

# 2060 Comprehensive Plan Environment

“Don’t it always seem as though, you don’t know what you’ve got ‘til it’s gone. They’ve paved paradise and they put up a parking lot.” So goes the sentiment of a 1970s ballad recently made popular once again.

Probably nowhere is the cost of growth more profoundly exacted than from environmental resources. As communities expand to serve a growing population, areas which have been home to a variety of native vegetation and wildlife habitats shrink or are eliminated. Ironically, new developments often select names which reflect the species they may be displacing - Coyote Ridge, Hawk Hollow, Fox Glen.

Often, the features which make an area attractive for development are those which support abundant wildlife and natural resources as well. Water, vegetation, gentle terrain, clean air, pleasant views, and fair weather all offer important features to sustain a community of people and of wildlife. Growth and development do not have to displace or destroy natural areas, resources and/or wildlife if thoughtful and deliberate planning is assertively employed. In fact, the ability for development to complement and enhance the natural environment assures a critical quality of life standard is retained and will add value to development, the community and the ecosystems within the region.



*Caring for the land  
goes hand in hand  
with caring for  
community, and  
being of service  
to a larger world  
holds both great  
promises and great  
heartaches.*

– Peter Forbes

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**Blended – integrated  
with development**

## Introduction & Perspective

### Past

The emphasis on agriculture and tree planting along city streets gave Greeley the nickname of “The Garden Spot of the West.” Early residents received a railcar of shade and fruit trees to plant shortly after arriving at the colony, but many of the trees did not survive since irrigation water was not yet available. Water was delivered to the colony by ditches dug from the Cache la Poudre River to the community. The original cost for these ditches was estimated to be \$20,000, so that amount was allocated in the colony’s budget. The Number Two and Number Three ditches were built at a considerably higher cost than was expected by the colonists and, after several expansions, construction costs totaled nearly \$90,000.

Between 1884 and 1886, eight artesian wells were drilled in Greeley due to impure surface water, which made residents ill. The first artesian well, located in Lincoln Park, was completed in 1884 and struck water at 1200 feet. Greeley doctors and citizens believed the water, which had carbonate and bi-carbonate of soda, had medicinal qualities. The August 27, 1884 Greeley Tribune compared Greeley’s artesian well water with a well in France, where people went for healing from various ailments. After all eight wells were completed, they stopped overflowing and had to be pumped. Several of the wells stopped producing water by the early 1900s. In 1903, City residents voted to fund a project bringing water from the mountains, in part because of a city water shortage. It is likely that the wells were not used as frequently once the water was piped from the mountains.

Colorado Agricultural College (now Colorado State University) professor and Experiment Station researcher Ralph Parshall was a civil and irrigation engineer who developed a flume to accurately measure water flow in irrigation ditches. His flume strongly impacted irrigation on the Poudre, in Greeley and around the world. It improved efficiency, ensured farmers got their allotment of water, but no extra, and it fit into canals and laterals of all sizes. It was easy to operate and maintain, and it is still used today around the world.

In 1904, the City of Greeley bought a farm near Bellvue, at the mouth of the Cache la Poudre River. This farm included senior water rights and a treatment plant was built on the site. This water system used 2.5 acres of slow sand filters, and a wooden water transmission main 36 miles long delivered pure mountain water to residents. By the 1930s, a drought and the Dust Bowl led to great concerns over water to support this growing area. In 1937, the Colorado-Big Thompson Project (C-BT) was approved and construction began the next year, lasting until 1957, when the project was completed. The C-BT Project provides supplemental water to 30 cities and towns. The water is used to help irrigate approximately 693,000 acres of farmland in Northeastern Colorado. The system consists of 12 reservoirs, 35 miles of tunnels, 95 miles of canals and 700 miles of transmission lines to collect and



distribute water. The system covers about 150 miles east-west and 65 miles north-south. As Greeley continued to grow, city leaders looking to the future purchased high mountain reservoirs, built new treatment facilities, and acquired more units of water.

## **Present**

### ***Environmental issues***

The environment represents a common thread with all facets of our daily life. Since the adoption of the 2020 Comprehensive Plan, environmental issues have become even more in the forefront of everyday life. Concerns about global warming began to be voiced in 1998 and 1999, although the concept that adding carbon dioxide to the atmosphere could warm the earth was first suggested in 1896. The warmest year on record to date was 1998, and the ten warmest years on record have all occurred since 1990. There is still much debate on global warming. Many believe it is caused by fossil fuel combustion, while others believe that human influences have been minimal compared to solar activity or oceanic circulation. Either way, global warming and the resulting climate change will continue to impact our environment and the way we live.

There are unique and environmentally sensitive natural areas in and around Greeley that should be protected and preserved for future generations. These areas include flood plains and drainage areas, as well as areas with steep slopes and areas prone to erosion. In 1998, the Greeley **City Council** acknowledged the importance of these areas when they adopted the Areas of Ecological Significance map. This map identifies high impact areas, or areas typically found in and along the 100-year flood plain and which would be severely impacted by development or human activities. Also, these areas are prone to flooding and if development occurred, they would likely be affected during periods of high water. Moderate impact areas are those areas where the ecological character would be moderately impacted by development or human activity. The City's Development Code includes standards for allowing development to occur within these areas as long as special attention is given to minimizing the impacts of development on the environment. Many of the areas identified on the Areas of Ecological Significance are within the City's Conservation Zoning District, which includes commercial mineral deposits, the flood way, farming, parks, and permanent open space. Erosion control plans and storm drainage reports and plans are required for all new development in Greeley. These reports and plans ensure that development can occur in such a way that it does not impact other properties and that it is safe from and is not impacted by these natural hazards.

Chief among the natural resources of the area is the Cache la Poudre River, which meanders through 22 miles of Weld County, from its point of origin in the Rocky Mountains of adjacent Larimer County, to its confluence with the South Platte River east of Greeley. A cooperative

effort among Greeley, Windsor, and Weld County has resulted in nearly 20 miles of trail being constructed along the river, between Windsor and Greeley. This river corridor is also home to the Poudre Learning Center, which is an interdisciplinary environmental learning center that focuses on history, science, economics, stewardship and aesthetics, primarily for school audiences. The Learning Center came about as a result of intergovernmental cooperation and agreements and the primary structure on the site was financed largely by a fundraising project undertaken by Greeley and Windsor Rotary Clubs. The school districts of Windsor, Eaton, Johnstown/Milliken, and Greeley/Evans as well as UNC, CSU, the City of Greeley and other area entities and organizations have supported the establishment and continuation of this valuable center set along the Cache la Poudre River. Here, students have a “hands-on” opportunity to learn in an outdoor setting and are exposed to nature.

Richard Louv, author of “Last Child in the Woods” identifies what he calls “nature-deficit disorder” in his book. He believes that direct exposure to nature is necessary for the physical and emotional well-being of both children and adults; however, in recent years, many children have spent much of their free time indoors. If they spend time outdoors, it is not typically in a “natural” environment. As a result, their exposure to nature has been reduced. Many of today’s parks are manicured, designed specifically for certain sports and activities and do not offer a true natural experience. Nature can provide a welcome refuge from the stresses of modern urban life, yet nature is getting farther away from where we live and recreate. Too often, development alters the land to design and build parks and open spaces that require substantial amounts of water for irrigation and plant trees in linear formations that do not occur in nature. The early settlers of Greeley learned the hard way of the challenges related to planting non-native plant species that do not thrive in Greeley’s semi-arid climatic conditions.

### ***Community Separators & Vistas***

In 1998, the Northern Colorado Separator Study was done as a joint effort between the governments of Berthoud, Fort Collins, Greeley, Larimer County, Loveland, and Milliken. The municipalities of Johnstown and Windsor, and also Weld County, participated indirectly in the study at that time. This study was intended to identify key areas that should remain in open space, or see only limited development to retain a physical and visual separation between these communities. The study also identified areas that had scenic vistas and view corridors. A number of concepts for keeping areas open and preserved were studied and included cluster development, acquisition of property, and the purchase of **development rights**. Although this study was not formally adopted by Greeley, it provided valuable information and served to highlight the need for action at some point in the future, before these scenic vistas and panoramas are lost.

The important view sheds identified around Greeley to protect included: US Hwy 34 corridor west toward I-25; north of the US Hwy 34 corridor toward Windsor; and, to the southwest, toward Johnstown and

*Conservation is  
humanity caring for  
the future.*

– Nancy Newhall



**DEVELOPMENT RIGHTS**  
- the right to develop  
property.

Milliken. Other important corridors that were identified included the Poudre River Trail corridor, Sheep Draw, and the bluffs near “O” Street, on the north side of Greeley. Greater consideration for the placement of buildings and structures, the use of design that is more compatible with the surroundings, and attention to height, mass, materials and color are techniques that can be used to enhance a vista or view shed.

### **Water**

Water has continued to be a valuable key resource, as cycles of drought years alternate with wet years. Greeley averages 12-14 inches of rain annually. The cost of water has increased considerably in recent years as demand increased to support the development occurring in Northern Colorado. Colorado Big Thompson (C-BT) water was approximately \$22 per unit in the late 1950’s when the C-BT project was completed and water was first available and rose, to approximately \$9,000 per unit in 2008 (note: one unit is equivalent to .75 acre feet). Since then, the market value of C-BT water has fluctuated dramatically, depending on demand.

The City of Greeley Water Department uses the ten-year average water use for water resources planning purposes and its Water Master Plan is based on a 50-year planning horizon. Over the past ten years (1999 – 2008), the system wide per capita use of water averaged about 221 gallons of water per day. This system wide average includes commercial consumption as well as the consumption of other municipal customers in Milliken, Evans, and Windsor. The per capita use of water for residential properties only averaged 140 gallons of water per day. During this same ten-year period, drought years occurred between 2000 and 2004 and water restrictions were put into place. After the drought, usage dropped down, as residents became more accustomed to water restrictions. Based on the population projections used by the Water Department, demand for Greeley’s water will exceed supply within 20 years. This projection assumes that all proposed 2003 Water Master Plan projects are successfully completed. If they are not, then supply will exceed demand even sooner. The City treats and distributes over 9 billion gallons of water to over 118,000 residents each year. Treating and distributing this water requires two water treatment plants, a reclamation plant, three treated water reservoirs, and 2.70 million miles of pipeline.

In order to receive water service for new development, the City requires raw water dedication at the time of development. Raw water dedication for residential development is typically three acre-feet of raw water per acre of land. A cash-in-lieu rate per **acre-foot** of water is allowed for raw water obligations of less than six acre-feet, or to supplement raw water dedications by up to six acre-feet. Cash in-lieu rates vary, depending on the actual price of C-BT water, and are set quarterly by the City’s Water and Sewer Board. Greeley accepts raw water from the Greeley-Loveland System, the Greeley Irrigation Company, or C-BT water. The City of Greeley has an Industrial Water Bank program that provides raw water credits for industrial users. This program is used as an incentive for locating new industry in Greeley, or to expand existing industry and encourage them to remain in the community.

**ACRE-FOOT** – the volume of water one-foot deep covering an acre of land.

# Environmental Education as a way of life

Water conservation also plays an important role in water usage in Greeley. In 1995, the Water and Sewer Board adopted its first water conservation plan to address future water needs. The plan suggested techniques for reducing water consumption inside the home, as well as for lawns and gardens, and included the use of low-water plant materials and proper planting techniques as water conservation methods. The use of non-potable water systems is another way of conserving water and has been allowed for several years. These systems use ditch water to irrigate City parks and open spaces. This water has not been treated, so it is not safe to drink. The City has adopted design criteria for non-potable irrigation systems and it is possible to use such a system for irrigation of areas controlled by homeowners or commercial property owner associations. The City's Development Code was also amended shortly after the adoption of the 2020 Comprehensive Plan to support xeric planting options and require soil amendments to reduce irrigation water demands.

### ***Air Quality***

Air quality in Northern Colorado has been improving in recent years, as emission standards for automobiles and industrial standards have increased. Carbon monoxide and particulate levels have been improving; however, Weld County, Larimer County, and seven other Denver metro area counties were recently found to no longer comply with EPA's National Ambient Air Quality Standards for ozone. EPA recently lowered its ozone standard to .075 ppm (parts per million). Ozone comes from such things as auto emissions, industrial plants, lawn mowers, and oil and gas drilling and storage operations. Climatic conditions (hot summers) can increase ozone levels. Carbon monoxide and ozone has been measured in Greeley since 1982, while particulate matter has been monitored since 1986. As a result of the recent ozone levels, a number of different testing solutions are being considered, including tail pipe evaluations and the use of on-board computers of cars that are 1996 models or newer. There are existing programs that serve the Greeley area that are intended to help reduce pollution levels. These programs include the use of The Bus (mass transit), VanGo (van pooling), and carpooling matches set up through SmartTrips, which is operated by the North Front Range Metropolitan Planning Organization.

Odor has been an air quality issue in Greeley since 1964, when an Odor and Air Quality Pollution Committee was created to deal with the odor coming from the feedlots and other agri-business uses in the area. In 1996, the City created an odor hotline to field odor-related complaints. The acquisition and closure of the Meyer feedlot several years later resulted in a significant drop in the number of calls as one of the significant odor sources was gone. In 2000, there were about five odor complaints per 1,000 residents and by 2006, the number of complaints had dropped to about one per 1,000 residents. Odor is a key component in a community's quality of life and even with the significant reduction in the number of odor complaints, there is still a perception in the state and region that associates Greeley with odor.

*The United States  
has six percent  
of the world's  
population and uses  
sixty percent of the  
world's resources.*

– John McPhee



### ***Noise & Lighting***

Other factors related to air quality include noise and lighting. The City's Noise Ordinance sets maximum decibel levels permitted by zoning district and by time of day and is enforced by the Greeley Police Department. Noise is created by airport traffic, the railroad lines that cut through the community, and car and truck traffic on city streets and highways, in addition to other human activity, such as construction activities or loud music. Lighting levels are regulated by the City's Development Code for land uses and specific locations. The intent of regulating lighting levels is to ensure that outdoor lighting is not excessive and does not "spill" off of the site, creating impacts on adjacent or other area properties. Some communities have adopted "dark sky" ordinances, which are intended to regulate the use of outdoor lighting. The Dark-Sky Association is developing a model ordinance to address this topic for communities who want to minimize the impacts of outdoor lighting.

### ***Urban Forest***

The urban forest is one of the community's greatest resources, particularly for a plains community like Greeley. In addition to the aesthetic qualities of trees, they also provide shade and give protection from wind, give off oxygen and use up carbon dioxide, and offer food and shelter for animals. Management of the urban forest includes the need for tree maintenance, as well as replacing trees that have been removed, or are dead or dying. The City's Forestry Division maintains all of the trees and shrubs in City parks and public grounds, monitors tree trimming and pesticide application services by contractors, manages the urban forest, and offers valuable information on diseases, insects, and environmental conditions. The Division also manages the Memorial Tree program, which allows people to have a tree planted to commemorate a loved one and the Tree Donation program, where trees can be donated for the parks system through relocation to a park. Over 300 new trees are planted each year by the Forestry Division to enhance and maintain the urban forest. Trees and shrubs are a key component in the landscape plans that are created and installed on new development and redevelopment sites. In some instances, the number of trees required by code would not "fit" a site, or would result in a less than desirable design or give the trees adequate room to grow. The Wal-Mart site on West 10<sup>th</sup> Street is an example of this, where cash-in-lieu provided for those trees that could not be accommodated on site for use in tree installation elsewhere in the community.

### ***Recycling & Renewable and Alternative Energy Resources***

There has been an increasing emphasis on the management of natural resources over the past several decades, particularly for non-renewable resources. The recent volatility in oil and gas prices has renewed interest in conserving energy and in particular, conserving non-renewable energy sources. Research and exploration is now focused on developing alternative energy sources that are renewable or are considered "clean" fuels and include such things as biodiesel,

**SUSTAINABLE**

**Well-"TreeD"**  
**Walkable**

bioalcohol, electricity, hydrogen, methane, natural gas, and biomass (hemp, corn, algae oil). Solar, wind, and geo thermal power are being used to power homes and businesses in Colorado. Recycling has come into the forefront of everyday life, with single-stream recycling, which no longer requires recyclables to be sorted before being set out at the curb. The City of Greeley and other area agencies have sponsored programs including a lawn mower exchange, toilet recycling, and pumpkin recycling. A recycling program to collect used vegetable oil was offered in November 2008 in Greeley for the first time and may be continued year-round. This oil is used to produce biodiesel fuel, which is a clean burning alternative fuel that has lower emissions than petroleum diesel or fossil fuels.

The City of Greeley operates the “Greeley Greencycle Center” on a portion of a former feedlot site, which is owned by the Greeley Urban Renewal Authority. This recycling center offers an environmentally-friendly alternative for green waste recycling and accepts only organic materials, including grass, leaves, sawdust, clean and mixed wood, tree limbs, top soil, and manure. There is a small fee for dropping off materials. The City is also sponsoring a new community recycling center near Downtown that will accept non-organic materials and is scheduled to begin operating in early 2009. The Weld County Household Hazardous Waste facilities and programs began operation in 1994 and since that time, have helped divert over 1.1 million pounds of household hazardous waste from being put into area landfills. Sites are located on North 17<sup>th</sup> Avenue in Greeley and a South Weld County location is near Dacono.

#### **Land Use/Transportation Link**

The rising cost of transportation has led to a greater awareness of the link between land use patterns and transportation. Greeley developed with a fairly low density and as a result, there are areas where driving distances to school, employment, or shopping are higher. These distances require additional drive time, increased traffic and congestion on streets, increased air pollution, and increased costs for operating a motor vehicle. A more dense and compact form of development typically includes a mix of land uses, which means that residents can walk or have a shorter commute to work, school, shopping, or entertainment. Developments that use the new urbanist or neo-traditional form of development typically include services within walking distance of homes, as well as provide for connectivity between areas. This means that residents can walk, bicycle, or take the bus and do not have to use their car for trips that are of short distances. Compact development is a key principle of smart growth and ideally results in a mix of land uses, variety of housing types, and services close to residential areas rather than the traditional suburban form of development that essentially requires an automobile to go anywhere. The residential area of the Promontory development, on the west side of Greeley, is an example of an area that developed with no services for at least three miles and the nearest grocery at least five miles away.

*Can our wealth,  
our technology and  
our political ability  
produce a livable  
urban environment,  
or are we damned  
to live in the waste  
of our mistakes?  
This question may  
well be one of the  
crucial tests of our  
civilization.*

– Lawrence S.  
Rockefeller



### ***Energy Efficiency & Conservation***

In 2007, the Greeley City Council adopted a resolution for broad City support of energy efficiency and conservation in its municipal activities and programs. This resolution addresses the management of municipal operations, which includes products and purchasing; City fleet and fuels; traffic management; recycling; City capital improvement projects; and community education and support. Community partnerships to jointly address transportation, energy efficiency and conservation, and economic development were also addressed in the resolution. As a result of this resolution, the Community Development Department became the first City department to use hybrid vehicles for its Code Enforcement and Building Inspectors.

The first annual Environmental Stewardship Awards were given out in 2008 by the City and its Air Quality and Natural Resources Commission. The award is to recognize businesses and individuals that made outstanding efforts using strategies that protect the local environment. Awards were given for residential, commercial, industrial, and governmental/non-profit categories.

### ***Mineral Resources & Development***

Weld County and the Greeley area have an abundance of oil and gas resources and as a result, there are numerous oil and gas wells and tank batteries. The City's Development Code has established setbacks and spacing requirements for oil and gas wells and related tank batteries to keep them from residential and other types of development. These setbacks and requirements are based on safety concerns, particularly where higher density land uses such as schools or churches are located. There are also screening and design standards to ensure that these more intense land uses blend-in better with the natural environment. Greeley currently has about 400 wells within the community and there are about 15,000 throughout Weld County. Commercial grade sand and gravel deposits are also located along the Cache la Poudre and South Platte rivers. Many of these areas have been mined over the years and the end result has been reclamation and creation of a system of ponds and lakes. These areas offer a tremendous potential for future educational purposes, as well as recreation, because of their proximity to the rivers.

### ***Community Gardens***

A new program was started recently by the Neighborhood Resources Office for creating community garden plots. Residents can rent garden plots and use them to grow vegetables and flowers. There has been great interest in this program and it is expected to expand in future seasons. Programs such as the community gardens and farmer's markets contribute to the local economy by providing a greater source of locally grown foods for local consumption, serving the local "food shed". These sources reduce the amount of energy needed to transport goods to markets and reducing transportation costs also results in reduced food costs. With Greeley and Weld County's agricultural base, there is a significant amount of food produced in the immediate area.

**Patterns**

The following key trends that relate to the environment have been identified:

- As development continues to the west side of Greeley, the significant views and view corridors along U. S. Hwy 34 and S. H. 257 offer unique areas that should be retained
- The ecologically sensitive areas throughout the community have been identified and efforts to protect and enhance these areas are being undertaken
- Greeley has an adequate supply of water for the community at current growth rates through the year 2025, assuming that all currently proposed water projects are achieved. If not, demand for water will outpace supply by that time
- While air quality has been improving in recent years, Weld County is one of nine counties in Colorado that is in violation of EPA standards for ozone levels
- Greeley’s urban forest is a tremendous natural resource for the community and efforts to enhance and maintain it should continue
- Greater use of and interest in renewable resources, sustainable building and development practices, alternative energy sources, and creative programs designed to provide educational opportunities about the environment are expected to continue

**Progress**

Since the adoption of the 2020 Comprehensive Plan, many of the action steps of the plan have been accomplished, or are in process. The following report card highlights some of the key accomplishments. The full Environment Report Card can be found in the Appendix of this document:

- The annual Environmental Stewardship Award was created and awarded for the first time in 2008
- Over 20 contiguous miles of the Poudre River Trail have been completed
- City Council adopted a resolution to address energy efficiency and conservation in municipal facilities, programs, and activities.
- An east Greeley former feedlot site was acquired and cleared and the Greeley Greencycle Center now operates on a portion of that site

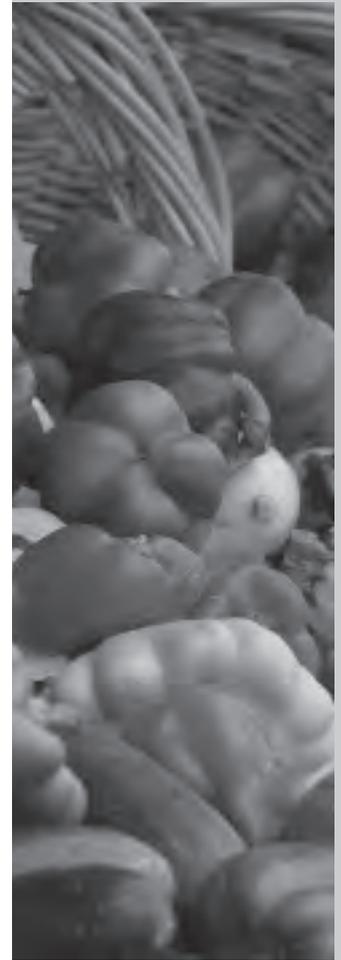
## **Potential**

The following Environment Themes were identified to create a vision of a 2060 Greeley as:

- Sustainable
- Blended – Integrated with development
- Walkable
- Deliberate – Judicious
- Connectivity
- Strategic planting for local climate
- Honor nature as it exists here
- Leadership
- Environmental education as a way of life
- Community gardens
- Healthy
- Protect view sheds
- Places to explore
- Environmental/energy economic development exploration
- “Maintain food sheds”
- Smart growth
- Habitat friendly development
- Creative management of natural resources
- Diversity of parks & open spaces & places
- Renewable energy
- Thoughtful public spaces
- Clean air & water
- Well-“TreeD”
- Xeric wise
- Community stewardship of its environment
- Green built
- Intergovernmental cooperation

## **Promise**

Sustainable and environmentally sensitive community development



**II.**  
**ENVIRONMENT CHAPTER**  
**GOALS, POLICIES, OBJECTIVES & ACTIONS**  
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# Renewable Energy

## Thoughtful public spaces

## ◆ ENVIRONMENT ◆

**GOAL:** Demonstrate stewardship of natural resources to create a high quality of life and attractive community design which incorporates sustainability, preservation, and protection of important native wildlife and habitats

### OBJECTIVES

#### EN1 RESOURCE PROTECTION

**A Protect wildlife and natural habitats through attentive identification, mapping and regulation of such sensitive areas in concert with new and infill development projects**

- 1 The City's **Areas of Ecological Significance Map (AESM)** is hereby re-adopted and incorporated by reference into this 2060 Comprehensive Plan
  - a The Map should be reviewed and updated in conjunction with the Annual Growth and Population Projections conducted in support of capital improvements and **Adequate Public Facilities Area (APFA)** map updates. The AESM may be adjusted more often if new data is available in conjunction with pending development to refine location and treatment of sensitive natural resources (see also LU7A1 and PR2A3)
  - 2 Maintain and enhance the Poudre River Trail and Corridor for natural resource and **habitat** preservation as well as for educational use and enjoyment by the public in an appropriate manner (see also CD1D5, LU8A7, and PR2B13)
    - a Complete the study of the easterly extension of the Poudre River Trail to its confluence with the South Platte River as a tool to assist in the further protection and use of this important local river corridor
    - b Enhance the use and access to the Poudre River Trail by developing linkages to other trail corridors, such as Sheep Draw, and area irrigation ditches
    - c Increase the appreciation of Downtown and the North Greeley Island Grove and Mercado District through the development of linkages and more urban level river walk activities in those areas of the Poudre River Trail that intersect with urban areas of the community (see also EC4B5 and RE2C4)

**ADEQUATE PUBLIC FACILITIES AREA (APFA)**  
– that area within which a full complement of City infrastructure is available to support growth and development.

**AREAS OF ECOLOGICAL SIGNIFICANCE** – areas which have significant environmental features and attributes, including critical wildlife habitat and populations, native and unique plant communities and valuable natural features.

**HABITAT** – areas that contain adequate food, water and cover to enable one (1) or more species of wildlife to live in or use the area for part of all of the year and which typically consists of natural or planted vegetation, along with one (1) or more sources of water available in the area or adjacent areas.

- 3 Consider **wildlife movement corridors** in the location, design and development of urban uses in sensitive environmental areas to assure that native species can access habitats with minimal human interference
  - a Design development in these areas to maximize successful habitat accommodation (e.g. limit fences that restrict movement of animals)
- 4 Manage and control **non-native** vegetation to prevent **invasive displacement** of **native species** of plants and animals (see also EN4)
  - a Continue active code enforcement to control the spread of noxious vegetation as identified by the state and through local ordinances
    - i Expand educational and information guides to the public to assist in understanding the impact and control of problematic vegetation
    - ii Work with area nurseries and outlets for plant materials to solicit their help in providing guidance to consumers relative to appropriate plant materials (see also EN4)

**B Encourage a growth pattern for the city that preserves unique and sensitive natural resources and areas**

- 1 Cooperate with other area jurisdictions to develop programs for the preservation of areas of environmental importance such as river corridors, gravel mining reclamation sites, scenic views, open space and community separator areas of mutual influence and significance
  - a Initiate discussions with adjacent jurisdictions to actively identify and protect these important areas prior to development
  - b Produce intergovernmental agreements and related joint management tools to memorialize and commit to a shared level of attention and vigilance for these important areas

**C Minimize impacts and hazards associated with flood plains and drainage ways**

- 1 Fully enforce flood plain regulations to permit acceptable development in these hazard prone areas

**WILDLIFE MOVEMENT CORRIDOR** – a belt, band, or stringer of vegetation or topography that provides a completely or partially suitable habitat for animals to follow during daily, periodic, or seasonal movements.

**INVASIVE DISPLACEMENT**  
– the replacement or eradication of native species of plants by the spreading of non-native plants.

**NATIVE SPECIES** – plants or animals that are naturally found within an area.

**NON-NATIVE VEGETATION**  
– vegetation that is not naturally found within an area.

## EN2 WATER RESOURCES

### A Protect, conserve, maintain, and improve the quality and quantity of water available to Greeley residents and commerce

- 1 Protect the drinking water supply available to city residents by designating domestic use of the City's **water rights** as superior to any other use
- 2 Secure the economic vitality of the community in its ability to attract and grow desired business and industry and accommodate future residential development by purchasing **raw water** commensurate with the expected pace of community growth tempered with expected conservation actions
  - a Aggressively develop intergovernmental agreements or service agreements with other water districts to secure a reliable water source or service in areas of projected growth as defined by the Long Range Expected Growth Area defined in this 2060 Comprehensive Plan in a timely manner and in advance of development
  - b Support timely and effective support for development in the Long Range Expected Growth Area as it relates to **208 Wastewater planning** and treatment. Where possible and practical, look for opportunities to share and/or coordinate such capital improvements with other jurisdictions to efficiently use consumer resources
- 3 Protect the quality of water sources by meeting or exceeding all **Colorado Primary Drinking Water Standards** and assure the integrity of its drinking water supplies through timely testing and quality management practices
- 4 Promote the most efficient use of water through conservation and related practices.
  - a Regularly review building and fire codes to assure standards include "**best management practices**" concerning energy efficiency installations related to plumbing fixtures and conservation measures
  - b Review and revise land use development codes, as appropriate, to encourage:
    - drought-resistant and **xeric** plantings in landscape installations
    - proper installation of landscape materials to conserve plantings at water, such as with soil amendments
    - planting at optimal seasons to minimize water use and plant stress

**BEST MANAGEMENT PRACTICE** – state-of-the-art technology as applied to a specific problem.

**COLORADO PRIMARY DRINKING WATER STANDARDS** – those standards used for treating drinking water in Colorado.

**RAW WATER** – the water rights a developer must dedicate to the City of Greeley in return for water service.

**208 WASTE WATER PLAN** – a plan developed pursuant to Section 208 of the Federal Clean Water Act for the treatment and quality of waste water.

**WATER RIGHTS** – a decreed right to use, in accordance with its priority, a portion of the waters of the state by reason of the appropriation and use of the water.

**XERIC** – a form of landscaping intended to conserve water.

- an appropriate ratio of required landscape and permeable area to site improvements consistent with the other objectives of this 2060 Comprehensive Plan
  - c Audit water use associated with City facilities and review options to convert to xeric landscape treatments or strategically redesign sites for water conservation
  - d Develop incentive programs which induce water conservation installations and practices, including irrigation systems
  - e Develop a water rate structure that provides incentives for the efficient use of water and reflects actual cost of service
  - f Provide extensive education of the public in efficient and cost effective water conservation practices, including access to water audits for developed sites to measure actual water use patterns
- 5 Assertively promote the use of non-potable water for irrigation as a viable and efficient alternative to treated water for landscapes (see also PR2B12)
- a Develop incentives to encourage use of non-potable water in landscape and other appropriate applications
  - b Consider the extension of water lines to serve larger groups of users and along primary roadways to provide non-potable water to landscaped medians and parkways
- 6 Review Development Code standards to assure that they encourage the sensitive, effective and desirable incorporation of water elements into site design in such a way as to protect water interests and create more natural and appealing development design and function
- 7 Cooperate with regional partners in the effective and efficient management of water interests in planning for future area growth (see also GR2A1)
- B Manage the system of *ground water*, surface water, and storm water in planning for future community needs that foster other complementary natural resource opportunities**
- 1 Evaluate **aquifers, ground water recharge areas**, and sources of ground water pollution within Greeley watersheds and formulate appropriate protection programs

**AQUIFER** – a geologic formation that contains a usable supply of water.

**GROUND WATER** – the supply of freshwater under the surface in an aquifer or geological formation that forms the natural reservoir for potable water.

**GROUND WATER RECHARGE AREAS** – those areas in which the replenishment of underground water supplies takes place.

- a Consider the effects of **non-point source pollution** such as from chemicals and practices associated with agricultural activity, and landscape maintenance and seasonal roadway treatments (e.g. pest control, fertilizers, de-icing applications) to storm sewer drainage and return water flow quality. Develop appropriate management strategies to address these areas of potential concern (see also PR2C1a, TR1B3 and TR3A1)
  - b Consider and provide comment on area land use applications which may include potential ground and surface water pollution from such development, such as from mining and mineral extraction activities, which may also impact area economies and community reputation
- 2 In conjunction with the annual review and update to the Areas of Ecological Significance Map, review and revise area wetland resources to assure accuracy in identification of these natural resources
  - 3 Develop programs to protect and enhance area wetlands as a component of open space and natural habitat corridor preservation (see also CD1D5 and PR2B10)
  - 4 Discourage the destruction of wetlands by requiring appropriate mitigation measures in conjunction with site work or development activity
  - 5 Undertake a study to evaluate the merits of establishing a program to aid the development of new wetland areas to **restore** natural habitats and to improve water quality. Consider the merits of the development of a “wetlands bank” as part of this evaluation
  - 6 Develop minimum standards which must be achieved as a condition of accepting wetland areas which have been impacted or re-created in conjunction with development. Consider a requirement to install native vegetation as part of such standards (see also PR2A4aiii)

**NON-POINT SOURCE POLLUTION** – air pollution from a non-definable source.

**RESTORE** – the repair or reconstruction of a building or structure’s original architectural features.

# Community stewardship of its environment

- 7 Complete a storm drainage study of area basins to identify sites to acquire and develop as larger area storm drainage detention facilities in order to accomplish more effective, attractive, and useful improvements within the community and provide a means for smaller sites to pay a fee-in-lieu of providing on-site detention thus gaining more flexibility for site development (see also CD3B1, LU6B1, PR2A3, PR2B6 and PR2B9)
  - a Develop options to provide more natural-appearing storm drainage and water storage facilities such as with swales and with the use of slope and shape of detention areas
- 8 Regularly and proactively update floodplain data and, as necessary, modify designated boundaries and classifications to minimize potential for property damage
  - a Encourage the use of such areas, as well as major drainage facilities, for recreation, open space, and other appropriate uses that would preserve the natural environment and limit the potential for damage due to flooding (see also EN5D5, PR2B11 and PS2A2)
- 9 Ensure that water delivery from ditches is sustained through active maintenance
- 10 Evaluate the feasibility and advisability of establishing and maintaining minimum stream flows

**EN3 AIR & ENVIRONMENTAL QUALITY**

**A Improve local air quality to have a minimum of pollutants and offensive odors**

- 1 Maintain full compliance with regional, state and federal air quality standards and work to reduce stationary and **mobile source emissions** of pollutants with special emphasis on the reduction of pollutants that cause adverse health effects and impair visibility (see also TR1B4)
  - a Evaluate the impacts as part of employing best practices related to road sanding and other snow/ice treatments, wood burning fireplace installations, and agricultural and ditch burning practices
  - b Work with the local Extension Agent, Farm Bureau, or other appropriate agencies and organizations to identify and encourage crop management practices that limit air quality impacts

**MOBILE SOURCE EMISSIONS** – air quality emissions that come from mobile or moving sources, such as automobiles.

- 2 Integrate air quality considerations into the transportation planning and traffic management processes, encouraging alternatives to **single occupant vehicle** travel. Initiate and provide community education to describe how the following actions, among others, could help achieve this objective (see also TR3B1):
  - a Prioritize pedestrian travel in the city's transportation system
  - b Support bicycle travel as an integral component of the transportation network
  - c Enhance mass transportation forms of travel
  - d Promote car maintenance practices which increase efficiency in use and operation thereby reducing pollutants
  - e Enumerate the costs of travel choices and viable alternatives, including telecommuting, commuter trip reduction, and a variety of transportation demand management (TDM) strategies (see also TR1B1)
  
- 3 Explore, recognize and reward the use of environmentally friendly fuels and sources of energy, as available, energy-efficient modes of travel, and other ecologically-sound technologies (see also TR3B1d)
  - a The City should lead by example in converting its fleet of vehicles to sustainable, low emissions and cost-effective fuels and to down-size where possible and practical to reduce the environmental impact of vehicle use and maintenance
  
- 4 Incorporate air quality objectives into the land use planning and development process by encouraging land use patterns and transportation systems which reduce travel and air emissions
  - a Evaluate all zoning and land use requests for their impact on air quality and, when feasible and practical, encourage redesign, relocation, or project adjustments where such adjustments can be incorporated to make a positive impact on air quality (see also LU1C3)
  - b Discourage developments which do not prioritize or protect pedestrian movements within the project or neglect interconnectivity to adjacent developments or projects, such as with parking lot access (see also TR1A9)
  - c Seek relationships and/or agreements with adjacent jurisdictions to adopt similar standards which would allow a complementary interface

**SINGLE OCCUPANT VEHICLE (SOV)** – a motor vehicle occupied by only one (1) person.

# Smart Growth Habitat Friendly Development

- d Examine alternative street designs and traffic control tools, such as “coving”, roundabouts, and right-on-red turning movements, to reduce vehicle idling
  - e Explore the impacts and benefits of adoption of anti-idling regulations to limit the excessive emission of pollutants from vehicles that are temporarily parked or stopped
- 5 Maintain an aggressive posture in the identification, tracking, management, and reduction of offensive outdoor odors through efforts which shall include, but not be limited to the following activities:
    - a Disallow the establishment of any new animal confinement facilities within the city
    - b Maintain an odor hotline to report offensive odors that are then investigated and reported through code enforcement actions
    - c Retain local ordinances which carry consequences to odor generating businesses or activities that negatively impact the quality of life for community residents
  - 6 Maintain air quality standards related to odor and other emissions that are adhered to by new and expanding businesses or industry
    - a In conjunction with affected business and industry, seek methods to reduce odors generated from existing operations
    - b Disallow the establishment of any new business or industry which is not able to contain offensive outdoor odors generated from its operation
  - 7 Work with other governmental entities to formulate and employ strategies to eliminate or minimize offensive odors from land uses in and around urban populations, and particularly within expected urban growth boundaries by encouraging best management practices associated with those operations
- B Promote acceptable noise levels throughout the community**
- 1 Minimize the exposure to excessive and disturbing noise through the enforcement of daytime and nighttime noise ordinances, as well as through assertive traffic enforcement actions (see also PS4A9)
    - a In particular, attend to noise from air conditioning units, loud parties and gatherings, barking dogs, loud vehicle noise, and vehicles that emit excessive noise from radios

- b Review the practices related to the use of sirens by emergency response vehicles to balance alerting motorists of the imminent presence of such vehicle movements with excessive and disruptive use of sirens
  - c Work with the airport on a regular basis to ensure that flight patterns are minimal over occupied portions of the community (see also TR3A2d)
  - d Explore the use of “Quiet Zones” to lessen impacts from rail train movements and warning whistles (see also TR3A2)
- 2 Minimize noise conflicts through improved land use relationships, with special attention afforded the impact of transportation and industrial facilities and proper acoustical design (see also LU1C5 and T3A2)
- a Evaluate the need for sound barrier walls and landscape treatment adjacent to major arterial roads and, if warranted, pursue funding to install such noise buffers
  - b Require the proposed land use which will generate noise to prepare an analysis of where the noise will be heard in order to consider appropriate mitigation measures
  - c Disallow land use requests that will result in conflicts between operations of disparate land uses relative to noise generation unless substantial **bufferyard** or building treatments by the applicant can be demonstrated to adequately **mitigate** the impacts from anticipated noise
  - d Encourage the consistent courtesy and enforcement of air traffic patterns to reduce impacts to residential areas, such as is generated by emergency medical and airport air traffic (see also PS1C3d and TR6C2)
  - e Explore and employ all available and practical options to reduce noise generated from rail traffic (see also RE2C3d,TR3A2 and TR7B4)

**C Employ strategies for the judicious use of outdoor lighting**

- 1 Through land use development standards, encourage the efficient use of outdoor lighting to reduce light pollution and conserve energy without compromising public safety
- a Review proposed lighting levels with each type of development proposed for conformance with City codes and to limit the impacts from errant light to adjacent properties or to the public rights-of-way

**BUFFERYARD** – a landscaped area used to physically separate or screen one use or property from another.

**MITIGATE** – mechanism for addressing undesirable impacts on the natural environment, alleviating or lessening the impact of development.

- b Enforce adopted standards for illumination levels for various types of development
- c Minimize glare and the halo effect from lighted areas through standards which require shielding techniques to direct light away from reflective surfaces, rights-of-way and adjacent land uses
- d Promote the use of energy-efficient lights in municipal applications and throughout the city through new installations and upgrades to existing facilities and devices

- 2 Promote the appropriate disposal of lights that may contain hazardous substances

**D Promote effective development which minimizes negative effects to temperature levels, such as through the reduction of “urban heat islands”**

- 1 Reduce ambient air temperature produced from “urban heat islands” created from large areas comprised of asphalt or dark materials such as roads, parking lots, and roof tops (see also CD2C2 and TR2D7)
  - a Collect and evaluate data from national studies dealing with alternatives to the use of dark materials on rooftops, roads, and in parking areas or in other large surfaces
  - b Actively explore the merits of adopting local design standards for future construction and major redevelopment to effect a reduction in heat from such sources (see also TR4D1C). Consider standards related landscape and traffic median applications

**EN4 URBAN FOREST & VEGETATION**

**A Protect and expand the urban forest within and around the city through appropriate species diversification**

- 1 Actively manage the tree population within area parks, recreational facilities, open spaces, and rights-of-way as a primary objective
- 2 Facilitate the strategic planting of large vegetation and trees along major transportation corridors and **view sheds** to preserve and improve important vistas (see also CD1D2)
- 3 Protect selected trees by utilizing proper pruning and tree care to achieve compatibility with other urban needs and support of a diverse ecosystem which is more resilient to insect disease and climate changes

**URBAN HEAT**

**ISLAND-** – a dome or bubble of increased air temperature that forms over a city or community that results in increased day and night temperatures; impacts and enhances the production of harmful ground level ozone layers (smog); causes greater stress on humans and machinery; increases financial expenses; creates a community’s own weather system. Urban heat islands are created when vegetation is removed and replaced by large areas of dark material, usually asphalt on roads, parking lots, and roofs.

**VIEW SHED** – the surface areas from which a viewpoint is seen.

- a Limit the **monoculture** planting of trees and vegetation, except in limited applications, to reduce the potential for extensive loss of the landscape due to insect or disease infestations or other conditions which impact a specific species
- 4 Weigh the value of trees when resolving infrastructure conflicts; select and plant appropriate tree species on public rights-of-way which maximize benefits from the plantings while protecting the safety of area residents
- 5 In land development applications, where appropriate, give recognition and credit for maintaining existing tree and vegetation cover and consider tree replacement when removal is unavoidable
- 6 Work with neighborhoods to define the character of their areas by the types and locations of trees and major vegetation present. Where appropriate and desirable, provide guidance and incentives for replacing in-kind when such trees and vegetation must be removed
  - a Identify the tree species and their locations on the University of Northern Colorado campus and provide a self-guided tour publication to educate the public as to the unusual and varied trees found there
  - b Encourage other community facilities and institutions to provide visitors with identification of trees and vegetation and the reasons for their selection (e.g. drought tolerance, local significance; attraction to wildlife)
- 7 Protect and retain trees and groups of trees with significant historical, cultural, horticultural, habitat, environmental, and aesthetic value (see also CD1B2, CU1A4, LU7B2 and RE3A3). Replace such trees and vegetation when their removal is not avoidable
- B Enhance the beauty and comfort of the community through protection and incorporation of its natural and urban wildlife habitats**
  - 1 Promote, reward and advocate stewardship practices associated with management of the urban forest among community residents and businesses through education, training, and volunteer participation in community programs which address care of the environmental infrastructure

**MONOCULTURE** – the planting of only one species of tree.

# Community Gardens Healthy Protect View Sheds

- a Develop educational materials, clinics and related means of providing a framework within which to stimulate community stewardship
  - 2 Reinforce the City’s designation as a “Tree City” through support of tree plantings, re-plantings, and maintenance, especially in public areas including street rights-of-way (see also policy CD1D2)
  - 3 Promote the City’s **Backyard and Natural Areas Certification Program** to foster greater appreciation and stewardship of such areas for urban wildlife
- C Promote the use of landscaping with species appropriate to the local climate conditions through proper implementation of xeric landscaping principles**
- 1 Plant species which provide sustainable landscapes relative to drought and pest tolerance and which add interest, variety, appeal and beauty to the community
  - 2 Encourage the planting and maintenance of native species of trees, shrubs, and other vegetation to encourage native wildlife and minimize water demand to support a healthy landscape
    - a Provide educational materials, clinics and incentives to promote the community’s understanding and use of native plants in landscape applications
- D Protect natural areas and wildlife habitats through comprehensive noxious and invasive weed management programs**
- 1 Provide on-going education to the public, area plant nurseries, and landscape businesses about noxious weeds, their threat to local habitats and wildlife, and regulatory provisions and fines related to the presence of such weeds on property

**BACKYARD AND NATURAL AREAS CERTIFICATION PROGRAM** – a program administered through the City of Greeley which provides special designation for landowners who accommodate natural areas, vegetation, habitat, and other specified features that support native animal and plant communities.

**EN5 DEVELOPMENT & RESOURCE CONSIDERATIONS**

- A Incorporate short- and long-term resource benefits to support sustainable community planning decisions and building activity**
- 1 Promote the conservation and efficient use of natural resources and energy through a review and revision of building codes, as warranted, to require the incorporation of up-to-date conservation measures in new construction and redevelopment (see also RE1B1)

- a Provide the public and the building community with information about the short- and long-term return on investment (monetarily and environmentally) with the use of energy-wise products
  - b Encourage agencies which develop housing for lower income residents to maximize energy efficient installations to help reduce housing costs as it relates to energy consumption
  - c Examine Development Code standards related to site requirements, such as parking, to limit the “footprint” of development to the degree it can be done and meet the overall objectives of this 2060 Plan
- 2 Provide community leadership by example in maximizing energy efficiency in all City operations, programs and equipment
- a Upgrade the energy efficiency of existing municipal buildings through the use of renewable resources, such as solar, wind, and similar technologies and energy reduction strategies
  - b Assure energy efficiency in new construction and redevelopment of City facilities
  - c Maintain an audit of City facilities and operations to reflect and report on the City’s success in achieving energy efficiencies

**B Maximize the efficiency of resource use and promote incorporation of renewable resources throughout the community**

- 1 Through land use development, encourage the conservation of energy through policies and regulations governing placement, orientation, and clustering of development such as:
- a Density and efficiency of land use patterns
  - b Cluster housing units to make effective use of sensitive open lands and developed areas (see also LU5B1a)
  - c Mixed and multiple use developments which reduce the need for automobile traffic
  - d Development of mass transportation corridors which interface into planned **development nodes** within residential and commercial centers of development (see also LU8A10)
  - e Solar and wind collection opportunities through building orientation and site design (see also CD2C2)
  - f Preserve established housing stock of historic significance by encouraging owners of such residences to apply for local designation (see also RE3D1)

**DEVELOPMENT NODE**

– an area where urban development is concentrated and which may consist of a variety of land uses.

**C Support the reasonable coexistence of human and natural environments through measures that educate, support, and incorporate complementary accommodation**

- 1 Delineate deposits of subsurface resources, such as aggregate material and oil and gas, and encourage the extraction of such materials in advance of surface development in accordance with state law (see also GR2A4)
  - a Develop incentives to minimize surface use conflicts through the co-location of oil storage tanks and directional drilling
  - b Maintain minimum setback and site design standards from oil and gas wells and storage tanks which protect the public's interest through attention to safety and compatibility issues relative to adjacent properties and uses (see also PS2A3)
  - c Encourage the thoughtful reclamation of land which has been mined for sand and gravel to provide sites which will complement and enhance the community and adjacent development. Work with the property owner early in the aggregate mining land use permitting process to establish expectations for reclamation of the site upon completion
    - i Incorporate these standards into the initial land use permitting process
    - ii Undertake a study of the Poudre River sand and gravel mining corridor to establish a comprehensive design scheme for this important reclaimed mining area and identify means by which to ensure its accomplishment (see also LU7E2)
- 2 Review and revise as appropriate, local regulations related to the extraction of subsurface aggregate material which mitigates impacts to the natural environment, surrounding neighborhoods and properties and which provides for the review of reclamation plans
  - a Develop minimum standards expected with the reclamation of sites used to extract minerals
- 3 Cooperate with other jurisdictions to address concerns relating to mineral extraction activity, proposed mining sites, and reclamation plans
  - a Seek reclamation which facilitates the re-establishment of the disturbed, natural environment and minimizes loss of other resources, such as water

- b Promote site development standards which accomplish the re-establishment of wildlife habitat through creative reclamation design
  - c Carefully balance economic benefits from mining activities with the social costs, such as health and safety, related to the impacted environment
- 4 Through this 2060 Plan, re-adopt the **Greeley Natural Resources and Wildlife Master Plan**, which provides guidance for protection of urban and area wildlife and habitats
  - a Update this Wildlife Master Plan within two years to assure relevance and best management practices are incorporated into this guide
- 5 Support the development of programs which foster greater understanding and accommodation of area wildlife needs, such as through the Natural Areas Certification Program

**D Adopt development standards which minimize impacts to natural areas and promote the health and safety of the developing urban community (see also GR3B2a)**

- 1 Support **green construction** practices to assure energy efficiency in new development and redevelopment. Promote sensitive location of improvements to take advantage of renewable energy opportunities and the use of recycled and alternative building materials
- 2 Maintain development standards which define the appropriate design and level of construction in areas where slopes and hillsides are prevalent (see also PS2A5)
  - a Require development on hillsides to adhere to engineering standards of slope stability and safety
  - b Continue to enforce standards to minimize aesthetic concerns with the placement of structures along slope ridges to avoid a dominant ridgeline profile; use of sensitive color palettes to blend features into the hillside area; and minimizing artificial structures which would be necessary to limit drainage and erosion concerns
- 3 Adopt and vigorously enforce sediment erosion control standards to manage construction activity and limit impacts to adjacent properties from silting and fugitive dust

**GREELEY NATURAL RESOURCES AND WILDLIFE MASTER PLAN** – a plan that provides a philosophy and recommendations toward natural resources management as wildlife and environmentally sensitive areas may be impacted by development, adopted in 1993.

**GREEN CONSTRUCTION** – methods used for construction of buildings that are earth and people-friendly, protecting human health and having little impact on the environment.

- a Require construction and developed sites to reduce movement of mud and weed seeds off-site
  - 4 Preserve and enhance the functional and aesthetic qualities of drainage courses and waterways by using, in general, a non-structural approach to flood control which emphasizes a natural appearance. Where structural solutions are used, they should be consistent with the adopted master plans for the neighborhood or area
  - 5 Prevent new development in floodway areas and retain such areas in their natural state whenever possible (see also EN2B8, PR2B11 and PS2A2)
  - 6 Limit new development in flood fringe and flood plain areas and employ construction standards which minimize hazards to persons and property consistent with best practices and with rules set by the **Federal Emergency Management Administration (FEMA)** and **Army Corps of Engineers (ACOE)**
    - a Evaluate the impacts of prohibiting or severely limiting new development in such areas and consider the possibility of dedicating flood plains as a wetlands “bank” to replace such areas needing to mitigate loss of wetland due to development (see also PR2B11)
  - 7 Require a comprehensive environmental inventory and assessment as a component of the annexation, zoning and development process. Incorporate consideration of special environmental features into the planning and development of property (see also GR2B1)
- E Enhance the community through the development of features that provide new habitats and amenities as part of the built environment**
- 1 In conjunction with the Division of Wildlife, consider development in proximity to natural areas to assure sensitivity in the location and design of urban features in key wildlife and related habitat areas
- F Promote the efficient and appropriate disposal and/or recycling of waste products**
- 1 Reduce **solid waste** through measures which emphasize **precycling, recycling**, reuse, and proper disposal

**ARMY CORPS OF ENGINEERS (ACOE)**  
 – a federal agency responsible for the design and construction management of public works and flood-related projects.

**FEDERAL EMERGENCY MANAGEMENT ADMINISTRATION (FEMA)**  
 – the federal agency responsible for the management of natural disasters.

**RECYCLING/PRE-CYCLING** – the process by which waste products are collected, separated, stored and reduced to raw materials and transformed into new and often different products.

**SOLID WASTE** – unwanted or discarded material, including waste material with insufficient liquid content to be free flowing.

- a Encourage productive reuse of yard waste through composting and mulching which does not create or result in offensive outdoor odors
  - b Pursue programs which encourage the creative treatment of wastewater and composted wastewater sludge
  - c Encourage programs which provide precycling and source separation recycling programs, such as curbside recycling for households and businesses, additional community recycling centers, and recycling centers at multi-family residences and institutional uses
    - i Promote the use of energy conscious products when such alternatives exist
  - d Encourage a shift from land fill disposal to alternatives that more effectively conserve energy and natural resources, including diverting organic material to the City's Greencycle site for composting
    - i Encourage recycling of construction and demolition waste
  - e Continue partnerships with other governmental entities and private operations to reduce solid waste and emphasize precycling, recycling and reuse through incentive programs and waste disposal fee structures
  - f Explore options to limit the number of waste haulers servicing a single neighborhood area to reduce the impact of large trucks in local streets and limit the amount of curbside trash that is present at a time
    - i Facilitate the option by homeowners associations and similar neighborhood organizations to voluntarily contract for one trash hauling company to serve the neighborhood
- 2 Minimize the public's exposure to hazardous waste, and prevent hazardous waste contamination through the facilitation of proper use and disposal
- a Cooperate with the County's **Household Hazardous Waste** Program in providing educational support to increase public awareness and to encourage proper disposal of household hazardous material
  - b Work with other governments and community organizations to acquaint the public with non-toxic alternatives, pollution prevention, and responsible use and disposal of hazardous waste

**HOUSEHOLD HAZARDOUS WASTE**  
 – common household chemicals and substances which have the potential to be hazardous due to ignitability, corrosivity, reactivity, or toxicity.

- c Encourage public and private efforts to reduce the use of chemical herbicides, pesticides, and fungicides. Through this 2060 Plan, commit the City to the use of integrated pest management, emphasizing the selection of the most environmentally sound approach with the intention of reducing or eliminating dependence on chemical pest control strategies
  - d Update the hazardous material truck routing plan to assure the safe and predictable transport of hazardous materials to and through the city (see also HS4B2, PS2A4a, TR2B4b and TR4B2)
- 3 Work with community partners to assess the effects of household hazards in the form of lead-based paint, radon, asbestos, carbon monoxide, mold, and other potential indoor hazards; and support continued efforts to educate residents on the identification and management of such household hazards (see also HS4B2, PS2A4b & c, and RE1B2)

**G Expand opportunities to capture waste energy to supply local utility needs and drive the local economic development engine**

- 1 Aggressively pursue energy development activity to tap and convert unused energy sources for potential use in the municipal and franchise utility systems
- 2 Identify all community energy applications and their potential to be converted to renewable energy; create an environment where research and support for alternative energy is an automatic endeavor
- 3 Promote development of “green jobs” to further expand the community’s movement toward renewable energy resources (see also EC1C1 and EC2A12b)

**EN6 COMMUNITY ENVIRONMENTAL EDUCATION**

**A Promote education of the public about issues of local and regional environmental concern**

- 1 Work with school district educators, Aims Community College and the University of the Northern Colorado to develop curricula and learning opportunities which provide hands-on exposure and promotion of environmental awareness and stewardship, as well as opportunities to shape policies and procedures
  - a Retain a youth representative member on the City’s Air Quality and Natural Resource Commission

**GREEN JOBS** – jobs found in the environmental or agricultural sectors of the economy which are intended to focus on improving conservation and sustainability.

**WASTE ENERGY** – new energy that is captured as a by-product from the decomposition or new generation of waste products.

- b Explore opportunities for student internships, field trips, and research projects to further the understanding, appreciation and protection of the natural environment
- c Utilize educational opportunities presented through the Poudre Learning Center and through the Poudre River Trail

**B Engage all citizens in the process of supporting the protection and improvement of the quality of the natural and built environment**

- 1 Collaborate with other community partners to pursue all possible avenues to expand public awareness and stewardship of the community's natural and environmental assets, including:
  - written publications
  - electronic media
  - cable and telecommunications
  - field excursions and demonstration sites
- a Develop an annual report to the community that provides an inventory of environmental amenities, use considerations and emerging areas of stewardship
- b Cultivate citizen stewardship and responsibility for the care and protection of special natural areas in the community through Adopt-a-Trail and related programs

**C Recognize and celebrate environmental stewardship in all aspects of community life**

- 1 Involve citizens in a wide range of volunteer opportunities to expose them to local environmental assets, needs, and experiences
- 2 Consider inducements to community residents and businesses to promote good ecological practices and conservation of natural resources (see also CD1A4a)
  - a Identify areas where natural resource conservation will have financial benefit to the City, such as water conservation, and assess how incentives can be offered to reward desired behaviors or improvements

**EN7 VIEW SHED & IMPORTANT CORRIDOR**

**A Promote community development in such a way as to protect key view sheds and travel corridors**

- 1 Identify important corridors that carry environmental significance and/or visual appeal related to its natural features and establish special design treatments and protections in such areas (see also CD3C3)
- 2 Consider the special designation of these view shed areas to elevate their prominence, appreciation and significance
  - a Within two years of the adoption of this 2060 Plan develop a list of criteria of features which relate to visual significance;
  - b Applying such criteria to area features, research and identify potential area for view shed protection. Evaluate the merits of the following areas for inclusion for special attention:
    - i Bluff area
    - ii Sheep Draw
    - iii Ashcroft Draw
    - iv Confluence of the Cache la Poudre and South Platte Rivers
    - v "O" Street Corridor
    - vi SH 392 Corridor
    - vii US Hwy 34 Corridor (Business & Bypass routes)
    - viii Cache la Poudre Corridor
    - ix 4<sup>th</sup> Street west of 35<sup>th</sup> Avenue
    - x 20<sup>th</sup> Street west of 23<sup>rd</sup> Avenue
    - xi 59<sup>th</sup> Avenue from 4<sup>th</sup> Street to US Hwy 34 Bypass
  - c Work with land owners in special corridors to develop land use protections and development design to facilitate this objective

**B Reflect a sensitivity to areas of ecological significance in the built environment**

- 1 Review, update, and maintain regulations which blend built structures into the natural environment in a sympathetic manner. Such efforts should include, at a minimum:
  - a Camouflage of cell towers (see also CD3C2a)
  - b Low profile buildings in significant view corridors
  - c Non reflective building materials and subtle and complementary color use
  - d Undergrounding of utilities and co-location of sites (see also CD3C2a)
  - e Complementary land forms and landscape

**Honor nature as it exists here**  
**LEADERSHIP**

- f Low profile oil tanks and accessory structures
- g Fencing that is wildlife-friendly

**C Protect open lands in strategic areas within and around the community in order to provide visual relief from the urban landscape, preserve “food sheds” and important vistas, and/or retain separation from other communities (see also CD1A2, CD3A1a, LU 7B1, PR2B2d, PR2B8 and TR4D)**

- 1 Consider opportunities to retain agricultural cropland in acknowledgment of the community’s heritage to help meet this strategy
  - a Pursue agricultural/conservation easements that offer value for forgone surface development as a tool to conserve cropland as an open land area
  - b Catalogue those farms purchased as part of the City’s Water Department “dry up” farmland acquisitions for possible use in the open lands inventory to meet this objective (see also CD1A2a and LU7D1)

**FOOD SHED** – the system that describes the flow of food used to feed a particular area, starting with the origins of the food, its destination, and transportation to the destination.