



# Chapter ten

## Northwest Sub-Area

### Introduction

The Northwest area of Crystal Lake is comprised of approximately 12 square miles. The area lies primarily north of Route 176, follows the boundaries of the City along the west and the watershed boundary along the east and is bisected by Route 14 and the Union Pacific Railroad. See Location Map, Exhibit A and Boundary Map, Exhibit B for further clarification.

The northwest area is the last large area that remains underdeveloped in Crystal Lake. As public utilities are being extended to the area, future development is likely to occur. This section establishes the standards for that development. This area has many unique elements that merit protection and responsible development. This section identifies the characteristics of the area including natural features, watershed development and current land uses. It also establishes development standards through the Conservation Overlay to ensure thoughtful future growth and protection of natural areas and green space.

### Existing Conditions

The area is comprised of 5 main elements: Watershed, Ridgefield Corridor, McHenry County College, Rural Residential and Farmland/Green Space.

#### Watershed

The primary recharge for Crystal Lake occurs within the five square miles north of the lake, a significant portion of which is within this sub-area. The watershed acts as a filter for the lake when rainwater percolates through the soil and eventually flows to the lake. In 1975, the City commissioned the Crystal Lake Watershed Study, which provided a basis for watershed protection. In 2007, the City adopted the Crystal Lake Watershed Stormwater Management

Exhibit A

**Northwest Sub-Area Location**

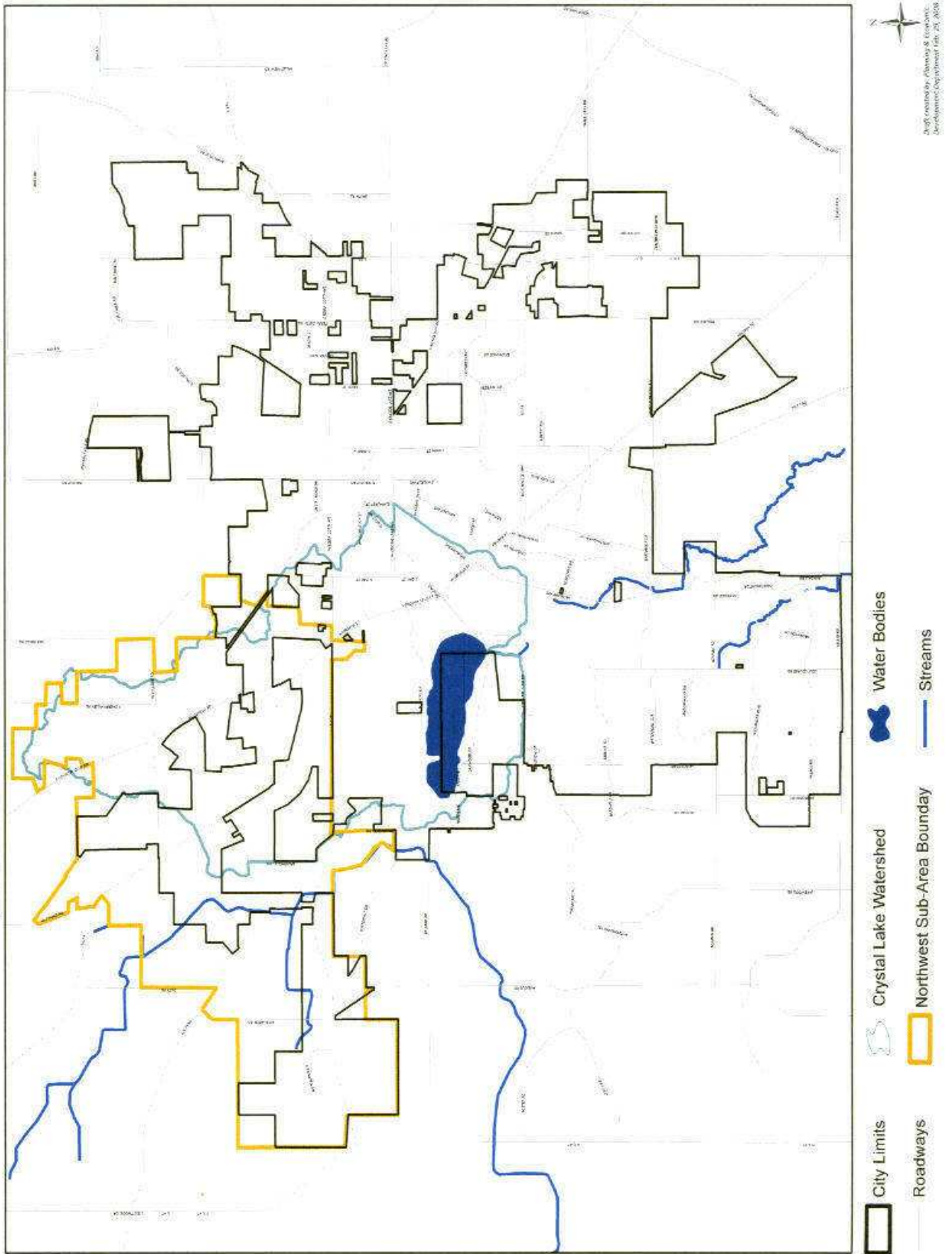
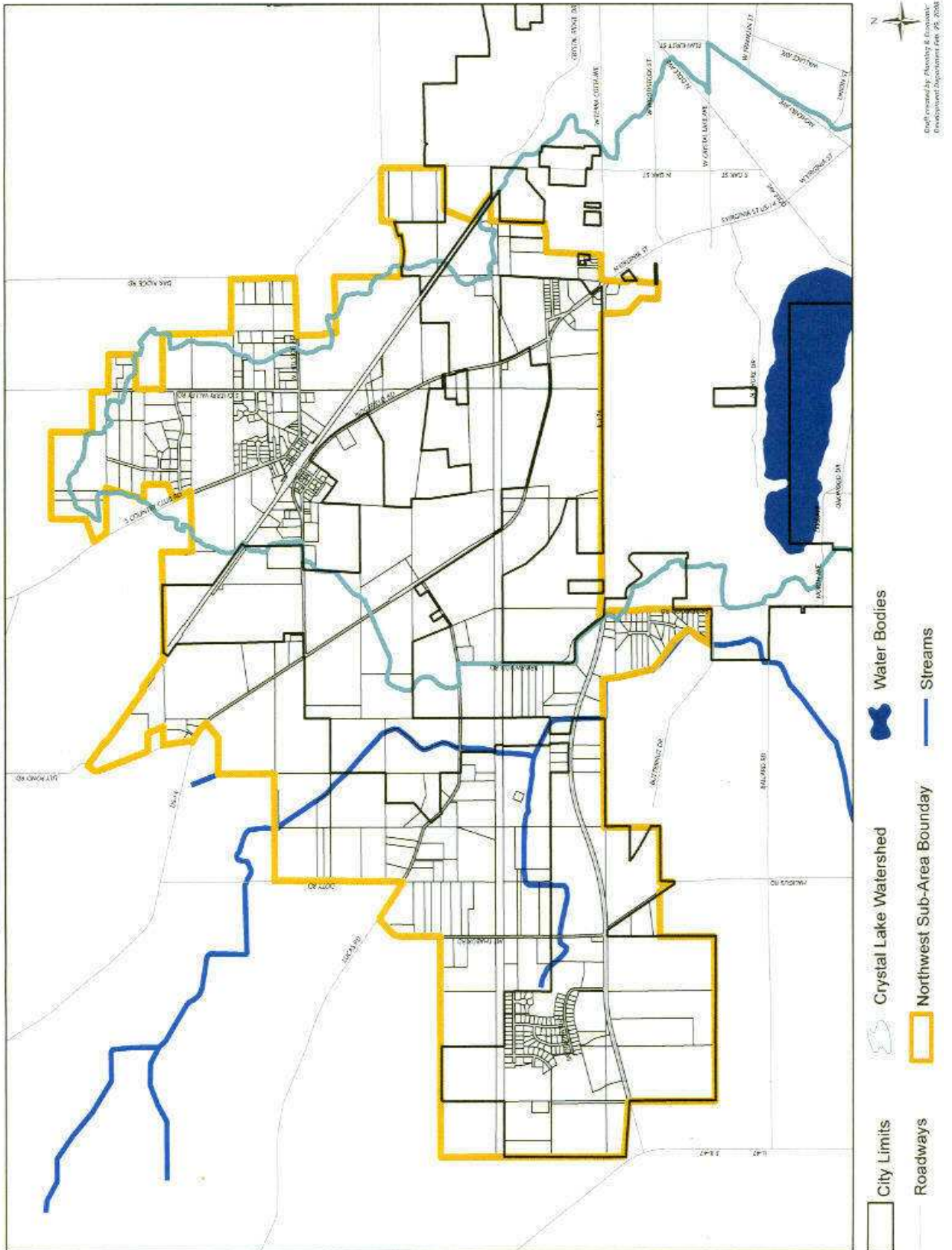


Exhibit B

**Northwest Sub-Area Boundary**



Design Manual which discusses the numerous design practices available to treat and improve water quality entering the ground or flowing over land. The Design Manual provides examples and design possibilities to allow for development and minimize impacts to or improve the quality of the lake, limiting the possibility of pollution. The Design Manual, the Unified Development Ordinance and the Comprehensive Land Use Plan, provide guidance for future development of the watershed boundary area.

### Ridgefield Corridor

The Ridgefield Corridor is an existing residential and industrial area located on the southwest and northeast sides of the Union Pacific Railroad at Hillside Road. This area is under the jurisdiction of McHenry County and is largely rural due to the lack of City utilities in the vicinity. The Comprehensive Plan element for the Ridgefield Corridor describes the need to preserve the character while preparing for redevelopment of the area. It is likely that when City utilities become available in this area, increased density and a mix of uses will occur, benefiting from the proximity to the rail lines. This plan provides guidance for possible mixed-use redevelopment in this area.

### McHenry County College

Located just south of Ridgefield Corridor, McHenry County College (MCC) is situated on 112 acres of property. The site is currently improved with college classrooms and administration buildings, ancillary parking lots and ball fields. The 44 acres north of the existing campus buildings are being used for crop farming and ancillary parking. MCC desires to develop the 44 acres currently under their ownership with the possible long-term development of 57 acres farther to the east, located on either side of Tartan Drive. The City encourages the expansion of MCC and its services.

### Rural Residential

With the exception of MCC and Ridgefield, the eastern portion of the sub-area has been developed as rural residential. These small subdivisions, which are characterized by larger lots with well and septic systems, were approved through McHenry County. Rural residential development promotes low densities, but not necessarily good conservation design. The rural residential pattern promotes sprawl development by requiring expansive lengths of roadways and utilities to serve a relatively low number of homes. In addition, rural residential development in this area is within the watershed and the well and septic systems are not desirable in the Crystal Lake watershed. Although rural residential does have a place in City development, its use should be limited and it should not be a substitute for green space preservation.

### Farmland / Green Space

The portion of the sub-area to the west and along Route 14 is still predominantly farm land. The area to the west drains away from Crystal Lake and is not part of the Crystal Lake watershed, but part of the Upper Kishwaukee River Watershed. Farmland is slowly converting to single-family residential subdivisions throughout the Country as land becomes more scarce and homebuilders desire to expand. This area will likely follow similar development patterns unless a planned approach is instituted. Good conservation design, natural area protection and limiting sprawl will be key components to developing this area. Protection of some of the existing farmland through a Transfer of Development Rights Program and deed restrictions are possible for this western area.

## Natural Features

This northwest area is graced with many desirable natural features, including marshes, woodlands, prairie areas, wetlands and a portion of the Kishwaukee River. These natural areas function to cleanse water, provide wildlife habitat and offer educational and recreational opportunities—all contributing to the quality of life within Crystal Lake.

Several of these features are included in the McHenry County Conservation District's Natural Areas Inventory. The complete inventory list with photos and details can be obtained from MCCD. Protection of these natural features with buffer areas, respectful development, and best management practices is imperative. In addition to the protection of these core natural features, large areas of green space connecting the features should also be preserved. The natural features are labeled on Exhibit C and detailed below. Also described after each site is the required buffer area. A 100-foot buffer from all identified sites and the preservation of all oak tree stands is recommended in concert with MCCD recommendations.

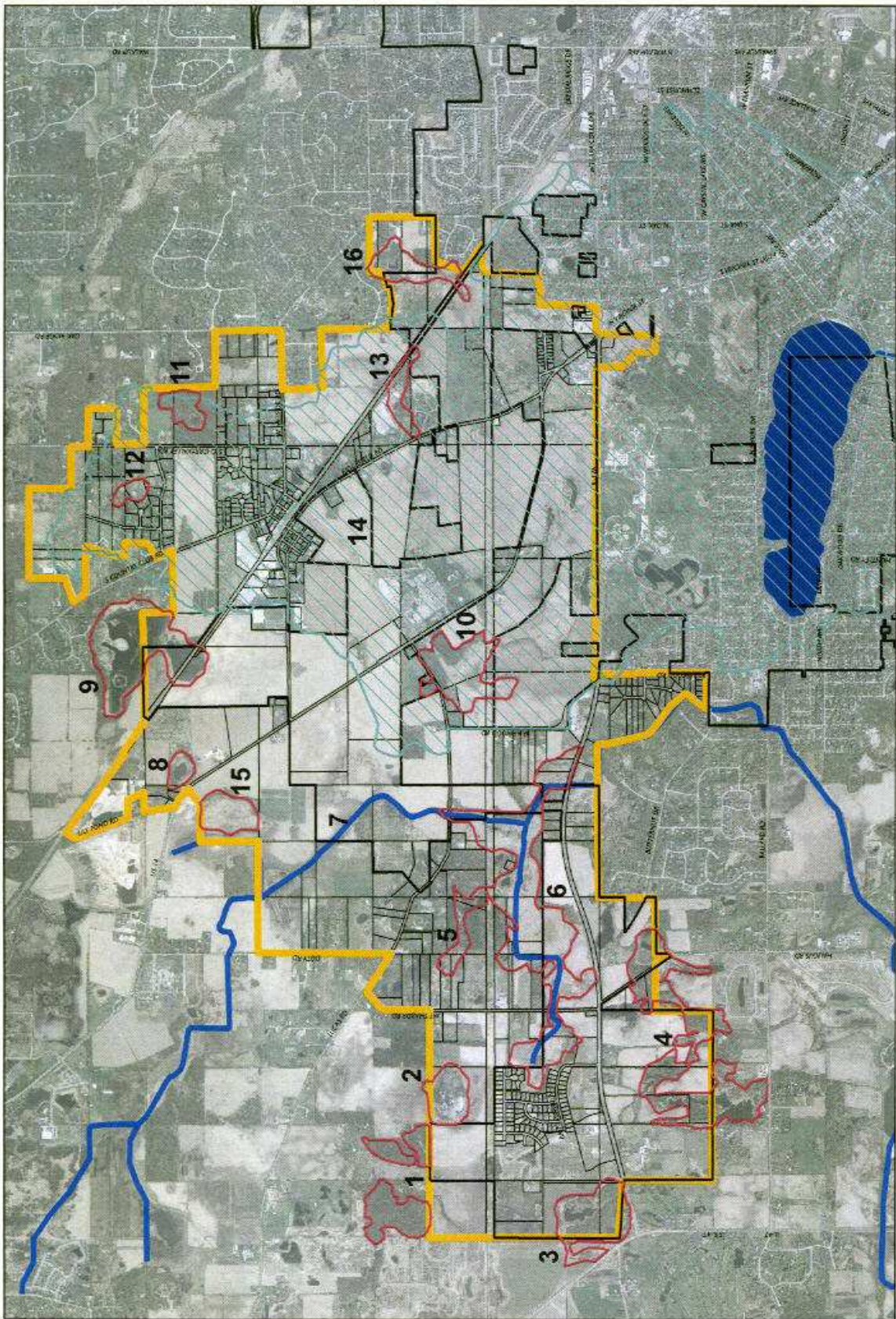
- 1) Site 1 is an existing undisturbed grove of trees including a small creek, identified as Resource Conservation by the City of Woodstock. Only a small portion is within the sub-area, but care should be taken to protect this feature. Although not identified by MCCD, the preservation of undisturbed areas is as important as other identified natural areas. A buffer of 100-feet should be established from the edge of the tree grove and around the creek. The land use map has been amended to show this area as open space.
- 2) Mt. Tabor Marsh, identified by MCCD. Marshes have similar features to wetlands and create a habitat area. A 100-foot buffer should be established around the marsh to preserve its quality. An additional green space link should be provided between site 1 and site 2 to create connectivity.
- 3) Route 47-Route 176 Marsh as identified by MCCD, contains two large water areas surrounded by an undisturbed grove of trees. Development and destruction of this natural feature should be prohibited. A 100-foot buffer should be established from this marsh/wetland.
- 4) A series of small depressional areas which retain water surrounded by trees and shrubs. This feature is noted on the map because it is unique, although it is not formally identified by MCCD. A 100-foot buffer should be established and links to site 3 are possible.
- 5) Site 5 is Mt. Tabor Marsh east, identified by MCCD. This marsh has less water and more plantings than the other marshes. This site links directly to sites 6 and 7. A 100-foot buffer should be established around site 5.
- 6) Route 176 Sedge Meadow is identified by MCCD as a natural feature. This meadow is a large grassy area filled with a variety of plants perfect for wildlife habitat. Included with this area are several wetlands adjacent to the Kishwaukee River. A 100-foot buffer should be established around this entire element.
- 7) Kishwaukee River branch. The Kishwaukee River is a high-quality feature that supports life along its banks and the surrounding areas. Although this is only a small branch, the quality of the river and surrounding habitat area shall be protected. A 100-foot buffer should be established from the river bank.

- 8) Muskrat Pond, identified by MCCD, is a small pond surrounded by undisturbed bushes and grasses. A 100-foot buffer should be established from the outer limits of the grass area surrounding the pond.
- 9) Site 9 is Lily Pond Marsh, identified by MCCD. This feature straddles the rail line and a portion of this feature is located within the sub-area. This site has very little undisturbed surrounding area because it has been farmed. A 100-foot buffer should be established to protect the water quality of this feature. Opportunity exists to provide a green space connection between this site and site 8.
- 10) A dense cluster of high quality trees, identified by this Plan and ADID wetlands. Undisturbed trees should be preserved and a 100-foot buffer should be established around this area.
- 11) Ridgefield Prairie, identified by MCCD, is currently surrounded by and encroached upon by large lot single-family residences. A true buffer may not be able to be established due to the proximity of the existing residences. A 100-foot buffer should be established, wherever possible.
- 12) Country Club Road Wetland, identified by MCCD. This is a natural wetland protected by state and federal laws. This feature is surrounded by a large grove of undisturbed trees. A 100-foot buffer should be established from the MCCD boundary in order to preserve additional surrounding trees.
- 13) Site 13 is identified by MCCD as West Crystal Lake Prairie. This feature is located on a site currently improved with an industrial use. The site is currently undisturbed and a 100-foot buffer should be established to ensure its future protection in the case of expansion or redevelopment of this user.
- 14) Crystal Lake Watershed, identified by the City of Crystal Lake. The watershed is detailed within this Plan and in the City's development ordinances. Development within the watershed should be closely regulated to ensure compliance with best management practices for protection of the lake water quality and quantity.
- 15) Freshwater emergent wetland as identified on the National Wetland Inventory.
- 16) Freshwater unconsolidated bottom wetland as identified on the National Wetland Inventory.
- 17) All oak tree stands shall be protected with a minimum 100-foot buffer. Development shall be planned so that removal of oak trees is not necessary or minimal at most.

Development which occurs within this sub-area should conscientiously be planned around the protection and incorporated into the existing natural features. Enhancement and expansion of these features should also be incorporated into development. Goals and objectives have been established for the protection of these natural features shown on Exhibit H within the Environment Preservation section.

Exhibit C

**Northwest Sub-Area Natural Features**



North  
Draft created by: Manthey & Gorman  
Development Department / Oct. 30, 2012

- City Limits
- Roadways
- Crystal Lake Watershed
- Northwest Sub-Area Boundary
- Water Bodies
- Streams
- Natural Features

## Current Approvals

Development has occurred both within the City and within the County throughout this northwest sub-area. Several properties have chosen to annex into the City and seek City zoning, see Exhibit D. Several of these properties, which have been annexed, enjoy specific zoning rights. All properties which had a specific watershed zoning (W-1, W-2, W-3 or W-4) are now zoned W after the comprehensive rezoning in July of 2009. They are:

- 1) Goldman property – On the north and south sides of the ComEd easement west of the UPRR. Currently, the site is utilized for farming and open land but the W- Watershed zoning would allow a mix of uses, including residential, commercial, office and other types of uses as permitted via a Watershed PUD approval.
- 2) McHenry County College – Annexed and zoned in 1985 to allow the college use.
- 3) Windy Knoll Estates – On the east side of the UPRR west of Oak Street with preliminary approval for 0.64 dwelling units per acre.
- 4) Kaper Property - On either side of Route 14 at Ridgefield Road North, annexed with a total of 451 acres. A mix of zoning uses was approved via the site-specific zoning amendment. Currently the site is utilized for an indoor soccer facility and farming.
- 5) Sunset Meadows – Crystal Lake Park District’s property, north of Route 176.
- 6) Classic Oak – A retail store at the northeast corner of Routes 14 and 176, zoned W-Watershed and permitted all B-2 uses.
- 7) Auto dealership- located at northeast corner of Routes 14 and 176, annexed as-is and zoned W-Watershed and permitted all B-2 uses.
- 8) The Ridgefield corridor is zoned and developed under the County’s jurisdiction. Much of this area is rural residential subdivisions and industrial users, but is not denoted on the City’s zoning map.

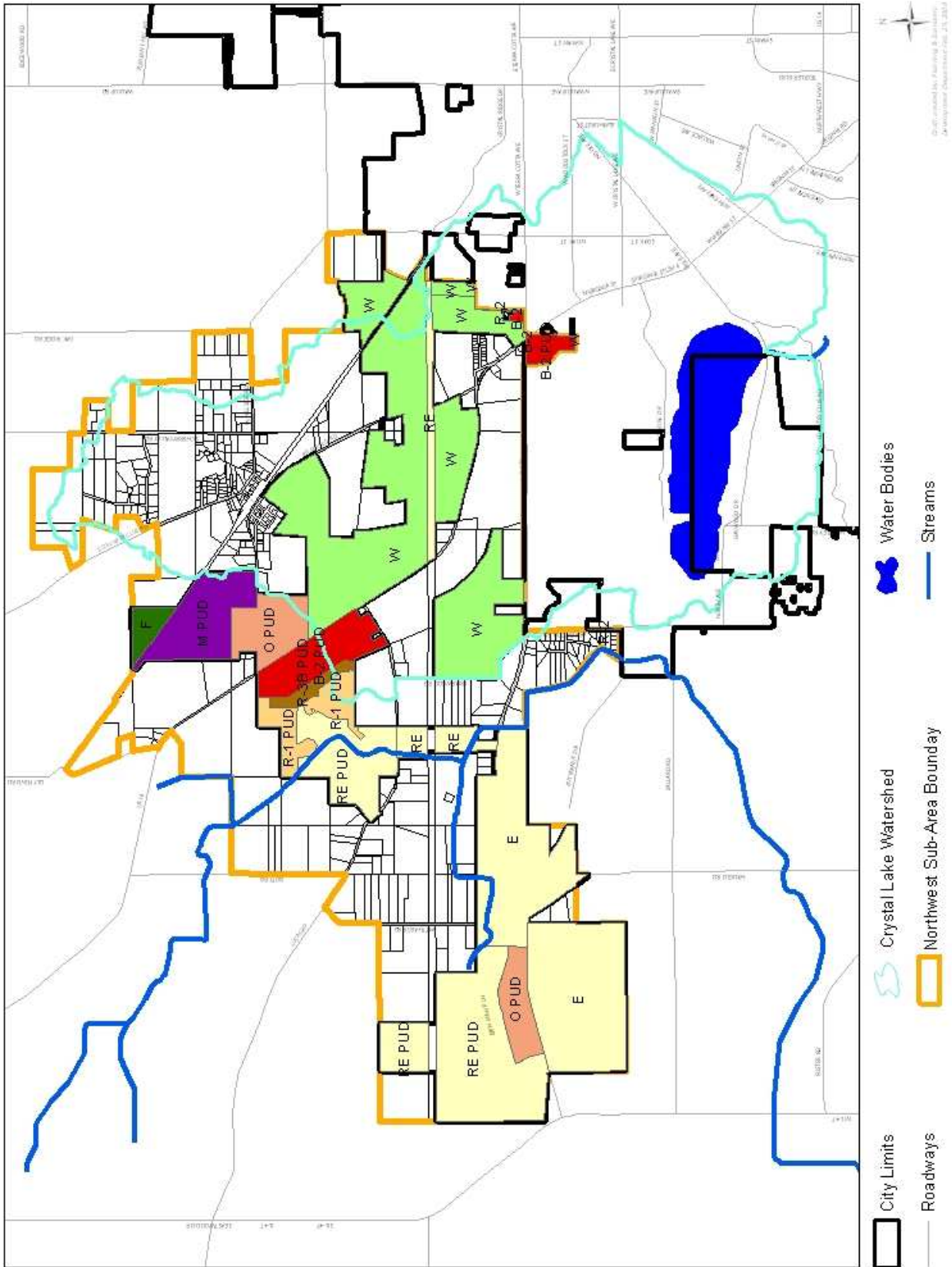
Property on the western half of the sub-area is zoned predominantly E or RE. E requires a minimum 3 acre lot size and RE zoned lots require a 20,000 square-foot lot size. The following properties were annexed and zoned into the City:

1. Bailey – On the eastern edge of the Kishwaukee River bisected by the ComEd easement zoned RE with a variation to allow the use as a farmstead.
2. Herrick Trust – Just south of Bailey, north of Route 176, zoned RE.
3. Crystal Lake Union Cemetery – Northwest corner of Route 176 and Mt. Thabor Road, zoned E with a Special Use Permit for a cemetery.
4. Weiler – Southeast corner of Routes 47 and 176 and NEC Route 176 and Mt. Thabor Road, zoned E, currently farmed and open land.
5. Bryn Mawr – Northeast corner of Route 47 and Route 176 zoned RE PUD and O PUD, both farmed and single family house development.
6. Various Owners – Southeast corner of Route 176 and Mt. Thabor Road, annexed by several petitioners all zoned E, all farmed.
7. Barton Stream – Northwest corner of Lucas Road and Route 14, zoned B-2 PUD, R-3B PUD, R-1 PUD and RE PUD.



Exhibit D

**Northwest Sub-Area Zoning**



## Northwest Sub-Area Goals, Actions and Indicators

### 10.1 Watershed Protection



#### Goal:

**Endeavor to protect the watershed by monitoring the Crystal Lake aquifer recharge conditions, improving the quality of surface and sub-surface drainage, reducing accumulated nutrients in the lake and preventing harmful or haphazard development.**

Crystal Lake's namesake lake is protected and partially recharged by the Crystal Lake watershed. Highest priority has been given to protect the lake and limit harmful development within the watershed area. The watershed area is approximately five square miles nestled between the Kishwaukee River watershed and the Fox River watershed. This is actually a sub-watershed for Crystal Creek. A significant portion of this area is currently farm and grasslands, but development of the area has and will likely continue to occur. Best management practices for stormwater control, water quality preservation, water infiltration and smart growth should be implemented as outlined in the Crystal Lake Watershed Stormwater Management Design Manual. Development has occurred within the Watershed in three distinct areas; McHenry County College along Route 14, Ridgefield Corridor along the Union Pacific Railroad and rural residential subdivisions on the eastern edge.

#### McHenry County College

McHenry County College (MCC) currently has 112 acres, approximately 68 of which have been developed with buildings, parking, sidewalks and detention basins. Future expansion plans could include the development of the north 44 acres with additional parking and buildings. Any development would require compliance with the Crystal Lake Watershed Stormwater Management Design Manual. The design manual requires pre-treatment basins to treat the water before it can be recharged into the ground to reduce land pollutants and debris from entering underground aquifers. Any improvements to the existing site and the future development of MCC's additional property, should be designed to meet the goals and objectives of the Comprehensive Plan and the design techniques outlined in the Design Manual.

## Ridgefield Corridor

The Ridgefield Corridor is an existing industrial and moderate density single-family residential area developed under McHenry County's jurisdiction. This area is surrounded by farmland and large lot rural subdivisions. The corridor straddles the Union Pacific Railroad line, as illustrated to the right. Development is haphazardly concentrated around the rail line and wasn't not reviewed to ensure protection of the watershed. Most new development would likely be annexed and zoned in the City, presumably with connection to City utilities, when available to this area. It is expected that industrial users that require access to the rail line would continue to be attracted to this area.



## Rural Residential

The area near Hillside and Country Club roads has been developed with larger lot rural subdivisions. These homes have been approved by McHenry County. There are no City utilities serving this area and the homes rely on private well and septic systems. The 1975 Watershed Study recommended removal of all septic systems when utilities are available. Additional large lot development may occur in this area, both in the County and, if properties are annexed, in the City. Future smart growth development will be encouraged.

The Northern Illinois Planning Commission (NIPC) now merged with the Chicago Area Transportation Study (CATS) to form the Chicago Metropolitan Agency for Planning (CMAP), prepared a set of fact sheets grouped as Building Sustainable Communities. In the report, "Building Green Infrastructure," NIPC states, "avoid large lot zoning (5 acres or more) as an open space preservation tool, as this typically results in sprawling development and does not maximize open space preservation benefits, especially if the majority of the five acre lot is converted to turf grass." The EPA's, "Protecting Water Resources with Higher-Density Development," report also discourages large lot rural development. The EPA states that lower density development requires substantially higher amounts of underground infrastructure, roadways and paved areas and uses up 100% of the land, and does not preserve large undisturbed green space. Higher density development allows for the same number of units to be constructed, but on a much smaller piece of property, thereby preserving larger green spaces.

Higher density development is also less expensive for the City because less miles of roadway and underground infrastructure need to be maintained. In this setting, high density development only works if the remaining portion of the property or adjacent properties are preserved as green space. An alternative to high density development would be limited lot disturbance within large lot development. This would allow for larger lots, but also create large undisturbed green space and corri-

dors. Disturbance would be limited to what is necessary to construct a house, driveway, small grass yard and other construction work.

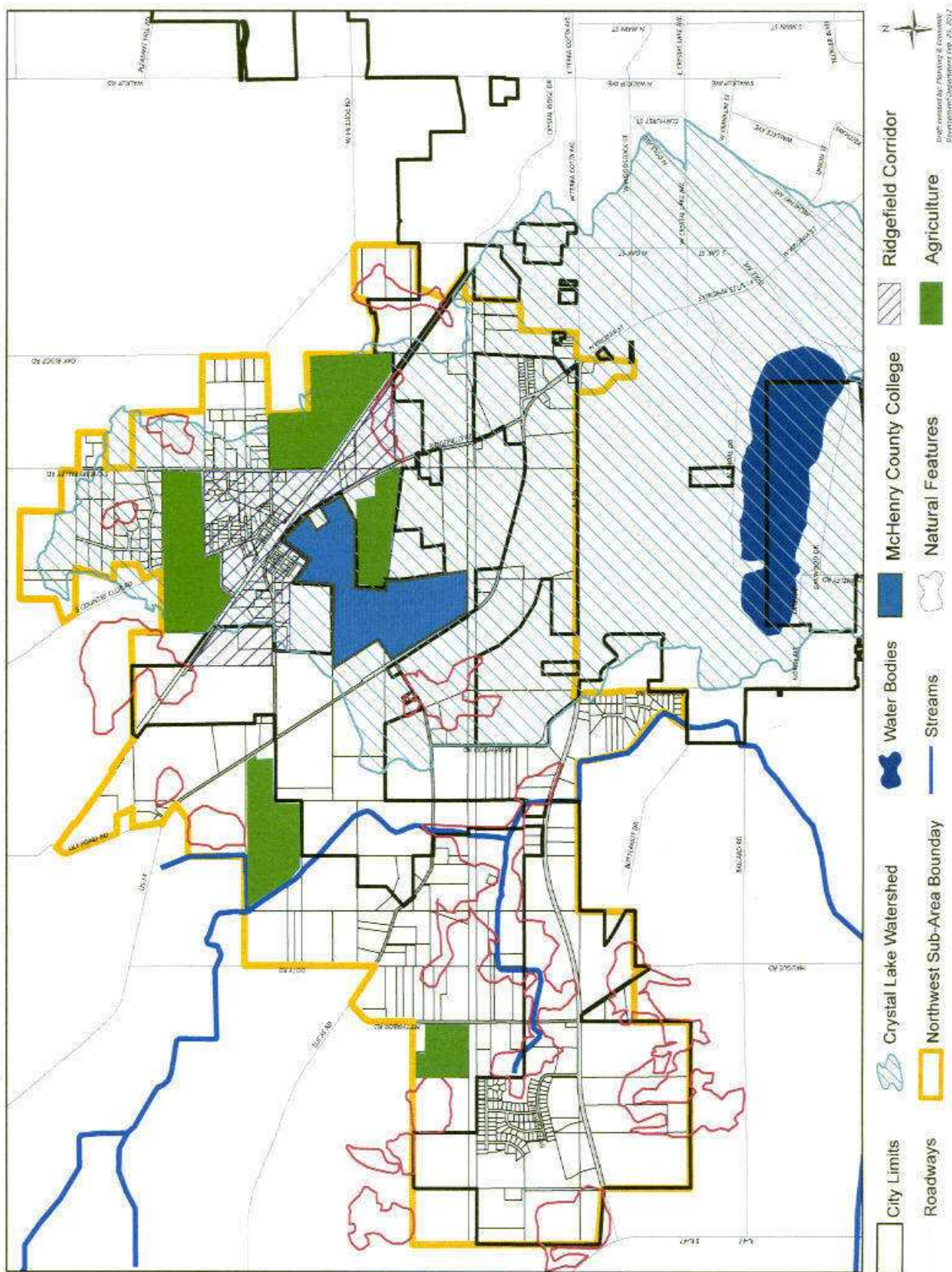
For example, a 5 acre lot allowed a 10% disturbance area, would equate to 21,780 square feet of disturbed area. This provides the area for a house, driveway, play equipment, yard and construction area. The remaining 196,020 square feet would be preserved in its natural condition. Within the City's Watershed area is Schafer Subdivision which has been designed with this idea. The lots are limited to 5% impervious coverage allowing 3,418 square feet of buildable area. The remaining portion of the lot is a conservation easement, which allows the protection of wetlands, habitat and natural open space.

New subdivision areas are encouraged to be designed as cluster subdivisions. Cluster development which preserves large areas of undisturbed green space is recommended due to the cost savings of underground utility and roadway construction and the preservation of the natural environment. The possible rural development of this area shall be closely reviewed to ensure that the properties protect the watershed and do not encourage undue sprawl and impervious area.

	Supporting Actions	Success Indicators
10.1a	Support development which improves the quality of the watershed.	All development meets or exceeds the required best management practices in the Crystal Lake Watershed Stormwater Design Manual.  Increase in the installation of on-site BMPs with new construction projects.  Increase in water quality at the lake.
10.1b	Encourage development and redevelopment which minimizes its impact.	Increase in development that utilizes minimal grading techniques (not mass-grading).  Increase in the number of developments that install natural stormwater systems to handle onsite water.
10.1c	Require installation, repair, or restoration of natural features.	Increase in the number of projects that plant native trees or landscape materials.
10.1d	Utilize conservation design techniques in all development plans.	Increase in the construction of cluster designed subdivisions.  Reduction of impervious surfaces in new developments verses traditional developments.  Increase in the preservation, conservation and donation of large natural areas.

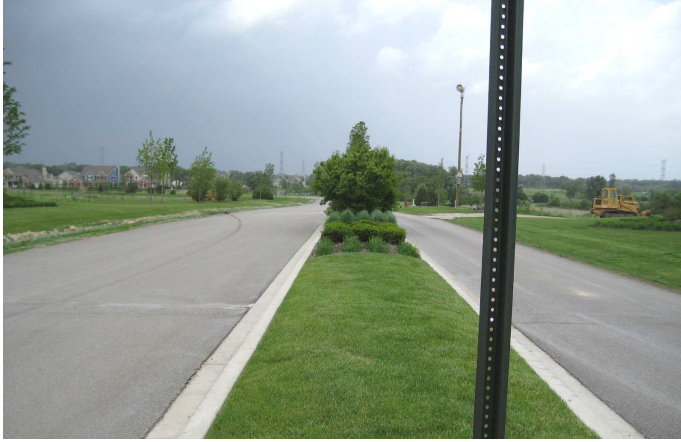
Exhibit E

**Northwest Sub-Area Crystal Lake Watershed**



## Northwest Sub-Area Goals, Actions and Indicators

### 10.2 Transportation



#### Goal:

**A transportation network which includes both automobile and alternative modes of transportation that is planned in conjunction with development and conscientious of natural resources or other site features.**

### Transportation

The efficient movement of people throughout this area to other parts of the City and to surrounding areas is critical for proper development and redevelopment of the area. Single occupancy vehicles are still the most used means of transportation in this area because of limited alternative mass transit options. In light of this, the existing transportation network should be planned for continued growth with the redevelopment of this sub-area. Existing roadways should be upgraded and new roadways should be installed to ensure an adequate roadway network. While the exact design and layout of each roadway cannot be specifically determined at this point in time, an ultimate plan or vision has been established. A Traffic Planning Study, available through the Engineering Department, was initiated in January 2007, which outlines the necessary roadway network. This vision shall be refined with each new development in this sub-area as part of the developers traffic study requirement. This Study in conjunction with the recommendations in the Comprehensive Plan shall set the requirements for transportation improvements in this area.

### Automobile Transportation

#### Roadway Classifications

Each roadway has a functional classification that contains distinct characteristics regarding right-of-way, pavement width, speed limits, access point spacing, etc., which are summarized in the roadway classification section in the UDO. Exhibit F shows the ultimate roadway design classifications anticipated within the sub-area. Note that the roadway network shall be designed to easily accommodate future expansion to this ultimate classification. It should be noted that Route 14 and Route 176 within this sub-area are under the jurisdiction of the Illinois Department of Transportation (IDOT) and classified as Strategic Regional Arterial (SRA) routes. SRA routes were created to es-

establish a broad developed design concept for arterial improvements so that high volume movements may be made with minimal interruptions. The SRA planning study must be used in conjunction with other City and IDOT requirements when developing the roadway geometrics for either of these roadways.

### Roadway, Driveway, and Parking Lot Design

In order to meet some of the goals of conservation design with respect to roadway configuration, the City may be willing to allow some flexibility in its standards for items such as pavement width, material type, sidewalks, and curbing. These may be edge treatments, rain gardens, alternate surfaces, sidewalk/path variations, roundabouts, and shared access points.

### Transportation Improvement Concepts

Ridgefield Road Extension. A future east-west collector roadway extending Ridgefield Road from Route 14 to Doty Road is recommended. As a true collector, direct residential driveway access would not be permitted.

Ridgefield Road/Route 14 Re-Alignment. Per IDOT's preliminary improvement plans, this intersection should be realigned to an angle closer to 90 degrees to enhance sight lines and safety.

Briarwood Road Extension. A future north-south collector roadway extending Briarwood Road north to Ridgefield Road is recommended. Between Lucas Road and Ridgefield Road, this collector would parallel Route 14 and serve as a buffer between possible commercial and residential developments.

Briarwood Road Re-Alignment. Briarwood should be adjusted through the Park District property to straighten the existing 90 degree curve.

Mt. Thabor Road Re-Alignment. If in the future it is possible to consolidate the intersections of Mt. Thabor Road and Doty Road with Lucas Road into a single 4-leg intersection, the illustrated option on Exhibit F should be explored.

Route 14 Access. Spacing between full access points to Route 14, which is designated as an SRA, should be a minimum of ¼ mile. However, ½ mile spacing with cross-access and frontage roads should be explored as the primary option. IDOT approval for any access to Route 14 will be required.

Future Roadway plans. As development proceeds, right-of-way will need to be preserved and dedicated to address existing sight line concerns and allow future expansion.

## Alternative Transportation

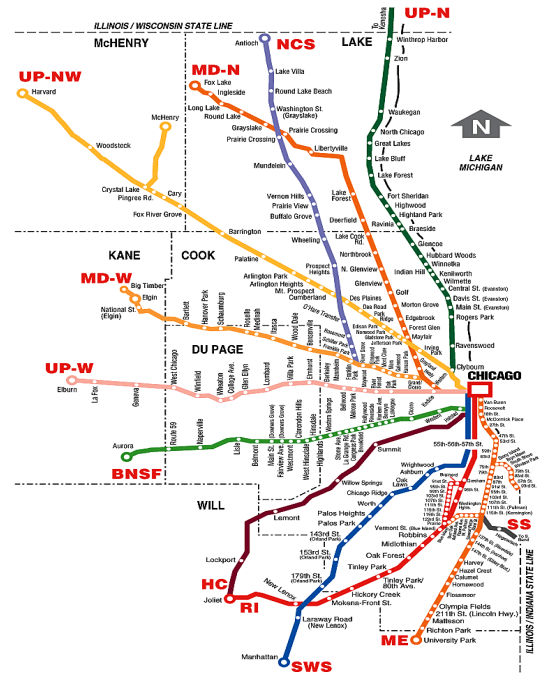
### Bicycle Path Network

Bicycle transportation is increasing around the world. Making the choice to bike can help burn up to 25 calories per mile while joining in the efforts to reduce detrimental pollutants released into the air. If people used bikes to run short errands half the time, it could save more than 1,100 lives a year in 11 Midwestern cities, thanks to reduced air pollution and improved health, figuring people would bike 4 months out of the year, according to scientists at the University of Wisconsin, pub-

lished in the journal *Environmental Health Perspectives*. In order to become more bike friendly, many cities are implementing programs to install new off-street and on-street bike lanes. The City of Crystal Lake is also reviewing how more bicycles and fewer automobiles can travel throughout the City. The locations shown on Exhibit F regarding the proposed/planned bicycle paths were compiled using the latest available information from various stakeholders including the McHenry County Conservation District (MCCD), IDOT, McHenry County Division of Transportation (MCDOT), and the City of Crystal Lake. These routes may be subject to change and these agencies should be consulted as part of the development process for any properties in this sub-area. All bicycle paths must meet the Americans with Disabilities Act (ADA) and Illinois Accessibility Code requirements for accessibility. To facilitate a bicycle friendly City, developers may be required to include bicycle path or sidewalk connections to the main network of trails, within their plans. Opportunity exists to provide these paths or connections on residential collectors and local streets as a separated bike lane within the roadway pavement. On-street bike paths should be examined as developers prepare engineering roadway plans.

Transit

With increased development in this sub-area, public transit options should be integrated into the overall transportation network. Pace currently offers service in the Route 14 corridor and Metra is continually evaluating other service enhancements to this Northwest line. Development of the roadway network in this sub-area should take on-street mass transit stops into consideration as part of the design process. PACE bus pull outs should be coordinated with the agency’s plans for the area and be examined as part of the traffic study review. PACE routes would lead to the existing or new Metra station. The existing Metra network covers 5 counties and brings travelers from the outer suburbs to the Chicago metro area. Crystal Lake is part of the Union Pacific Northwest line which travels from Harvard to Chicago.

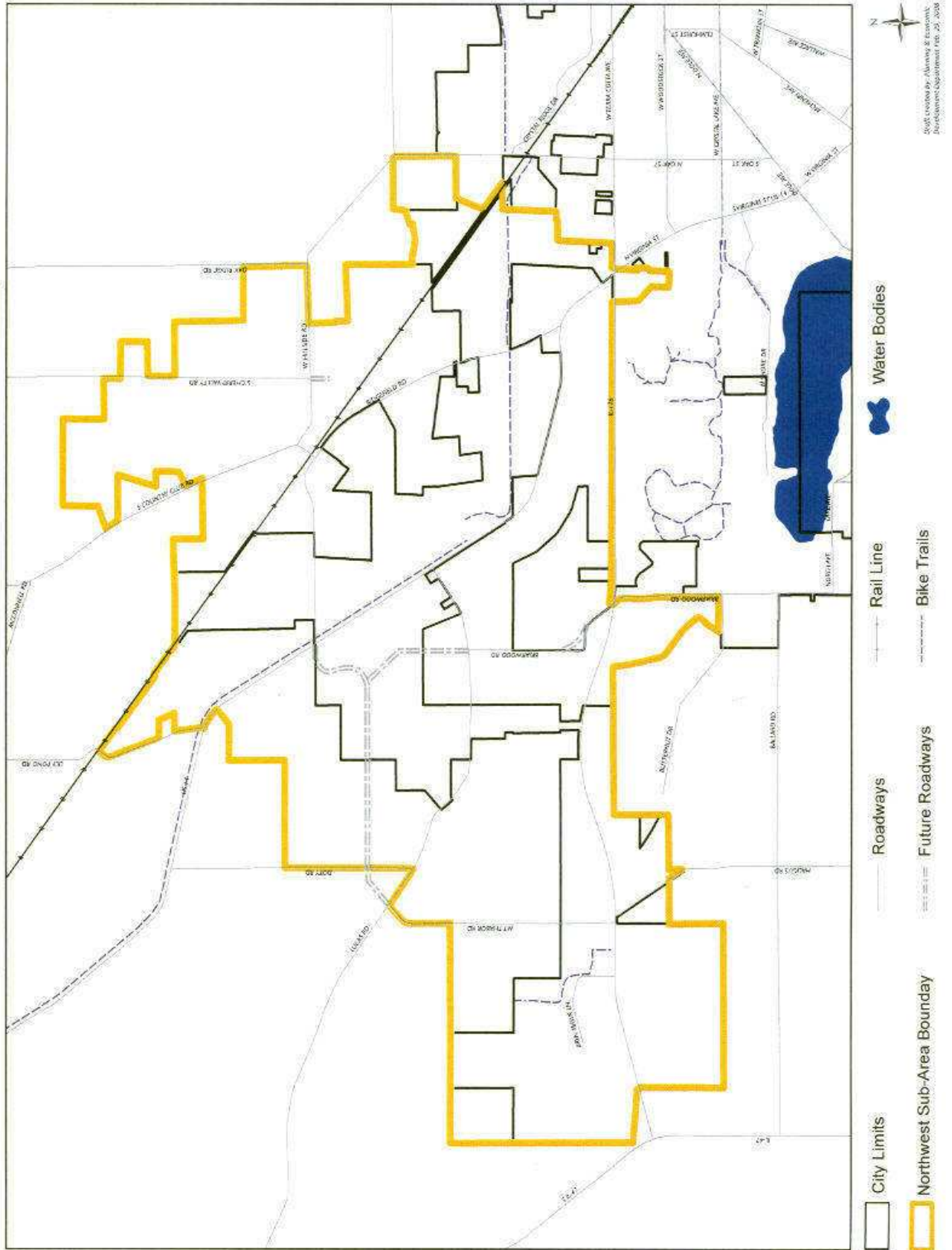


	Supporting Actions	Success Indicators
10.2a	Create a unique and functional transportation network.	Adoption of a comprehensive access management plan. Completion of roadway connections. Increase in the construction of alternative designed roadways to accommodate natural features.
10.2b	Encourage the construction of alternative modes of transportation.	Increase in the installation of bicycle and multi-use paths. Increase in the number of feet of sidewalk installed. Construction of improvements to the Metra, PACE or future mass transit provider’s network.



Exhibit F

**Northwest Sub-Area Transportation**



## Northwest Sub-Area Goals, Actions and Indicators

### 10.3 Utilities



**Goal:**

**Utility lines for water, sewer and possibly storm sewer to be extended throughout the area to allow for high-quality controlled growth.**

City water and sewer utilities are currently not available to the majority of this sub-area. Much of the existing residential development utilizes private well and septic systems. However, much of the existing residential development is within the Crystal Lake watershed area; well and septic systems are discouraged within the watershed. The City has prepared a master plan for the extension of public utility services into this area. The Plan, as illustrated on Exhibit I, depicts the proposed trunk line and lift station location. The extension of utilities in this area is critical for well-planned responsible development. The utility extension will be funded by private developers and land owners, but constructed under the direct control of the City.

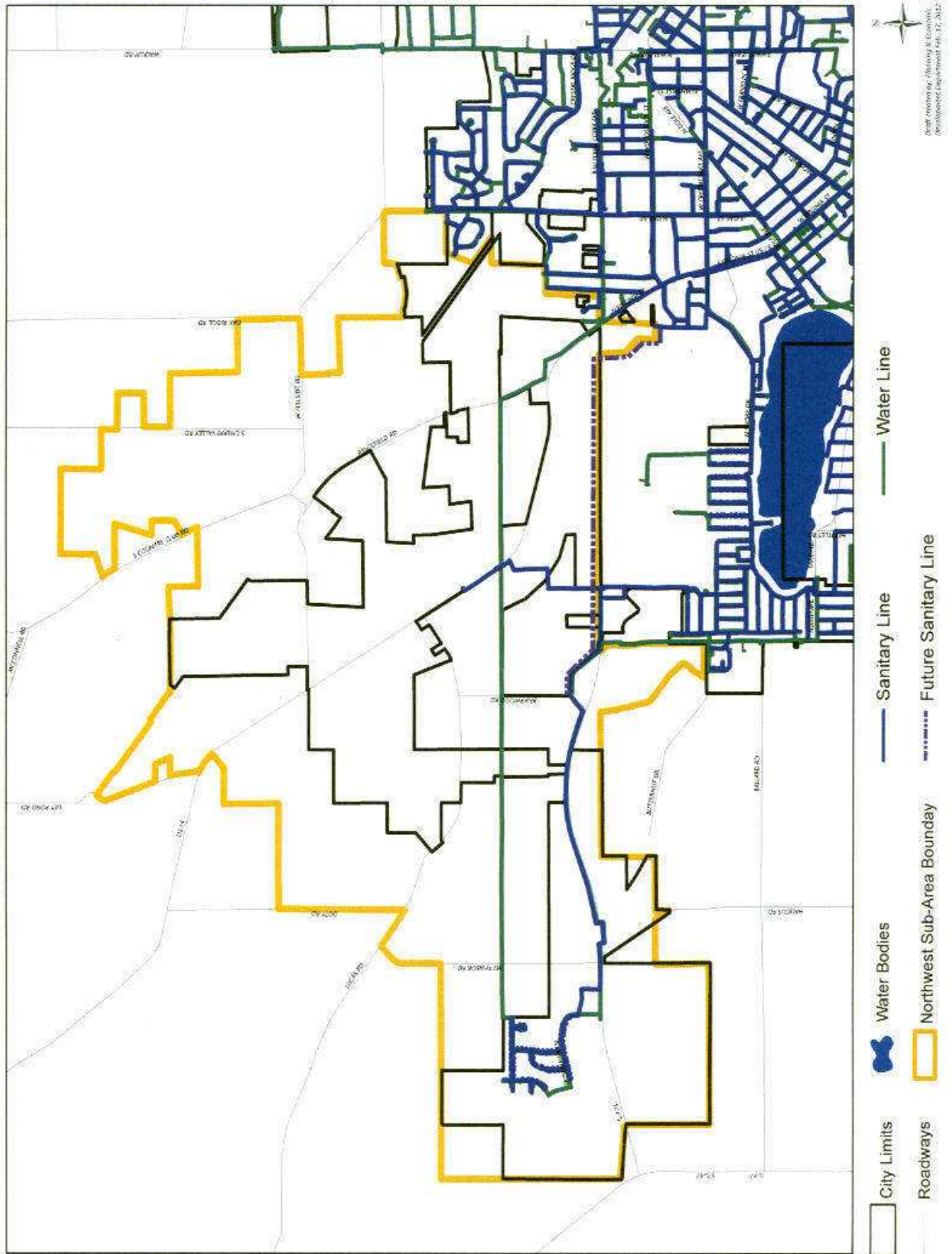
The sanitary sewer trunk line has been located in the most practical spot to acquire easements and to allow the maximum amount of gravity service lines. Individual main and service lines will need to be proposed when each development plan comes forth. These main and service lines will be reviewed to ensure they do not conflict with any natural features, green space connections or other elements of this sub-area plan.

There is an existing 16-inch water main loop along the Commonwealth Edison right-of-way from south Ridgfield Road to the Bryn Mawr development, which can be extended along with a future roadway network.

	Supporting Actions	Success Indicators
10.3a	Require utility line extensions to be complementary with other elements of this section of the Comprehensive Plan.	<p>The construction of utility projects which avoid disturbance to or enhance the natural system of any existing natural features.</p> <p>The approval of developments with a complete utility construction and management plan.</p>
10.3b	Support alternative utility projects.	<p>The increase in the construction of natural stormwater systems.</p> <p>The use of construction techniques that prevent shallow ground water from being conveyed out of the watershed.</p> <p>Research regarding a package treatment plant for this area.</p>

Exhibit G

**Northwest Sub-Area Utilities**



## Northwest Sub-Area Goals, Actions and Indicators

### 10.4 Recreation



Crystal Lake Park District.

#### Goal:

**Active and passive recreational opportunities and facilities shall be pursued by public and private entities to provide areas or connections to areas for the enjoyment of all residents and visitors.**

The City, along with the Crystal Lake Park District, values recreation opportunities and looks for ways to privately or publicly maintain and increase these features. The establishment of recreation amenities provides benefits for all residents and visitors of the City. A variety of recreation amenities are needed depending on the environment and the users. City staff has reviewed the draft Master Plan being prepared by the Crystal Lake Park District and incorporated their proposed park and trail locations. There are generally two categories of recreation amenities, active and passive. These types of amenities should be incorporated into all new subdivision plans.

#### Active Recreational Amenities

Active recreation relates to amenities that encourage activity such as play equipment, sport courts, bike paths and ball fields. Active recreation is extremely beneficial because of the nationwide obesity problem and because it helps promote community and neighborhood gathering. Active recreation amenities will be required throughout subdivisions, along roadways or areas with good accessibility, and regionally located per Park District requirements. Locations of active recreation areas are illustrated on Exhibit H. These are parks, lakes and bike paths.

#### Passive Recreation Amenities

Passive recreation relates to amenities which allow an individual pace or use of an area, for example, gardens, walking paths, picnic area, or similar. Passive recreation allows the user to take ad-

vantage of the amenity but does not require any type of strenuous activity. Interjections of passive recreation along side active recreation amenities provide a good mix for all users and allow many people with health problems or limited mobility to still experience some level of recreational use and health benefits. Passive amenities are appropriate in areas of natural protection, limited developmental possibility, or which connect or adjoin active recreational areas. Locations of possible passive recreation sites are shown on Exhibit H. These are trails along stream banks and field tiles.

## Development Plans

All development plans for subdivisions should include recreation amenities. New active and passive amenities should be planned and constructed by the property owner/developers of neighborhood areas. If any amenities exist outside, but adjacent to the subdivision, the subdivision developer should connect, enhance or expand these amenities.

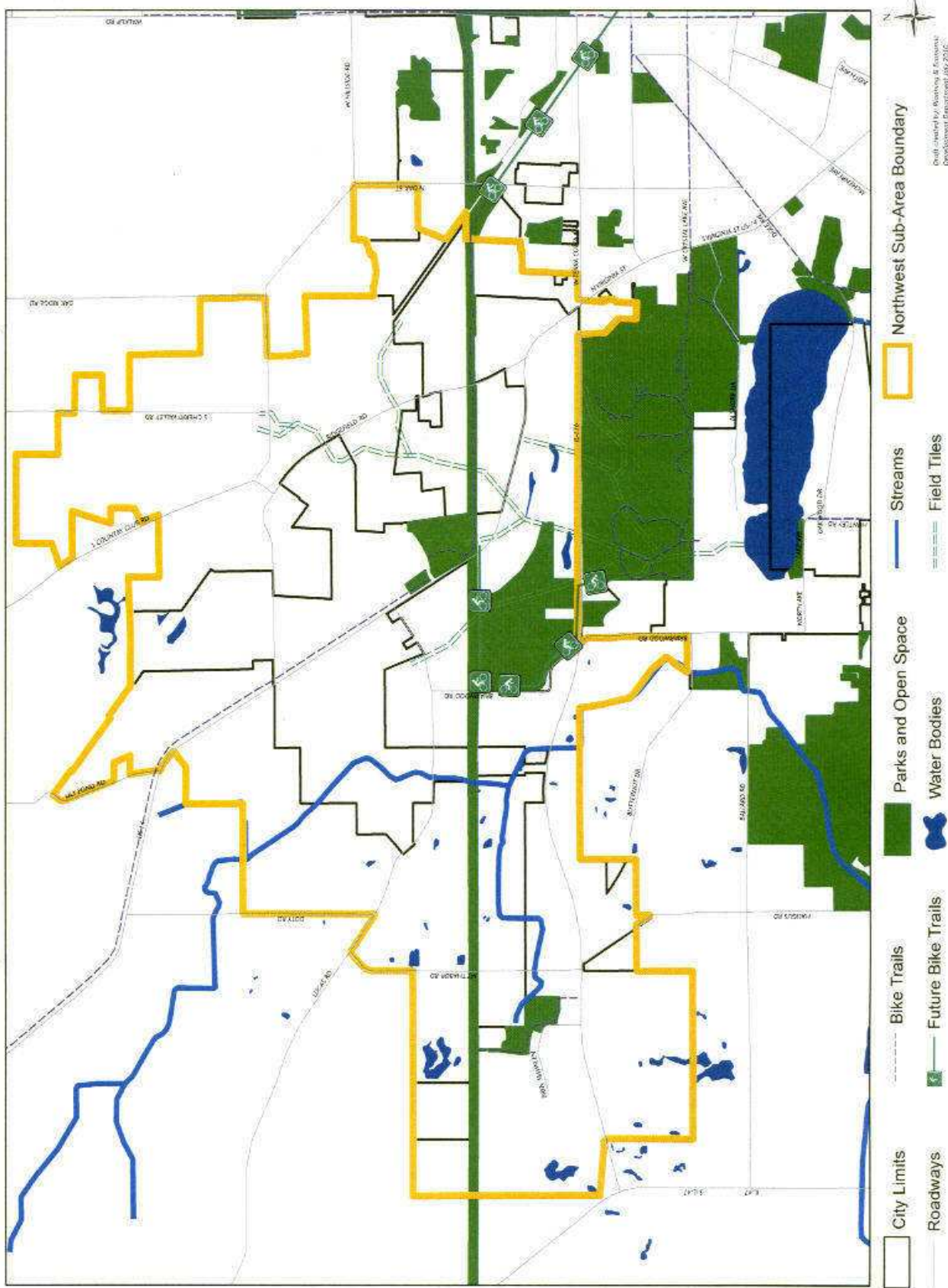
## Recreation Amenities

All proposed amenities will be of quality construction and meet or exceed the functional needs of the users. The installation of new amenities shall be coordinated with one of the four government entities; Crystal Lake Park District, City of Crystal Lake, McHenry County, or the MCCD.

	Supporting Actions	Success Indicators
<b>10.4a</b>	New housing developments to provide recreational amenities for the internal residents and contribute to amenities which will benefit the City as a whole.	Increase in the construction of recreation amenities in the sub-area.  Increase in development projects that include park and open space areas.
<b>10.4b</b>	Developers should work with the Crystal Lake Park District to implement master plan amenities.	The number of properties donated annually.  Increase in the construction of park space or payment of developer donations.
<b>10.4c</b>	Encourage the incorporation of recreation amenities that take advantage of the existing natural environment.	The annual number of park space constructed which provides links between natural features.  The number of non-buildable areas like floodplains, wetlands, etc. used for passive recreation amenities.

### Exhibit H

# Northwest Sub-Area Recreation



## Northwest Sub-Area Goals, Actions and Indicators

### 10.5 Smart Growth



Maple Lawn Dairy Farm. [maplelawndairyfarm.weebly.com](http://maplelawndairyfarm.weebly.com)



[hillsborough-nj.org](http://hillsborough-nj.org)



#### Goal:

**Development and redevelopment of property while incorporating innovative design techniques to promote environmental, fiscal and economic smart growth.**

Smart growth is a term used today to describe design techniques which lessen sprawl development and promote environmentally, fiscally, and economically **smart** development involving innovative land-use planning techniques. Key components to smart growth are: a range of housing opportunities; walkable neighborhoods; a mix of land uses; distinctive, attractive communities with a strong sense of place; and the preservation of open space, natural areas and critical environmental areas. Combining all these components requires high quality innovative design plans. To encourage innovative design, this plan suggests several methods of development; environment preservation, redevelopment and reuse of old buildings and sites, cluster development, transfer of development rights, and transit oriented plans. The design of all development shall be compatible with existing site features and protect natural features (mature trees, wooded areas, water courses, scenic views, ponds, flood plain areas, historical land markers, etc.) which if preserved would add to the attractiveness and value of the sub-area, neighborhood or City and enhance the quality of life.

### Environment Preservation

Preserving the environment requires protection of natural features, retaining areas of undeveloped green space and protecting agricultural uses while allowing for compatible development. A survey conducted by McHenry County in preparation for their proposed 2020 Plan contained a synopsis of interviews conducted with county residents which found that traffic congestion, loss of rural character and stress on school systems were the three biggest resident concerns. Transportation should be planned with a clear hierarchy of streets to complete the network and handle traffic volumes as explained earlier in the transportation section. The loss of rural character and the stress on the school systems are primarily caused by the conversion of farmland and undeveloped green space into housing subdivisions. Typical subdivisions promote sprawl and total loss of environment. The natural features as identified on Exhibit C are an exceptional natural legacy that must be protected, because if lost, will never be able to be replaced. MCCD has identified 150 natural areas in

the County, 10 of which are within this sub-area. The existing natural features of the area range from wetlands, to prairie grass, to tree groves, to undisturbed areas. This section provides examples of how development, natural features, green space and agriculture can all co-exist in new development. Exhibit I depicts the buffer areas around natural features, undeveloped green space corridors, soils appropriate for organic agricultural use, and flood prone areas; in turn, leaving appropriate areas for development to occur. Any development plans submitted shall be accompanied by a soils map which shows the soil type as determined by actual soil borings, a survey of the existing topography of the site, and a survey of the natural environment including: depressional areas, ponds, wetlands, tree groves, MCNAI sites, waterways, prairies, and existing agricultural fields.

## Redevelopment and Reuse

The redevelopment and reuse of old buildings and sites encourages infill development rather than sprawl. Reuse of old buildings may simply just be a new user moving in, but it may also be a conversion of an industrial or office building to a residential use. The reuse of a building saves on building supplies and labor costs which promotes environmentally and economically fiscal development. The reuse of sites allows for removal of older non-environmentally friendly buildings and the construction of a new facility, but in close distance to utilities and other infrastructure eliminating sprawl. Development (includes residential, non-residential, transportation and all related utilities) should be evaluated to ensure it is compatible with the surrounding environment and does not create a detrimental influence over the land. Growth and development should be encouraged near existing activity centers to relieve pressure to sprawl and convert agricultural land. Reuse of buildings and sites can also occur in the Ridgefield area. The existing industrial users could relocate leaving empty building or choose to upgrade their sites. The City would encourage redevelopment or reuse throughout this area as the preferred method of development. All development should work to minimize its impact on the natural environment; several methods are suggested in the goals at the end of this section.

## Cluster Development

Undeveloped green space are areas which are currently not developed with houses or businesses and are not used for agricultural purposes. The western area of the sub-area is currently farmland, but contains large parcels zoned for 1/2 acre to 5 acre lots. As was stated earlier, large lot development would not create an ideal situation for preservation of undeveloped green space and the many natural features in this area. This sub-area plan establishes guidelines for keeping some of this area as permanent undeveloped green space. Increasing density near existing urban areas and protecting green space is ideal. The preservation of this undeveloped green space enhances the rural lifestyle and protects other environmental features including ground water. Cluster development would be an appropriate development technique in this sub-area. Cluster development can be applicable to both residential and business development. Residential cluster development is the grouping of the residential structures on a portion of the property reserving a significant portion of the property as green space. Residential cluster development is a way of permanently protecting green space, rural character and the environment while providing high-quality housing and allowing property owners the ability to develop their property. Business cluster development is based on the same principles and allows for the grouping of like businesses in a campus type environ-



ment while preserving a significant portion of the site as green space. Business clustering also lends itself to alternative means of transportation by allowing for more bicycle parking facilities or a mass transit stop. The Unified Development Ordinance (UDO) will allow for cluster development practices through the Planned Unit Development process. Cluster development shall be utilized on properties within the Watershed and where the property contains natural features.

## Transfer of Development Rights

Transfer of development rights (TDR) refers to the transfer of potential development ability of one site to another property. TDR is appropriate when the transferring property is within the agricultural overlay or contains natural features. The donating property is then required to remain green space or agricultural land and the accepting site has the ability to increase its density. Permanently preserving privately owned productive agricultural land ensures a stable land base for the future agricultural industry. Agriculture is one of the largest land uses in McHenry County as it has some of the best soils for agriculture use in Northern Illinois. Exhibit I depicts Farmland Preservation areas where high quality agriculture soils are located and where continued agriculture production is likely and encouraged. These areas should be considered for a possible Agriculture Overlay which would designate them as being reserved for agricultural development, specifically organic farms. The average size of an organic farm within the United States is 27 acres in size, which is appropriately sized for several locations in this sub area. The agricultural uses in this area, as well as within the County, serve to enhance the rural lifestyle of the area and generate significant positive economic benefits. In order to preserve agricultural uses, this section suggests that development be focused around existing activity centers and buffers be established between agriculture and development uses. In other existing Transfer of Development Rights (TDR) programs across the country, it is found that farmers who sell their development rights reinvest the capital back into their farm operations, eliminate debt or use the income to acquire more land and expand their existing agriculture operations. Appropriate receiving areas for the transferred development must contain existing infrastructure and be located near existing activity centers. Exhibit J illustrates the appropriate donating and accepting areas. An agreement between all property owners involved shall be created, signed and recorded upon all involved properties. The UDO will allow for TDR under the Planned Unit Development process. Property owners can also put a conservation easement on the property through the McHenry County ACE program. Either program will benefit the area by allocating appropriate areas for development including higher density, cluster and mixed use development as well as preserving natural areas and agriculture uses.

## Transit Oriented District

A transit oriented district (TOD) is an overlay placed on property surrounding a transit facility to allow for a mix of both residential and business uses. This planning technique could be used if a transit facility is located near the Ridgfield area. The TOD would allow for higher density residential mixed with business uses to create a mini town center around a transit facility. Higher density residential would increase ridership potential and promote environmentally friendly design by encouraging the residents to utilize transit options rather than their personal vehicles. TODs provide an 18% reduction in auto trips, 12% less vehicle miles traveled per trip during morning rush hours, 18%-28% reduction on roadway network needs, and improves air quality, lower develop-

ment costs, greater pedestrian safety and more access to jobs for lower income workers\*. These are some worthwhile benefits to implementing a TOD.

\* (source: Federal Transit Administration, Building Livable Communities with Transit, 1999, p.3)

## Conservation Design

All of these techniques can be combined into one approach labeled Conservation Design. This smart growth technique is the culmination of many processes to help cities grow in ways that consume less land and strike a balance between preservation and growth. Growth and development are inevitable, but it can be done in a way that improves the environment. Conservation design has four primary steps to allow for the combination of the natural features, the working landscape and the built environment.

Step 1 is to identify the natural features and resources, topography and drainage patterns.

Step 2 is designing the development to work with these identified elements. The site should be laid out to take advantage of existing topography and limit grading or filling of the site. The buildings should be located to preserve natural features, reduce necessary impervious surfaces and take advantage of solar and wind power options. Landscape should be native plant materials which will grow better, use less water and work with the existing environment. Impervious surfaces should be limited by requiring shorter driveways, shared access points and parking facilities, minimum number of parking spaces, and reduced roadway quantities and widths. Stormwater control will require the use of BMPs including swales, infiltration basins, vegetated strips, rain gardens and bio-retention areas.

Step 3 is the review of the plan including the “treatment train.” The plan should be evaluated to make sure it has taken every opportunity to work with the environment. Also the treatment train, which is the combination of many BMPs to create an efficient treatment system, will be evaluated. Watershed requirements are explained in the City’s Watershed Stormwater Management Design Manual.

Step 4 is the maintenance and management plan. If the design and development are approved, most likely large areas of green space will be preserved and the maintenance plan details who and how these areas will be preserved in perpetuity. The plan will identify what features are on the property, i.e. natural protected areas, park area, stormwater facilities, etc. and then what is the most appropriate method to protect them including what group would be most appropriate to oversee the maintenance. For some protected natural areas, land conservation groups such as the MCCD may be the most appropriate group, whereas stormwater facilities could be appropriately maintained by a homeowners association.

Conservation design is the preferred development methodology, especially in this area due to its unique features. It is proven that conservation design saves construction costs by requiring less roadways, utilities and grading work. The City has established a Conservation Overlay District for this area, which requires specific goals to be met.

	Supporting Actions	Success Indicators
<b>10.5a</b>	Development plans shall include the protection, preservation, enhancement and expansion of natural features.	<p>The increase in the number of development plans submitted that indicate natural features to be preserved.</p> <p>The number of tree groves protected or enhanced annually.</p> <p>The establishment of appropriate buffers, including 100 feet from natural features and 50 feet from drain tiles, as illustrated on development plans.</p> <p>Use of green space as a buffer or corridor link between natural features.</p>
<b>10.5b</b>	Encourage the reuse and redevelopment of existing buildings or sites.	The increase in the number of brownfield sites that are redeveloped.
<b>10.5c</b>	Allow for cluster designed subdivision and business site development.	<p>Increase in the approval of PUDs for cluster development.</p> <p>The reduction of impervious surfaces associated with a development. (based on an average from other non-conservation developments and UDO permitted impervious surface limits).</p> <p>Increase in open space and natural features illustrated in developments.</p>
<b>10.5d</b>	Seek to establish a Transfer of Development Rights (TDR) program to protect agricultural land, hydric soils and other natural features.	<p>The establishment of a Transfer of Development Rights program.</p> <p>The approval of density bonuses for projects which have purchased development rights through a TDR.</p>
<b>10.5e</b>	Explore the feasibility of Transit-Oriented District (TOD) around the Ridgefield Corridor.	The construction of a transit facility in this area.
<b>10.5f</b>	Conservation design techniques should be followed for development within this area.	<p>The number of projects submitted that meet the goals detailed in the UDO.</p> <p>The number of conservation subdivisions approved.</p>

The northwest sub-area is a unique area that contains 17 specifically identified natural resources scattered around existing development, hydric soils and farmed agriculture land. This largely underdeveloped area will develop according to the demand for new housing and services in this area. The extension of utility services to serve this area will likely be the trigger that starts this development boom. This section of the Comprehensive Plan allows the City to properly plan for and require smart growth. A significant portion of this sub-area is within Crystal Lake's Watershed. This along with the other natural features in the area will require conscientious development planning and construction. While it can be difficult to reconcile sustainability with traditional sprawling developments, it is possible to create communities that enable people to live, work and play in harmony with nature and restore and preserve the natural environment.

Exhibit I

# Northwest Sub-Area Environment Preservation

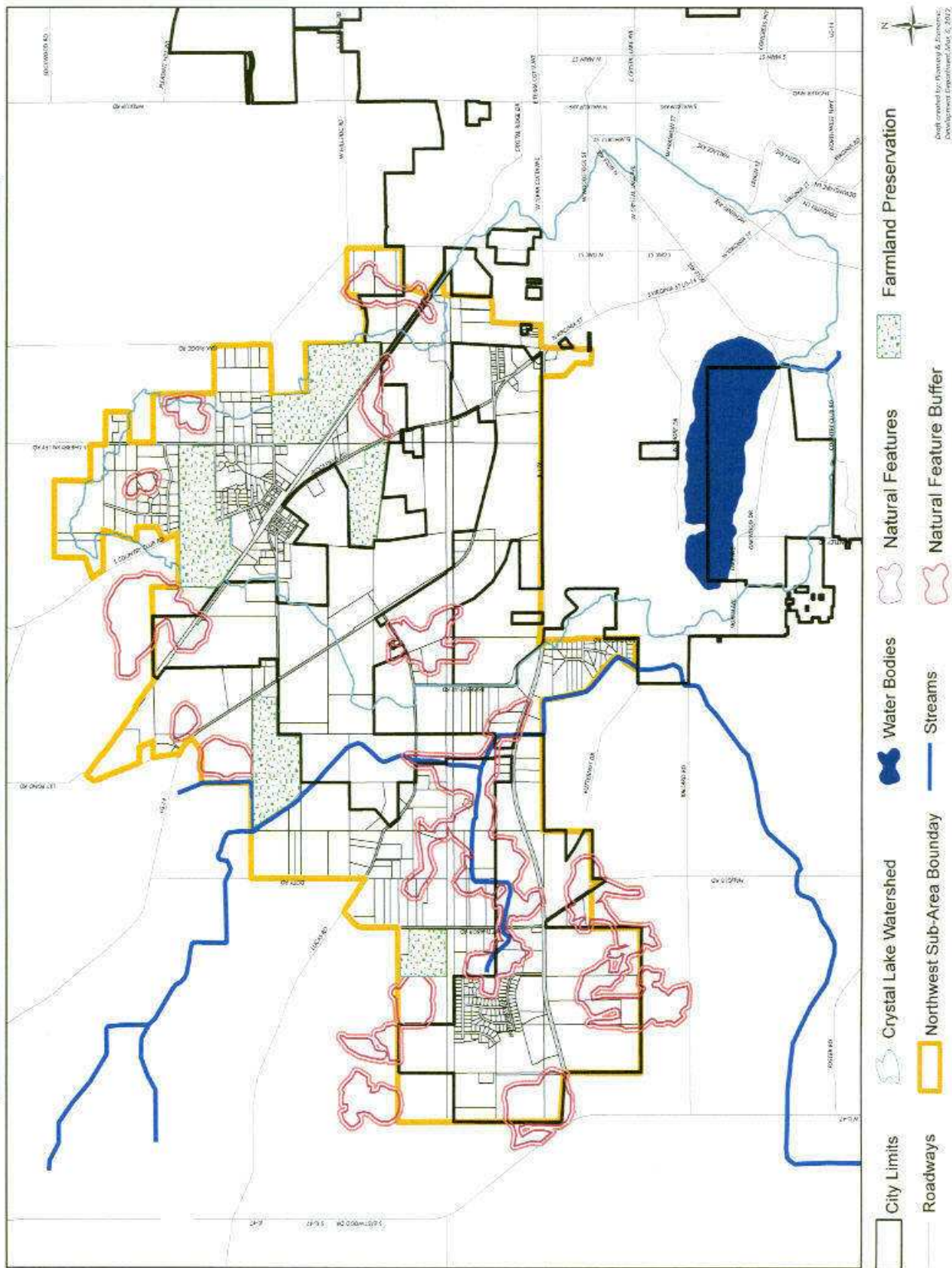


Exhibit J

**Northwest Sub-Area Transfer of Development Rights**

