Natural environment areas are of prime importance to the community. These aesthetic amenities enhance the quality of life in the area, contribute to the small-town character of the City, as well as perform important ecological roles. Natural areas often act as buffers or barriers in determining the extent and direction of development and growth. Therefore, it is necessary that special consideration be given to these areas in formulating Delano's 2040 Comprehensive Plan.

Environmentally sensitive areas include lands characterized by steep slopes or soil limitations, forested areas, wetlands, natural drainageways, and floodplains. The City has expressed particular interest in regard to the restoration of the Crow River as a community asset and greenway corridor, as well as a need to deal with the City's longstanding storm water drainage problems.

As the City continues to grow, there will be greater emphasis on efforts to compatibly integrate land uses and new development with the City's environmental amenities. With each petition for annexation the City requires the submission of site survey and resource inventory that identifies natural features of the site including topography, wetlands, woodlands. Along with the resource inventory, a conceptual development plan is required that illustrates how future development will be integrated with the natural features of the site. This information at time of annexation allows the City to direct development in a manner to achieve the City environmental goals.

SEVERE SOILS

Select areas of Delano contain soil that present severe limitations for urban development, due to high water tables, flooding potential, steep slopes, and poor drainage qualities. Past development in areas of poor soil have resulted in wet basements, poorly drained yards, and sewer system backu ps. Any development in areas exhibiting poor soil will require extensive soil corrections. To avoid the extensive costs associated with public improvements or private construction in areas of severe soil, the City will discourage development in these areas. If development within an area of poor soils cannot be avoided, the following efforts will be met:

1. Development proposals located in poor soil areas (as identified by the Wright County Soil Survey) will be required to field check soil conditions to verify the extent of poor soil.

2. Development in areas having poor soil will be required to demonstrate soil correction efforts and/or construction methods that will be implemented.

3. In soil areas having a high-water table, new principal buildings must be

three feet above the water table.

4. Foundation drain tiles will be required in areas characterized by poorly drained soils to reduce damage from basement flooding.

TOPOGRAPHY

Several isolated areas within the community exhibit steep slopes in excess of 12 percent. Areas of severe slopes present physical barriers that influence subdivision design, limit utility extensions, and restrict street development. To this extent, development in areas of steep slopes must be designed in a manner that integrates the proposed land use function with the natural topography. It is City policy that the preservation and maintenance of these slopes will be encouraged to retain their buffering and aesthetic values as well as to avoid potential erosion problems.

As a means of minimizing the land use and environmental impact of development requests in areas of steep slopes, the City requires an evaluation of the topography within development sites and proposed subdivisions as means of guiding site design to preserve areas of steep slopes. Factors to be considered include subdivision and site design, grading plans, street grades, lot grading, percentage of grade on driveways and parking lots, house pad elevations, storm water management, erosion and sediment control, and slope protection.

CROW RIVER / FLOODPLAIN

The South Fork of the Crow River which bisects the City is considered both an asset and a detriment to the community. The benefit of the river includes its role in a storm water drainage system, its natural aesthetic qualities, and potential as a recreational amenity. The negative aspects of the river deal with its floodplain.

The 100-year floodplain encompasses an extensive area of residential, commercial, and public land uses. Seasonal flooding places the City at risk of personal injury or property damage. Each Spring, the City mobilizes its flood emergency plan that prepares the City for high flood events. The local response to flood events taxes the City's personnel and financial resources.

The City has to worked toward reducing flood impacts within the City through its flood emergency plan, flood control improvements (i.e., floodwall, improved dikes, upstream ponding, expanded flood storage areas), removal of flood hazards, and prohibition of development in the FF2, Flood Fringe Districts. Each of these efforts is aimed at improving flood safety, reducing flood emergency response time, and reducing the overall cost of flood emergencies to the City.

The City will continue to pursue efforts to enhance the positive aspects of the river while mitigating or avoiding the problems of floodplain development. The efforts will include:

1. Riverside clean-up efforts through both voluntary efforts and code enforcement. River clean-up should focus on the pick-up and removal of discarded debris both along the riverbanks and within the river channel.

2. The City has taken extensive efforts to remove non-conforming structures and debris that encroached into the Crow River floodplain (Commercial buildings west of River Street, Granite Works industrial buildings and the large debris piles of waste granite and junk tied to the Granite Works operations.) Such structures and debris had encumbered the flow and capacity of the floodway and flood fringe areas and presented flood hazards.

3. As an element of the Delano Downtown redevelopment, the City has acquired and removed non-conforming buildings to create a river front linear park. Riverfront Park takes advantage of the river as an aesthetic amenity that complements and enhances the appearance of the downtown commercial core. This linear park design includes flood protection components that will allow for the quick assembly of a temporary floodwall along River Street to protect the Downtown area and to expedite City flood emergency efforts.

4. The City acquired the old Delano Granite Works site, mined, and removed the piles of granite debris, and junk from the site to expand the flood storage capacity in this area of the City. The City redeveloped portions of the Granite Works site as multiple family residential housing in a manner consistent with floodplain regulations that will protect these housing units from potential flood damage. The City will continue to investigate opportunities to redevelop non-conforming floodplain properties as a means of reducing flood impacts within the City.

5. The City will periodically review and adjust its Flood Emergency Plan to address community issues and improve the plan's effectiveness.

6. The limitation or prohibition of future subdivision development within the 100-year floodplain of the Crow River through the enforcement of the City's FF2 floodplain regulations.

7. The promotion of greenway development within the 100-year Floodplain of the Crow River to protect it and lessen impact of adjacent development while

providing recreational opportunities.

WETLANDS

Due to past problems with high water tables and storm water drainage, the preservation of wetlands for both storm water retention and water quality has become an important priority for the City of Delano. These local concerns, in conjunction with the 1991 State Wetland Conservation Act, will greatly influence the treatment of wetlands in development areas in the future. In addressing the wetlands, the City is the responsible unit of government for wetland protection.

To address these concerns, the City adopted its first stormwater management plan in November of 1996. The goals, polices, standards, and practices of this plan have been implemented with all new development occurring within the City and newly-annexed areas. The 1996 Delano Stormwater Management Plan addressed both the City and the surrounding extraterritorial area and encompasses the maintenance, future improvements, and costs of the system. The City is in the process of updating its Comprehensive Stormwater Management Plan in conjunction with the Comprehensive Plan to address the City development needs through the year 2040.

Through the 2040 Comprehensive Stormwater Management Plan the City will maintain and utilize natural wetlands and drainageways for storm water management. This effort will serve the community, maintain attractive natural environmental areas, and reduce community investment in man-made storm sewer systems.

The preservation of wetlands and floodplain areas is essential in land use planning in order to retain the open atmosphere of the City and to protect the natural functions of natural amenities. The following efforts shall continue to be implemented be to protect and preserve wetlands, drainage ways, and floodplains within the City:

1. The City will implement the recommendations of the Delano 2040 Stormwater Management Plan.

2. Site plan and subdivision design will be required to observe the regulations of the Delano Subdivision Wetland Protection regulations as amended, that results in no net loss in wetland acreage.

3. The City will require lot sizes and development densities to be exclusive of wetlands, drain ways, floodplains and water courses to protect the environmentally sensitive areas from the encroachment of development.

4. Wetlands and required wetland buffer areas shall be platted as outlots and

dedicated to the City to prevent adjoining lots from encroaching into the required wetland buffers. Demarcation posts/ signs shall be installed at the shared boundary between wetland outlots, and the abutting lots to prevent trespass.

5. The City will work to incorporate the Crow River floodplain area and major wetland systems into a larger greenway system.

TREE COVER

Some of the extraterritorial planning areas are characterized by significant stands of trees. These wooded areas represent a valuable natural resource which should be preserved in conjunction with new development. The City has adopted tree preservation and landscape regulations that include:

1. Use of large lot single family zoning in areas characterized by significant woodlands.

2. Site grading must include tree preservation measures to avoid tree loss through root compaction, tree cuts, or disease.

3. Integrate streets and building pad locations on development sites in a manner that is sensitive to significant tree stock.

4. City shall enforce its zoning and subdivision regulations pertaining to tree preservation and required landscaping that include provisions for the protection of significant trees and significant tree stands, replacement trees and required landscaping for residential and institutional land uses.

GREENWAYS

A priority of the community is to maintain its small-town character through the preservation of open space and environmentally sensitive areas. The City will seek to accomplish this goal through the creation of greenway corridors. Greenways are corridors of protected open space managed for conservation and passive recreational purposes.

The physical features of Delano's river corridor, floodplains, wetlands, and tree cover lend itself to greenway planning. Together, these features will help define the City's desired greenway corridors. Greenways as they apply to Delano, are intended to accomplish the following:

1. Preserve areas of contiguous open spaces as a means of maintaining the City's small-town character. The establishment of linear greenways will serve to break up the urban land use patterns and define neighborhoods. The City will establish select greenways with a trail system that will connect the various commercial, residential, and recreational destinations throughout the community.

2. Preserve the ecological functions of the City's environmentally sensitive areas. In this respect, development with the greenways will be limited to passive recreational uses. Urban land uses will be allowed at the periphery of the greenways with subdivisions and site design that preserve the view sheds and vistas into the greenway corridors. Infrastructure planning (i.e., street and utilities) that cannot parallel the greenway corridor shall be located and designed so as to have the least disruption possible of the greenway.

3. Provide a diversity of natural features and habitats. This is to allow for wildlife, for wildlife habitats, and to facilitate wildlife movement through areas dominated by human activities. In this respect, the greenways will be configured to include both lowlands and upland areas.

4. Provide passive recreational opportunities to Delano residents. Park planning shall be integrated with the greenway areas. This would allow all community residents the opportunity to enjoy the natural amenities of Delano.

The implementation of greenway planning must not only focus on the purpose of the greenways but must also pay attention to existing property ownership patterns, and land uses within the proposed greenways. Consideration must also be given to the City's future transportation and utilities and how they may be influenced by the greenways. The following strategies have been outlined for the implementation of the greenway planning:

1. The following map illustrates the general locations and configurations of the community greenways. The size and configuration of the greenways will be reflective of the stated greenway purposes and the environmentally sensitive areas that require protection, which will be defined as a part of a development application.

2. Recognizing the existing property ownership and land use patterns within

the conceptual greenways, the greenways will consist of both public and privately owned land. The environmentally sensitive areas within the greenways shall be protected through the implementation of the City's environmental regulations found in the zoning, floodplain, shoreland and wetland regulations. Beyond these regulations, the City will develop new zoning regulations to define the following:

a. Land use and development at the periphery of the greenway areas will be in accordance with the City's Land Use Plan. The City will develop performance standards addressing viewshed protection, buffer areas around the greenways, development rights transfer to protect upland areas within the greenways, etc.

b. Transportation and utility infrastructure improvements shall be limited within the greenways as "pass through facilities" not intended to facilitate development within the designated greenway.

3. The City will utilize various methods for preserving the greenways including its zoning and environmental requirements to regulate development. However, in some instances, greater property control may be required. In these instances, the City will promote the establishment of conservation easements, land donations to the City or other land conservation groups, direct land acquisition through park land dedication or land purchase. The City may provide pedestrian trails within the greenways. This will require the acquisition of appropriate trail easements.

4. The City will need to create community-wide awareness of the value and importance of the proposed greenways to garner support for their establishment and maintenance. Community education pertaining to citizen land stewardship programs will be pursued to solicit private property owners to participate in the creation of the greenways. Citizen volunteerism will also be pursued to assist in ongoing restoration and maintenance of established greenways.

INSERT GREENWAYS MAP HERE

AIR AND NOISE POLLUTION

The main sources of air and noise pollution are projected to be the collector and arterial streets running through Delano. Because residential uses abut these corridors and will continue to do so, buffer zones including landscaping, berming, and fencing will be established wherever possible. In addition, commercial and potential industrial vehicular circulation shall be discouraged, and in some cases prohibited, from using local residential streets.

The City's industrial areas are another potential source of pollution. The negative effects of these uses can be minimized through their isolation from other incompatible uses and thoughtful site design.

Any new commercial and industrial development, including expansions, will comply with existing State and Federal pollution emission standards. Any development which contributes to an area with an existing pollution problem should require an environmental assessment to be completed prior to approval of the development.

RECYCLING

The City of Delano promotes the recycling of disposables and currently contracts with a private recycling service to collect cans, glass, newsprint, and some types of cardboard on a bimonthly basis. In addition, collection service of batteries, motor oil, and other hazardous waste is provided on a monthly basis. As noted in the Policy Plan, the City strongly promotes the continuation of a community-wide recycling program.

The City offers a compost site to handle yard waste for Delano residents. This site is located just southwest of the City's waste treatment plant.

GREEN STEP CITY

The City of Delano became a Green Step City in 2011. Green Step is a voluntary program intended to help cities achieve sustainability and quality of life goals. The Green Step program outlines 28 practices to promote environmental protection, energy conservation, and efficient land use and development design. The Green Step Practices are measurable benchmarks that the City can achieve in areas of:

- Building and Site Lighting
- Building Energy Efficiency
- Land Use Planning
- Transportation Planning
- Environmental Management
- Economic and Community Development

The directives of the Comprehensive Plan and zoning will promote community development that promotes healthy lifestyles, manages, and reduces pollution sources, and promotes energy efficiency through subdivision, site and building design features.