3 Environmental Resources

This chapter includes an outline of the guiding principles for environmental resources, a discussion of environmental resource features and a long range planning and implementation approach with associated strategies, entitled "The Greenprint Challenge."

Introduction

Lancaster County is characterized by flat and rolling plains, sloping toward the east from a high elevation of 1,520 feet in the southwest, to its lowest point of 1,080 feet where Salt Creek exits the northeastern portion of the county. The Salt Creek basin defines most of the County's topography, with portions of the Middle Big Blue (southwest), Big Nemaha (southeast) and Little Nemaha (east) basins also entering the County borders.

Surface water flows in over 400 miles of warm water streams over the gentle slope, contributing to numerous ponds and lakes, including 16 major lakes between 20 and 1,800 acres each, most built in the 1960s by the Army Corps of Engineers. These lakes provide recreation and habitat to the people and animals of Lancaster County. Surface water is susceptible to pollution in the form of sedimentation and contamination from runoff. Fertilizers and sediment are the most common water quality problems in the County's streams and lakes. Agriculture, construction, and urban runoff are the primary sources of pollution. The *Watershed Management* division of Public Works and Utilities and the *Lower Platte South Natural Resource District (NRD)* partner to design management plans

In this Chapter

Introduction 3.1
Guiding Principles 3.3
The Greenprint Challenge: Overview 3.4
Environmental Resource Features and Strategies 3.6
Local Food 3.11
Greenways and Open Spaces 3.12
Unique Features 3.16

LPlan 2040 Vision for Environmental Stewardship

"LPlan 2040 commits Lincoln and Lancaster County to sustainable growth through preservation of unique and sensitive habitats, and the encouragement of creative integration of natural systems into developments."

LPlan 2040 Vision & Plan

that address both the quantity and quality of surface water.

Wildlife includes white-tailed deer, a wide variety of song birds, ground birds, and small mammals, migrating and resident water fowl, and a variety of fish species. Large mammals include predators such as fox, coyote, and bobcats. Many species such as raccoon, squirrel, and opossum are commonly seen in both urban and rural areas. Lancaster County is also home to several State and Federal threatened and endangered species which are discussed later in this chapter.

Ground water seeps into the ground and collects, is stored, and moves slowly through layers of soil. Groundwater is almost exclusively the source of drinking water in Lancaster County. Generally groundwater quality and quantity is higher in the southern portions of the County. Residential, agricultural, and industrial users outside the urbanized area obtain about 25% of the water used in the Dakota aquifer beneath Lancaster County. High salinity in the northern part of the county makes groundwater more difficult to acquire. Groundwater contamination includes infiltration of agricultural chemicals into supplies. Small areas of contamination, mostly in the urban area, have also been identified. The Lower Platte South NRD, Nebraska Department of Environmental Quality and other public and private non-profit entities work together in programs to cap abandoned wells, protect wellhead areas, and educate the public on proper use and disposal of potential contaminants.

The soils of Lancaster County are intimately tied to groundwater. Soils are widely varied in the County with the most common being the Sharpsburg, Wymore, Pawnee, Judson, and Kennebec soil series. Generally, soils north of Lincoln show higher infiltration rates, are able to hold more water, and are more likely to be saline. Soils to the south have slower infiltration rates and higher run-off potential. Soil erosion is a primary concern as agricultural production forms a major economic base for Lincoln and Lancaster County. Thirty-one percent of soils in the non-urbanized areas of Lancaster County are classified as Prime Farmland and are located primarily along streams and bottomland.

Air quality in Lancaster County has historically been high. Lancaster County benefits from prevailing westerly winds and an extensive rural landscape between Lincoln and Denver, CO. The level of air pollution as measured against standards set by the US Environmental Protection Agency is low. The *Lincoln – Lancaster County Health Department* conducts regular air quality monitoring activities and provides up to date information on their website.

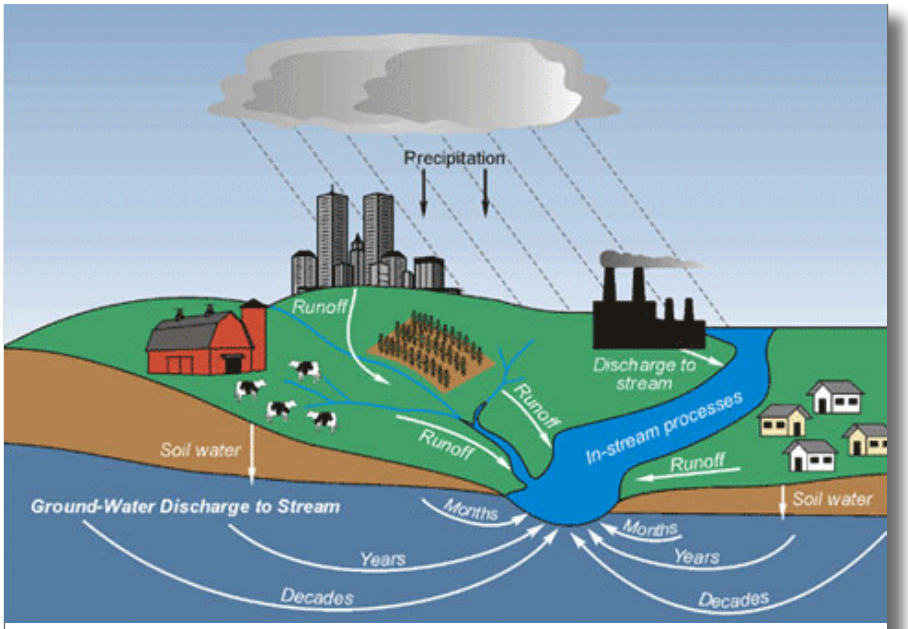


Figure 3.1: Model of the Water Cycle

Guiding Principles

Maintain the Richness and Diversity of the County's Urban and Rural Environments

- Lancaster County boasts a diverse set of environmental resources and landscape types that should be respected and maintained.
- Lancaster County is home to a distinctive association of threatened and endangered species of plants and animals that represents a highly valued environmental legacy.
- Environmental resources reside within a broad range of settings that should be considered as policy and development decisions are made.

Be Broadly Inclusive

- The impact of the actions taken by the community extend beyond the borders of Lancaster County, and oftentimes influence the natural resource features of adjacent counties, states, nations, and the world.
- Urban and rural areas should receive equal priority in the planning process as the natural resource features are found throughout Lancaster County.
- Public-private alliances and partnerships should be built upon, with an emphasis on the natural resource features rather than the patterns of ownership or land use on which the features exist.
- The community should capitalize upon both the environmental and economic benefits that the natural resource features provide.
- Well managed environmental resources generate and reinforce business opportunities.

Focus Attention on Unique Landscapes

- Signature landscapes provide visual images of the community's natural and cultural history and serve as a reminder of the ecosystem that forms the community's urban and rural economic base.
- Signature landscapes will require thoughtful management if their long term viability is to be ensured.

Seek Early Identification of Areas to be Preserved

- While planning for future growth is integral to LPlan 2040, it is equally important that environmental resource features be accorded similar attention. The community should invest planning resources into the early identification of those areas that are most valued as part of the Greenprint Challenge. This principle supports the notion of "getting ahead of the game" by knowing what resources are most valued, where they are located, and what actions should be made within the broader planning process to secure their future for the community.

Obtain Reasonably Constrained Regulations

- Maintaining a balance between the natural and human built environment is always a delicate one. Planning policy and regulatory approaches employed in achieving the Plan's Vision and Greenprint Challenge should strive to be effective, tempered, pragmatic, circumscribed, and respectful of private property rights.

Well managed environmental resources generate and reinforce business opportunities.

Provide Biological Interconnection

- Plants and animals do not exist in isolation. They interact with each other and reside within an integrated habitat. Implementation of LPlan 2040 needs to respect biological connections that exist today and provide responsive means for maintaining those associations.

Promote Diversity of Vegetation

- Plants are a basic environmental building block. They provide habitat and food for animals, as well as aid in sustaining other vegetation that holds the soil and protects water quality. Maintaining a diverse range of plants ultimately supports a healthier environment for all plants and animals.

Make "Green Space" an Integral Part of All Environments

- "Green space" can come in a wide variety of forms. The policies of LPlan 2040 should strive to incorporate such uses in the full range of urban and rural landscapes.

Prevent the Creation of a "Wall-to-Wall City" through the Use of Green Space Partitions

- As cities and villages expand, establishing corridors and districts of green should be part of the growth process. This often requires the advance delineation of these areas and the means for securing their ongoing protection and maintenance.

Establish Effective Incentives for Natural Resource Feature Preservation

- Securing the long term permanence of green space is a basic dilemma in natural resources planning. The use of "green space development incentives" (e.g., setting aside non-buildable areas, creating green space preserves, density bonuses) should be a primary consideration in implementing this Plan.

The Greenprint Challenge: Overview

In 2001 the City of Lincoln and Lancaster County Planning Department, in close cooperation with the Lincoln Parks and Recreation Department and the Lower Platte South Natural Resource District, initiated the development of a "Greenprint" for Lancaster County: a vision and detailed model for how natural and cultural features can be effectively maintained and can exist harmoniously with economic vitality and community growth. Through extensive participation of the University of Nebraska-Lincoln faculty and staff from the Nebraska Game and Parks Commission, the *Greenprint Challenge* was formed.

The purpose of the Greenprint Challenge is to assure the long term health and integrity of the ecosystem upon which Lancaster County is superimposed, and to capture the community-wide quality of life and economic benefits that can be derived from the area's environmental resource features. The "Challenge" reflects a demanding character associated with pursuing a truly broad community vision requiring marshaling of public and private forces based upon the prospects of long-term results.

Proper land use planning and plan implementation can aid in maintaining a healthy natural environment. While ultimately focusing on three "Core Resource Imperatives" — Saline and Freshwater Wetlands; Native Prairies; and Riparian,

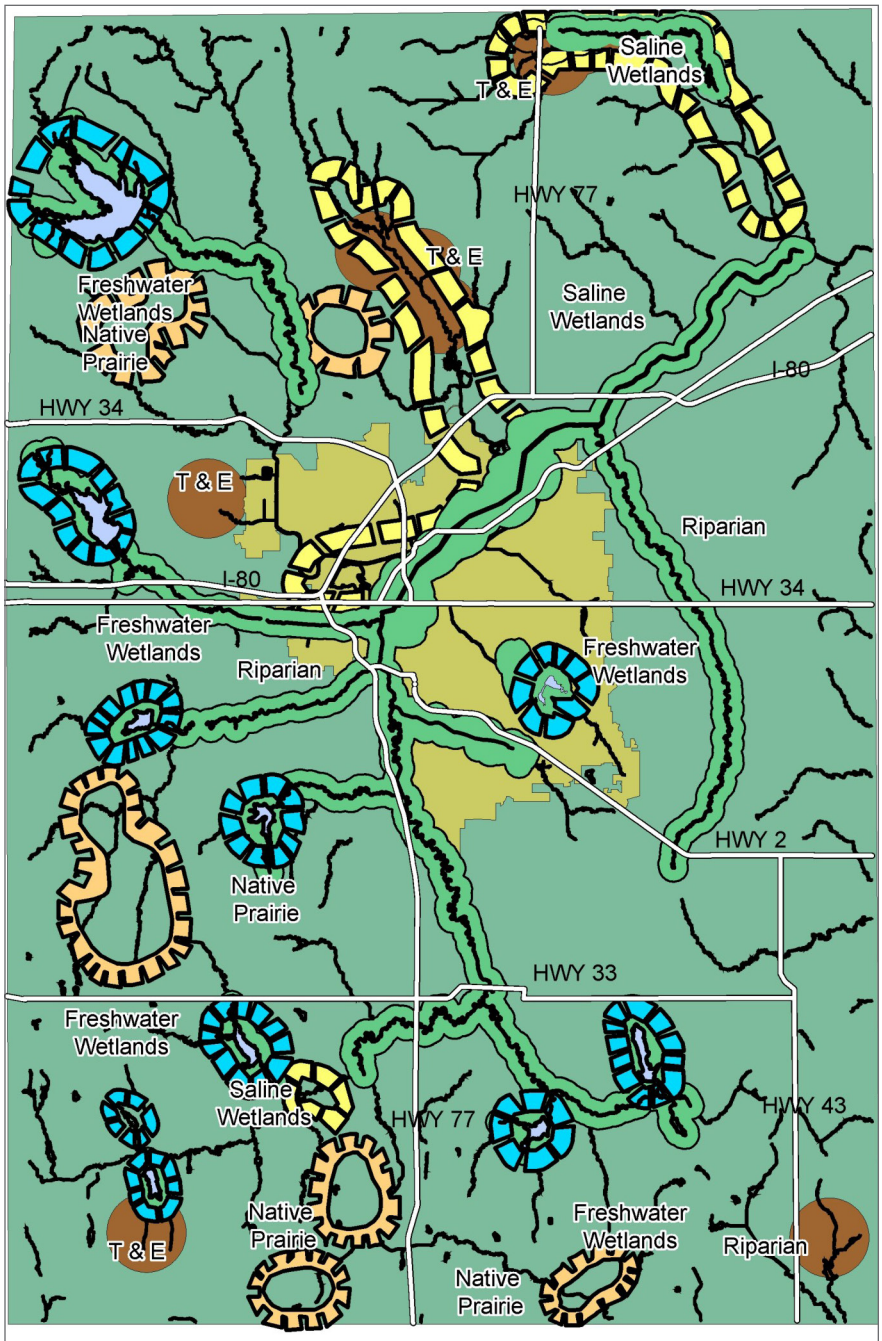
Floodplains and Stream Corridors — the Greenprint Challenge offers a basis within which crucial planning decisions concerning the wide range of environmental resource features can be effectively pursued. The Greenprint Challenge Composite Map highlights these Core Resource Imperatives together with Threatened and Endangered ("T & E") species.

Greenprint Challenge Implementation

The Greenprint Challenge Report, August, 2001, includes several implementation concepts to guide the completion of the natural resource feature strategies listed above. Many of these implementation concepts have been followed in the development of this and previous plans. Some are still yet to be accomplished. As future plans are developed, the Greenprint Challenge will continue to act as a guidepost in the process.

Implementation Strategies for the Greenprint Challenge

- Integrate the natural resource feature concepts into future planning activities such as zoning and subdivision review, watershed master planning, subarea planning, transportation and utility planning, and floodplain management studies.
- Pursue a variety of funding and financing options on a continuing basis. These may include establishment of a land trust to enable donations of land, capital improvements programming providing for further acquisition of park property and natural areas, and grant funding from such sources as the Land and Water Conservation Fund, various floodplain and water quality funding programs, and the Nebraska Environmental Trust.
- Conduct outreach efforts bringing together private land owners, environmental interests, and the development community to seek a common understanding and approach regarding natural resource features and the vision described in this Plan.
- Identify and foster partnerships to maintain and operate parks, recreation programs and natural areas in the county. This structure may involve



Map 3.1: Greenprint Challenge Composite Map

existing agencies, reflecting a modification in current responsibilities and authorities. The entity should have clear responsibility to act both inside and outside the City of Lincoln and its extra-territorial limits.

Environmental Resource Features and Strategies

As an LPlan 2040 land use category, "environmental resources" represent an important part of today's urban and rural landscapes. Such features need to be valued and sustained as part of the overall planning process if they are to remain as vital parts of the natural heritage left for succeeding generations. These features help to define the County's unique sense of place — geographically, culturally, and temporally. The Plan fully recognizes the harmony and connections that exist within and among these features.

Thirteen separate environmental resource features are recognized in the Plan. The Greenprint Challenge map displays generalized locations within the county in which these resources categories may be found. For a more detailed map, the *Natural Resources Geographic Information System (NRGIS)* map can be accessed, and categories can be toggled off and on to view their location. A brief description of each of the Plan's environmental resource features and specific strategies for protecting these features is provided below.

Native Prairie

This feature refers to the tallgrass prairie areas that are dominated by big bluestem, little bluestem, indiangrass, and sideoats grama grass species. Numerous wildflowers and forbs are also found in these prairies, including golden rod, purple coneflower, purple prairie clover, and black-eyed susan. Though historically they were the region's prevailing natural condition, native prairies are an increasingly rare feature on the Nebraska landscape. Lancaster County is fortunate to have about 8,640 acres of native prairie remaining, mainly in the west central portion of the county, although they are scattered throughout the county in patches of land that must remain whole if their integrity as a natural resource feature is to continue. Nine Mile Prairie, Pioneers Park and Spring Creek Prairie are three of the larger massings of native grasslands in the county.

Strategies for Native Prairie

- Develop planning guidelines, management techniques and supporting policies for preserving native prairies and grassland. For example, these areas remain healthiest when periodic burning is done to support plant regeneration. Notification to adjacent property owners of possible burnings and smoke occurrences must occur as title to property changes. Research into such issues should examine how the implementation of necessary management guidelines can best occur; particularly options for balancing the inherent needs of natural resources features (such as grasslands) with those of surrounding properties.
- Acquire buffer areas around prairies and other natural areas for management and resource protection.
- Investigate means for encouraging native prairie restoration by private entities.
- Utilize the University of Nebraska Center for Grassland Studies in assessing alternatives for grassland preservation and restoration.
- Resurvey and update the County's prairie and grassland inventory for inclusion in the Natural Resources Geographic Information Systems (NRGIS).

Freshwater Wetlands

This feature refers to areas that have hydric (i.e., water-bearing) soils, are frequently if not regularly moist, and are home to water tolerant plants. These types of wetlands are distinguished from "saline wetlands" by the lack of salt in the water that keep them wet. Freshwater wetlands are more prevalent in the county than are saline wetlands; however, they provide important water quality and habitat functions. The use of many freshwater and saline wetlands are regulated under Section 404 of the Federal Clean Water Act.

Strategies for Freshwater Wetlands

- Pursue stormwater management practices that consider both water quality and quantity approaches near freshwater wetlands. Buffer areas should be encouraged at their perimeters to decrease the effects of adjacent future uses.

Saline Wetlands

This feature refers to those locations in the county where wetlands having a high salt content can be found. These wetlands played a large part in the founding of Lancaster County, as settlers were attracted by the salt deposits. Saline wetlands have four distinguishing characteristics: a type of soil usually associated with damp or soggy areas; the presence of water during most of the year; a high occurrence of saline (otherwise known as salt); and plants that are adapted to wet, salty soils. Eastern Nebraska saline wetlands are rare, with perhaps 1,400 acres remaining in the county. They tend to be found along Little Salt Creek and Rock Creek to the north and northeast of Lincoln. They provide habitat to a number of threatened and endangered species of plants and animals — the Salt Creek tiger beetle and the saltwort plant in particular.

The Saline Wetlands Conservation Partnership (SWCP) was established in 2002. The partners include the City of Lincoln, Lancaster County, Lower Platte South Natural Resources District, the Nebraska Game and Parks Commission, and the Nature Conservancy.

The *Implementation Plan for the Conservation of Nebraska's Eastern Saline Wetlands* was completed in 2003. This plan seeks a partnership approach to address the conservation of saline wetlands and the needs of the community. The goal is "No net loss of saline wetlands and their associated functions with a long-term gain in sustaining wetland functions through the restoration of hydrology, prescribed wetland management, and watershed protection."

Strategies for Saline Wetlands

- Continue the efforts of the Saline Wetlands Conservation Partnership to execute the Implementation Plan for the Conservation of Nebraska's Eastern Saline Wetlands.
- Provide appropriate incentives — in addition to regulatory mechanisms such as the Federal Section 404 process — to encourage landowners to preserve saline and freshwater wetlands. Incentives to be used or considered further include:
  - Special density credits or bonuses within a Community Unit Plan for wetland conservation.
  - Transfer of development rights.
  - Utilize these areas for wetland bank mitigation.
  - Technical assistance for wetland preservation and enhancement.
  - Conservation easements with tax incentives.
  - Fee simple purchase of land for preservation.
- Research and seek implementation of procedures for managing lands containing and

near to saline wetlands. It would be desirable for this research to be conducted at the watershed level to provide a broad perspective of how area-wide development will interact with this natural resource. A special treatment buffer along the perimeter of saline wetlands could reduce the impact of increased runoff, sedimentation, and other pollutants. Such buffers could also serve to provide support for the preservation of habitat areas for the county's threatened and endangered species.

Threatened and Endangered Species

This feature refers to those plant and animal species whose continued existence have been identified by Federal and/or State officials as being threatened or endangered. In Lancaster County these include the Salt Creek tiger beetle (State and Federal Endangered), Western Prairie Fringed Orchid (State and Federal Threatened), Saltwort or Western Glasswort (State Endangered), Least Bittern (State Threatened), and the Massasauga Rattle Snake (State Threatened). Other vulnerable species having habitat or that have historically been found in Lancaster County include the Bald Eagle (State and Federal Threatened), River Otter (State Threatened), Small White Lady's Finger Orchid (State Threatened), Topeka Shiner (State and Federal Endangered), and American Burying Beetle (State and Federal Threatened).

A final rule designating critical habitat for the Salt Creek tiger beetle was made in 2010, and a recovery outline was completed by the U.S. Fish and Wildlife Service. The Nebraska Game and Parks Commission is initiating a Habitat Conservation Plan for the Salt Creek tiger beetle with a completion goal of 2013.

Strategies for Threatened and Endangered Species

- In conjunction with the Habitat Conservation Plan research continues into the conservation of Nebraska's eastern saline wetlands, which will enhance Salt Creek tiger beetle habitat. This will continue to include authorizing or soliciting funding for hydrology or hydrogeology research of the habitat area, determining basin-wide impacts of land use and human activities on the wetlands, characterizing the tiger beetle's biology and habitat, and assessing the economic impacts of potential management efforts.
- Continue cooperation between public and private entities to protect habitat for threatened and endangered species. Current efforts include those of the Saline Wetlands Conservation Partnership, the USDA Natural Resource Conservation Service, the Nature Conservancy, Nebraska Audubon, and others.
- Landowners with saline wetlands and within the 500-foot buffer zones should be offered assistance concerning programs to preserve and protect wetlands and transition lands occurring on private property.
- Continue to investigate incentives allowing land owners to pursue voluntary purchases, conservation easements, transfer of development right (TDR) or other similar preservation options.
- Continue to explore grant opportunities for saline wetland preservation and enhancement.
- Continue the public education effort to raise awareness of the Salt Creek tiger beetle and its unique habitat.

Basins and Streams

This feature refers to the region's watersheds and the waterways they produce. These areas are demarcated by ridge lines that define the top of each basin. The majority of the county falls within the Salt Creek Basin with its numerous tributaries to Salt Creek forming smaller watersheds or sub-basins. A portion of the county in the extreme southeast also drains to the Nemaha River Basin The Watershed Management section of the *"Energy & Utilities"* chapter further describes the Salt Creek and associated sub-basins and the management plans being created for them.

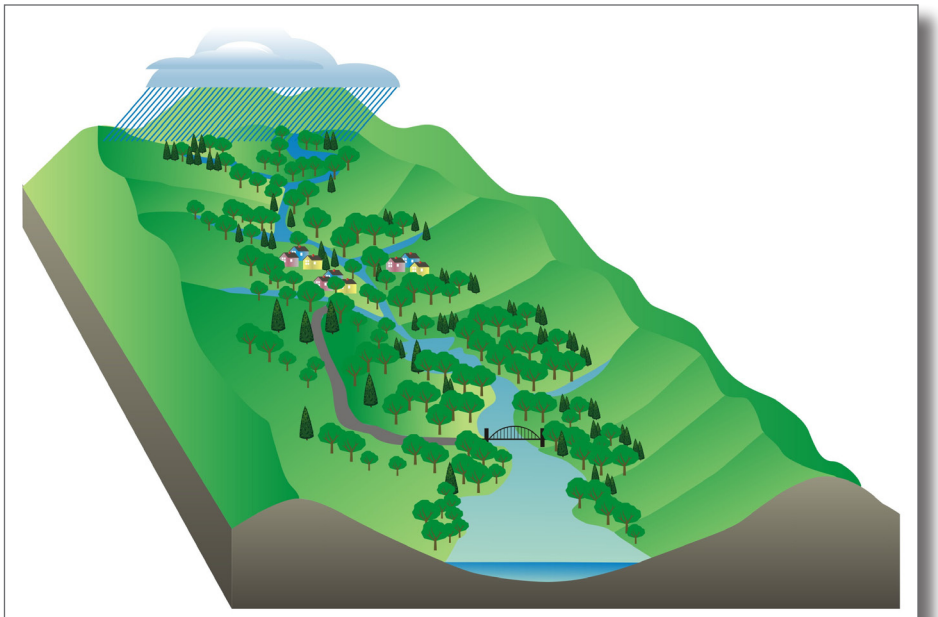


Figure 3.2: Watershed showing the area that drains into a stream or river

Floodplains

This feature refers to land that is susceptible to flooding or that has flood prone soils. Approximately 13.8% of Lancaster County is covered by floodplains. Floodplains provide multiple benefits to both the natural (flood storage, habitat, water quality) and built (recreation, public health and safety, economic) environments. The overriding policy for the floodplain is a "No Adverse Impact" policy for the City and County, which means that the community has a goal of insuring that the action of one property owner does not adversely impact the flooding risk for other properties.

Further discussion of floodplain and stormwater management considerations and strategies can be found in the Watershed Management section of the *"Energy & Utilities"* chapter.

Strategies for Floodplains

- Designate areas for future urban development outside of the floodplain and floodway.
- Preserve and enhance vegetative buffers along stream corridors and other natural functions of the floodplain.
- Implement a "*Rain to Recreation*" watershed approach to reduce flood damages, protect water quality and natural areas, while providing for recreational and educational opportunities so as to realize multiple benefits.

Approximately 13.8% of Lancaster County is covered by floodplains.

Riparian Areas

This feature refers to spaces immediately adjacent to water courses on each side of a stream. They are most often located in the floodplain. They frequently contain a large amount of woody vegetation. Riparian areas can serve as linear connections between natural and built areas, as well as boundaries and edges to a variety of adjacent land uses. They offer numerous benefits including flood storage, stormwater conveyance, wildlife habitat, recreation, visual appeal, and shaded areas.

Strategies for Riparian Areas

- Buffer areas should be sought along stream corridors with significant natural values worthy of continued preservation, and/or to decrease impacts from adjacent future land uses; considerations may include natural areas protection and/or stormwater management.

Parks, Trail Corridors and Other Recreational Areas

While LPlan 2040 recognizes parks, trails, and recreational areas as a separate, distinctive land use category, they are an important part of the overall county's natural resource base. They include a diverse collection of sites and facilities owned, managed, and maintained by public entities and accessible to the general community. They accommodate a variety of recreational uses including passive and active recreation, hunting, fishing, and boating. Further discussion of specific greenways and corridors follows in this chapter. The County Trails map can be viewed in the *"Transportation"* chapter of this plan. For continued discussion on other parks and recreation facilities, please see the *"Parks, Recreation & Open Space"* chapter.

Strategies for Parks, Trail Corridors and Other Recreational Areas

- Pursue the active coordination of all future trail network extensions and enhancements. The urban network of trails should connect employment centers, shopping areas, schools, and residential neighborhoods. Trails should be an integral part of the community's green spaces and corridors. (See *"Transportation"* chapter)
- Seek establishment of trail easements or comparable options along selected county roads. (See *"Transportation"* chapter of the Plan.)
- Monitor rail lines which may be abandoned in the future for acquisition as trails as part of an overall open space and recreation system for the county.
- Seek opportunities to incorporate scenic views, corridors and natural areas into parks, trails, and other recreational facilities.

Urban Forest

This feature refers to the trees and other woody plants that have been planted or grow naturally within the communities in Lancaster County. Though many may not consider the urban forest to be part of the natural environment, it represents a significant community investment — exemplified in Lincoln being a "Tree City" — with its elimination or neglect having substantially detrimental consequences. The urban forest is more thoroughly discussed in the *"Parks, Recreation & Open Space"* chapter.

Strategies for the Urban Forest

- Further the continued development of the urban forest through design standards and other current planning mechanisms.

Woodlands

This feature refers to the County's natural wooded areas, especially those exhibiting bur oak/hickory associations. Woodlands in this context exclude the numerous stands of tress dominated by elm species, red cedar, mulberry, etc. This feature is also distinct from the riparian areas discussed earlier in this chapter.

Strategies for Woodlands

- Preserve existing tree masses as much as possible by integrating them into future development plans.

Agricultural Lands

This feature refers to land — about 78.5 percent of the county — utilized for growing crops, raising livestock, or producing other agricultural products. Though agricultural activity is identified as a separate land use category in LPlan 2040, agricultural land does constitute a distinctive natural resource feature as well. These lands are an integral element in the natural landscape providing habitat as well as being a basic element of the County's historic signature landscape. More information about agricultural areas can be found in the *"Neighborhoods & Housing"* chapter of this Plan.

Strategies for Agricultural Lands

- Preserve agricultural land within the Tier I and Tier II areas, both to reduce conflicts in the future growth of Lincoln and to ensure available land for the production of food products that are important to the health and economic vitality of the community.

Cultural and Historic Landscapes

This feature refers to places that are significant because of their unique character, because significant activities or events occurred at those sites, or because persons who have had a significant impact on culture are associated with the sites. Cultural and historic landscapes are also considered in the *"Placemaking"* chapter, because they individually and collectively add value to the community's sense of place and hold an important place in affirming memorable images of the County's heritage. Further discussion of cultural and historic resources can be found in the *"Placemaking"* chapter.

Strategies for Cultural and Historic Landscapes

- Document historic, cultural and archeological sites throughout the city and county.

Views and Vistas

This feature refers to important or unique natural resources, places, structures, and landmarks. The views of these features can be from nearby or afar. Vistas refer to areas that afford significant views. Views and vistas, such as those to the State Capitol, provide key points of reference and help create the County's signature landscape. The Capitol View Corridors are also more thoroughly described in the *"Placemaking"* chapter.

Strategies for Views and Vistas

- Investigate the availability for preservation of several locations in the county that offer distinguished views and vistas. These could be acquired through fee simple title or easements. Many of these locations may be appropriate for public ownership as future parks or open space. Efforts should be made to acquire these parcels should they become available.

Local Food

A topic that has become increasingly important since the Greenprint Challenge was developed is that of local foods. The local food movement was born of a desire to provide a secure source of nutritious food that has a reduced impact on the environment and increased benefit to the health of consumers. Many urban areas have few sources of fresh produce, meats and dairy products; and many consumers must rely upon convenience foods and fast food restaurants. Food that is transported over great distances, sometimes from other

continents, consumes a great deal of energy in that transport and produces a corresponding amount of greenhouse gases.

Production of food closer to the urban center, if not within it, reduces the distance food must be transported, increases the freshness of food available, supports the local agricultural economy, and provides nutritious food to those who might not otherwise be able to obtain it.

Local food may be produced in the rural area of the county, or counties nearby; or it may also be produced within the urban area itself. In any case, the preservation of land for food production both nearby and within the city is integral to local food opportunities. Prime farmland within the county should be preserved for its agricultural value as well as potential for food production. Within the city, community gardens, bee keeping, chicken coops, farmer's markets and local cooperative markets are all important links in the local food chain.

Building a strong local food network takes the cooperation of both public and private sectors. Organizations such as Community Crops, Nebraska Food Cooperative and the University of Nebraska Extension Service have been at the forefront in the provision of local food program support.

Strategies for Local Food

- Continue to promote the preservation of prime farmland in the rural areas of the county.
- Continue to promote public-private partnerships that build stronger food networks and promote urban agriculture.
- Promote more community gardens.
- Allow community gardens in all zoning districts at appropriate locations and with appropriate standards.
- Encourage backyard gardens, edible landscaping and urban orchards.
- Provide the opportunity for community garden space on public land such as in public parks and rights-of-way.
- Encourage increased points of sale of local foods.

Greenways and Open Spaces

Open space and greenway linkages form systems of land preserved in an undeveloped state, often due to unique natural attributes such as floodplains and associated riparian areas, saline and freshwater wetlands, and native prairies. The local and regional commuter and recreational trail system is often integrated with greenway linkages.

The geography of Lancaster County presents unique opportunities for creating open space and greenway linkages that can connect neighborhoods as well as rural and urban areas, while creating buffers that provide relief from a wall-to-wall city. The Salt Valley drainage basin which dominates the county and wraps around the City of Lincoln, is fed by numerous tributaries that radiate out into the surrounding rolling hills. The effect is that of a large loop primarily made up of Salt Creek and Stevens Creek, with tributary tendrils both uniting and separating areas of urban, residential and agricultural development.

This loop comprises the Salt Valley Greenway, which is envisioned to be accomplished through conservation easements and fee simple acquisition of selected sites with unique environmental features or recreational opportunities. This can include parks and open space, trails, both active and resource-based recreation, riparian and stream corridors, floodplains, threatened and endangered species habitat, saline and freshwater wetlands,

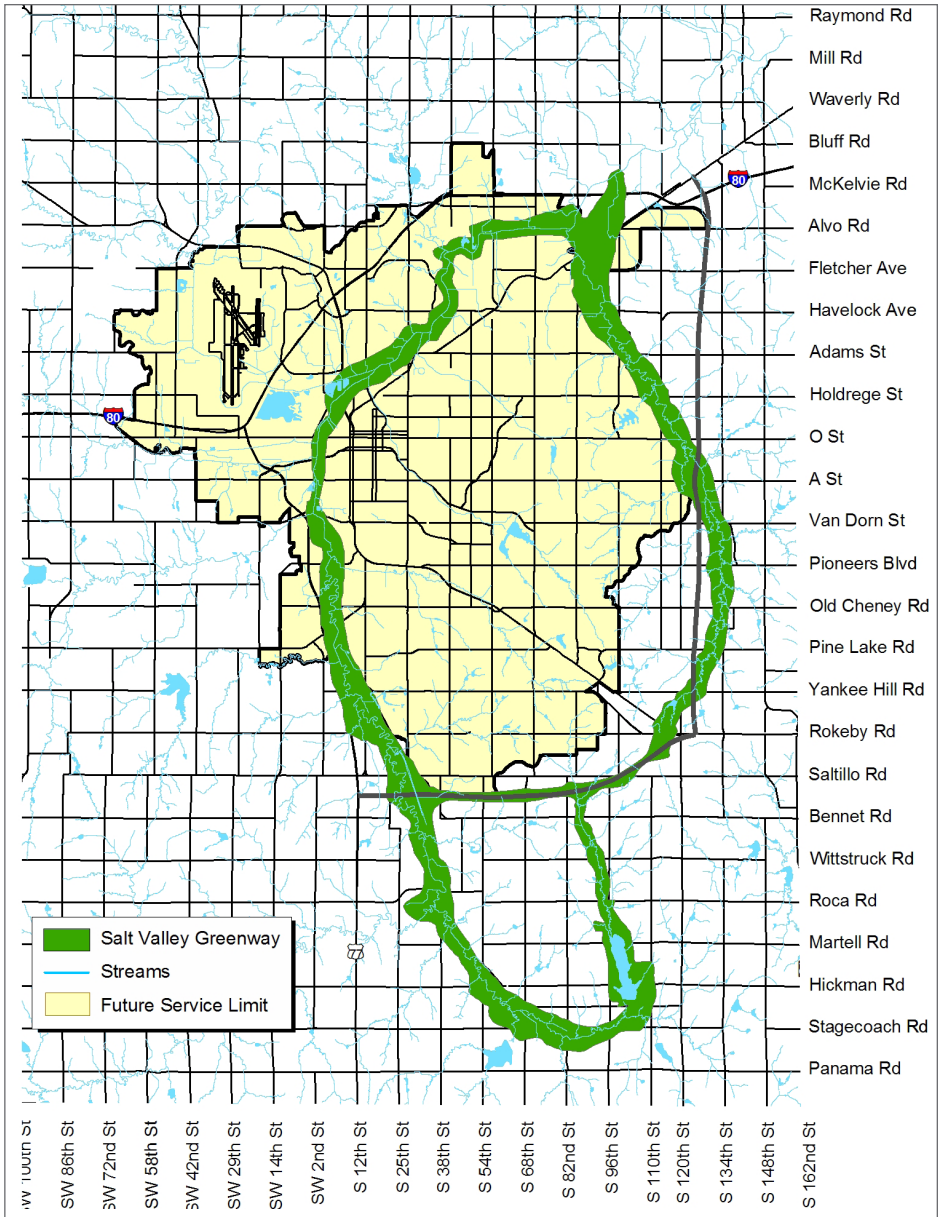
agricultural land, signature landscapes, wildlife corridors, lakes and streams, abandoned rail lines, and transportation corridors. The Greenway may be as narrow as a few hundred feet in some places to as wide as a mile around state recreation areas.

The Salt Valley Greenway includes the previously identified "Crescent Green" linear greenway along Salt Creek beginning on the north and then proceeding along Salt Creek on the west, including Wilderness Park. It follows the Salt Creek floodplain south of Wilderness Park, connecting with the community of Roca and continuing south to the city of Hickman. From Hickman, the corridor proceeds east to Wagon Train Lake tributary and follows the linear open space along the planned South Beltway east before turning north along the Stevens Creek floodplain. At the north end, the Greenway connects back in with Salt Creek including saline wetlands, Salt Creek tiger beetle habitat and the Crescent Green Corridor on the north, forming a continuous open space system.

The Salt Valley Greenway is important for recreation, transportation, environmental resource preservation, education, and economic development among other benefits. The opportunity to tie together multiple environmental and recreational resources would create a facility that is unique in the region and could be a platform for multiple community events attracting visitors from all over the region.

The Salt Valley Greenway would provide connectivity with current and future green corridors that extend out from Lincoln such as the MoPac Trail corridor, Murdock Trail corridor, Antelope Valley, Dietrich Bikeway, and Billy Wolff Trail Corridor. It would provide a destination for additional trails as Lincoln continues to grow. The Greenway would also provide access to green corridors that then would extend out into the county to State Recreation Areas (SRA) and natural resource areas and beyond including the following:

- Prairie Corridor on Haines Branch corridor to Conestoga SRA and Spring Creek Prairie.
- Cardwell Branch corridor to Yankee Hill SRA.
- Middle Creek corridor to Pawnee SRA.



Map 3.2: Salt Valley Greenway

- Salt Creek corridor to Killdeer and Bluestem SRA.
- Oak Creek corridor to Branched Oak Lake.
- Salt Creek corridor east and up the Little Salt Creek and Rock Creek corridor.

The Salt Valley Greenway would provide connectivity with the Homestead Trail that goes to Beatrice and south to Kansas. It would connect with additional rail lines that are acquired for trails in the future.

Strategies: General

- Use the Salt Valley Greenway concept to embody LPlan 2040's Vision and environmental resource guiding principles.
- Develop a strategic plan for acquiring and conserving lands within the Salt Valley Greenway corridor through cooperative efforts of public agencies, private organizations, and individuals.
- Prepare and distribute information to community residents regarding the functions and value of the Salt Valley Greenway, and of the plans for its creation.
- Identify and pursue funding sources for the acquisition of significant properties forming the Greenway.
- Coordinate the planning of the Salt Valley Greenway with county-wide trails planning and any other relevant on-going planning activities.
- Encourage the development of a public-private partnership that will concentrate efforts on further planning, funding, land acquisition, and development of the Salt Valley Greenway. This should be viewed as a local natural resource as well as a major economic development program.
- Continue to use conservation easements to protect greenway areas where it may be desirable to allow compatible land uses such as row crop farming or pasturing.
- Use of fee simple title may be more appropriate for areas that are best maintained in a natural state due to particularly sensitive features such as rare or sensitive areas, or that have value for resource-based recreation like hiking, interpretive activities, and wildlife viewing.
- Continue to develop a county-wide open space plan as identified on the Parks Master Plan Map.
- Encourage the retention of linear connections of green spaces wherever possible. Efforts should be made to preserve small stream corridors throughout future developments.
- Pursue greenways connecting urban and rural areas. Such corridors should follow stream courses and connect valuable natural resource areas.
- Ensure that as greenways and open space corridors are identified and created, provisions are made for possible future access points across these areas. This may include, but not be limited to, access for new road alignments, road widenings, utilities, and other similar services.

Crescent Green

The concept of a linear greenway along Salt Creek as it runs through the Lincoln urban area has been in the City's Comprehensive Plan since 1961. The name "Crescent Green" was first used in 1964 as part of an architectural design class. A plan formally describing a "Crescent Green Park" was prepared by the firm of Clark & Enersen in 1977. This plan called for a park to be created along Salt Creek from Wilderness Park north to the city's former landfill near North 56th and Fletcher .

Strategies: Prairie Corridor on Haines Branch

- Continue the Pioneers Park trail network along Haines Branch to connect with Conestoga Lake and then continue south by the Village of Denton and on to Spring Creek Prairie Audubon Center. These connections would form a corridor encompassing over 2,000 acres of native prairie and two premier prairie education centers

– Pioneers Park Nature Center and Spring Creek Prairie Audubon Center.

Strategies: Stevens Creek Basin Link

- Seek the early acquisition (or the application of other management techniques) of land along Stevens Creek and within the Stevens Creek Basin for future greenways, open space and park uses. Examine possible park and open space potential around Walton where the MoPac and future Stevens Creek Trails will connect.
- Use the Stevens Creek Watershed Master Plan as a guide for identification of areas of opportunity.

Strategies: Crescent Green Link

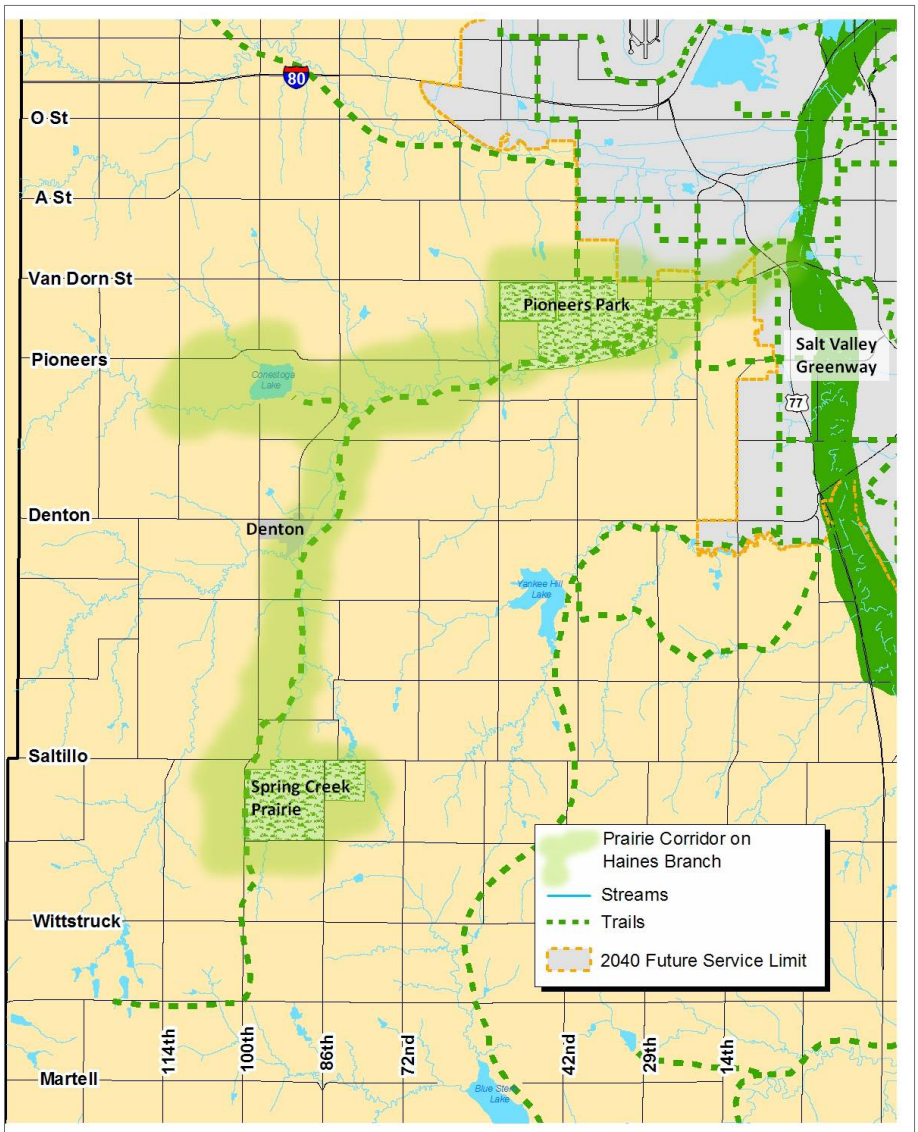
- Continue development of the "Crescent Green" concept to provide a continuous greenway and open space corridor around the west and northern part of Lincoln.

Strategies: South and East Beltway Links

- Explore alternatives for creating a greenway corridor along the South and East Beltways. This work would occur as the more detailed planning of those facilities takes place. The activities could range from park-like areas existing today along Interstate 180 and Highway 2 in Lincoln, to more riparian settings as are found in Wilderness Park and the Crescent Green areas. The corridor could connect with historic and cultural assets, regional and community parks, lakes, and other recreational areas. It could also provide potential habitat and corridors for animal movement.

Strategies: I-80 Corridor (N. 27th to Waverly)

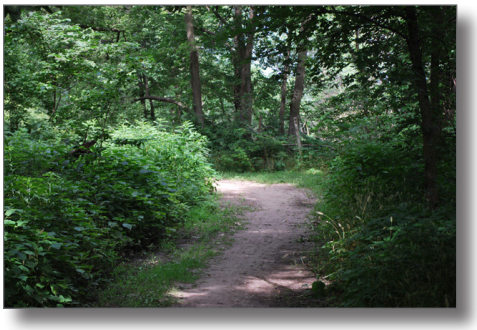
- Continue the advancement of the greenway corridor along Interstate 80, between North 27th Street and the City of Waverly. This corridor already includes a number of wetland areas (both saline and fresh water) that are under public ownership – City of Lincoln and the Lower Platte South Natural Resources District in particular. The corridor contains the Warner Wetlands and the City's wetlands mitigation bank. The area is a major entryway into the City of Lincoln and provides associated trail and open space opportunities.



Map 3.3: Prairie Corridor on Haines Branch

Strategies: Salt Creek South/ Wilderness Park Link

- Pursue the acquisition of additional greenway south from Saltillo Road along Salt Creek. This future greenway should generally follow the 100-year floodplain along Salt Creek, and incorporate the right-of-way of the abandoned Union Pacific rail line. This area could eventually connect a network of trails that would extend into northern Kansas. This extension may be accomplished through a combination of land purchases, conservation easements, donations, and other options.



- Work with other incorporated communities within the county — notably Roca and Hickman – to coordinate the Greenway's extension.

Strategies: Little Salt Creek and Rock Creek Saline Wetlands

- Continue the efforts along these stream corridors to conserve and enhance Nebraska's most limited and endangered wetland type, which provides habitat for a variety of native plant and animal species, including two endangered species. Link these important natural resource corridors to the Salt Valley Greenway via future county trails.

Unique Features

Inventory and pursue the preservation of unique features to provide special educational and interpretive opportunities. These include quarries and areas of geological significance, remnants of historic trails, unique bluffs near Bennet, the sandstone prairies, a small waterfall south of Denton, and historic pits and grasslands around Hickman and Roca.