet the needs of the users of the facility. Our weight room inventory includes 2 treadmills, 4 elliptical trainers, 4 stationary bikes, 1 stairclimber, 1 rowing machine, Cybex weight system and various free weights.

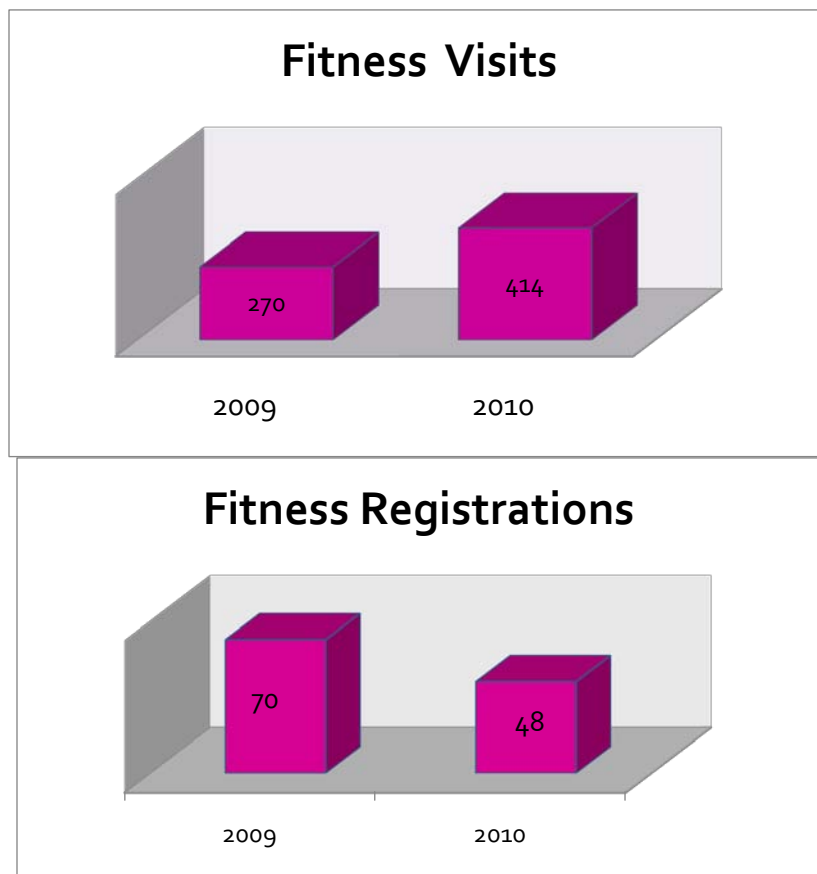


Fitness



A variety of drop-in fitness classes are offered at various times of the day throughout the week. Zumba, a Latin dance aerobics class, and Boot Camp, a high intensity workout, continue to be the more popular fitness classes and bring in strong participant numbers. Yoga also continues to be very popular. Traditional fitness classes, such as fit ball, step aerobics, kickboxing and weight training are also available and have grown over the past year. There was a total of 7,585 participants (excludes silver sneaker participants) who attended fitness classes in 2010. Zumba was the most popular class with 3,234 participants in 2010.

In general, class sizes have held steady during the year, with some variation from class to class. Personal training has also been successful this year, especially with the addition of personal training “packages” that allow participants to commit to a greater number of classes, while paying a slightly discounted fee. Total revenue from the personal training program in 2010 was \$4,800.



Special Interest

Martial Arts

Several different forms of martial arts are available at the Recreation Center including Karate, Tae Kwon Do and Judo. For Karate and Tae Kwon Do, participants register for individual sessions, and instructors serve as independent contractors, receiving a predetermined percentage of the registration fees. There were a total of 82 registrants in Karate and 74 registrants in Tae Kwon Do for 2010. The Judo classes are offered as a facility rental, with Judo participants paying a group rate drop-in fee or purchasing a punch pass for each class. There were a total of 5,463 drop-in visits for the Judo Club in 2010 with total revenues of \$12,495.

Dance

A variety of children's dance classes are offered, to include Shake, Rattle & Twirl, Twinkle Toes, Ballet, Hip-Hop Dance and Dance Kaleidoscope. There were a total of 144 participants registered for youth dance classes.

The adult Belly Dancing class has a steady group of young women enjoying this class. During the past year, there were 114 participants registered for Belly Dancing.

Wellness

Chiropractic care is offered twice each month at the recreation center. 136 participants signed up for the chiropractic care program. Chiropractic care is also a service for which the provider receives a portion of the participant fees, as an independent contractor, which results in a net profit for the City regardless of the number of participants each day.

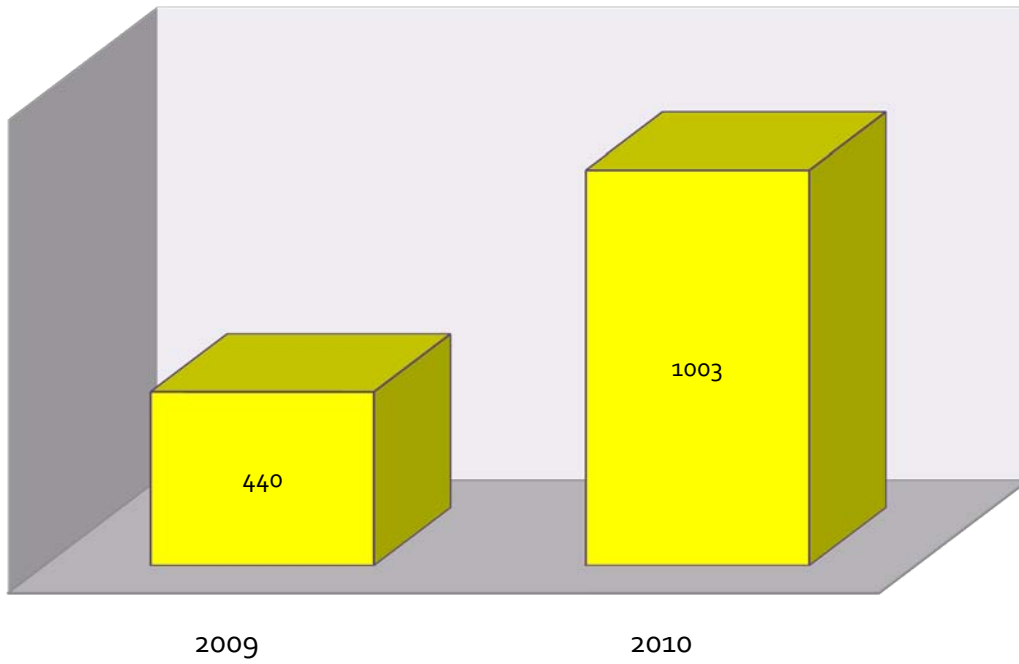


Youth Special Interest

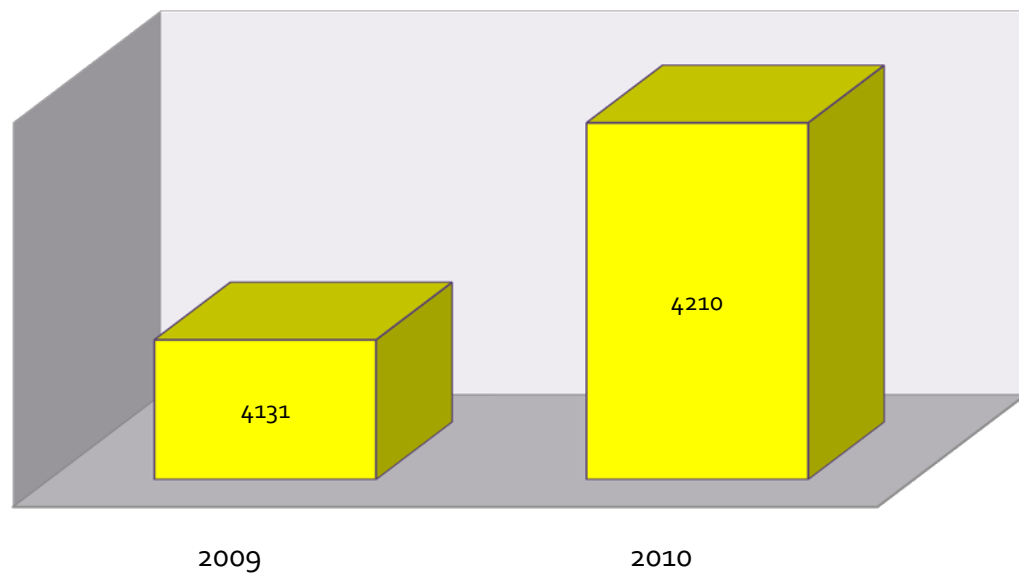
CPR/First Aid and Babysitting classes have become very popular. Each of these classes are offered five times a year and had 55 participants registered in 2010.

This summer, we added a youth archery program for ages 6-14 and the program was funded by a grant through NRPA. The archery program has been a great addition and there were 14 children registered in 2010 indicating this unique program has great potential to grow.

Special Interest Registrations



Special Interest Visits



Theatre, Culture and Seniors

Michael Sticker *Recreation Supervisor*

Overview

The D.L. Parsons Theatre continues to be an important community asset with the Cultural Programs offerings being well-attended with a total attendance of 31,481 for 2010. Organizations that rented the theatre in 2010 accounted for 18,609 attendees. Productions, classes, and events produced by the Cultural Programs division, in cooperation with the Northglenn Arts and Humanities Foundation (NAHF), accounted for 12,872 attendees. When including classes and visitors to City parks - particularly E.B. Rains Jr. Memorial Park - who were able to experience and enjoy the annual changing of the Art on Parade and People's Choice sculptures, those numbers approximate well over 105,000 cultural patrons.



D.L. Parsons Theatre rentals generated \$45,410 in revenue in 2010. This represents an increase of 8% over 2009. This highly utilized community resource hosted dance, theatre, and performing arts organizations, and was used for religious services, corporate meetings, presentations, and other functions. In some cases, rentals are booking two years in advance. Additional use of the space is provided to the City of Northglenn, free of charge, for events such as swearing-in ceremonies and neighborhood meetings for the Police Department, all-staff meetings, and various other City gatherings and presentations.

Rental attendance increased every month but October. December was a particularly busy month with a rental nearly every day until the week after Christmas. The rental attendance at the D.L. Parsons Theatre in 2010 was higher with 18,609 rental attendance compared to the 14,266 rental attendance in 2009.

What was accomplished?

Funding from Scientific and Cultural Facilities District (SCFD) through NAHF enabled Cultural Programs to bring quality artistic and educational experiences to the north-metro area throughout 2010. SCFD awarded NAHF \$49,130 for Northglenn Youth Theatre, Missoula Children's Theatre, Sounds of Summer Concert Series, Art on Parade, and People's Choice public art programs. Patrons of every age benefited from our programs both as audience members and as active participants. Neighbors came together to enjoy great music, learn new skills, celebrate and support the artistic accomplishments of those they know, and to simply be entertained, refreshed, renewed, and enlightened.

2010 marked the 16th season for the award-winning **Northglenn Youth Theatre (NYT)** program. The lineup included: "Elton John and Tim Rice's 'AIDA'," "James and The Giant Peach," and "Roald Dahl's 'Willy Wonka'." We were able to cast 114 children for these productions and provide opportunities for 15 more to volunteer backstage. NYT was again honored with both local and national awards in 2010 and continued to win more national awards than any other youth theatre in Colorado. Attendance for NYT continued to be strong, including a completely sold out run of "Willy Wonka!" The total attendance for the three productions was 4,171.



Missoula Children's Theatre returned to the D.L. Parsons Theatre for the 22nd season in January and June. The titles were "Snow White and the Seven Dwarfs" and "Beauty Lou and the Country Beast." A total of 114 youth were cast in the two shows and 936 people attended the four performances.

The free **Sounds of Summer Concert Series** and **July 4th Family Festival** entertained over 2,600 at E.B. Rains Jr. Memorial Park. The theme for the summer concerts was "Strumming Through Summer" and featured bands that had multiple stringed instruments. Unfortunately the July 4th Family Festival concert was canceled this year due to inclement weather. This normally accounts for over 10,000 attendees. The concert is again planned for 2011.

Art on Parade, Northglenn's on-loan public art program, continues to attract artists from around the U.S., and again received international submissions from China, Mexico and England. The selection committee for Art on Parade included citizens of Northglenn, residents of neighboring cities, former and current Northglenn City Council members, NAHF board members, and primary and high school aged students.

The **People's Choice** award was given to Santa Fe, New Mexico resident and artist Lyman Whitaker for his piece "Double Spinner." The copper and stainless steel Wind Sculpture™ was installed in the roundabout at Kennedy Drive and Melody Drive in October. It is already creating quite a buzz! A public dedication is planned for the spring of 2011. The City's sculpture collection now exceeds a total value of \$325,000. The NAHF conducted a full evaluation and executed maintenance and repairs of the entire Northglenn collection in 2010. Patrick Kipper of Loveland provided the service, including the complete rehabilitation of the Veterans War Memorial on Community Center Drive. Annual maintenance will continue to be provided by the NAHF.



NAHF funds are used to pay for the majority of the program costs for the above programs. NAHF receives its funding from individual donations, SCFD monies, fundraising events, program ad sales, concessions, investment income, and City of Northglenn per capita funds.

Volunteers

Volunteers remain an invaluable asset to Cultural Programs. In 2010, 100 volunteers clocked in 1,500 hours.

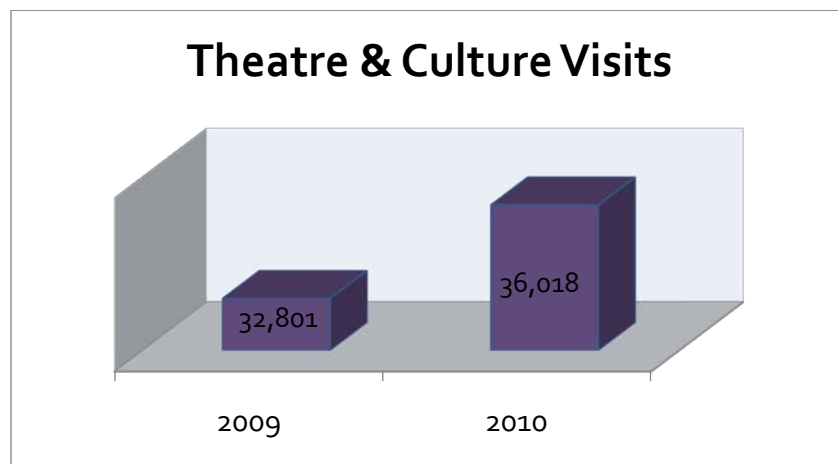
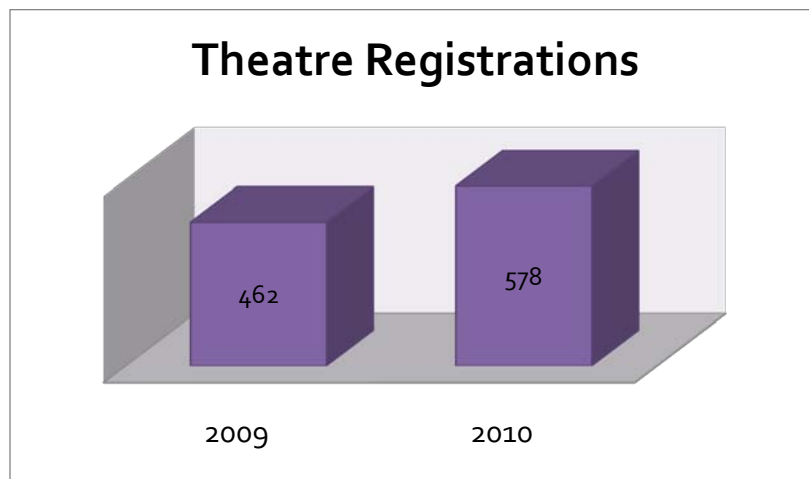
Classes and Special Engagements

In 2010 Cultural Programs offered various **classes**, mostly to youth, with a total attendance of 316. New offerings included auditioning workshops and a musical jam session called "Jamtastic." In 2010 we offered more **family-friendly performances** in our "Magical Mornings" series at the D.L. Parsons Theatre. Shows included Opera Colorado, Wayne Francis (ventriliquism), The Playground Theatre, Jim Jackson (clown), and Halau Kalama (hula dancing). Total audiences for these shows were 1,792 – up 68% over last year! The **Travel Film Series** continues to be a favorite among seniors. Titles included "Inside Iran," "St. Vincent and the Grenadines," "Israel & Jordan," "Alaska," "Discovering the Dutch," "The Himilayan Journeys and Nepal," and "The Best of Bavaria." Numbers remained steady at 1,243. NAHF and Cultural Programs also proudly hosted a one day **workshop for SCFD** in February. Nearly 70 SCFD organizations attended the workshop, giving our facility and programs some extraordinary exposure. The very popular annual **Daddy Daughter Sweetheart Ball** was held on February 27. This year's theme was "Hoorah for Hollywood" and featured a party fit for any rising star! Young ladies aged 5-13 and their daddies donned their fanciest outfits and enjoyed a night filled with dancing, light hors d'oeuvres and fun activities. This event continues to be a hot ticket in town; it sold out two weeks in advance. We increased the numbers to accommodate demand and had 190 attendees. We also hosted the **Night of the Stars** talent competition. This is the fourth year Northglenn has participated in this contest. 25 acts participated in three categories and three age groups. Winners from our local contest went on to compete against other winners from participating Denver Metro cities including, Englewood, Broomfield, Erie, Lakewood, Commerce City, and Brighton. All of the nine winners from Northglenn received trophies!

Facility

The annual maintenance closure was the last week of August. During that time, the entire D.L. Parsons Theatre was cleaned and organized, including the build shop, green room, dressing rooms, box office, mezzanine, lighting booth, and seating area. Some on-going issues remaining from the 2008 fire code compliance project are:

- The permanent stairs were removed from house left and right going up to the stage and various temporary solutions were put into place. A plan is being developed for permanent stairs.
- All backstage lighting was removed to comply with proper use of extension cords, etc. Temporary solutions have been created until a more permanent solution can be put into place.
- The audience capacity is still to be listed at 300. In past years, shows were often sold out at 310-320 by placing chairs in the back and front of the theatre. This will be rectified through the installation of the sprinkler system.



Senior Programs

The *Northglenn Senior Center* continues to offer social, educational, fitness, and fun for area seniors. The Center had 13,721 visits in 2010. Offerings



included Bingo, Bunco, Bridge, Festive Fridays, luncheons, Community Crafts, Driver's Safety classes, birthday parties, and games. Additional classes on "Facebook" were very well attended. "Game Show Tuesdays" offered Jeopardy, Trivial Pursuit, Wheel of Fortune, Senior Feud and The Price is Right. The Senior Breakfast continues with the meal catered by Cracker Barrel or Santiago's. On Veteran's Day, we combined breakfast with a Veteran's tribute, complete with 21-gun

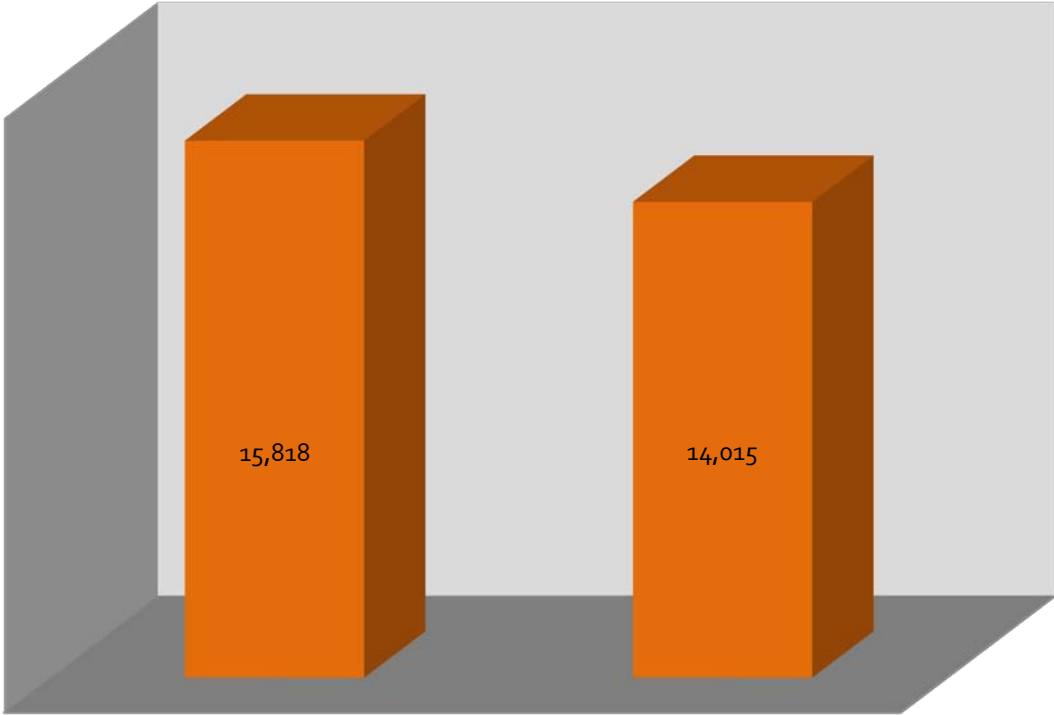
salute by American Legion Post 22. Some of the special events of 2010 were a chili cook-off, Hoodie Hoo Day, pets on the patio, tea parties, pie bake-off, scavenger hunt, sock hop and a local hero's backyard BBQ. A senior Art on Parade walking tour of the Sculptures at E.B. Rains Jr. Memorial Park was held in July. NAHF provided breakfast burritos for 45 people. With generous sponsorship from Prime Time for Seniors, we were able to keep the senior picnic and had 140 people attend. We continued to reach out to the community with Northglenn Ambulance Health Education classes. The 5th Annual Northglenn Ambulance membership drive provided 100 households with Ambulance Memberships. Also, Adams County Treasurer's Office provided free tax preparation for 1,003 people in 2010. Volunteers of America presented an 8-week class on Matter of Balance, a fall prevention program. National Jewish came in August and provided free lung function testing. Tri-county Health offered free Shingles vaccinations and Detective Terrie Hoodak started a "Coffee with the Cops" program that encourages open communication to discuss safety issues and concerns. We honored our senior volunteers with an Ice Cream Social as a Volunteer Recognition Event in April.

The senior fitness program as a whole continues to be popular. There were over 21,000 SilverSneakers[®] visits in 2010. SilverSneakers[®] program revenues were over \$66,000, even with a reduction in the cap from Healthways. (We now get \$4 per visit with a cap of 7 visits. This is down from a cap of 8 visits in 2009). Over 1,000 SilverSneakers members are enrolled. Senior fitness classes, including those that are a part of the SilverSneakers[®] program, are open to any individual aged 62 and older. Admission for these classes is either a SilverSneakers[®] "swipe" or a drop-in fee. As a part of the SilverSneakers[®] program, there are currently five Muscular Strength & Range of Movement classes, two Cardio Circuit classes, and three SilverSplash[®] classes offered each week. In addition, there are also Senior Weight Training and Senior Yoga classes offered each week. A self-led T'ai Chi club enjoys strong participation.

Medicare Monday, presented by the Colorado Gerontological Society, had 95 seniors in attendance. On November 15 Medicare representatives presented detailed information about Medicare, answered questions, and talked through the many changes in coverage.

The SilverSneakers revenue for 2010 was \$66,740. The annual visits for 2010 for SilverSneakers was 21,345.

Senior Center Visits and Registrations



PARKS OPERATIONS

The Parks Division finished up quite a few projects in 2010 including the valve replacements, ball field renovations and fences at North West Open Space. The Webster Lake Shoreline Project



is well under way and preparations have begun for the Skate Park addition in E.B. Rains Jr. Memorial Park in the spring and early summer of 2011. A new snow removal policy was adopted in an effort to be more efficient and effective for the winter of 2010 and 2011. Assessments were done that covered many sites and operations and now staff will be streamlining the process that was begun last spring.

Installation of 5 irrigation zones and sod at North West Open Space was completed. The project enlarged the soccer fields by half of a regulation playing field and helped alleviate the close proximity of the baseball teams to the soccer fields. This work was completed by staff in-house as part of the overall fence and infield grant work being done on-site last fall. In addition, finishing touches were put on a couple of the projects at Danahy Park that were started during the volunteer day held by Crossroads Church. The volunteer day was a huge help to the Parks division and very much appreciated by all.

The Sperry playground replacement project was completed and is a big hit in the neighborhood according to the citizens that staff has encountered at the park. The valve replacement project is about half way finished at North West Open Space except for a few sod replacement areas that will be touched up in the spring. Staff will be working with the contractors on the Huron Street project at both Croke Reservoir and Winburn Park, to restore the sites to their original condition.

Irrigation system audits are being performed on many of the parks to test the efficiency of the systems and to determine adjustments that need to be made before next spring. Staff will be moving forward with the central control computerized system that was purchased a couple of years ago but was not completed due to a communication channel frequency problem that is now resolved. The system will save the city water and provide a much more effective and efficient irrigation system.

The Forestry division has completed the application for the Tree City USA Growth Award after a full summer of pruning projects as well. The 104th medians and all city facilities and numerous park sites were trimmed back and improved for the health of the overall site, which included the removal of plant materials that were unhealthy or invasive. The new mulch created by the city's trial recycling program was quickly distributed through the parks system and is saving a good deal of money on annual mulch purchases.

The flower beds throughout the city looked great this year and will continue to flourish with the addition of more perennials this fall and the planning of bed improvements this winter. The City reached an agreement with the City of Westminster to grow over 10,000 annuals this



City of Northglenn Noxious Weed Management Plan

Prepared by the

Northglenn Noxious Weed

Advisory Committee

January, 2010

City of Northglenn Noxious Weed Management Plan

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City of Northglenn Noxious Weed Management Plan

Introduction

Purpose of This Plan

The purpose of this City of Northglenn Noxious Weed Management Plan is to provide guidelines for effectively managing priority noxious weeds, which constitute a present threat to the natural resources of lands in the City of Northglenn. This plan implements the mandates of the Colorado Noxious Weed Act (also referred to herein as the Act) by detailing integrated management options for certain noxious weeds. Such options include education, preventive measures, good stewardship, and control techniques. It is this plan's intent to incorporate those options that are the least environmentally damaging, yet practical, timely, and economically feasible.

Enactment Authority

The Undesirable Plant Management Act (C.R.S. 35-5.5) was signed into state law in 1991 and amended in 1996, 2000 and 2003. Now known as the **Colorado Noxious Weed Act, §§ 35-5.5 (2003)**. It states that certain noxious weeds pose a threat to the natural resources of Colorado. It also states that it is the duty of all persons to use integrated methods to manage noxious weeds if the same are likely to be materially damaging to the land of neighboring landowners. It further directs that the cities of each county in the state shall adopt a Noxious Weed Management Plan for all incorporated land within the county. Northglenn ordinance Chapter 9, Article 15 declares noxious weeds to be a public nuisance under the Northglenn Noxious Weeds Ordinance.

The Northglenn Parks and Recreation Advisory Board established the Northglenn Noxious Weed Advisory Committee on March 12, 2001. The committee consists of the Northglenn Parks and Recreation Advisory Board, with assistance from the Weed Supervisor of the Adams County Extension Service, Two Representatives from the Parks, Recreation and Cultural Services Department, and the City Manager or his designee.

The Act (C.R.S. 35-5.5-106) directs the governing body of each municipality to adopt a noxious weed management plan, "The governing body of each municipality in the state shall adopt a noxious weed management plan for all lands within the territorial limits of the municipality." The Northglenn Noxious Weed Advisory Committee shall:

1. Develop recommended management criteria and integrated weed management plans for managing priority noxious weeds;
2. Declare noxious weeds and any Colorado and/or Adams County noxious weeds designated by rule to be subject to integrated management; and
3. Recommend to the Northglenn City Council an integrated weed management plan for managing priority noxious weeds within the City.

4. The jurisdictional area of the Northglenn Noxious Weed Advisory Committee is the City of Northglenn. This plan shall be referred to as the City of Northglenn Noxious Weed Management Plan.

Jurisdiction and Scope of Plan

This plan shall apply to all lands managed by Northglenn. It does not preclude the City from entering into intergovernmental agreements with other governmental entities towards managing noxious weeds under the Colorado Noxious Weed Act. The City of Northglenn is aware that the Federal Noxious Weed Act (1974), as amended by Section 15 (management of undesirable plants on Federal Lands (1990), directs federal agencies to have an office or person trained to coordinate a noxious weed management program, to adequately fund the program, to implement cooperative agreements and to conduct integrated weed management. It also directs that such agencies manage on Federal lands those noxious weeds that are designated in the City or County within which the Federal land lies. Northglenn recognizes that a Memorandum of Agreement regarding noxious weed management was signed in Colorado in 1996 among 13 federal and state agencies with land management and natural resource protection responsibilities.

Colorado Executive Order #D 006 99, dated July 19, 1999 requires state agencies and departments to cooperate with the local governing bodies of counties and municipalities to achieve shared noxious weed management objectives.

Definitions

The following definitions shall apply to terms used in this plan:

1. "**Act**": the Colorado Noxious Weed Act (2003), Article 5.5 of Title 35, C.R.S., as amended.
2. "**Adjacent**": meeting or touching at some point, or having nothing of the same kind intervening.
3. "**Agriculture**": uses involving the cultivation of land, production of crops, and/or the keeping of livestock; but not including commercial feed yards; the slaughter or processing of animals for commercial purposes; kennels; horses; veterinary hospitals; or riding academies.
4. "**Alien Plant**": a plant species that is not indigenous to the State of Colorado.
5. "**Biological Management**": the use of an organism to disrupt the growth of noxious weeds.
6. "**Council**": the Northglenn City Council.
7. "**City**": the area of Adams County, Colorado, which is incorporated as the City of Northglenn.
8. "**Cultural Management**": methodologies or management practices conducted which favor the growth of desirable plants over noxious weeds, including maintaining an optimum fertility and plant moisture status in an area, planting at optimum density and spatial arrangement in an area, and planting species most suited to an area.

9. "**Forb**": a broad-leafed plant; not a grass, shrub, or tree.
10. "**Herbicide Management**": the use of herbicides or plant growth regulators to disrupt the growth of noxious weeds.
11. "**IMP**": an individual noxious weed management plan, as further defined under "Integrated Management Plan" below.
12. "**Infestation**": to have overrun or inhabit, so as to be harmful or bothersome.
13. "**Integrated Management Plan or IMP**": the planning and implementation of a coordinated program utilizing a variety of methods for managing noxious weeds, the purpose of which is to achieve desirable plant communities. Such methods may include but are not limited to education, preventive measures, good stewardship, and biological cultural, herbicide, and mechanical management.
14. "**Landowner**": any owner of record of state, municipal, or private land and includes an owner of any easement, right-of-way, or estate in the land.
15. "**Local Noxious Weed**": any plant of local importance, which has been declared a "Northglenn Noxious Weed" by the City Council.
16. "**NWMP**": the City of Northglenn Noxious Weed Management Plan, and as further defined under "Management Plan" below.
17. "**Northglenn Noxious Weed Advisory Committee** ": the Northglenn Parks and Recreation Advisory Board , with assistance from the Weed Supervisor of the Adams County Extension Service (Holly Postmus), Jim Urand and Mark Arado of the Northglenn Maintenance and Operations Department, and the City Manager or his designee.
18. "**Management**": any activity that prevents a plant from establishing, reproducing, or dispersing itself.
19. "**Management Plan**": a noxious weed management plan developed by any person, the Northglenn Noxious Weed Advisory Committee or the designee of the City Manager using integrated management. The "City of Northglenn Noxious Weed Management Plan" (NWMP or this plan) shall refer to the integrated management plan adopted by the Board for the subject lands. An "Individual Management Plan" (IMP) shall refer to an integrated management plan for a specific property or group of properties as submitted by a landowner(s), and approved by the Northglenn Noxious Weed Advisory Committee, the Northglenn City Council or their designee.
20. "**Mechanical Management**": those methodologies or management practices that physically disrupt plant growth, including tilling, mowing, burning, flooding, mulching, hand-pulling, shoveling, hoeing, and chopping.
21. "**Native Plant**": a plant species that is indigenous to the State of Colorado.

22. "**Neighboring**": any property located within a one-half mile radius of the boundary of the subject property.
23. "**Noxious Weed**": an alien plant or parts of an alien plant that has been designated by rule as being noxious or has been declared a noxious weed by the City Council, and meets one or more of the following additional criteria:
 - a. Aggressively invades or is detrimental to economic crops or native plant communities;
 - b. Is poisonous;
 - c. Is a carrier of detrimental insects, diseases, or parasites;
 - d. The direct or indirect effect of the presence of this plant is detrimental to the environmentally sound management of natural, open-space or agricultural ecosystems.
24. "**Noxious Weed Management**": the planning and implementation of an integrated program to manage noxious weeds.
25. "**Person**" or "**Occupant**": an individual, partnership, corporation, association, or federal, state, or local government or agency owning, occupying, or controlling any land, easement, or right-of-way, including but not limited to any county, state, or federally owned and controlled highway, drainage, or irrigation ditch, spoil bank, borrow pit, gas and oil pipeline, high voltage electrical transmission line, or right-of-way for a canal or lateral.
26. "**Plant Growth Regulator**": a substance used for controlling or modifying plant growth processes without appreciable undesirable phytotoxic effect at the dosage applied.
27. "**State Noxious Weed**": any noxious weed identified by the commissioner of the Colorado Department of Agriculture by rule after surveying the Local Advisory Boards and prioritizing the top ten weeds. Said survey is to be conducted every three years.
28. "**Subject Lands**": all public lands within incorporated Northglenn, with the exceptions of any land administered or managed by a federal, state or county agency.
29. "**Weed Inspector**": the agent or employee as appointed by the City Manager in concert with the Neighborhood Service Officers of the Neighborhood Services Division or any other employees or agents designated by the City Manager, to conduct the duties and functions of the Weed Inspector under this plan
30. "**Weed Office**" (303-280-7818): the office of the Weed Inspector where noxious weed administration and education activities are centered.

Colorado Noxious Weed Act: State-Listed Noxious Weeds

A state noxious weed list and rules and regulations under the Act are developed by the Commissioner of the Colorado Department of Agriculture (CDA). The State requirements and the complete state list is found in Appendix C. The Northglenn Weed Office (303-280-7818) will monitor and comply with any amendments to the rules and regulations. The following plants were

priority noxious weeds found in Northglenn. They must be managed where found on any subject lands. Their control is described in Appendix A and their biology is detailed in Appendix B. Additional noxious weeds from the state list will be added as discovered to exist or probably exist in Northglenn.

Northglenn Priority Noxious Weeds

NAME	Management	Description
	Page	Page
Canada thistle (<i>Cirsium arvense</i>)	15	39
dalmatian toadflax (<i>Linaria dalmatica</i>)	17	39
diffuse knapweed (<i>Centaurea diffusa</i>)	19	39
field bindweed (<i>Convolvulus arvense</i>)	21	39
hoary cress (whitetop) (<i>Cardaria draba</i>)	23	39
leafy spurge (<i>Euphorbia esula</i>)	25	40
musk thistle (<i>Carduus nutans</i>)	27	40
Myrtle spurge (<i>Euphorbia myrsinites</i>) List A	30	40
poison hemlock (<i>Conium maculatum</i>)	31	40
purple loosestrife (<i>Lythrum salicaria</i>) List A	32	40
Russian knapweed (<i>Acroptilon repens</i>) (<i>Centaurea repens</i>)	33	41
saltcedar (<i>Tamarix ramosissima</i>)	34	41
Scotch thistle (<i>Onopordum acanthium</i>)	27	42
spotted knapweed(<i>Centaurea biebersteinii</i>)(<i>C. maculosa</i>)	36	41
yellow toadflax (<i>Linaria vulgaris</i>)	17	42
Teasel (<i>Dipsacus fullonum</i>)	36	42

Objectives and Goals

Objectives

The objectives of the City of Northglenn Noxious Weed Management Plan (NWMP) are to:

1. Develop and implement integrated management programs for Northglenn Noxious Weeds within Northglenn.
2. Continue and improve educational programs that effectively will communicate noxious weed impacts and management.
3. Utilize “Partners with Parks” to organize volunteers to implement certain objectives.
4. Offer to provide landowners/occupants with technical support in weed management.
5. Work with other government agencies towards establishing effective integrated noxious weed management programs on their properties, such as highway rights-of-way.
6. Outline processes for obtaining control of Northglenn Noxious Weeds on private and public properties.
7. Wherever possible, to identify and select the least environmentally damaging weed management methods that will provide desired control of infestations.
8. Select control methods that are practical and economically reasonable.
9. Seed native or adapted species on areas of bare soil or areas occupied by weeds, including non-noxious weeds.

Short-Term Goals

Short-term (1 to 5 years) goals for the City of Northglenn Noxious Weed Management Plan (NWMP) are to:

1. Educate landowners/occupants and selected city employees and volunteers on awareness, identification, prevention, control and eradication of Northglenn Noxious Weeds.
2. Concentrate on early detection and control of new noxious weed infestations. These are the easiest and most affordable to control, and prevent larger infestations from developing.
3. Maintain a current noxious weed infestation map.
4. Establish contact with landowners/occupants who have a noxious weed infestation through Neighborhood Services.
5. Reduce the noxious weed acreage on city land by 5%.
6. Reduce Poison hemlock by 50%.
7. Increase the areas occupied by native grasses or other suitable plant materials by 5% or more.

Long-Term Goals

Long-term (5 to 10 years) goals for the City of Northglenn Noxious Weed Management Plan (NWMP) are to:

1. Increase the use of biological control methods, wherever feasible.
2. Reduce noxious weed acreage within Northglenn by 15%.
3. Release appropriate insects for bio-control of select noxious weeds (i.e., Canada thistle).
4. Continue educational efforts focused on awareness, prevention control, and eradication of noxious weeds.
5. Reduce noxious weed populations on city lands by 20%.
6. Reduce poison hemlock by 90%. Eradicate poison hemlock on playgrounds.
7. Develop inter-governmental agreements to coordinate weed inventory, priorities and control.
8. Encourage planting of native grasses or other suitable plant materials to protect the soil and reduce weeds.

Plan of Work

Description of Integrated Weed Management

The Act requires all persons to use integrated methods to manage noxious weeds if such plants are likely to be materially damaging to neighboring lands.

Integrated management of noxious weeds is fully defined in the "definitions" section of this NWMP. In short, it includes the coordinated use of education, preventive measures, good stewardship, and control methods, the purpose of which is to achieve desirable plant communities.

Control methods include cultural, mechanical, biological and herbicidal. Definitions of these terms are also in the "definitions" section of this plan.

Integrated management of “Northglenn Noxious Weeds” will vary depending upon plant site location. Management options for noxious weeds will be evaluated and approved by Adams County and the State of Colorado..

Prevention Measures

Preventive control involves use of measures that will prevent the introduction or establishment of noxious weeds into areas not currently infested with noxious weeds. Prevention also includes the eradication of small new infestations. These measures usually are the most practical and cost-effective means of integrated weed management. The least expensive weed to manage is one that does not infest an area.

Preventive measures that have applicability to the subject lands are: 1) using weed-free seed and mulch, 2) promoting the Colorado Weed Free Hay and Forage program, 3) prioritizing weed management areas along routes of entry and dispersal, and monitoring noxious weed infestations in bordering cities.

With regard to measure number 3, the Weed Inspector will manage Northglenn Noxious Weeds on Northglenn properties and Rights-of-Way from March through October. Public education programs will emphasize weed infestation prevention. Sites found to have small, eradicable infestations of new; uncommon noxious weeds will be given high priority for management purposes. A coordinated control effort with private landowners will be organized, where applicable. The Colorado Department of Transportation, Adams County and ditch companies will be contacted. They will be encouraged to cooperate on projects along ditches and roadways within the City of Northglenn boundaries with noxious weed infestations."

Educational Programs

Education of the public is one of the most important aspects of integrated weed management. Emphasis will be made on continuing and expanding educational noxious weed programs, such as the following:

1. Timely media articles concerned with noxious weed identification and management. Emphasis will be made of the alien origin of noxious weeds and the consequences of not managing them through the City of Northglenn website and the Northglenn Connection.
2. Via the media and seminars, offer the assistance of the Northglenn Noxious Weed Management Committee and Colorado State University Cooperative Extension office in weed management and IMP matters.
3. Conduct landowner/occupant noxious weed management seminars or talks.
4. Conduct “Northglenn Noxious Weeds” identification, management, and awareness seminars with Maintenance and Operations and Public Works personnel, Neighborhood Service Officers of the Neighborhood Services Division and volunteers. This is done on an annual basis.

5. Utilize Extension Fact Sheets and websites when possible. Prepare informational brochures on integrated noxious weed management for the public. Make selected herbicide labels and MSDS available at public and educational events.
6. Work with the Adams County Weed Department in educating staff, residents, developing research test plots, etc....

Mapping

Mapping is a valuable tool in integrated weed management. As such, the Weed Inspector or his designee will establish and maintain visual maps of past and current infestations of selected Northglenn Noxious Weeds. From these, a graphic representation of weed management progress and needs will be evident. Google's "Earth" computer program will be the primary mapping tool. Adam's County weed supervisor will be advised on new infestations and any sighting of purple loosestrife.

The primary goal of mapping is to record the "Northglenn Noxious Weeds" species present, the area infested, density of the infestation, soil types, groundwater depth, and other site factors pertinent to managing the infestation successfully.

Intergovernmental Agreements and Contracts

Intergovernmental Agreements (IGAs) and contracts are useful tools towards more effective noxious weed management among agencies and governments. Through cooperation, more is understood and more is done. Towards this end, the Weed Inspector may contact certain entities concerning compliance with the Act. Contracts and IGAs will be encouraged towards cooperative efforts in managing Northglenn Noxious Weeds. Assistance will be offered towards helping each agency developing IMPs for their lands. The following organizations will be contacted, initially.

1. Colorado Department of Agriculture, Division of Plant Industry
2. Colorado Department of Transportation
3. Colorado Division of Wildlife
4. CSU Cooperative Extension
5. Adams County Weed Department

Adopt-A-Roadside or Greenway Program

An Adopt-A-Roadside or Greenway program will be established which would give landowners/occupants the ability to assist in managing Northglenn Noxious Weeds on Northglenn land. Volunteers could cut or dig up noxious weeds on city property.

Noxious Weeds on Private Property

Cooperation from all landowners/occupants regarding timely noxious weed management will be encouraged via positive communication and education efforts. The Weed Inspector will work with Neighborhood Services. Noxious weeds on private property should be reported to the Neighborhood Services Supervisor at 303-280-7840 for appropriate educational and enforcement measures.

Notices under the Northglenn's Noxious Weed Management Plan (NWMP) and the Northglenn Noxious Weeds Ordinance Chapter 9 Article 15 are mailed to owners of land having Northglenn Noxious Weeds, as observed and recorded by the Weed Inspector or Neighborhood Service Officers of the Neighborhood Services Division. County Assessor records are used to identify landowner names and addresses. Notices are delivered by both regular and certified mail. A reasonable effort is made to identify tenants, if any, who then are concurrently, sent notices.

In the event the landowner/tenant fails to comply with the Notice, they will have due process before the Weed Inspector or his/her agent develops an IMP to manage the Northglenn Noxious Weeds. Due process includes being invited to a hearing before the City Council.

The Northglenn City Council, the Maintenance and Operations Director or Neighborhood Service Officers of the Neighborhood Services Division may direct the Weed Inspector to assist the landowner in implementing an IMP.

It is desirable that the Weed Office (303-280-7810) has work priorities with regard to mapping and managing Northglenn Noxious Weeds on subject lands. This is due to the size of the subject area and to the number of landowners with existing noxious weed infestations. The following list prioritizes the development of Individual Management plans (IMP):

1. Eradication of purple loosestrife and eradication of poison hemlock in playground areas.
2. Any List A species or populations of List B species designated for eradication.
3. Northglenn Parks, Open-space, Greenways and right-of-ways in cooperation with the Parks Superintendent.
4. Complaint properties.
5. Significant infestation of the Northglenn Noxious Weeds.
6. Lands bordering waterways (i.e. ditches, canals, rivers, creeks)
7. Lands currently managed by Northglenn in cooperation with the Parks Superintendent.
8. Land under cooperative agreement with other jurisdictions.

Scheduled Northglenn Parks Activities **(Noxious Weed Control Measures to be done on City Property)**

February

Call to order biological controls (insects) for use on thistle infestations and to get instructions on when to place insects.

March

1. Mow sections of Oscar Arnold Nature Area where existing tall vegetation would interfere with spraying.
2. Scout for poison hemlock and teasel infestations along the Farmer's Highline Canal Trail and E. B. Rains Jr. Memorial Park, spray early growth of poison hemlock.

Late April to mid May

1. Spray Canada thistle, musk thistle and hoary cress at Oscar Arnold Nature Area.
2. Spray hoary cress in other areas along the Farmer's Highline Canal trail.
3. Spray additional growth of poison hemlock.

June

1. Dig up poison hemlock plants missed earlier, before flowering occurs (volunteers).

Early July

1. Spray knapweed at E.B. Rains Park and Fox Run Open Space.

Late July to Early August

1. Second spraying of knapweed.
2. Scout for purple loosestrife at Fox Run Open Space (wetland area), cut and bag flowers, and spray.
3. Spray yellow toadflax at Northwest Open Space, along Farmer's Highline Canal Trail and at Croke Reservoir (second application in late August if necessary).

Any infestations on private property, contact Neighborhood Services.

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3. diffuse knapweed (<i>Centaurea diffusa</i>)	19
4. field bindweed (<i>Convolvulus arvensis</i>)	21
5. hoary cress (whitetop) (<i>Cardaria draba</i>)	23
6. leafy spurge (<i>Euphorbia esula</i>)	25
7. musk thistle (<i>Carduus nutans</i>)	27
8. Myrtle spurge (<i>Euphorbia myrsinites</i>)	30
9. poison hemlock (<i>Conium maculatum</i>)	31
10. purple loosestrife (<i>Lythrum salicaria</i>)	32
11. Russian knapweed (<i>Centaurea repens</i>)	33
12. saltcedar (<i>Tamarix ramosissima</i>)	34
13. Scotch thistle (<i>Onopordum acanthium</i>)	27
14. spotted knapweed (<i>Centaurea maculosa</i>)	36
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APPENDIX A

Integrated Management for Northglenn Noxious Weeds

Management techniques must be approved by the Commissioner of Agriculture, locally the Adams County Weed Management Specialist, is a source for approved techniques. The integrated management options listed below are meant to provide proven management techniques for controlling noxious weeds on various sites. Additional viable options likely will become available in the future. Site-specific options are presented only for sites where the noxious weed is expected to be found in Northglenn, either now or in the near future. Native vegetation in place of introduced species requires site-specific investigation of the soil and moisture regime.

Planting of native species, like western wheatgrass (*Agropyron smithii*) or blue grama (*Bouteloua gracilis*), should always be considered in developing an IMP. In some cases, non-native plant materials may be preferred to limit the establishment of noxious weeds.

E.P.A. labels are getting more specific on the type of land that a pesticide may be used. Check the official Label for applicability before using any pesticide. Manufacturer's lists are available at:

<http://www.cdms.net/manuf/manuf.asp>

Adam's County has noxious weed fact sheets at:

<http://www.colostate.edu/Depts/CoopExt/Adams/weed/factsheet.htm>

The State of Colorado has noxious weed lists and fact sheets at:

<http://www.colorado.gov/cs/Satellite?c=Page&childpagename=Agriculture-Main%2FCDAGLayout&cid=1167928170082&p=1167928170082&pagename=CDAGWrapper>

Canada thistle

Canada thistle is an alien, deep-rooted perennial that spreads by seeds and creeping, horizontal roots. Its vast root system makes it very difficult to control. This is reflected by its wide distribution on subject lands, both on dryland and riparian sites. Its fluffy seeds are especially adept at traveling with wind and colonizing new areas.

1. Management Measures

A. Cultural Management

Establishing and maintaining selected, aggressive grasses can be a management control tool used alone, however, Canada thistle will spread on moist or riparian sites, even among a very aggressive smooth brome grass stand.

B. Mechanical Management

Mowing, or similar efforts that mechanically damage the above ground thistle plant, is effective in decreasing infestations. Perform these activities two or more times per growing season. The goal is to stress the plant, making it use root food reserves and reduce (or eliminate) seed set. Canada thistle is known to set seed on plants lower than mower cutting height. To eliminate an infestation of Canada thistle by cultivation, begin this activity when root food reserves are low. This time generally is 4 to 6 weeks after emergence (very early bud stage) in the spring. From 90 to 98 percent of a thistle infestation can be eliminated by deep cultivation (4 to 6 inches deep) repeated every 21 days during a

growing season, and continued to freeze up. Care must be taken to not have cultivation interfere with soil conservation plans, nor result in soil erosion.

C. Biological Control

Grazing may have a slight effect on reducing vigor, but is not an effective management practice. Insects have been released in Colorado on an experimental basis to control Canada thistle. *Ceutorhynchus litura*, a predator of Canada thistle, feeds on the plant externally as an adult, while the larvae mine the leaves and stems. A gall forming fly, *Urophora cardui*, has been released to help combat Canada thistle. At this time their effectiveness has been marginal. Some are available to the general public.

D. Herbicide Control

Herbicides that are recommended for use on Canada thistle, either independently or in combination, are: picloram (Tordon22K®), triclopyr & clopyralid (Redeem R&P®), clopyralid (Stinger® or Transline®), clopyralid plus 2, 4-D premix (Curtail®), chlorsulfuron (Telar®), diclycolamine (Vanquish®), metsulfuron methyl (Escort XP), glyphosate (Roundup®, Rodeo®), and dicamba (Banvel®), quinclorac (Paramount® or Drive 75 DF®). Dicamba, 2,4-D and mecoprop (Weed-B-Gon MAX®) or (Super Trimec®). Proper timing of applications, according to label directions, is critical. Picloram and dicamba can injure woody plants by being exuded through weed roots and being up taken by trees and shrubs within three times their drip lines. Always follow herbicide label directions for application and environmental protection guidelines.

Integrated Management Options by Site

A. Open-space, Pasture and Riparian Sites

Option #1. Biological and Herbicide Control

A herbicide treatment in late September or early October. On riparian sites, use only appropriately labeled products. This is an effective management method. Grazing or insects are not feasible.

Option #2. Mechanical and Herbicide Control

Mow two to four times from May to late August. Follow with a reduced-rate herbicide treatment in late September or early October. On riparian sites, use only appropriately labeled products. This is a very effective integrated management method.

Option #3. Mechanical Control Only

Use mowing or cultivation throughout the growing season with the primary goal of preventing seed set.

Option #4. Herbicide Control Only

Herbicides used will be at labeled rates and labeled for the target site. Depending on the product, make application in late-spring and in September/October, in the fall only, or at any time during the growing season. On riparian sites, use only appropriately labeled products.

B. Along irrigation and storm water ditches

Option #1. Mechanical and Herbicide Control

Same as for riparian sites as described above.

Option #2. Mechanical Control Only

Same as for Option #3 as described above. Mechanical control limited to chopping, weed-eating, hoeing, etc.

Option #3. Herbicide Control Only

Same as for Option #4 as described above.

C. Road Rights-of-Way and other Non-crop Areas.

Option #1. Mechanical and Herbicide Control

Mow or flail Canada thistle 2 to 4 times from May to September. A reduced herbicide application will be made to visible re-growth in the fall.

Option #2. Herbicide Control Only

On sites that cannot be mowed, apply approved herbicides at labeled rates. Depending on the product, apply herbicides in spring and fall, fall only, or at any time during the growing season.

http://www.colostate.edu/Depts/CoopExt/Adams/weed/pdf/Canada_thistle.pdf

Dalmatian and Yellow toadflax

Toadflax is an alien perennial weed that spreads by seeds and creeping roots. It has somewhat waxy leaves and produces numerous hard black seeds, which are easily transported on tires.

Toadflax is difficult to control. Yellow toadflax is found at the Oscar Arnold Nature area, Croke Reservoir and along the Farmer's Highline Canal at E. B. Rains Park. Dalmatian toadflax is rare in Northglenn.

1. Management Measures

A. Cultural Management

Cultural control methods tend to work poorly towards controlling toadflax. A productive, aggressive grass stand will tend to slow the spread of toadflax, and to deter the establishment of new infestations. toadflax will survive and spread, even in a bluegrass lawn.

B. Mechanical Management

Mechanical control of toadflax is difficult because it sprouts from underground rhizomes. Mowing generally has little or no effect. Hoeing or grubbing is more effective. Flailing or cultivation at intervals of 10 to 14 days can be effective, but 2 or more growing seasons of diligent effort are needed to achieve stand reduction. Cultivation intervals must be religiously maintained. Cultivation can spread toadflax rhizomes to non-infected sites via dragging, or from being transported on the cultivation or flailing equipment.

C. Biological Management

Biological control of toadflax is difficult.. *Brachypterolus pulicarius*, *Calophasia lunula*, *Eteobalea intermediella*, *Gymnetron antirrhini*, *Gymnetron linariae*, and *Mecinus janthinus* are being investigated for use on both toadflaxes. Grazing is not effective.

D. Herbicide Management

Herbicides labeled for use on toadflax, either singly or cooperatively are: picloram (Tordon22K®), quinclorac (Paramount® or Drive® 75 DF), dicamba (Banvel®), glyphosate (Roundup®, Rodeo®), diclycolamine (Vanquish®), fosamine (Krenite®), and 2, 4-D, Dicamba + 2, 4-D; chlorsulfuron (Telar®); Dicamba, 2,4-D and mecoprop (Weed-B-Gon MAX®) or (Super Trimec®). or metsulfuron methyl (Escort XP®) + 2, 4-D gives good control when applied before the bloom stage. Imapazapic (Plateau® or **Journey**®) is effective on Dalmatian toadflax only when applied in the fall.

Dicamba and picloram can injure woody plants by being exuded through weed roots and being uptaken by trees and shrubs within three times their drip lines. Effective control can take many years with some herbicide use strategies. Proper timing of application, according to label directions, is critical, especially with 2, 4-D. Always follow herbicide label directions for application and environmental protection guidelines. Near ground or surface water use only 2,4-D type products labeled for “near water” use and/or Rodeo®. Glyphosate and some amine forms of 2, 4-D are compatible in mixtures. Nonionic surfactants need to be added to the herbicide in order to increase effectiveness.

2. Integrated Management Options by Site

A. Open-space, Pasture, and Riparian Sites

Option #1. Biological and herbicide Control

Graze livestock from May through late August. Follow in September/October with a herbicide treatment to toadflax. On riparian sites apply glyphosate, fosamine, and aquatic - labeled 2, 4-D according to label guidelines.

Option #2. Mechanical and Herbicide Control

Cultivate or use manual efforts (shoveling, hoeing, weed eating, etc.) to stress toadflax from May through late August. Allow regrowth of toadflax before applying a herbicide in September. On riparian sites apply glyphosate, fosamine, and aquatic-labeled 2, 4-D according to label guidelines.

Option #3. Herbicide Control Only

Apply herbicides in the spring and fall, fall only, or at times during the growing season, depending on the product. Use appropriate products for the site, and at labeled rates.

B. Along Irrigation and storm water ditches

Option #1. Mechanical and Herbicide Control

Same as for option #2 for riparian sites as described above, except cultivation cannot be done. Use only herbicides labeled for ditch site. Do not spray ditch water.

Option #2. Herbicide Control Only

Same as for Option #3 as described above. Use only products labeled for irrigation ditches. Do not spray ditch water. Near ground or surface water use only 2,4-D type products labeled for “near water” use and/or Rodeo®.

C. Road Right-of-Ways and Other Non-Crop Areas

Option #1. Mechanical and Herbicide Control

Cultivate these sites 2 to 4 times per growing season. Apply herbicides to toadflax at labeled rates. Depending on the product and site, the applications will be made in spring and fall, fall only, or at any time during the growing season.

Option #2. Herbicide Control Only

On sites that cannot be cultivated, apply labeled herbicides to toadflax in a strategy as described in Option #1 above.

Diffuse knapweed

Diffuse knapweed is an alien, biennial to short-lived perennial weed that reproduces by seed. It is a pioneer species that quickly invades disturbed, dry sites. This knapweed is located around gravel pit areas near the South Platte River in the County, on rangelands between Bennett and Strasburg, and in some waste areas in the Watkins area. It has not been identified in Northglenn, but is nearby.

1. Management Measures

A. Cultural Management

Use similar methods as those stated for Russian knapweed. Although diffuse knapweed is not known to be allelopathic, seeding alone in infested sites will not provide adequate control. It produces early spring growth that is difficult to compete against.

B. Mechanical Management

Mowing (or other mechanical efforts) diffuse knapweed when it is in the bud stage, and again when it flowers, can significantly reduce seed production but will not eliminate the infestation. Mowing usually increases diffuse knapweed density, due to increased germination from the soil seed bank. Mowing should be followed by a fall herbicide treatment. This weed has been known to flower at a plant height below mower level.

Hand-pulling is effective if done frequently for control of scattered diffuse knapweed plants. It may also be appropriate in areas where other treatments are not feasible or are prohibited. Optimum time for pulling is in the spring when the soil is moist and allows for extraction of a lethal portion of the taproot. Pulling can also be used during the bolting stage in June and again before seed dispersal.

C. Biological Management

Two species of seedhead flies (*Urophora alibis* and *U. quadrifasciata*) or *Metzneria paucipunctella*, a flower-feeding gelechiid moth and *Larinus obtusus* reduce the seed production of this weed. When combined with a root-boring beetle (*Sphnoptera jugoslavica*) or (*Agapeta zoegana*) a root boring moth, diffuse knapweed control is increased. (*Cyphocleonus achates*), a root boring weevil shows promise.

Sheep will graze diffuse knapweed when it is green and succulent (rosette through bud stage) and when there is no other forage available.

D. Herbicide Management

Herbicides that can be used independently or in combination with each other are: picloram (Tordon22K®), dicamba (Banvel®), clopyralid (Stinger®, Transline®), clopyralid + triclopyr (Redeem R&P), diclycolamine (Vanquish®), clopyralid + 2,4-D (Curtail®) and 2, 4-D. The latter used alone works poorly. Metsulfuron methyl (Escort XP®) and chlorsulfuron (Telar®) are somewhat effective when applied during the flowering stage in order to inhibit seed formation and production of viable seed. Glyphosate can work well at the rate of 1 quart of product per acre, applied twice in a season. Picloram and dicamba can injure woody plants by being exuded through weed roots and being uptaken by trees and shrubs within three times their drip lines. Always follow herbicide label directions for application and environmental protection guidelines.

2. Integrated Management Options by Site

A. Open-space and Pasturelands, Riparian and Non-Crop Areas, and Right-of-Ways

Option #1. Cultural and Herbicide Control

Make a short-residual herbicide application to diffuse knapweed early summer when diffuse knapweed is in the rosette to bolting stages. Another application may be needed in late summer. Then seed selected competitive, perennial grasses anytime between late October through early April. Use aquatic-labeled 2, 4-D, Rodeo® (glyphosate), or clopyralid in riparian areas and gravel pits, and according to their labels.

Option #2. Biological and Herbicide Control

Seedhead flies and root-boring beetles or weevils will be released where they show promise. Introduction of seedhead flies by transporting infested plants to diffuse knapweed sites in Adams County can be done in the fall. Flies from the plants will release themselves in the next spring, and infest new knapweed plants.

Apply an herbicide treatment to weed rosettes in the fall, after the flies have completed their life cycle. Use aquatic-labeled 2, 4-D, Roundup® (glyphosate), or clopyralid in riparian areas and gravel pits, and according to their labels.

Option #3. Mechanical and Herbicide Control

Mow diffuse knapweed (or use other mechanical efforts) when this weed is in the bud stage, and again at flowering after regrowth. Then apply a herbicide application to plant regrowth that shows signs of flowering. Use aquatic-labeled 2, 4-D, Roundup® (glyphosate), or clopyralid in riparian areas and gravel pits' and according to their labels.

Option #4. Mechanical Control Only

Mow or use other mechanical treatments throughout the growing season, as needed, to reduce seed set.

Option #5. Herbicide Control Only

Apply herbicides to weeds in the rosette stage during or fall. Bolting plants also will receive treatments. Herbicides should not be applied after mature plants have set seed or effectiveness will be lost. Use aquatic-labeled 2, 4-D, glyphosate (Roundup®), or clopyralid in riparian areas and gravel pits, and according to their labels.

http://www.colostate.edu/Depts/CoopExt/Adams/weed/pdf/Diffuse_knapweed.pdf

Field bindweed

Field bindweed is an alien perennial weed that spreads by seeds and creeping roots. It has a creeping growth habit whereby it grows close to the ground or climbs up structures or other plants. This habit makes it more difficult to control than weeds that grow upright. The lengthy seed viability, 20 to 50 years, also makes field bindweed difficult to control.

1. Management Measures

A. Cultural Management

Cultural control methods tend to work poorly towards controlling bindweed. A productive, aggressive grass stand will tend to slow the spread of bindweed, and to deter the establishment of new infestations. Field bindweed will survive and spread, even in a bluegrass lawn.

B. Mechanical Management

Mechanical control of field bindweed is difficult because of its low growth habit. Mowing generally has little or no effect. Hoeing or grubbing is more effective. Flailing or cultivation at intervals of 10 to 14 days can be effective, but 2 or more growing seasons of diligent effort are needed to achieve stand reduction. Cultivation intervals must diligently be maintained. Cultivation can spread bindweed rhizomes to non-infested sites via dragging, or from being transported on the cultivation or flailing equipment. Plastic or fabric can be used to place on the soil over an infested patch. The infestation will be eliminated in three years through this effort.

C. Biological Management

Two species of natural enemies are presently being released in Northglenn for the suppression of field bindweed. A small eriophyid mite, *Aceria malherbae*, is available for release and has proven to be quite effective on large bindweed infestations in Northglenn, and the bindweed moth, *Tyta luctuosa*. Grazing is not effective.

D. Herbicide Management

Herbicides labeled for use on field bindweed, either singly or cooperatively are: quinclorac (Paramount® or Drive 75 DF®) picloram (Tordon22K®) dicamba (Banvel®), glyphosate (Roundup®, Rodeo®), fosamine (Krenite®), diclycolamine (Vanquish®), 2, 4-D,

fluroxypyr (Vista®), and 2,4-d+MCP+dicamba+Sulfentrazone (Surge®) Dicamba, 2,4-D and mecoprop (Weed-B-Gon MAX®) or (Super Trimec®).

Dicamba and picloram can injure woody plants by being exuded through weed roots and being uptaken by trees and shrubs within three times their drip lines. Effective control can take many years with some herbicide use strategies. Proper timing of application, according to label directions, is critical, especially with 2, 4-D. Always follow herbicide label directions for application and environmental protection guidelines. Near ground or surface water use only 2,4-D type products labeled for “near water” use and/or Rodeo. Glyphosate and some amine forms of 2, 4-D is compatible in mixtures.

2. Integrated Management Options by Site

A. Open-space, Pasture, and Riparian Sites

Option #1. Biological and herbicide Control

Graze livestock from May through late August. Follow in September/October with an herbicide treatment to bindweed. On riparian sites apply glyphosate, fosamine, and aquatic labeled 2, 4-D according to label guidelines.

Option #2. Mechanical and Herbicide Control

Cultivate or use manual efforts (shoveling, hoeing, weed eating, etc.) to stress bindweed from May through late August. Allow regrowth of bindweed runners to 8- to 12-inch lengths before applying an herbicide in September/October. Quinclorac (Paramount® or Drive® 75 DF) for three years has been successful. On riparian sites apply glyphosate, fosamine, and aquatic-labeled 2, 4-D according to label guidelines.

Option #3. Herbicide Control Only

Apply herbicides in the spring and fall, fall only, or at times during the growing season, depending on the product. Quinclorac (Paramount® or Drive® 75 DF) for three years has been successful. Use appropriate products for the site, and at labeled rates.

Option #4. Biological Control

Biological control of field bindweed is difficult. Two species of natural enemies are presently being released in Colorado for the suppression of field bindweed. The first, a small eriophyid mite, *Aceria malherbae*, and the bindweed moth, *Tyta luctuosa*, is also being reared at the Colorado Insectary for release to the field. Grazing is not effective.

B. Along Irrigation and storm water ditches

Option #1. Mechanical and Herbicide Control

Same as for option #2 for riparian sites as described above, except cultivation cannot be done. Use only herbicides labeled for ditch site. Do not spray ditch water.

Option #2. Herbicide Control Only

Same as for Option #3 as described above. Use only products labeled for irrigation ditches. Do not spray ditch water. Near ground or surface water use only 2,4-D type products labeled for “near water” use and/or Rodeo®.

Option #3. Biological Control

Biological control of Field bindweed is difficult. Two species of natural enemies are presently being released in Northglenn and Colorado for the suppression of field bindweed. The first, a small eriophyid mite, *Aceria malherbae*, and the bindweed moth, *Tyta luctuosa*, is also being reared at the Colorado Insectary for release to the field. Grazing is not effective.

C. Road Rights-of-Way and Other Non-Crop Areas**Option #1. Mechanical and Herbicide Control**

Cultivate these sites 2 to 4 times per growing season. Apply herbicides to field bindweed at labeled rates. Depending on the product and site, the applications will be made in spring and fall, fall only, or at any time during the growing season.

Option #2. Herbicide Control Only

On sites that cannot be cultivated, apply labeled herbicides to field bindweed in a strategy as described in Option #1 above.

Option #3. Biological Control

Biological control of field bindweed is difficult. Two species of natural enemies are presently being released in Colorado for the suppression of field bindweed. The first, a small eriophyid mite, *Aceria malherbae*, (used in Northglenn) and the bindweed moth, *Tyta luctuosa*, is also being reared at the Colorado Insectary for release to the field. Grazing is not effective.

http://www.colostate.edu/Depts/CoopExt/Adams/weed/pdf/Field_bindweed.pdf

Hoary Cress (Whitetop)

Hoary cress is an alien perennial weed that spreads by seeds and creeping roots. Hoary cress is difficult to control. It is common at the Oscar Arnold Nature area along canals and in vacant areas in Northglenn. Seeds are produced in June and July.

1. Management Measures**A. Cultural Management**

Cultural control methods tend to work poorly towards controlling Hoary cress unless performed on a consistent basis. A productive, aggressive grass stand will tend to slow the spread of hoary cress, and to deter the establishment of new infestations.

B. Mechanical Management

Mechanical control of hoary cress is difficult because it sprouts from underground rhizomes. Mowing generally has little or no effect. Hoeing or grubbing is more effective. Flailing or cultivation at intervals of 10 to 14 days can be effective, but 3 or more growing seasons of diligent effort are needed to achieve stand reduction. Cultivation intervals must be maintained. Cultivation can spread hoary cress rhizomes to non-infected sites via

dragging, or from being transported on the cultivation or flailing equipment. Seeds may be transported by cultivation equipment.

C. Biological Management

Biological control of hoary cress is difficult or impossible. No insects are available that effectively control this weed. Grazing is not effective.

D. Herbicide Management

Herbicides labeled for use on hoary cress, either singly or cooperatively are: metsulfuron methyl (Escort®), chlorsulfuron (Telar®), dicamba (Banvel®), imazethapyr (Pursuit) glyphosate (Roundup®, Rodeo®) imazapic (Plateau®), 2,4-D+MCP+dicamba+sulfentrazone (Surge®) and 2, 4-D. Dicamba can injure woody plants by being exuded through weed roots and being uptaken by trees and shrubs within three times their drip lines. Effective control can take many years with some herbicide use strategies. Proper timing of application, according to label directions, is critical, especially with 2, 4-D. Always follow herbicide label directions for application and environmental protection guidelines. Near ground or surface water use only 2,4-D type products labeled for “near water” use and/or Rodeo®. Glyphosate and some amine forms of 2, 4-D are compatible in mixtures.

Nonionic surfactants need to be added to the herbicide.

2. Integrated Management Options by Site

A. Open-space, Pasture, and Riparian Sites

Option #1. Biological and herbicide Control

Livestock will not eat Hoary cress. Apply a herbicide during pre-flower to flowering stage in the spring or to rosettes in the fall. On riparian or ditch bank sites apply glyphosate, fosamine, and aquatic labeled 2, 4-D according to label guidelines.

Option #2. Mechanical and Herbicide Control

Apply a herbicide to infestations prior to or at the flowering stage, follow treatment with mowing. On riparian sites apply glyphosate, fosamine, and aquatic-labeled 2, 4-D according to label guidelines.

Option #3. Herbicide Control Only

Apply herbicides in the spring and fall or spring only. depending on the product. Use appropriate products for the site, and at labeled rates.

B. Along Irrigation and storm water ditches

Option #1. Mechanical and Herbicide Control

Same as for option #2 for riparian sites as described above, except cultivation cannot be done. Use only herbicides labeled for ditch site. Do not spray ditch water.

Option #2. Herbicide Control Only

Same as for Option #3 as described above. Use only products labeled for irrigation ditches. Do not spray ditch water. Near ground or surface water use only 2,4-D type products labeled for “near water” use and/or Rodeo®.

C. Road Rights-of-Way and Other Non-Crop Areas

Option #1. Mechanical and Herbicide Control

Cultivate these sites 2 to 4 times per growing season. Apply herbicides to Hoary cress at labeled rates. Depending on the product and site, the applications will be made in spring and fall or spring only depending on the label requirements.

Option #2. Herbicide Control Only

On sites that cannot be cultivated, apply labeled herbicides to Hoary cress in a strategy as described in Option #1 above.

<http://www.whitman.wsu.edu/weeds/hoarycress.html>

Leafy Spurge

Leafy spurge is an alien, deep-rooted perennial that spreads by seeds and creeping, horizontal roots. It exists in or near riparian sites.

1. Management Measures

A. Cultural Management

Seeding and maintaining selected perennial grasses has been found to be an effective tool. Early emerging grasses, like western wheatgrass and pubescent wheatgrass, that utilize early season moisture have reduced spurge density and limited the spread and establishment of new infestations. Sequential glyphosate (e.g. Roundup®) applications followed by a seeding of Luna pubescent wheatgrass, Ephraim crested wheatgrass, intermediate wheatgrass, Sherman big bluegrass, or Bozoiisky Russian wild rye, has shown to be effective in reducing an infestation of spurge in Wyoming. Proper grazing management is always a desirable cultural tool.

B. Mechanical Management

Mechanical control of spurge is difficult, at best, and may actually increase the stand density of spurge. Mowing spurge at regular intervals 4 to 6 times per spring/summer will reduce seed production, but will provide little long-term control. Mow as plants re-grow and before flowering stage. Spurge's milky sap has been known to gum up mowers. Mowing may not be effective even when combined with herbicide applications.

Cultivation can be done at two- to four-week intervals, but is costly and can bare soil to erosive factors. Research results are not available that indicate whether stand reduction or eradication can occur from the sole use of mechanical treatments. Tillage throughout the growing season or fall-only cultivation have proven useful. Care should be taken not to transport roots caught on machinery into uninfested portions of the field or other areas.

C. Biological Management

Grazing should take place only on large infestations of leafy spurge. Much research is being done with using sheep to graze spurge as a stress treatment. Thus far both sheep and goats have been found to be effective grazers of spurge. Do not overgraze. If animals are turned in to a site after spurge has set seed, quarantine animals in a corral for seven days before releasing them into a non-infested pasture.

Several insect species have been released by the USDA/APHIS (Animal and Plant Health Inspection Service) that affect spurge. *Aphthona abdominalis*, was released in 1996. This is the smallest of the flea beetles and causes similar damage to the plants as the other *Aphthona* species. *Aphthona nigriscutis*, *A. cyparissiae* and *A. czwalinae*/*lacertosa* have all become established at field insectary sites and can be collected in large numbers. Insect releases should take place only on large infestations of leafy spurge.

D. Herbicide Management

Some herbicides are currently labeled for use on Leafy spurge. The following can be used independently or in some combinations: picloram (Tordon22K®), dicamba (Banvel®) 2, 4-D, glyphosate (Roundup®, Rodeo®) imazapic (Plateau®) and fosamine (Krenite®). Imazapic Plateau®, 2, 4-D (some formulations), glyphosate and fosamine are labeled for use on riparian sites. Picloram and dicamba can injure woody plants by being exuded through weed roots and being uptaken by trees and shrubs within three times their drip lines. If a solo herbicide treatment is used, application during the flowering stage is usually effective when applying picloram, dicamba, or 2, 4-D. Fall treatments are highly effective when applying imazapic or picloram. Fall is typically the most effective time for applications. Always follow herbicide label directions for application and environmental protection guidelines. If the infestation is small, herbicide applications may be the only management method required to achieve eradication.

2. Integrated Management Options by Site

A. Open-space, Pasture, Parks, and Riparian

Option #1. Biological and Herbicide Control

Graze leafy spurge with sheep or goats from April through late May, release biocontrol insects on the site during early summer, follow with a herbicide treatment in late September or early October. Use aquatic-labeled 2, 4-D, fosamine, or imazapic in riparian sites.

Aphthona abdominalis is the smallest of the flea beetles and causes similar damage to the plants as the other *Aphthona* species. *Aphthona nigriscutis*, *A. cyparissiae* and *A. czwalinae*/*lacertosa* have all become established at field insectary sites and can be collected in large numbers.

Apply imazapic only in the fall

Option #2. Mechanical and Herbicide Control

Mow at least two times per spring/summer. Cease mowing in late August. Follow with an herbicide treatment during late September or early October. Use aquatic-labeled 2, 4-D, fosamine, or imazapic in riparian sites.

Option #3. Biological or Mechanical Control Only

Use sheep or goats, blading or mowing (or shoveling, hoeing, chopping, etc.) all growing season with the expressed purpose of keeping spurge from setting seed. Use of these methods may still allow the spread of rhizomes. Once the methods have been discontinued, the spurge will quickly return.

Aphthona abdominalis is the smallest of the flea beetles and causes similar damage to the plants as the other *Aphthona* species. *Aphthona nigriscutis*, *A. cyparissiae* and *A. czwalinae* have all become established at field insectary sites.

Option #4. Herbicide Control Only

Use herbicides such as picloram, dicamba, or 2,4-D in the late-spring during the true-flower stage. This stage is impossible to determine without close inspection of the opened, yellowish-green flower within the yellowish bracts. If possible a treatment will also be made in early fall. Use only herbicides labeled for the site and that do not harm woody vegetation. Apply imazapic as a fall treatment only. Picloram may be applied as a fall treatment as well.

B. Irrigation and storm water ditches

Option #1. Mechanical and Herbicide Control

Hand chop hoes weed-eat, etc. three (3) to six (6) times per growing season to prevent seed set and to stress the plants. Apply labeled herbicides in late September/early October. Do not spray ditch water.

Option #2. Herbicide Control Only

Use herbicides labeled for this site on Leafy spurge in late spring during the true-flowering stage and in early-fall after a light freeze. Do not spray ditch water.

C. Rights-of-way and other Non-Crop Areas

Option #1. Mechanical and Herbicide Control

Paved Rights-of-Way will be mowed, or otherwise mechanically controlled, two or more time per growing season. An herbicide application will be made to visible regrowth in the fall.

Option #2. Herbicide Control Only

On sites that cannot be mowed, Leafy spurge will be controlled by labeled herbicides.

Treatments will be made in late-spring and/or early fall, just after a light frost.

http://www.colostate.edu/Depts/CoopExt/Adams/weed/pdf/Leafy_spurge.pdf

Musk and Scotch Thistle

Musk and Scotch thistles are alien, biennial forbs that reproduce solely by seed. Their seeds have feathery plumules attached that allow them to travel with the wind and infest remote sites. They can maintain good germination (better than 30%) after years of being buried in soil. Buried Scotch thistle seeds can have 30% germination after nine years. Prevention of seed formation by these two plants, therefore, is imperative. Musk and Scotch thistles are found in many locations, primarily on open-space land and riparian areas.

1. Management Measures

A. Cultural Management

Establishment of selected, aggressive grasses can be an effective cultural control of these thistles. This weed seems to invade primarily overgrazed or dryland sites with a poor plant population. Unfortunately few, if any aggressive grasses will adequately populate upland sites.

B. Mechanical Management

Mowing (or chopping), is most effective when done to musk and Scotch thistle plants at full bloom. Unfortunately, these weeds do not bloom as individual plants at the same time; thus, repeat mowing is necessary.

As biennials, grubbing effectively can control these weeds or digging below the crown level doing so when they are in the rosette stage is easiest. The key to eradication of these thistles is to prevent seed production.

C. Biological Management

Again, the key to controlling musk and Scotch thistles is the prevention of seed production. This is very difficult with biological controls. Use of other management methods, together with biological, are recommended for eradicating, or reducing large populations of these thistles.

Livestock tend to avoid musk and Scotch thistle, patches, especially heavily infested ones. Horses and cattle have been known to eat flowering heads.

One bio-control agent for musk thistle is the seed head weevil (*Rhinocyllus conicus*), which is well distributed in the subject area and spreads on its own. The larval stage of this weevil devours most of the seeds in a head that it infests. This insect alone has not, and will not, effect total control of musk thistle infestations. The crown weevil (*Trichosiromus horridus*) attacks the crown and reduces the flowering potential of Musk thistle. When used together, the crown and seedhead weevils provide fair to good control of Musk thistle. *Cassida rubiginosa*, a leaf-feeding tortoise beetle that causes considerable damage to musk thistle plants by skeletonizing the leaves may be used in combination with the other insects. No biological agents are currently available for Scotch thistle.

D. Herbicide Management

Herbicides labeled for control of these weeds are: clopyralid (Stinger®, Transline®), clopyralid + 2,4-D (Curtail®), glyphosate (Rodeo®, Roundup®), triclopyr & clopyralid (Redeem R&P®), diclycolamine (Vanquish®), Dicamba, 2,4-D and mecoprop (Weed-B-Gon MAX®) or (Super Trimec®), chlorsulfuron (Telar®), metsulfuron methyl (Escort XP®), dicamba (Banvel®), 2, 4-D, and picloram (Tordon22K®). 2, 4-D will do an excellent job if applied during the early bud stage or to rosettes in the fall. 2, 4-D and glyphosate can be used on riparian sites. Metsulfuron and chlorsulfuron are most effective when applied during the bolt to bud growth stages in order to eliminate viable seed production, but are not effective when applied to the rosette stage. Dicamba and picloram

can injure woody plants by being exuded through weed roots and being uptaken by trees and shrubs within three times their drip lines. Always follow herbicide label directions for application and environmental protection guidelines. Near ground or surface water use only 2,4-D type products labeled for “near water” use and/or Rodeo®.

3. Integrated Management Options by Site

A. Open-space and Pasture Lands, and Riparian Sites

Option #1. Biological and Herbicide Control

Treat thistle rosettes in the fall with herbicide. Allow the seed head weevil to infest Musk thistle flower heads in the spring and early summer. If a thistle patch is a moderate or severe infestation, treat 50% of it with an herbicide in the spring on the rosettes. Glyphosate and aquatic labeled 2,4-D can be used in riparian sites, and according to label directions.

Option #2. Mechanical and Herbicide Control

Mow, or otherwise mechanically injure these thistles in the bloom stage. Treat any regrowth and fall rosettes with herbicide. Grub out bolted plants where possible. Use appropriate herbicides for riparian areas

Option #3. Mechanical Control Only

Mow or chop musk and Scotch thistle at the bloom stage. Retreat as necessary to prevent seed set. Grub out plants, where possible, before seed set.

Option #4. Herbicide Control Only

Apply herbicides to rosettes in either spring or fall. If plants have already bolted, apply Escort XP or Telar to eliminate viable seed production. Use appropriate herbicides for riparian areas.

B. Along Irrigation and storm water ditches

Option #1. Biological and Herbicide Control

Same as described in Option #1 above. Use only herbicides labeled for ditch sites. Do not spray ditch water.

Option #2. Mechanical and Herbicide Control

Same as Option #2 above, except mowing cannot be employed. Use only herbicides labeled for ditch sites. Do not spray ditch water.

Option #3. Mechanical Control Only

Same as Option #3 above, except mowing cannot be used.

Option #4. Herbicide Control Only

Same as Option #4 above. Use only herbicides labeled for ditch sites. Do not spray ditch water.

C. Rights-of-Way and other Non-Crop Areas. Option #1. Mechanical and Herbicide Control

Mow musk and Scotch thistle 2 to 4 times per growing season. Treat any regrowth and fall or spring rosettes with herbicide.

Option #2. Mechanical Control Only

Mow, grub out, or otherwise mechanically control these thistles with the purpose of preventing seed set.

Option #3. Herbicide Control Only

On sites that cannot be mowed or otherwise mechanically controlled, treat Musk and Scotch thistle with an appropriate herbicide.

http://www.colostate.edu/Depts/CoopExt/Adams/weed/pdf/Musk_thistle.pdf

Myrtle Spurge

Myrtle Spurge has recently been designated as an "A" listed noxious weed by Colorado. This perennial weed is often found in rock gardens and is moving into natural areas where it has the potential to do enormous environmental damage. In Northglenn it has only been found in gardens, especially xeriscapes.

Although easily removed by hand, this member of the spurge family (Euphorbiaceae), contains a milky sap that is caustic to skin and eyes.

1. Management Measures

A. Cultural Management

Do not plant. Do not till, if tap roots are present

B. Mechanical Management

Dig out the entire tap root. Avoid getting the irritating milky juice on anything and wash tools and hands. Pieces of the tap root sprout, so do not till.

C. Biological Management

NONE

D. Herbicide Management

A number of herbicides are available. Those that can be used independently or in combination with each other are: 2,4-D, glyphosate (Roundup®, Rodeo®) Dicamba, 2,4-D and mecoprop (Weed-B-Gon MAX®) or (Super Trimec®).

<http://www.colorado.gov/cs/Satellite?c=Page&cid=1184920449268&pagename=Agriculture-Main%2FCDAGLayout>

Poison Hemlock

Poison hemlock is a very poisonous introduced biennial noxious weed that reproduces by seed. Poison hemlock has killed children who use the hollow stems to blow through. People have been killed by consuming plant parts wrongly identified as anise, wild parsley or wild parsnip. The toxins in this plant are teratogenic and create gross skeletal deformities during the first trimester of embryonic development. Women of childbearing age are advised to avoid handling or cutting this plant. Poison hemlock exists along the Farmer's Highline Ditch, E.B. Rains Park, Grange Hall creek, Croke Reservoir and the Oscar Arnold Nature Area usually along ditches or roadsides.

Report any sightings to the Northglenn Maintenance and Operations Department.

1. Management Measures

A. Cultural Management

Since poison hemlock invades wet or riparian habitats, cultural management techniques are difficult to use. This means that supplemental management methods are needed. Any grazing animal will die after consuming a small amount.

B. Mechanical Management

For infestations of a few plants, poison hemlock can be controlled by digging seedlings in the fall or in the spring before they produce seed. Remove all stems and roots by putting them in bags to prevent accidental poisoning. Another mechanical method is to cut flower heads before they seed. Wear gloves and coveralls. Wash hands before eating, drinking or smoking. Women of childbearing age should not handle cut plants or use a weed-eater on this plant because the toxins may be absorbed through the skin and deform embryos.

C. Biological Management

(*Agonopterix alstroemerian*) defoliates young and adult plants. Hemlock is toxic to many insects.

D. Herbicide Management

For fall control of seedlings and spring growth of less than 1 to 2 feet tall, use of an aquatic-labeled 2, 4-D is effective. Look for seedlings where adult plants have grown. Glyphosate (Rodeo) is effective on plants, but is a nonselective product that will kill all other vegetation that is sprayed. On sites away from water, the following can be used independently or in some combinations: picloram (Tordon22K®), sulfometuron methyl (Oust®), dicamba (Banvel®) 2, 4-D, diclycolamine (Vanquish®), glyphosate (Roundup®, Rodeo®) imazapic (Plateau®) and fosamine (Krenite®). Dicamba, 2,4-D and mecoprop (Weed-B-Gon MAX®) or (Super Trimec®) are readily available herbicides, which cannot be used near water, and are labeled only for use on turf sites, not range and pasturelands

3. Integrated Management in Riparian Sites

Dig out small infestations or cut growth back every two weeks. Apply herbicide to larger infestations to reduce their size for mechanical treatment. Apply herbicides in September

on newly germinated plants. Do not scatter plant pieces where pets or small children may chew on them.

<http://www.imapinvasives.org/GIST/ESA/esapages/conimacu.html>

Purple Loosetrife

An “A” List species - Must be eradicated by law.

Purple loosestrife is an alien perennial noxious weed that reproduces by seed (three million seeds per plant), and secondarily by short rhizomes and pieces of stems and roots. It is highly competitive and will drive out native wetland vegetation, including cattails. It provides very poor habitat for birds, fur-bearers, or other wildlife. Only a few plants are known to exist in the Fox Run Open-space. Report any sightings to the Northglenn Maintenance and Operations and Recreation Department and the Adams County Weed Department.

1. Management Measures

A. Cultural Management

Since purple loosestrife invades wet habitats, cultural management techniques are difficult to use. Vegetation should not be overgrazed. Sites without vegetation should be reseeded to adaptable, competitive plants. However, purple loosestrife has the ability to continue to invade even heavily vegetated sites. This means that supplemental management methods are needed, in addition to cultural management.

B. Mechanical Management

For infestations of a few plants, purple loosestrife can be controlled, especially on sandy soils, by hand-pulling or digging seedlings before they produce seed. More mature plants may require digging to be uprooted. Remove all stems and roots by putting them in bags to prevent them from sprouting new plants. Another mechanical method is to cut flower heads before they seed.

C. Biological Management

Two species of beetles (*Galerucella californiensis* and *Galerucella pucilla*) are showing some promise for biological control of loosestrife. Releases of at least 500 beetles per infested site are needed. These beetles eat leaves, small stems, and flowers, and can completely defoliate loosestrife plants. Two other insects, a root weevil (*Hylobius transversovittatus*) and seed weevil (*Nanothyes spp.*) are in early research stages. Use as an option only for heavily infested sites. Since purple loosestrife is designated as an “A” list species on the Colorado Noxious Weed Act, eradication is mandatory, therefore biological control agents will not be utilized.

D. Herbicide Management

For early-season control of seedling and regrowth plants less than 1 to 2 feet tall, use of an aquatic-labeled 2, 4-D is effective. Look for seedlings where adult plants have grown. Glyphosate (Rodeo®) is effective on plants less than 12 inches tall, but is a nonselective product that will kill all other vegetation that is sprayed.

For mature plants, glyphosate (Rodeo®) and triclopyr (Garlon 3A®) are effective when applied at pre-flowering to post-bloom stages. For spot spraying use a 1.0 to 1.5% solution plus 0.5% of nonionic surfactant. A wiper application can be used with a 33.3% percent solution of Rodeo®, plus 5 to 10% surfactant, at the full flower stage.. Always follow herbicide label directions. Due to massive seed production, all purple loosestrife flowerheads must be clipped and bagged prior to any herbicide application.

3. Integrated Management in Riparian Sites

Hand-pull or dig out small infestations. Apply herbicide to larger infestations to reduce their size for mechanical treatment. Apply 2, 4-D to early growing plants to avoid killing desirable vegetation with use of Rodeo®.

http://www.colostate.edu/Depts/CoopExt/Adams/weed/pdf/Purple_loosestrife.pdf

<http://www.colorado.gov/cs/Satellite?c=Page&cid=1178305507411&pagename=Agriculture-Main%2FCDAGLayout>

Russian Knapweed

Russian knapweed is an alien perennial weed, which spreads by seeds and creeping roots. It has the ability to release chemicals into the environment as foliage decays, which inhibits the growth of vegetation in close proximity (allelopathic properties). In Adams County, it has been found on open-space, pasture sites, and Rights-of-Way.

1. Management Measures

A. Cultural Management

Seeding and maintaining aggressive grasses such as Critana thickspike wheatgrass or Sodar streambank wheatgrass will help in competing with Russian knapweed and slow its spread. Proper fertilization, grazing and supplemental irrigation of grasses are always effective cultural control methods.

Due to the allelopathic properties of this weed, supplemental control methods, such as judicious use of herbicides, may be needed to give grasses a chance to compete. Applying clopyralid + 2,4-D (Curtail®), metsulfuron methyl (Escort XP®, aminopyrralid (Milestone®) or chlorosulfuron (Telar®) followed by seeding of a bunchgrass and a sod-forming grass, has worked well to revegetate infested sites. Additional herbicide treatments after grass establishment are needed to keep Russian knapweed populations reduced to an acceptable level.

B. Mechanical Management

Cutting or removing the above-ground portion of the plant reduces the current year growth, and may eliminate seed production, but will not kill Russian knapweed. Cutting several times before the plants bolt stresses Russian knapweed plants and forces them to use nutrient reserves stored in the root system.

C. Biological Management

No effective biological control agents are known currently for this weed. Horses cannot be allowed to graze this knapweed as they can develop chewing disease. A root nematode (*Subanguina picridis*) has provided poor control.

D. Herbicide Management

A number of herbicides are labeled for use on Russian knapweed. Those that can be used independently or in combination with each other are: chlorsulfuron (Telar®), aminopyrrolid (Milestone®), picloram (Tordon22K®), triclopyr + clopyralid (Redeem R&P®), clopyralid (Stinger®, Transline®), diclycolamine (Vanquish®), 2,4-D, and glyphosate (Roundup®, Rodeo®) dicamba (Banvel®) and clopyralid + 2,4-D (Curtail®), Dicamba, 2,4-D and mecoprop (Weed-B-Gon MAX®) or (Super Trimec®). Picloram and dicamba can injure woody plants by being exuded through weed roots and being uptaken by trees and shrubs within three times their drip line. Always follow herbicide label directions for application and environmental protection guidelines.

2. Integrated Management Options by Site

A. Open-space and Pasturelands, Rights-of-Way, Riparian, and Non-Crop Areas

Option #1. Mechanical and Herbicide Control

Mow or use other mechanical efforts throughout the growing season, with the first and successive efforts done at the bud stage. Apply herbicide in early fall, after a light freeze. Use glyphosate or Curtail® in riparian areas, and according to their labels.

Options #2. Cultural and Herbicide Control

To an existing infestation of Russian knapweed apply a short-residual herbicide, such as glyphosate or 2, 4-D. Follow-up by successfully seeding a competitive grass. Fertilize adequately and in a timely manner to stimulate grass growth. Apply a labeled herbicide to any knapweed that is out competing grass. Use glyphosate or Curtail® in riparian areas, and according to their labels.

Option #3. Herbicide Control

Apply labeled herbicides to Russian knapweed during the bud stage, bloom to post-bloom, and/or in early fall, depending on type of herbicide. Use glyphosate or Curtail® in riparian areas, and according to their labels.

<http://www.ext.colostate.edu/pubs/natres/03111.html>

Saltcedar

Saltcedar is an alien perennial noxious weed that reproduces by seed, and secondarily by short rhizomes and pieces of stems and roots. It is highly competitive and will drive out native wetland vegetation, including cattails. It provides very poor habitat for birds, fur-bearers, or other wildlife. Only a few plants are known to exist in the Fox Run Open-space. Report any sightings to the Northglenn Maintenance and Operations Department 303-280-7810 and/or the Adams County Weed Department.

1. Management Measures

A. Cultural Management

Since saltcedar invades wet habitats, cultural management techniques are difficult to use. Vegetation should not be overgrazed. Sites without vegetation should be reseeded to adaptable, competitive plants. However, saltcedar has the ability to continue to invade even heavily vegetated sites. This means that supplemental management methods are needed, in addition to cultural management.

B. Mechanical Management

A bulldozer or prescribed fire can be used to open up large stands of saltcedar. These methods must be followed up with a herbicide treatment of the resprouts when they are 1 to 2 meters tall.

C. Biological Management

Saltcedar leaf beetles, *Diorhabda elongata*, the Chinese leaf beetles (*Diorhabda elongata*) and mealybug (*Trabutina mannipara*) are showing some promise for biological control of saltcedar. They are not currently approved for use.

D. Herbicide Management

For small patches, cutting the stem and immediately applying a herbicide (known as the cut-stump method) is most often employed. The cut-stump method is used in stands where woody native plants are present and where their continued existence is desired. Individual tamarisk plants are cut as close to the ground as possible with chainsaws, loppers or axes, and a herbicide is applied immediately thereafter to the perimeters of the cut stems. The herbicides triclopyr (e.g. Garlon4® or PathfinderII®) and imazapyr (Arsenal®) can be very effective when used in this fashion. This treatment appears to be most effective in the fall when plants are translocating materials to their roots. The efficacy of treatments is enhanced by cutting the stems within 5 cm of the soil surface, applying herbicide within one minute of cutting, applying herbicide all around the perimeter of the cut stems, and retreating any resprouts 4 to 12 months following initial treatment. For large stands of saltcedar that would essentially be monotypic, foliar applications of the herbicides imazapyr (Arsenal®) or a combination with glyphosate (Roundup®) are effective. Late summer/early fall are optimum treatment times. This is recommended for areas that have little to no desirable shrubs or trees.

3. Integrated Management in Riparian Sites

Hand-pull or dig out small infestations. The cut-stump method is used in stands where woody native plants are present and where their continued existence is desired. Individual tamarisk plants are cut as close to the ground as possible with chainsaws, loppers or axes, and herbicide is applied immediately thereafter to the perimeters of the cut stems. The herbicides triclopyr (e.g. Garlon4® or PathfinderII®) and imazapyr (Arsenal®) can be very effective when used in this fashion. This treatment appears to be most effective in the fall when plants are translocating materials to their roots.

<http://www.colostate.edu/Depts/CoopExt/Adams/weed/pdf/Saltcedar.pdf>

Spotted Knapweed

Spotted knapweed is an alien, perennial forb that reproduces solely from seed. It is highly competitive on Open-space land, and will exclude many grasses and forbs over time. .

1. Management Measures

A. Cultural, Mechanical and Biological Management

These methods for control of Spotted knapweed are similar to those for the other two knapweeds previously addressed.

B. Herbicide Control

Some herbicides are labeled for control of spotted knapweed. Those that can be used independently or in combination with each other are: picloram (Tordon22K®), triclopyr & clopyralid (Redeem R&P®), clopyralid (Stinger® or Transline®), dicamba (Banvel®), diclycolamine (Vanquish®), 2,4-D, Dicamba, 2,4-D and mecoprop (Weed-B-Gon MAX®) or (Super Trimec®) and a premix of clopyralid and 2,4-D (Curtail®). Picloram has been found to be most effective. 2, 4-D, when used alone, results in poor control.

TEASEL

Teasel is an alien biennial or sometimes monocarpic perennial weed that spreads by seeds. It is usually found in relatively moist, disturbed situations. In Northglenn it is known near the inlet of the FHL canal at E.B.Rains park.

1. Management Measures

A. Cultural Management

Cultural control methods tend to work poorly towards controlling teasel. A productive, aggressive grass stand will tend to slow the spread of teasel, and to deter the establishment of new infestations.

B. Mechanical Management

Mechanical control of teasel is difficult because it sprouts from underground roots. Mowing generally has little or no effect. Hoeing or grubbing is more effective. Flailing or cultivation at intervals of 10 to 14 days can be effective, but 2 or more growing seasons of diligent effort are needed to achieve stand reduction. Cultivation intervals must be religiously maintained.

C. Biological Management

Biological control of teasel is unknown. Grazing is not effective.

D. Herbicide Management

Herbicides labeled for use on teasel, either singly or cooperatively are: picloram (Tordon22K®), diclycolamine (Vanquish®), dicamba (Banvel®), glyphosate (Roundup®, Rodeo®), Dicamba + 2, 4-D; chlorsulfuron (Telar®); or metsulfuron methyl (Escort XP®)

+ 2, 4-D, Dicamba, 2,4-D and mecoprop (Weed-B-Gon MAX®) or (Super Trimec®) gives good control when applied before the bloom stage. Metsulfuron (Ally®) is effective during bolt.

Dicamba and picloram can injure woody plants by being exuded through weed roots and being uptaken by trees and shrubs within three times their drip lines. Proper timing of application, according to label directions, is critical, especially with 2, 4-D. Always follow herbicide label directions for application and environmental protection guidelines. Near ground or surface water use only 2,4-D type products labeled for “near water” use and/or Rodeo®. Glyphosate and some amine forms of 2, 4-D are compatible in mixtures. Nonionic surfactants need to be added to the herbicide in order to increase effectiveness.

2. Integrated Management Options by Site

A. Open-space, Pasture, and Riparian Sites

Option #1. Biological and herbicide Control

No insect or grazing is effective. On riparian sites apply glyphosate, fosamine, and aquatic labeled 2, 4-D according to label guidelines.

Option #2. Mechanical and Herbicide Control

Cultivate or use manual efforts (shoveling, hoeing, weed eating, etc.) to stress teasel from May through late August. Cut stems to eliminate seed production in July. On riparian sites apply glyphosate, fosamine, and aquatic-labeled 2, 4-D according to label guidelines.

Option #3. Herbicide Control Only

Apply herbicides in the spring and summer or at times during the growing season, depending on the product. Use appropriate products for the site, and at labeled rates.

B. Along Irrigation and storm water ditches

Option #1. Mechanical and Herbicide Control

Same as for option #2 for riparian sites as described above, except cultivation cannot be done. Use only herbicides labeled for ditch site. Do not spray ditch water.

Option #2. Herbicide Control Only

Same as for Option #3 as described above. Use only products labeled for irrigation ditches. Do not spray ditch water. Near ground or surface water use only 2,4-D type products labeled for “near water” use and/or Rodeo®.

C. Road Right-of-Ways and Other Non-Crop Areas

Option #1. Mechanical and Herbicide Control

Cultivate these sites 2 to 4 times per growing season. Apply herbicides to teasel at labeled rates. Depending on the product and site, the applications will be made in spring and fall, fall only, or at any time during the growing season.

Option #2. Herbicide Control Only

On sites that cannot be cultivated, apply labeled herbicides to teasel in a strategy as described in Option #1 above.

http://www.co.jefferson.co.us/jeffco/weed_uploads/teas.pdf

Trade Name Disclaimer

®The use of trade names does not constitute or imply a recommendation by the City of Northglenn. There are dozens of herbicide manufacturers and hundreds of trade names for various chemicals, concentrations and mixes. Any herbicide used by the City of Northglenn will have the label and material safety data sheet (MSDS) available for public inspection, and will be used in strict accordance with the label.

Some Herbicide Manufacturers:

<http://www.wssa.net/Weeds/Tools/Herbicides/Manufacturers.htm>

APPENDIX B

Northglenn Priority Noxious Weed Descriptions

Canada thistle (*Cirsium arvense*) was early introduced into America from the Old World. It is a deep-rooted perennial that spreads by seeds and aggressive, creeping, horizontal root-stocks (rhizomes). The seeds have a tuft of hairs attached to their tips that greatly assists in dispersal by wind. Stems are 1 to 4 feet tall, erect, rigid, and only slightly hairy. Leaves are alternate on the stems, oblong or lance-shaped, and deeply cut into spiny-tipped irregular lobes. They are a bright green and only slightly hairy on the undersurface. Flowers are small, bristly, (but bracts are spineless) clusters varying in color from light lavender to a bright rose-purple. The heads are about one-half inch across, tubular shaped, and arranged in a flat-top inflorescence. Canada thistle is one of the most feared noxious weeds in the U.S. as it can infest many land types, from roadsides; ditch banks, riparian zones, pastures, irrigated cropland, to the most productive dry cropland.
http://www.colostate.edu/Depts/CoopExt/Adams/weed/canada_thistle_mgt.html

Dalmatian toadflax (*Linaria dalmatica* & *Linaria genisitifolia*) is an alien perennial up to three feet tall, reproducing by seed and underground root stalks. Leave are dense, alternate, entire and broad-based. Flowers are yellow, some with orange throat or spot, and resemble common snapdragon, except the “mouth” opens towards the sky. Leaves are waxy and repel spray. Seeds are numerous, hard and black. Seeds are easily transported on vehicle tires.
<http://www.ext.colostate.edu/pubs/natres/03114.html>

Diffuse knapweed (*Centaurea diffusa*) is of European origin; it is a biennial to short-lived perennial forb that reproduces solely by seed. Growing 1 to 2 feet tall, it is diffusely branched above ground. Leaves are small, and are reduced in size near the flowering heads. These heads are numerous. Showy flowers are white to rose, or sometimes purple. Bracts that enclose the heads are divided like teeth of a comb, and are tipped with a definite slender spine. Upon drying the bracts become rough, rendering them injurious to the touch. Diffuse knapweed is mostly found on dry, disturbed sites.
http://www.colostate.edu/Depts/CoopExt/Adams/weed/dknapweed_mgt.htm

Field bindweed (*Convolvulus arvensis*) was introduced from Europe. It is a perennial forb that reproduces from seed and creeping rhizomes. It is an extremely difficult noxious weed to control because, in part, of its taproot that may go 20 feet deep into the soil, and which repeatedly gives rise to numerous long rhizomes. Field bindweed stems are prostrate and twining, up to 6 feet long. They are not course. Leaves are distinguishable by their arrow shapes, with rounded or blunt tips. Leaves are 1 to 2 inches long. Flowers are funnel- or bell-shaped with colors of white to pale pink. They are about 1 inch long and very evident. Seed viability can be retained over a period of 30 or more years. Field bindweed is well adapted to the Northglenn and is widespread. It is extensively found in cultivated fields, waste areas, roadside, and open-space lands.
http://www.colostate.edu/Depts/CoopExt/Adams/weed/bindweed_mgt.html

Hoary cress (whitetop) (*Cardaria draba*) is an alien perennial reproducing by seeds and creeping rhizomes. It is a difficult noxious weed to control because, in part, of its taproot which repeatedly gives rise to numerous long rhizomes. Leaves are blue-green in color, lance-shaped. Upper leaves clasp the stem. Flowers have four white petals and appear in large flat-topped clusters in June, seed is set by August. There are four species, which look similarly, and all are alien noxious weeds.

Leafy spurge (*Euphorbia esula*) is of European origin. It is a deep-rooted perennial forb that spreads by seeds and aggressive, creeping, horizontal roots (rhizomes). Vertical roots can penetrate to a depth of 15 feet. Consequently, this weed seldom experiences a deficiency of water. It grows up to three (3) feet tall. Leaves are alternate, narrow, linear, and 1 to 4 inches long. Stems are thickly clustered. Flowers are very small and yellowish-green. They are enclosed by very visible yellowish-green, heart shaped bracts. The stems contain a milky sap that exudes readily upon stem breakage. Seeds are contained in a visibly divided, three-celled capsule. Roots are brown and contain numerous pink buds that generally produce new shoots or roots. Leafy spurge will grow on good cultivated lands, shallow rocky soils, open-space lands and along waterways. Where it becomes established it crowds out all other vegetation. It is considered a more serious weed than Canada thistle.

http://www.colostate.edu/Depts/CoopExt/Adams/weed/spurge_mgt.htm

Musk thistle (*Carduus nutans*) is a native of Europe and Western Asia. It is a forb that usually has a biennial habit. However, it has performed as a winter annual. It reproduces by seed only; healthy plants have produced 40,000 seeds. Seeds have a tuft of hairs attached to one end, which allows them to be transported great distances by wind. Leaves are dark green, hairless on both sides, and coarse lobed with 3 to 5 leaf points per lobe. Each lobe ends in a prominent white to yellowish spine. Spiny leaves extend on the stem, giving a winged appearance. Stems are hairless, and may reach 7 feet tall; it can grow as low as 2 feet tall. Flowering heads are solitary on stem branches, and usually nod or bend over; hence the weed is also known as nodding thistle. Flowers usually are deep rose, violet or purple. White-flowered plants have been observed. Bracts surrounding the heads are conspicuously broad with spine-pointed tips. Musk thistle typically is found on drier sites, but does infest creek bottoms and ditch banks.

http://www.colostate.edu/Depts/CoopExt/Adams/weed/msthistle_mgt.htm

Myrtle spurge (*Euphorbia myrsinites*) is a biennial or perennial. The plant grows from a taproot, with new stems emerging in early spring and dying back in the winter. Myrtle spurge has trailing stems, growing close to the ground. Stems and leaves are fleshy and grayish-green in color, and the leaves are attached to the stems in close spirals. Inconspicuous flowers, with showy yellowish bracts, are borne in clusters at the ends of the stems. Flowering occurs in March and April. Like other euphorbias, the plant contains a milky sap. Plants can grow up to 8-12 inches high and 12-18 inches in width.

<http://plants.usda.gov/java/profile?symbol=EUMY2>

Poison hemlock (*Conium maculatum*) is an alien biennial (sometimes perennial in favorable locations) that reproduces from seeds. Flowering plants are usually over four feet tall and may reach 10 feet tall. Stems are erect; red to purple spotted and extensively branched. Leaves are finely divided three or four times. Flowers are small and white in many umbrella-shaped clusters, each cluster supported by a distinct stalk. Plants bloom in June and July. Seeds start germination as early as August and may form low rosettes three feet across by September. Hemlock is extremely poisonous and tetragenic, handle with extreme care.

<http://plants.usda.gov/java/profile?symbol=COMA2>

Purple loosestrife (*Lythrum salicaria*) (also known as purple lythrum) is a native forb of Eurasia and Africa. It is a tap rooted perennial; short rhizomes also exist. This noxious weed has escaped from ornamental plantings to aquatic sites such as riverbanks, ditches, shorelines and wet meadows. Infestations rapidly replace native vegetation, can impede water flow in canals and

ditches, and have little wildlife habitat value. This noxious weed spreads primarily by seeds carried in water, in fur or feather of animals, and from human activities. Mature plants can produce three million seeds per year. Seeds survive for 5 to 20 years. Pieces of roots or stems also can produce new plants. It is adapted to a wide range of soils, including mucks, and can survive shallow flooding of 12 to 18 inches. Purple loosestrife produces multiple stems, 2 to 8 feet tall and 4-sided. They can be either smooth or hairy. Leaves are opposite or whorled on stems, 2 to 5 inches long, tongue-shaped with pointed tips, undivided, and attached directly to the stem (no petiole). Flowers are tightly grouped in long, vertical heads; they bloom from the bottom up on heads. They are reddish-purple in color, about one-inch long, have 5 to 7 petals, and a tube-shaped group of sepals that are pubescent. Plants can flower continuously from late June through September. In the county, purple loosestrife is found along the South Platte and scattered wet sites. Some ornamental cultivars of purple loosestrife, like Morden's Pink, are reported to be sterile. However, research has shown that while they may be self-sterile, they can cross with other cultivars and produce viable seed.

http://www.colostate.edu/Depts/CoopExt/Adams/weed/loosestrife_mgt.htm

Russian knapweed (*Centaurea repens* & *Acroptilon repens*) is of European origin. It is a perennial forb, spreading by creeping rootstocks (rhizomes) and seed. The rhizomes may penetrate to a depth of more than 2 feet in good soils. They are characteristically dark brown and black, and heavily scaled. This assists in easy identification of the plant. Stems become 2 to 3 feet tall. Lower leaves are deeply lobed and 2 to 4 inches long. Stem leaves usually are 1 to 2 inches long, oblong, with entire or toothed margins. Stems are erect and openly branched. Leaves, stems, and covering head bracts are covered with short, stiff hairs, giving them an appearance of knap; hence the plant's name. Cone-shaped flowering heads are less than one-half inch broad, and are solitary at tips of upper stem branches. Showy flowers are pink, purple to lavender. Russian knapweed can be found on open-space land, both irrigated and dry cropland, meadows, ditch banks, and roadsides.

http://www.colostate.edu/Depts/CoopExt/Adams/weed/rknapweed_mgt.htm

Saltcedar (*Tamarix ramosissima* & *Tamarix parviflora*) was introduced from Eurasia, but soon escaped cultivation. Now it is becoming common in bottomlands, banks, and drainage washes. Saltcedar is a beautiful shrub or small tree, especially in flower, which reproduces by seeds. The long slender grayish green branches are upright or spreading, often forming shrubby thickets many feet in diameter, mostly 10 to 12 (or to 15) feet high. The small grayish green narrow pointed leaves, about 1/16 inch long, are crowded on the stems often overlapping one another. They have the appearance of evergreen leaves, but are actually deciduous.

The myriads of little flowers, from deep pink to nearly white, are about 1/16 inch in diameter and crowded in many slender spikes, 1/2 to 2 inches long, forming a dense showy mass at the top of the branches. The slender tapering many seeded pods are pinkish red to greenish yellow, 1/8 to nearly 1/5 inch long, splitting into 3 to 5 parts when mature. The tiny seeds are less than 1/25 inch long, and have a tuft of fine silky hairs at the tip. The bark is reddish brown and fairly smooth at first, but becomes ridged and furrowed.

<http://plants.usda.gov/java/imageGallery?category=sciname&txtparam=Tamarix&familycategory=all&growthhabit=all&duration=all&origin=all&wetland=all&imagetype=all&artist=all©right=all&location=all&stateSelect=all&cite=all&viewsort=15&sort=sciname>


Spotted knapweed (*Centaurea maculosa* & *Centaurea biebersteinii*) is of European origin. It is a biennial or short-lived perennial forb with a stout taproot. It can have one or more stems that are branched, and from 1 to 3 feet tall. Basal leaves are up to 6 inches long, and narrowly elliptic in

shape, but can vary. Flowering heads are solitary on top stem branches. Bracts around the heads are stiff and tipped with a dark, comb-like fringe. This is a key difference between spotted and diffuse knapweeds; the bracts of diffuse are tipped with a definite slender spine. The showy flowers of spotted knapweed are pinkish-purple, or rarely cream colored. Spotted knapweed is often found on open-space lands and other drier sites.

http://www.colostate.edu/Depts/CoopExt/Adams/weed/spotted_mgt.htm

Scotch thistle (*Onopordum acanthium* & *Onopordum tauricum*) is a native of Europe and eastern Asia. It is a biennial or sometimes an annual reproducing by seed. Rosettes two feet across are not uncommon for this hearty plant. Stems are erect, have broad spiny wings, and are up to 8 feet tall. Leaves are large, spiny, and covered with fine dense hair, giving a grayish appearance. Upper leaves are alternate, coarsely lobed; basal leaves may be up to 2 feet long and 1 foot wide. The leaf and stem lobes end in a sharp, conspicuous spine. Flower heads are flat with short spines on the bracts that are not extremely harsh to touch. The flowers are large, violet to reddish in color. Scotch thistle can be found along waste areas and roadsides. It is an aggressive plant and may form stands so dense that they are impenetrable to livestock.

http://www.colostate.edu/Depts/CoopExt/Adams/weed/msthistle_mgt.htm

Teasel (*Dipsacus fullonum*)  is an alien biennial or sometimes monocarpic perennial weed that spreads by seeds. It is usually found in relatively moist, disturbed situations. The first year a basal rosette forms and the second year a three to six foot stem develops. The leaves are oblong, hairy, clasps the stem, forming cup-like structures. Flowers in July to August with white to purple egg-shaped blossoms. Rosette leaves are oval in outline, have a wrinkled appearance, and have margins with rounded or 'scalloped' teeth. Leaves that occur on the flowering stems are opposite, without petioles (sessile), and are lanceolate in outline. Leaves that occur on the flowering stems are also 'clasping', with their leaf bases completely surrounding the stem. All leaf midveins have short prickles on them.

<http://plants.usda.gov/java/imageGallery?category=sciname&txtparm=Dipsacus&familycategory=all&growthhabit=all&duration=all&origin=all&wetland=all&imagetype=all&artist=all©right=all&location=all&stateSelect=all&cite=all&viewsort=15&sort=sciname>

Yellow toadflax (*Linaria vulgaris*) is an alien perennial from eight inches to two feet tall, reproducing by seed and underground rootstocks. Leaves are pale green, numerous, narrow and pointed at both ends, 2 1/2 inches long. Flowers are yellow, some with orange throat or spot, and resemble common snapdragon, except the "mouth" opens towards the sky. Leaves are waxy and repel spray. Seeds are numerous, hard and black. Seeds are easily transported on vehicle tires. Flowers allow easy identification in

August. http://www.colostate.edu/Depts/CoopExt/Adams/weed/ytoadflax_mgt.htm

APPENDIX C
January 2008
Colorado Designated Noxious Weeds

List A

Eradication required. The plant known to occur in Northglenn is in **bold type**.

African rue (*Peganum harmala*)
Camelthorn (*Alhagi pseudalhagi*)
Common crupina (*Crupina vulgaris*)
Cypress spurge (*Euphorbia cyparissias*)
Dyer's woad (*Isatis tinctoria*)
Giant salvinia (*Salvinia molesta*)
Hydrilla (*Hydrilla verticillata*)
Meadow knapweed (*Centaurea pratensis*)
Mediterranean sage (*Salvia aethiopsis*)
Medusahead (*Taeniatherum caput-medusae*)
Myrtle spurge (*Euphorbia myrsinites*)
Orangehawkweed (*Hieracium aurantiacum*)
Purple loosestrife (*Lythrum salicaria*) REPORT TO 303-280-7810 & 303-637-8115
Rush skeletonweed (*Chondrilla juncea*)
Sericea lespedeza (*Lespedeza cuneata*)
Squarrose knapweed (*Centaurea virgata*)
Tansy ragwort (*Senecio jacobaea*)
Yellow starthistle (*Centaurea solstitialis*)

List B

Management plan required. Plants known to occur in Northglenn are in **bold type**.

Absinth wormwood (*Artemisia absinthium*)
Black henbane (*Hyoscyamus niger*)
Bouncingbet (*Saponaria officinalis*)
Bull thistle (*Cirsium vulgare*)
Canada thistle (*Cirsium arvense*)
Chinese clematis (*Clematis orientalis*)
Common Buckthorn (*Rhamnus cathartica*)
Common tansy (*Tanacetum vulgare*)
Common teasel (*Dipsacus fullonum*)
Corn chamomile (*Anthemis arvensis*)
Cutleaf teasel (*Dipsacus laciniatus*)
Dalmatian toadflax, broad-leaved (*Linaria dalmatica*)
Dalmatian toadflax, narrow-leaved (*Linaria genistifolia*)
Dame's rocket (*Hesperis matronalis*)
Diffuse knapweed (*Centaurea diffusa*)
Eurasian watermilfoil (*Myriophyllum spicatum*)
Hoary cress (*Cardaria draba*) a.k.a. Whitetop
Houndstongue (*Cynoglossum officinale*)
Leafy spurge (*Euphorbia esula*)

ATTACHMENT I

NORTHGLENN OPEN SPACE MANAGEMENT PLAN



A FRAMEWORK FOR THE FUTURE

NORTHGLENN,
COLORADO



2009

Northglenn Open Space Management Plan

A Framework for the Future of Open Space in Northglenn



Winburn Park Ponds

The vision for Northglenn's Open Spaces is to enhance the quality of life of Northglenn residents and future generations by conserving and managing open space to provide a continuing community resource for ecosystem education and wildlife - - places where wildlife thrives and people enjoy and experience it.

Quiet Places and Open Spaces

Have you seen the first rays of the sunrise reflecting on the ponds at Winburn Park?

Or sat on a bench to observe a red-winged blackbird swoop and clutch a reed in the marsh while clouds drift lazily across the sky at Croke Reservoir?

Isn't it amazing to hear the sound of leaves rustling in the trees while waves of prairie grasses roll in the wind at the Oscar Arnold Nature Area?

Have you watched a hawk circle an open space, watching for the movement of its prey?

Isn't it refreshing to see an oasis of natural landscape in the midst of urban development?

Do you appreciate walking down a trail toward the sun setting over the Rocky Mountains?

In the City of Northglenn, there are several parcels and corridors of land that undoubtedly improve the quality of our lives by providing quiet places and open spaces. These spaces include the Oscar Arnold Nature Area, the ponds at Winburn Park, Croke Reservoir, Fox Run Open Space, the Farmers' Highline Canal trail corridor, and Grange Hall Creek/Grant Ditch. Northglenn has intentionally established guidelines for the long-term care and preservation of these valuable resources.

These places have aesthetic, recreational, cultural, educational and natural resource values that need to be conserved for today, tomorrow and for future generations of Northglenn residents.

Northglenn is a land-locked community and, therefore, unable to purchase additional open space land.

Responsible stewardship must be practiced in the spaces that we have in order to properly care for them.

Within these pages, discover the location and features of Northglenn's open spaces and learn more about the issues, benefits, opportunities and challenges facing those charged with its stewardship: *All of us.*

This plan outlines a management plan for each open space or nature area, including a brief history of past maintenance, a proposed plan for current and ongoing maintenance, and a list of proposed future amenities.

The Value of Open Space

The beauty of Northglenn's natural gifts is everywhere—the shady trees, an array of vibrant plants, refreshing bodies of water. Open spaces do many things for the natural environment and the human spirit:

- **Maintain people's connection to the land**
- **Minimize the loss of critical wildlife habitat and restore habitat that is in decline**
- **Provide passive recreation opportunities for Northglenn and area residents**
- **Provide opportunities for Northglenn Residents to learn about the environment**
- **Enhance quality of life through the preservation of a dwindling local resource**



Open Space in Northglenn is defined as:

Outdoor areas of vegetation and other natural features that can support a diversity of wildlife and expand people's opportunities to move about, relax and experience their relationship with the earth.

As defined by Council Ordinance CBI562, the purpose is stated as: "The current open zone district provisions do not include the preservation of property in its natural state as a use by right in an open zone district. This provision allows for such a use by right on both public and private property in open zone districts. The ordinance further defines the term "Nature Area"." The term "nature area" shall mean an area established primarily as a conservation district to preserve the environment and natural character of the landscape within the district. Land within the district shall be protected from development, but may also be used for unimproved trails, buffering between land uses, defining the edges of urbanization and the preservation of valuable natural features and ecosystems. Utilities and existing improvements located in a nature area may be maintained as necessary, but reasonable efforts should be used to minimize environmental impacts.

What is an Open Space Management Plan?

An open space management plan allows open space in Northglenn to be viewed as a whole rather than as several individual unrelated parcels. This view supports continuity in planning and management of open space as a collective resource. Each parcel was evaluated and examined to establish its unique position as open space and to determine what is appropriate in each area, what the neighbors want, and what the issues and opportunities are associated with each of the open spaces. Conservation is defined as:

The act of preserving, guarding or protecting; preservation from loss, decay, injury or violation.

The benefits of developing an open space management plan are numerous. A broad-based public involvement approach has been taken to allow for a participatory decision-making environment where residents and other interested parties are able to offer their input into the shape of their natural surroundings. The participatory approach also allows for dialogue between the City of Northglenn staff, City Council, the Parks and Recreation Advisory Board, residents, and other agencies and organizations. It is hoped that continuing dialogue will lead to a constituency that is informed about challenges with open space and a planning team that is aware of the concerns of citizens.

Why Manage Open Space?

Some people think that open space manages itself. Experience teaches us otherwise. For example, based on resource inventories conducted on Northwest Open Space, it is apparent that the general trend of vegetation has been one of decline. As noxious weed species proliferate in each Northglenn Open Space parcel, favorable vegetation is threatened, as are the animals that the favorable plant species support. The human impact on the parcels must also be managed. Because they are rare and valued lands, they get significant use. If we do not intervene and manage open space, the values that we associate with it will soon disappear. In addition, Adams County, the City of Northglenn and the State of Colorado have noxious weed management ordinances which direct the City to manage invasive species. Healthy open space ecosystems in urban settings cannot exist without management.



Farmer's Highline Canal Trail



Grant Ditch



Grange Hall Creek

Urban wildlife depends heavily on water resources. Eighty percent or more of animal species rely on riparian areas to fulfill all or part of their habitat needs. As such, special attention and management consideration must be given to the many riparian areas and water sources in Northglenn's open spaces: Croke Reservoir, Farmers' Highline Canal, Grange Hall Creek/Grant Ditch, Winburn Park Ponds and the wetlands in the Oscar Arnold Nature Area.

The Parcels

Farmers' Highline Canal Corridor

The Farmers' Highline Canal enters Northglenn at the western city limits at Northwest Open Space Recreation Area near Pecos and 112th Avenue and flows north and east to E.B. Rains Jr. Memorial Park at 120th Avenue, then on into Thornton. A greenway trail runs parallel to the canal, providing over three miles of trail, including a pedestrian underpass at I-25. Water typically flows in the canal from mid-April through October. Homes line much of the corridor on both sides. People and wildlife co-exist, enjoying the long stretch of tree-lined trail. A respite from traffic and commotion, the canal and trail system provides an accessible corridor for wildlife, as well as habitat and a seasonal water source. In many segments, mature cottonwoods stretch their limbs to shade the trail. People use the trail to walk, run, bicycle roller blade, stroll baby carriages, relax and rehabilitate.

Winburn Park Ponds

Located along the east side of Huron Street, south of 112th Avenue, the park features an inviting oasis for passive enjoyment. Willows and cottonwood trees, cattails and marsh surround two ponds. Picnic tables, benches and a gazebo provide resting places to soak up the environment. Youth are invited to fish in the ponds, catching bass, blue gill and carp. A trail loop takes visitors on a quiet stroll around the nature area.

Grange Hall Creek

Grange Hall Creek flows across the southeast side of the city, and wanders through the Fox Run residential development. The Greenway Trail runs adjacent to the creek for much of its path. In the Fox Run development, the creek has two tributaries that run through grassland from west to east.

Fox Run Nature Area

The trail loops around a wetland area and runs past award winning erosion control structures, then meanders past the old Thede homestead, a historical site. This trail segment has very few trees. The only vegetation that is mowed is directly adjacent to the trail. The Grange Hall Creek open space is approximately 50 acres and is the most recent addition to the open space parcels.

Grant Ditch

A railroad track separates the Fox Run area of Grange Hall Creek from the western area known as Grant Ditch. A pedestrian underpass has been completed to link trails from the Fox Run side to the Grant Ditch trail west of Irma Drive. The Greenway Trail runs from Irma Drive west to I-25 and connects with the Farmers' Highline Canal trail, providing a continuous trail from the western city limits adjacent to Westminster. An underpass will lead to the eastern city limits shared with Thornton. Storm-water drainage appears to be one source of water in Grant Ditch and it runs nearly year-round. Homes border much of this wide corridor on both the north and the south. Historically, most of the vegetation along this corridor is mowed several times each year; this practice is harmful to wildlife habitat. There appears to be great potential to enhance the waterway and habitat.

Croke Reservoir

Croke Reservoir, located at Huron and Naiad, is home to a variety of wildlife:

fish, snapping turtles, water fowl, heron and red-winged black birds, muskrats, raccoons, and an occasional fox.

Willows and cottonwoods surround the area on three sides, providing a peaceful place of rest. Cattails provide a wetland habitat. Fishing is permitted from April 1 through October 15. Fishing is prohibited on the north side of the reservoir for environmental reasons. Fish species include bass, perch, carp and blue gill. There is a handicapped accessible fishing pier. Dogs, boats, skateboards and bicycles are prohibited in order to restrict the disruption of the wildlife. The reservoir is manmade. In 2009, rehabilitation of the Croke Reservoir Nature Area took place, including repairs to the shoreline erosion. Homes border the north side of the property.

Oscar Arnold Nature Area

The Oscar Arnold Nature Area is located at 112th and West 111th Way. This parcel was named in honor of the homesteader who settled there and eventually deeded the land to the city. The Farmers' Highline Canal runs along the south border of the property, providing a trail from which to observe the area. An informal trail has been worn through the center of the property. This area has a unique blend of wildlife habitat including a wooded area with mature cottonwoods, cattail marshes, and other wetland plants. The site hosts a variety of wildlife including foxes, coyotes, raccoons, hawks, and owls. The wooded area is often vandalized by illegal dumping, parties and paint-ball games. Vegetation was disturbed as soil was excavated from the south side of the property in the late 90's to build berms for the adjacent soccer fields. Homes border the east and west sides of the property. After resource inventories were completed in spring 2001, management activities which as weed control and wetland delineation began.

Goals & Actions

Individual management plans were developed for each property. Each plan details needed improvements, including specific management recommendations and a schedule for implementation. The goals of management and stewardship in Northglenn's open spaces are to:

- Promote ecosystem sustainability
- Enhance and protect natural, cultural, educational and scenic resources
- Provide safe and enjoyable passive outdoor recreation activities.

Each of these goals will be achieved through specific management actions that may include:

- Control of noxious invasive weeds through an integrated Pest Management plan
- Monitoring of vegetation, wildlife and water
- Planting of favorable plant species
- Maintaining trails
- Maintaining amenities such as fences, signs and benches, and introducing them as appropriate for enhanced management
- Working to provide educational opportunities through on-site informational materials and guided nature hikes where appropriate.
- Targeted enhancement based on public input

Prairie Lessons

“The prairie, although plain, inspires us. It teaches us that grandeur can be wide as well as tall. The prairie is a community. It is not just a landscape or the name of an area on a map, but a dynamic alliance of living plants, animals, birds, insects, reptiles and micro-organisms, all depending on each other. When too few of them remain, their community loses its vitality and they perish together. The prairie teaches us that our strength is in our neighbors. The way to destroy a prairie is to cut it up into tiny pieces, spaced so that they have no communication.

The prairie is tolerant. There are thousands of species of living things on the prairie, but few of them are natives. The prairie teaches us to see the virtue of ideas not our own and the possibilities that newcomers bring.

The prairie is bountifully utilitarian, but it is lovely, too in a hundred thousand ways and in a million details, many of them so finely wrought that one must drop to one’s knees to appreciate them.”

From “What the Prairie Teaches Us,” by Paul Gruchow in Grass Roots: The Universe of Home

Opportunities & Benefits

Open space presents many benefits. The benefits are certainly environmental in nature, but are also social, physical, emotional, educational and economic. A well managed open space can contribute to a sense of peace, provide opportunities for wildlife viewing as well as passive recreation, protection and rehabilitation of ecosystems, filtration of storm water run-off, increased property values, and a strengthened sense of community - to name but a few. Other opportunities articulated by the 2004 task force and agreed to by the 2009 Open Space Master Plan review committee include:

- Peaceful places/restoration of the spirit
- “Quiet Places and Open Spaces”
- Sense of stewardship for the land
- Natural places for future generations
- Observation and enjoyment of wildlife
- Relief from development
- Purification of air & water
- Educational resource
- Corridors for wildlife
- Ecosystem education
- Protecting the balance
- Connections between communities
- Encouraging favorable vegetation
- Developing a sense of “place”
- Conservation of a rare urban resource
- Public understanding & involvement
- Working with other municipalities
- Volunteer involvement & ownership
- Increased property values
- Educating the public about the benefits of management

Challenges

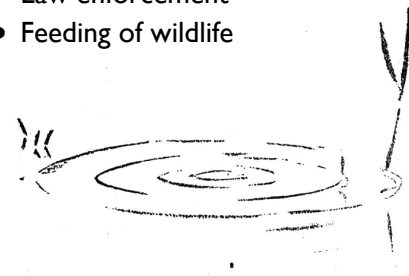
Along with benefits come challenges. One of the biggest challenges is the presence of highly aggressive invasive non-native plant species in the open spaces. Those species negatively impact vegetation and, consequently,

the wildlife that the plant habitat supports. If steps are not taken to manage the threat, the natural environments that Northglenn residents have come to value could be irrevocably compromised. Noxious weeds identified in Northglenn to date include: Canada Thistle, Scotch and Musk Thistle, Field Bindweed, Yellow Toadflax, Purple Loosestrife and Poison Hemlock.

Another challenge lies in the officially recognized use of the properties. City ordinance classified these parcels as “Open Zones,” along with parking lots, cemeteries, golf courses, and many other uses that are not consistent with the vision articulated in this document.

Other challenges have been identified through public meetings and by the Open Space Task Force in 2004, and agreed to by the 2009 Open Space Master Plan review committee, include:

- Noxious weed management
- Staffing/funding for maintenance
- Public education & input about open space management techniques, etc.
- Domestic pet waste & wildlife disturbance
- Informal trails—good or bad?
- Community consensus on vision
- Prairie dogs
- Off-trail uses
- Dumping
- Drainage
- Mosquitoes
- Fire
- Water to establish favorable vegetation
- Wetland delineation & management regulations for open water
- Working with other municipalities
- Law enforcement
- Feeding of wildlife



Alternatives

In the management of open space, three options emerge

1. Do Nothing
2. Integrated Pest Management
3. Integrated Pest Management and targeted resource enhancement

Doing nothing is not a viable alternative. Inaction will allow undesirable species to choke out favorable plant species and consequently wildlife species. The State of Colorado and Adams County require a program for noxious weed management, for which the City has developed the Noxious Weed Management Plan, which was most recently revised and adopted in July 2008 (CR-105)

The minimum course of action is likely to be a program of Integrated Pest Management which focuses heavily on weed management. However, due to the stronghold of noxious weeds in some areas, more invasive practices such as mechanical and chemical treatments may be required as a means

to establish control. Based on public input, there is also an opportunity to enhance both wildlife habitat and the recreational and educational opportunities for people in Northglenn's open spaces. A continuing program of public involvement will help determine which course of action community members would like to take in each open space site.

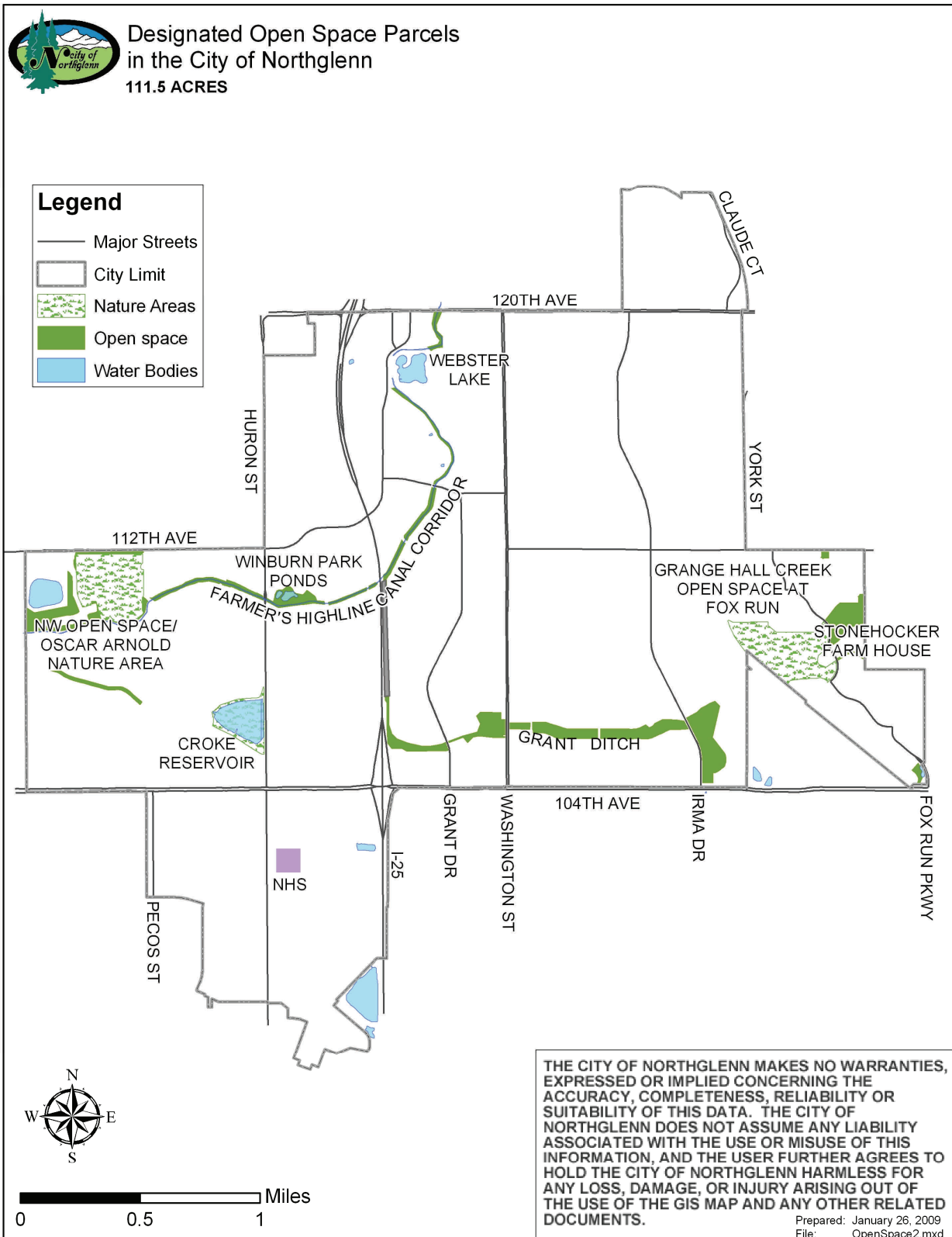
How Can You Get Involved?

- Respond to this document
- Attend public meetings, which are advertised through the City's website, park message boards, postings at the Recreation Center and City Hall, and other sources of public information
- Volunteer to help in the maintenance or enhancement of the parcels
- Help educate your family, friends, and neighbors about the values of open spaces and how each of us can help maintain them



Northwest Open Space

Designated Open Space & Nature Area Parcels in the City of Northglenn



Management Highlights

Farmers' Highline Canal

Goal

To control noxious weeds and promote desirable vegetation along the corridor for the enjoyment of the trail corridor users.

Past Maintenance

Areas around the canal and pathway have been mowed regularly. Trees and shrubs have been trimmed to keep the trail clear of hazards.

Proposed Maintenance

2009: Spray the ditch for poison hemlock twice/year. Continue to trim trees and shrubs, evaluate and remove hazard trees and mow regularly.

2010: Spray the ditch for poison hemlock twice/year. Continue to trim trees and shrubs, evaluate and remove hazard trees and mow regularly.

2011: Spray the ditch for poison hemlock twice/year. Continue to trim trees and shrubs, evaluate and remove hazard trees and mow regularly.

Ongoing Maintenance

- Continue to evaluate trees along the corridor to identify and remove hazards
- Trim trees and shrubs to maintain clearance along trail
- Continue mowing and trimming regularly

Proposed Amenities

- Continue replacement of wooden benches with plastic-coated metal benches and add new benches in appropriate areas
- Install nesting boxes in larger trees for birds
- Assess areas that may be viable for planting of trees, based on the highest likelihood of sustainability
- Replace the asphalt section of the trail east of I-25

If only we would remember to turn our gaze to the awe of a child, we would, we should recall that such a place exists within our grasp—in a garden, in a woods, by a stream...in nature, we would find what we're longing for: a beauty and stillness that lets the extraneous fall away and allows the essence of who we really are to emerge.

-Prevention Magazine



Management Highlights

The Ponds at Winburn Park

Goal

To manage the native part of the park as an open space and improve the water quality of the wetlands.

Past Maintenance

Wooden boardwalk was installed through the area by Boy Scouts. Ponds have been dredged periodically. Trees have been cleared and dead wood has been trimmed around the pond and along the pathway.

Proposed Maintenance

2009: Treat noxious weed infestation. Remove dead wood in trees over pathways. Continue to treat ponds with biological and/or chemical controls for algae and mosquitoes.

2010: Continue to treat any noxious weed infestations. Continue to treat ponds with biological and/or chemical controls for algae and mosquitoes.

Ongoing Maintenance

- Continue to mow along pathways
- Periodically test water quality in the ponds
- Ensure a viable and healthy fish stock

Proposed Amenities

- Stock fish in large pond
- Install bird houses or bat boxes in larger trees
- Install more benches/shelters around native area
- Formalize the dirt trail around the large pond

Management Highlights

Grange Hall Creek and Fox Run Nature Area

Goal

To establish a native open space setting for the residents of Fox Run and the users of the Greenway Trail System.

Past Maintenance

Mowing was discontinued on this site in 2003, except along pathways, streets, parks and fences. Chemical and mechanical treatments used to manage the noxious weeds. Salt Cedar, Russian Olive and Purple Loosestrife were controlled in this area.

Proposed Maintenance

2009: Spot treat any remaining infestations of noxious weeds chemically and mechanically. Assess control efforts and recovery of desirable vegetation. Reseed areas where populations of desirable vegetation are low.

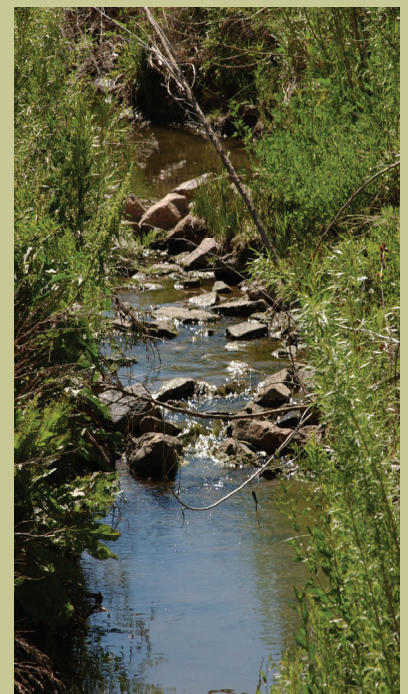
2010: Spot treat any remaining infestations chemically and mechanically. Assess control efforts and recovery of desirable vegetation. Reseed areas where populations of desirable vegetation are low.

Ongoing Maintenance

- Mowing along pathways, streets and residential fence lines
- Specifications will be 6-8' along pathways and streets, 15' along residential fences and Central Park
- This practice will make these areas more susceptible to re-infestation and weed control measures will be more frequent

Proposed Amenities

- Signage for the trail system
- Nesting boxes for birds
- Access to Stonehocker from Grange Hall Creek



Management Highlights

Grant Ditch

Goal

To incorporate open space management techniques in those areas of Grant Ditch where it is appropriate and enhances the experience of the Greenway Trail users.

Past Maintenance

This area has been mowed regularly in past years, this practice currently continues.

Proposed Maintenance

2009: Continue to mow the area regularly. Assess the condition of desirable vegetation. Inventory and start controlling noxious weed infestations. Investigate areas (hillsides, ditch banks) that would benefit from reduced or discontinued mowing.

2010: Continue to mow the area regularly, except for the areas between the trail and the ditch channel and steep hillsides. Control any noxious weed infestations. Assess control efforts and need for reseeding.

2011: Reseed areas where populations of desirable vegetation are low. Continue to mow the area regularly, except for the area between the trail and the ditch channel and steep hillsides. Control any noxious weed infestations. Assess control efforts and seeding.

Ongoing Maintenance

- Mowing will continue from the trail to the residential fences
- The concrete trail will be edged to keep vegetation off the trail as needed
- Tree plantings will be maintained along the ditch

Proposed Amenities

- Replace old benches and install new benches, tables and/or shelters in other locations throughout the trail corridor
- Install bird nesting boxes in larger trees
- Assess possibility of additional tree plantings and/or shrub and flower beds

Management Highlights

Croke Reservoir

Goal

To maintain the natural condition of the site. Continue to manage the site as an urban fishery and waterfowl/wildlife habitat.

Past Maintenance

The pathway around the reservoir has been mowed, Hazard trees have been identified, and removal has begun. In 2008, a significant rehabilitation of Croke Reservoir was completed. The reservoir was drained, the shoreline stabilized, additional trees planted, additional annual and perennial beds installed and new benches, tables, signage, shelters and pathways were added.

Proposed Maintenance

2009: Mow sodded areas, monitor the trees on the site, and inventory and treat any noxious weed infestations. Remove highest priority hazard trees.

2010: Treat any noxious weed infestations. Assess control measures and desirable vegetation recovery. Assure preservation of the natural habitat. Remove moderate priority hazard trees.

2011: Treat any noxious weed infestations. Assess control measures and desirable vegetation recovery. Assure preservation of the natural habitat. Remove hazard trees that were identified as lowest priority in 2009.

Ongoing Maintenance

- Continue to assess trees for liability hazards and trim as needed
- Mow all sodded areas
- Ensure a viable and healthy fish stock by monitoring the aquatic habitat and make improvements when necessary to the lake
- Maintain aeration system
- Continue to identify and evaluate hazard trees, and prioritize their removal based upon safety standards
- Wildlife habitat preservation

Proposed Amenities

- Install nesting boxes for birds
- Install additional benches/shelters
- Coordinate occasional fish stockings with the Colorado Division of Wildlife



Management Highlights

Oscar Arnold Nature Area

Goal

Reduce weed infestations to a level that does not impact the natural environment of the site.

Past Maintenance

Treatment of Canada Thistle, Yellow Toadflax and Russian Olive. Mowing of weeds along the north entry drive.

Proposed Maintenance

2009: Mow all areas infested with weeds outside of wetland and riparian areas ahead of chemical treatment. Biologically control infestations inside of wetland and riparian areas with weed control insects. Assess control efforts and desirable vegetation recovery.

2010: Discontinue mowing pretreatment for weed control to allow desirable vegetation to recover and compete. Chemically treat remaining large infestations, release weed control insects for weed control in wetland and riparian areas. Assess control efforts and desirable vegetation recovery.

2011: Monitor control efforts. Reseed areas not successful from previous seeding. Continue to spot treat weed infestations chemically and mechanically in dry land areas, mechanically and biologically in wetland and riparian areas. Assess control efforts and desirable vegetation recovery.

Ongoing Maintenance

- Mowing along pathways, streets and residential fence lines
- Specifications will be 6-8' along pathways and streets, 15' along residential fences
- This practice will make these areas more susceptible to reinfestations and weed control measures will be more frequent

Proposed Amenities

- ADA compliant Nature trail or formal path through the area
- Nesting boxes for birds
- Interpretive signage

Management Highlights

Northwest Open Space (north of Farmer's Highline Canal, exclusive of Athletic Fields)

Goal

Reduce noxious weed infestations, maintain the open area to safe and aesthetically pleasing standards..

Past Maintenance

Continue treatment of Canada Thistle, Yellow Toadflax and Field Bindweed. Weeds in open area mowed regularly.

Proposed Maintenance

2009: Continue treatment of Canada Thistle, Yellow Toadflax and Field Bindweed. Weeds in open area mowed regularly.

2010: Continue treatment of Canada Thistle, Yellow Toadflax and Field Bindweed. Reduce mowing to post and cable area only.

2011: Continue treatment of Canada Thistle, Yellow Toadflax and Field Bindweed. Continue mowing to post and cable area only.

Ongoing Maintenance

- Mowing
- Noxious Weed management through the use of chemical and biological controls, including insects for Canada Thistle and spraying of Thistle and Yellow Toadflax.

Proposed Amenities

- No new amenities are proposed for this area





Acknowledgements

This plan represents the combined efforts of a variety of individuals whose time was generously contributed in many ways including: attending public meetings to provide information about the community's priorities for open space properties, contributing technical assistance and participating on the Open Space Management Plan Revision committee. Each of these groups and individuals provided crucial input into the direction of this plan.

City of Northglenn

Northglenn Residents

Parks & Recreation Advisory Board

National Park Service Rivers, Trails & Conservation

Assistance Program

Colorado Division of Wildlife

Natural Resource Conservation Service

Adams County Weed District

Photography - City Staff



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