

# Table 1) Version Info

Release Number	Date	Comments
Version 1.01	5/31/2011	Release for public comments
Version 1.02	10/18/2011	Added changes from 6/24/2011 public meeting.
Version 1.03	11/14/2011	Added changes from 11/7/2011 public meeting.
Version 1.04	11/22/2011	Added changes from 11/21/2011 public meeting. Accepted for release to trustees.
Version 1.05	12/24/2011	Fixed typos. Accepted by Board of Trustees.

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### I. PREFACE

The first Official Comprehensive General Plan of the Village of Bull Valley used the recommendations of regional planners, including 1961 studies for the Eastern McHenry County Planning Association, the 1977 Comprehensive General Plan prepared by the Northeastern Illinois Planning Commission, and the 1979 Land Use Goals and Objectives adopted by the McHenry County Board. It was adopted in February 1979. The Land Use Map was adopted in 1981. The plan was updated in 1992.

The 1992 plan has served to protect the rich historical and environmental heritage of Bull Valley for seventeen years. It is the intent of this plan to do the same.

This revised Plan is produced for the guidance of the Village Officials and for the better understanding of citizens who must actively participate in this ongoing process as the Village moves toward the next century.

Village Officials, Planners and developers are encouraged to review not only the 1992 Village of Bull Valley Comprehensive Plan but the Appendices on Architecturally Significant Structures, Native Habitat, Archaeological Sites and Historical Sites

Much of the substance of the 1992 plan is in the text included in Appendix 1 of the 1992 Plan. Pertinent sections are included in this 2011 Comprehensive Plan for the convenience of the reader. Nevertheless, a thorough reading of Appendix 1 and review of the maps will be valuable.

### II. PUBLIC PARTICIPATION IN THE PLANNING PROCESS

The basic purpose of this public participation plan is to provide a process through which the Village of Bull Valley residents, public officials and other stakeholder groups may participate, in meaningful and effective ways, in developing the Village of Bull Valley's comprehensive Plan. This plan has been developed based upon the understanding that citizens and groups are the source of tremendous creativity and that their creativity and input will produce better planning decisions. This public participation plan recognizes every citizen's right to participate in the process of making local government decisions. Because the decisions represented by the Village of Bull Valley's Comprehensive Plan will define what the Village will look like for many years to come, public participation in the development of the plan is critical. Significant time and energy investments will be needed to complete this planning effort. Given these investments, broad and active public participation is an essential strategy for developing a plan and planning process that will stand the test of time.

The public participation plan consists of 3 phases. Briefly they are:

- Public Awareness share information; assure that all residents and interested parties are aware of the planning process and how to participate.
- Public Education provide the public with balanced and objective information
- Public Input provide the public with opportunities to inject ideas into the planning process.

Recognizing that not everyone is able to participate in the same way or at the same time, we strive to include a mix of participation opportunities that provide broad and diverse opportunities that consider the diversity of the Village.

### Public Awareness

The goal of Public Awareness is to make the public aware of the comprehensive planning process and the fact that the comprehensive plan needs to be updated. This could be done via direct mailings, news releases,

displays and exhibits. Access to the current comprehensive plan is made available at the Village hall for on-site inspection.

#### Public Education

The goal of Public Education is to provide the public with balanced and objective information to assist them in understanding the problems, alternatives, and/or solutions. Developing fact sheets, holding open houses or other public events may be used to accomplish a number of educational objectives during this phase of public participation. These include educating the public about results of previous Village-wide surveys and other public opinion tools, reviewing and/or introducing new or particularly relevant planning concepts during this step of the planning process, and interpreting and helping the public better understand technical information and how it relates to planning issues and concerns. The results from previous planning efforts are available at Village Hall and are available to the public for onsite inspection during regular business hours of by appointment. Once again the use of direct mailings, news releases, displays and exhibits, on-site inspection, fact sheets, public education meetings and newsletters are possible vehicles for this goal.

## Public Input

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The goal of public input is to obtain public feedback on issues, alternatives and/or decisions that need to be made and encourage suggested solutions from residents and stakeholders. This will be done via open houses, public hearings, opinion surveys etc. Village residents are encouraged to write letters, call the Village or email the plan commission at bvplanning1@yahoo.com

### III. HISTORY AND FORMATION OF THE VILLAGE OF BULL VALLEY

The area generally known as Bull Valley includes the site of the first group settlement in McHenry County, the 1835 Virginia Settlement, which grew into an agricultural community consisting mainly of typical Midwest dairy farms. Patterns of land use changed little before the Second World War. The same families have occupied some local home sites for more than 100 years.

The next settlers were attracted to Bull Valley by its beauty. Fewer people than in the past depended on farming for a livelihood, but many wanted acreage for a large garden, orchard, poultry or horses. They also wanted to protect the Valley's open space, woods, streams, and wildlife against the inevitable pressures of metropolitan growth. McHenry County did not yet have a planning office. Unincorporated countryside was vulnerable to the worst manifestations of uncontrolled sprawl, spot subdivisions, random gravel pits and trash dumps.

### Organization

In 1942, a group of neighbors organized the Countryside Improvement Association. It gradually became involved in questions of land use. In 1955, in an unprecedented action, owners of about 3,000 acres (half of the Bull Valley area at the time) voluntarily put their land into 3-acre zoning, the highest residential classification then offered by the County. This single decision established the future character of the community.

In 1960, money was raised from residents by subscription, to pay for a land use study and professional planning advice. They created the Eastern McHenry County Plan Association (EMCPA), addressing the common problems of four townships. That Association's recommendation in a report of July 25, 1961 was that a large part of the Bull Valley area be zoned for a residential/estate use of a minimum of 5-acre tracts, based on the following premise:

"Unlike the traditional concept of a community where the most intense use is at the center of the area and becomes more open as the distance from the center increases, the EMCPA area has at its center, a very attractive rolling, wooded area currently developed in low density, open estate type residential and farm development (and) included in this center portion are two very broad, scenic valleys which should be retained for non-intensive development"

When the County established a Planning Commission in 1963, the EMCPA dissolved and turned its studies over to the County Planning Commission.

As the County began to consider land use policy, Bull Valley neighbors continued to oppose development that threatened farms, forested hills, and wetlands. Through their association, they bore the costs of legal representation at endless zoning hearings, until it became obvious that private efforts could not win the fight to save the land.

## Incorporation

In 1977, the Countryside Improvement Association was reorganized as the Bull Valley Association, which initiated and campaigned for a referendum on incorporation. By state law, a new municipality could have no fewer than 200 voters in an area of two square miles hence the peculiar shape and boundaries of the Village, which had to reach out for scattered households. The referendum passed at an election held on July 23rd of that year, giving residents for the first time, the authority to implement their long-standing purposes. The Village of Bull Valley was empowered to formulate its own land use philosophy, plan its own growth, and pass laws to regulate development.

## IV. COMMUNITY CHARACTER

#### Historical Perspective

The glacial topography and resulting natural landscapes, flora and fauna of the Village and its planning area serve, more than any other attribute, to define the character of the countryside. Residents and visitors alike become enamored with the sweeping valley vistas, the profusion of wildflowers, and the certainty of seeing mammals and a multitude of birds, the heavy woodlands bordering narrow and twisting roads. A desire to protect the richness of this landscape has been the primary reason behind the long established desire by area residents to maintain significant parcels of open space, as well as low density and low impact land uses. (Language From 1992 Plan)

Surrounded by established municipalities, the Village defines its role as a green area separating those cities. Its unique glacial topography, extensive forestation and other natural endowments have esthetic value and regional importance. The preservation of open space is fundamental to environmental and ecological stability and of vital importance in an expanding metropolitan area.

Bull Valley differs from its neighbors because of its large lots and sizable areas of open space that contribute to the rural atmosphere and are an integral part of the everyday living environment. Where most communities develop dense business districts and town centers with neighborhoods and larger lots fanning out from that center, Bull Valley reverses this model, retaining large parcels of land centrally in the core of the Village, many in dedicated conservation easements and private and public nature preserves, with smaller lot development occurring at the edges of the Village.

To preserve the character of the Village, the basic policy of 5-acre residential zoning has been and must continue to be strictly maintained; some parcels smaller than 5 acres are already within the Village boundaries. Most of these parcels were annexed into the Village as part of multiple large parcel annexations.

The character of the residential roads in Bull Valley is an important element of the character of the entire Village. On all Village roads, the visual image that has been created is that of country living.

Consistent with the rural character of the Village, Bull Valley encourages a dark at night atmosphere with minimal street lighting; minimal air, water and noise pollution; minimal disruption of the landscape by utility lines, strict signing and advertising regulations including a ban on billboards, and preservation of a country feeling to Village roads.

Since surrounding cities provide a variety of industrial, and highdensity urban and suburban development, the Village does not include such land use within its corporate boundaries or zone of influence.

The Village should vigorously pursue infill. Owners of those adjoining properties should be made aware of Village policies and protections and encouraged to annex or enter into pre-annexation agreements.

#### Community Character Analysis as Guidance for Future Land Use

A community's land use plan serves as a basis for the community's zoning and subdivision ordinances. The plan expresses the long-term vision of the community and the ordinances outline the way that vision will be met. If the ordinances are challenged, a solid, well thought-out land use plan provides support for their enforceability. It also provides a basis for objection by the community when development proposed outside Village boundaries, but within the community's statutory planning area is not in keeping with the community's plan.

With that in mind, this planning commission has determined that the Village of Bull Valley has different areas that have different characteristics and require different considerations if they are to be developed. Defined character areas are a critical element in planning a community and in the zoning regulations that support the plan. The areas identified are Area One/The Pre-1992 Village and Boone Creek Valley; Area Two/Village 1992-to 2010; Area Three /Limited Retail Development.

Due to the glacial topography of the Village and the sensitivity of the Boone Creek Watershed which encompasses most of the Village, no area is more critical than any other in its need for strict consideration of the environmental impact of any development proposal. The glacier has given us an area with sections of sensitive wetlands, remnant oak woodlands, steep slopes and other natural features that must be protected. Consideration of the Critical Areas Map of the Boone Creek Watershed, the Illinois and McHenry

County Natural Areas Inventory Maps<sup>1</sup>, the McHenry County Sensitive Aquifer Recharge Map<sup>2</sup> and the McHenry County Conservation district publication "The Oaks of McHenry County"<sup>3</sup> must be part of the approval process for all zoning requests in all areas.

Additional consideration must be given to whether a proposed development is in a Class III Special Resource Groundwater area. For more information on the Class III Watershed areas of Bull Valley see page 19 of this plan, Boone Creek Watershed and Class III Special Resource Districts, and page 22, The Parker Fen Class III Special Resource Groundwater Systems.

Planning areas must have distinct characteristics to avoid running together and becoming so confused that they wind up having no character at all. In some cases sharp distinctions between character types will be appropriate; in others a thoughtful transition between character types will suit the situation. Each area should be viewed separately when evaluating development impacts on the character of that area in addition to determining potential impacts on the overall character of a community.

When asked what they valued about the Village in a September 2009 survey, residents responded with 'low density' 'the rural, country atmosphere,' 'the sense of peace, quiet, and privacy,' and 'the large amount of open space and unique environmental features. Care must be taken that the very thing the makes Bull Valley attractive is not compromised. The boundaries between these distinct areas need particular attention. The Village must resist attempts to change the area boundaries and permit intrusions by higher intensity uses into lower intensity areas.

<sup>&</sup>lt;sup>1</sup> Attachment 6) Designated Conservation Areas

<sup>&</sup>lt;sup>2</sup> Attachment 8)Sensitive Aquifer Recharge Areas (SARA) Map

<sup>&</sup>lt;sup>3</sup>This document is available from McHenry County's website, <u>http://www.mccdistrict.org/web/assets/publications/brochures/OaksofMcHenryspr</u> <u>eads\_WC.pdf</u>. An enlargement of the 2005 map from this document is attached as Attachment 7)Oak Stands of McHenry County

## Area One/Pre 1992 Village/Boone Creek Valley

Area One in this plan is the Pre 1992 Village and the pockets of nonannexed lands that are currently adjacent and partially surrounded by the Pre 1992 Village.

In 1992, the date of the last Comprehensive Plan, the Village encompassed 3.5 square miles centered primarily around the Boone Creek Valley, featuring 100 foot elevation differences, numerous springs discharging from the valley walls, and diverse habitat. The Village extended east to the broad outwash plain of Cherry Valley Rd. and west to the mature Oak Hickory Woodlands of Fleming Road.

Approximate boundaries were Fleming Road to the west, Thompson Road to the north, Cherry Valley Rd. to the east and Mason Hill Rd. to the south. Village properties were aligned primarily along Bull Valley Road, Thompson Road and Cold Springs Road, leaving non-annexed pockets of land in the Boone Creek Valley that are still not part of the Village today. These non-annexed lands are vulnerable to development standards not compatible with the Village philosophy and plan. Although much of this non-annexed land enjoys some level of protection by virtue of its proximity to the Village, we strongly encourage the owners of those parcels to support the Village in its goals by joining us in the effort to preserve this beautiful valley.

Area One has the mixed characteristics of Countryside, Woodland and Wetlands, based on the natural environment and emphasizing undeveloped open space. Natural scenic resources are preserved and man-made elements are incidental. This character type has been created in Bull Valley primarily by residents' desire to preserve and protect its significant environmental resources as described in the preceding section. Many residents have donated all or part of their land to conservation easements or dedicated Illinois Nature Preserves. Continuation of this type of permanent protection of prime agricultural land, natural features and open space through deed restrictions, conservation easements and donations to land trusts is strongly encouraged.

With Boone Creek at the center, Area One is the area of greatest topographical diversity, with rolling hills and natural features such as kettles, seeps and glacial ridges that support a heavily wooded environment. Accommodating any amount of development without destroying the character of the area is a difficult balancing task.

Several historically significant structures are preserved within this area of the Village.

Annexation of adjacent undeveloped lands that are consistent with the character of Area One, to expand the area should be pursued.

In Area One, most parcels are larger than Bull Valley's traditional five-acre minimum. Continuation of this practice must be strongly encouraged. The presence of rural architecture and agricultural uses like horse pastures and rural fences contribute to the character of this area. Careful attention must be given to preserving a natural look, preserving native vegetation, minimizing grading<sup>4</sup>, clearing invasive vegetation, preserving the natural flow of water, using best management practices for storm water management and preserving all possible native trees. The preservation or planting of native vegetation should be strongly encouraged and given preference over non-native plantings and non-native grasses<sup>5</sup>.

Because we view our communities from the road on a daily basis, design of the roadway is crucial to maintaining the character of an area. The clearing of land along roads is destructive of this character, and should be avoided except where necessary for safety and security at entrances and intersections. Preserving native trees and vegetation, landscaping roadways to make them enclosing and narrow, and permitting them to bend to accommodate natural obstructions enhances the country character of the road. Mason Hill Road is a case in point. Most of the west part of the road near or through the Village has a country road character because the vegetation encroaches right up to the edge of the pavement and makes the road appear narrow and

<sup>4</sup> Grading alters the natural topography; destroys the natural flow of storm water runoff; and increases chances of groundwater pollution, erosion, loss of wildlife habitat, and surface water pollution due to sediment, nutrients and pesticides. In rare cases where a restoration requires some grading due to past human disturbance, a restoration plan should be submitted to the Village for approval. The plan must include location and current description of the area proposed to be restored, type of restoration, a timeline and follow up maintenance plans.

<sup>5</sup> Addendum to the Bull Valley Comprehensive Land Use and Preservation Plan, Addendum VII, List of Plants Appropriate for Bull Valley Soil Types

rural. However as it moves further east, where individual landowners have lawns abutting the street and the view of buildings intrudes upon the vista, an Estate character begins to evolve.

## Area Two/1992 to 2011 Village/Estate

Area Two is the land extending outward beyond Area One, up to the boundary agreement lines with Woodstock and McHenry, and to the statutory mile and one half planning jurisdiction where there is no boundary agreement line in place.

Since 1992 the Village has grown as more people coming into McHenry County realized their vision of open space, environmental stewardship and individual privacy was complimentary to the Village philosophy. In the year of this plan, 2011, the Village encompasses approximately 7.5 square miles. The northern part of the Village reflects extensive recent annexations starting at Thompson Road and reaching almost to the edges of the Village of Greenwood. This section of the Village is connected by a strip along Cold Springs Road at Thompson Road that was created during formation and incorporation of the Village.

Today, the western edge of the Village has grown to align with the Woodstock/Bull Valley boundary agreement line, along Queen Anne Road and Country Club Road. To the east the Village has spread out a bit less, following the McHenry/Bull Valley boundary agreement along Ridge Road, Curran Road, and Crystal Springs Road.

Area Two/Estate development represents the lower intensity end of the Sub**u**rban character class. Estate character development is clearly residential, but it requires low-density development on larger, naturally landscaped properties that produces a country feeling. In general, open spaces dominate; architectural and man-made elements are apparent but secondary.

Although some Estate Character areas have become mixed into Area One over the years, it is not the intent of the Village to encourage Estate developments in Area One. In the next twenty years development pressures will increase demand for more Estate Character developments that should be constrained to Area Two of the Village. From time to time, the environmental features of an Area Two parcel being developed will be more characteristic of Area One and development will be constrained accordingly

To achieve an Estate character, the design of development must intentionally seek to imitate more rural areas through the use of rural street sections without sidewalks, vast open space throughout the development, the use of rural fence types and/or native hedgerows to divide properties and generous building setbacks on all sides. Careful attention must be given to preserving a natural look by preserving native vegetation, minimizing grading<sup>4</sup> clearing invasive vegetation, preserving the natural flow of water, using best management practices for storm water management and preserving all possible native trees, pursuant to the Bull Valley Tree Ordinance.

The preservation or planting of native vegetation should be strongly encouraged and given preference over non-native plantings and non-native grasses<sup>6</sup>. As in Area One, permanent protection of prime agricultural land, natural features and open space through deed restrictions, conservation easements and donations to land trusts is encouraged.

The Village's long-standing, five-acre minimum lot size must be maintained in Area Two. However, where appropriate, the Planned Unit Development process can be used to permit three-acre home sites that still preserve the Estate character of an area by placing homes so as to ensure that open space and important natural features that define the area character are protected.

The recently approved McHenry County 2030 Land Use Plan<sup>7</sup> includes areas designated as Estate and defined as 1-5 acres within the Bull Valley planning jurisdiction. This density is in direct conflict with Bull Valley's plan and is particularly insensitive where it is located directly adjacent to the Boone Creek Fen or other high quality wetlands. Every effort must be made to constrain the density of proposed developments in these areas.

All too often, the open space that contributes to the Estate character of a neighborhood is on abutting land that is not yet developed, as are the open vistas that are still intact. The natural open space and views of the

<sup>6</sup> Addendum to the Bull Valley Comprehensive Land Use and Preservation Plan, Addendum VII, List of Plants Appropriate for Bull Valley Soil Types <sup>7</sup> Refer to the 4-20-10 Future Land Use Map on the McHenry County 2030 Plan website, http://www.mchenrycounty2030plan.com/news/index.htm

landscape are "borrowed" from the adjoining land. When that is the case, as additional development eventually occurs adjacent to these existing neighborhoods, the character will also change, from Estate to Suburban, leading to disappointed and dissatisfied homeowners who feel they have lost some value and enjoyment in their own property and also compromising the comprehensive plan of the Village.

In order to prevent such potential changes in character, developments should not be dependent upon the borrowing of unprotected open space as a substitute for working with approved land trust organizations to protect dedicated open space and conservation areas in the development plan.

## Area Three/Retail

Retail Development has been under consideration since the 1992 plan. In 2010, the Village added a retail development area by amendment to the comprehensive plan and developed a retail planned development zoning ordinance. This plan continues the provision for a limited amount of retail development.

Area Three is <u>not</u> a contiguous area. It is intended to define specific locations for retail development, restricted at this time to a section of Illinois State Route 120 and a section of Crystal Lake Road, where we expect the adjacent cities of Woodstock, Wonder Lake and McHenry to also initiate commercial/retail development in the next twenty years.

The Village has grown from an area of two square miles at the time of incorporation to 8.7 square miles in 2011. With growth has come additional fiscal responsibilities, such as for road maintenance and police coverage. Fiscal policy must increasingly be as relevant a factor in decisions about future growth as other planning criteria. While growth, per se, does not ensure fiscal health, the need for a non-residential tax base must be acknowledged and accommodated.

While establishment of this Retail Planned Development Area is essential to the fiscal health of Bull Valley, it must develop in a way that does not compromise the character of areas One and Two. Retail developments will be low impact, meaning that it will result in minimal disturbance to the environment. All retail development will be subject to the requirements of the Retail Planned Development section of the Special Use ordinance. Retail Development must be compatible with the character of adjacent Village areas,

as well as the character of the Village as a whole. Each project should be required to generate revenue beyond the costs directly or indirectly associated with it. Furthermore, each proposed project should be considered on its individual merit, with no individual project creating a precedent for later projects.

In further refinement of the three Areas above the Village should continue to offer the following zoning districts:

- Agricultural: The Agricultural A-1 (40 acres) and A-2 (10 acres) collectively known as the "Ag" Agricultural District) are to provide areas where agricultural activities and related uses may take place and where small tract subdivision will not be allowed to proliferate and change the agricultural character of that countryside. Agricultural activities are the principal uses and residential uses are secondary. Established by ordinance in 1997, the Ag-40 overlay district is located generally in the northwest quadrant of the statutory planning area and serves as a buffer area between Bull Valley and Woodstock along the agreed planning boundary line between the two municipalities.
- Estate: Estate zoning is established to provide for minimum 5-acre home sites typical of existing home sites and non-agricultural conditions currently in the Village and surrounding area. Estate District land should provide sites made unique by their topographic variation, woodlands and wetlands. Home sites in this classification must be designed to work with the land and preserve its natural features.
- Natural Resource Conservation District (NR): The NR District is an overlay district. One or more other districts may be included within the boundaries of the NR district. The purpose of the NR district is to protect unique natural resource areas or scenic vistas or woodlands, and to assess development alternatives that recognize both the limitations and opportunities found in these areas.
- Class III Special Resource Groundwater System: This is a designation established by the Illinois Environmental Protection Agency after application and review. It is an exclusive designation that applies to demonstrably unique (e.g. irreplaceable sources) groundwater suitable for application of a water quality standard more stringent than otherwise applicable.) It applies to groundwater that is vital for a 14

particularly sensitive ecological system or groundwater contributing to a dedicated nature preserve that has been listed by the Illinois Environmental Protection Agency.

Of fourteen such areas designated in the entire State of Illinois, three are in or partially in the Bull Valley planning jurisdictional area. They are the Boone Creek Fen Illinois Natural Area Watershed District, the Parker Fen and Class III, and Gladstone Fen and Class III.

Within these Districts, development will be carefully examined and regulated to insure that the water quality, quantity and natural recharge function of the area are strictly maintained. No development will be permitted within the Districts that will have an adverse effect upon these conditions or cause degradation of the area.

### Goals and Objectives

## Goal:

A unique municipality characterized by low-density residential development that provides a rural life style for residents and acts as a low-density natural buffer between surrounding municipalities for the protection of the regional environment.

## Objectives:

- Protect existing and planned residential areas from encroachment by land uses that are incompatible or which may create adverse impacts by clearly defining and enforcing the boundaries of the distinct areas of the Village
- Utilize all available resources such as the Critical Areas Map of the Boone Creek Watershed, the Illinois and McHenry County Natural Areas Inventory Maps, the McHenry County Sensitive Aquifer Recharge Map and the McHenry County Conservation district publication "The Oaks of McHenry County" as part of the approval process for all zoning requests in all areas.
- Require developers to respect and preserve natural features such as vegetation, trees, wildlife habitats, waterways, wetlands, topography, and scenic vistas in all areas;

- Require dedication of sites containing significant environmental resources to conservation easements, Illinois Nature Preserves etc.;
- Utilize all available legal means including conservation dedications, deed restrictions, zoning restrictions and others, to maintain the Village's expression of collective will to preserve open space and native landscapes and pass it on to next generations.
- Require developers to preserve existing structures that reflect the history and heritage of Bull Valley;
- Maintain a unique municipal image characterized by low-density residential development, by adhering to development according to the adopted comprehensive plan;
- Continue to require a density of one dwelling to five acres as the basic policy of the Village, with provisions for a density reduction to one dwelling to three acres under certain conditions where appropriate in Area Two and beyond within the one and one-half mile planning jurisdictional limit;
- Require a dark at night atmosphere with minimal street and yard lighting; develop a dark sky lighting ordinance;
- Continue to require minimal air, water and noise pollution; minimal disruption of the landscape by utility lines, cell towers, and inappropriate structures incompatible with this plan;
- Continue to enforce strict signage and advertising regulations including a ban on billboards;
- Continue restriction on industrial and dense suburban development;
- Establish appropriate impact fees and park fees, to mitigate the Village's costs associated with accommodating new development;
- Facilitate environmental stewardship by providing ordinances for design standards, lighting standards, tree preservation, natural landscaping and waste disposal; and

• Continue to protect the Class III Special Resource Areas of Boone Creek Fen, Parker Fen, Gladstone Fen, and any new class III areas, with strict limitations on development and other alterations directly or indirectly affecting those areas.

## V. LAND USE AND NATURAL RESOURCES

#### Natural Resources

From the Bull Valley 1992 Plan: The Bull Valley area represents one of the most diverse aggregations of glacial landscapes in McHenry County. The uniqueness of the area is primarily due to this variety of surficial geology, and the resulting diversity of plant and animal habitat. Each of the six sub-regions needs a distinctive combination of preservation and development standards in order that the landscape identity of each can be preserved.

The dominant glacial feature in the Bull Valley area is the Boone Creek Valley, which cuts through the West Chicago Till Plain resulting in 100 foot elevation differences, numerous springs discharging from the valley walls, and diverse habitat. Boone Creek discharges into a broad outwash plain east of Cherry Valley Rd. In the late 19<sup>th</sup> and early 20<sup>th</sup> century, most of this area was tiled to provide drainage, tributaries to Boone Creek were channelized, and very productive cropland resulted.

There is a large concentration of kettles southwest of the valley, and a large kettle hole grouping adjoins the valley west of Cold Springs Rd. at Thompson Rd. The valley floor is approximately 820 sq. ft. above sea level at its upstream end, and at 800 ft. at the outwash plain. Ridge tops near the valley are at 920 ft. The kettle field ridges are generally at 950 ft. above sea level.

The glacial landmarks of each drainage basin differ substantially. The basins created differing conditions for the evolution of diverse floral and faunal habitats as well. Thus distinctive prehistoric and historic settlement patterns occurred in each basin. Although some information is documented on all of these characteristic features of the Boone Creek watershed, and other adjoining watersheds, much more data continues to be gathered.

#### Soils

A wide variety of soil types are found in the Bull Valley area due to the variability in topography and different plant habitats, which evolved since glacial times<sup>8</sup>. Through the history of the Village, it has utilized soil types in the overlay districts of its zoning ordinance to guide development. Soils are used in these overlay districts to define prime agricultural lands, wetlands, and problem soils related to septic fields. Soil types also indicate what plant communities should be re-established in restorations. Every development proposal in the Village planning area must include a Natural Resource Inventory by the McHenry County Soil and Water Division.

## Oak Woodlands

The rich topography of the receding glaciers fostered the growth of expansive hardwood forest across the county, largely dominated by various species of Oaks. The McHenry County conservation District publication, "The Oaks of McHenry County", documents the loss of over 87% of these magnificent forests from early settlement through the year 2005. The Bull Valley area has some of the last remaining stands of high ecological significance in the County.

Every effort must be made to prevent further fragmentation by incompatible residential development in woodland properties. Developers and owners are encouraged to clear invasive species so new oaks can grow and to plant new oaks to replace the declining stands of older trees.<sup>9</sup>

### Boone Creek Watershed and Class III Special Resource Districts

The majority of land in the Bull Valley area surface drains into Boone Creek. Five sub-basins comprise the Boone Creek Watershed. The water quality and resulting habitat quality of Boone Creek is dependent upon removing or minimizing pollutant loadings in the watershed. Pollutants originate from a variety of sources including fertilizers, herbicides and pesticides from yards and farm fields; salts and petrochemicals from local streets; coliform bacteria from livestock and malfunctioning septic systems; and soil particles from construction activity. The Village initiated a water pollution management study in this basin in 1991.

<sup>&</sup>lt;sup>8</sup> Addendum to the Bull Valley Comprehensive Land Use and Preservation Plan, Addendum VIII, Boone Soils of McHenry County

<sup>&</sup>lt;sup>9</sup> Attachment 7)Oak Stands of McHenry County

At this time, Bull Valley has the highest concentration of privately owned Illinois Nature Preserves in the State of Illinois as well as Boger Bog Illinois Nature Preserve, owned by the McHenry County Conservation district. All are dependent on groundwater and most encompass fen wetlands. Currently two Class III Special Resource Groundwaters have been designated, one for Boone Creek Fen Illinois Natural Area and the Julie M and Royce L. Parker Fen Nature Preserves A third is pending only final approval, expected in the near future, encompassing the water sources to Boger Bog and Gladstone Fen.

Excerpts follow from the Executive Summary of the Boone Creek Watershed Alliance watershed protection plan, available at www.boonecreekwatershed.org. A summary of the full report is found in the Comprehensive Plan Addendum, Addendum 1, Conclusions from the Executive Summary and Report of Boone Creek Watershed Alliance Watershed Protection Plan, page 5. Although this document was originally written specific to the Boone Creek Watershed, which encompasses a large area of high quality wetlands in Bull Valley, the following should be understood as applying equally to the other Class III Special Resource Groundwaters, both those that exist today and those that may exist in the future. Many of Bull Valley's State designated natural areas now protected are not within the borders of the Boone Creek Watershed, but the descriptions, issues and needs outlined below remain the same for all.

The Boone Creek Watershed encompasses 23.4 square miles in eastcentral McHenry County. Most of the watershed is in Bull Valley or its planning area.

The watershed hosts a unique collection of state-designated Natural Areas, designated because of the presence of threatened and endangered flora and fauna and because of unique and high quality habitats. It is home to one of the largest remaining woodland complexes in McHenry County.

Boone Creek is one of only two cold-water streams in Illinois. The recharge area for the Boone Creek Fen INAI site has been determined to be very vulnerable to contamination. Establishment of the Class III status was accomplished to help establish planning guidelines to protect the ground water so vital to this unique and sensitive ecological system.

The McHenry County Conservation District and Illinois Department of Natural Resources have acquired some of the most important natural areas in the creek's headwaters.

Included mostly within The Boone Creek Watershed is the Boone Creek Fen INAI site, a Class III Special Resource Groundwater area as defined by the state of Illinois and designated by the Illinois EPA

### The Boone Creak Fen INAI Watershed District:

This district falls within the jurisdiction area of the Village as well as the City of Woodstock and unincorporated McHenry County. See the comprehensive plan addendum<sup>10</sup>, which depicts the district. This designation was established because it and the other areas discussed below are some of the few high quality remnants of the fen community remaining today, containing unique wetland natural communities, including graminoid fens, calcareous seeps, sedge meadow, and a coldwater stream. Graminoid Fens in Illinois only occur in the Northeastern Morainal Division of the State, as found in Bull Valley. A graminoid fen is a type of wet prairie with an alkaline water source resulting from seepage of calcareous ground water. Most fens have been destroyed by artificial lowering water tables and grazing. The district has also been identified by the Illinois State Geological Survey as having a high potential for aquifer contamination due to the presence of highly permeable soils and subsurface materials, principally gravels and sands.

The Parker Fen Class Three Special Resource Groundwater Systems, Boger Fen and Gladstone Fen, while not in the Boone Creek Fen INAI site Class III Special Resource Groundwater area, are all described by the State, in their dedications as Illinois Nature Preserves, in the same terms. All contain unique wetland natural communities, including graminoid fens, calcareous seeps, and sedge meadows. All are described by the Illinois State Geological Survey as having a "high potential" for aquifer contamination" due to the presence of highly permeable soils and subsurface materials, principally gravels and sands. Any development that affects the existing surface drainage patterns or important groundwater recharge zones could adversely impact any of the Illinois Nature Preserves in Bull Valley.

<sup>&</sup>lt;sup>10</sup> Attachment 6)Designated Conservation Areas

Boone Creek Fen, Parker Fen, Boger Bog and Gladstone Fen and other Illinois Nature Preserves in Bull Valley that include wetlands could especially be impacted up gradient. Residential septic systems would produce plumes of chemically altered ground water that could eliminate many plant species that cannot tolerate elevated levels of chlorine and sodium. Further, any diminution of the water supply for these fens due to withdrawals through private wells, especially during dry periods, would have negative impact on the Nature Preserves.

#### The Parker Fen Class III Special Resource Groundwater Systems

Parker Fen is a thirteen acre natural area, part of the Illinois Nature Area Inventory (INAI) and contains a high quality graminiod fen and calcareous seep as well as sedge meadow and dry mesic woodlands. Any development that affects the existing surface drainage patterns or important groundwater recharge zones could adversely affect the fen.

### Gladstone Fen Nature Preserve and INAI site and Boger Bog

Gladstone Fen Nature Preserve consists of 11.8 acres. The McHenry County Conservation District acquired an additional 38 acres of the original Illinois Natural Areas Inventory (INAI) site in 1999 (Boger Bog), bringing the total amount of protected land to 49.8 acres. Groundwater contributing to the INAI site is eligible for Class III status under Section 620.230 of Title 35 of the Illinois Administrative Code, with the groundwater being irreplaceable for the sensitive ecological communities that are present within both the INAI and preserve boundaries. The natural communities present at Gladstone Fen and Boger Bog include fen, sedge meadow, prairie, and oak savanna (McFall and Karnes 1995).

Permanent protection of these special natural areas is crucial. The Village takes its stewardship of these natural areas very seriously. Bull Valley residents have worked with the support of BCWA and other conservation organizations to protect several private properties as permanent Illinois Nature Preserves.

#### Water

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## Drinking Water and Water for Daily use

All water for Bull Valley residents' comes from private wells. McHenry County and all its communities are dependent on groundwater for their growth, prosperity and health. We do not and never will have access to Lake Michigan water<sup>11</sup>.

Recent independent studies commissioned by the County, indicate that several townships in the county will experience water shortages by 2030 due to over-withdrawal from their aquifers. Bull Valley is located at the four corners where four different townships meet - Greenwood, Dorr, McHenry and Nunda Townships. According to the study, McHenry Township is a township of potential groundwater shortage, and both Nunda and Dorr Townships are areas of groundwater concern by 2030<sup>12</sup>. (See page 67 of the McHenry County 2030 Land Use Plan). Preservation of water supplies through protection of our aquifers must be a priority for any land use plan.

As development densities increase in adjacent communities, the demand for water will become greater. As water becomes a scarcer resource, attempts to control, privatize and reallocate it to different areas will be made. Assurance of an identified source of water to meet long-term demand should be required as part of any new development approval. The Village should take steps to protect its residents' water supply by any legal means available.

## Boone Creek and the Boone Creek Watershed

Boone Creek has a watershed of 23.4 square miles in McHenry County, Illinois. It flows 13 miles from headwaters in Bull Valley, Woodstock, and unincorporated McHenry County before discharging to the Fox River in the City of McHenry. Most of the watershed is in Bull Valley or its planning area.

The glacial soils of Bull Valley are particularly conducive to infiltration. This also makes them particularly conducive to contamination of the aquifers with runoff water that contains salts, oils, herbicides, and other pollutants. Three areas within the Boone Creek Watershed have earned an IEPA designation of Class III Special Resource Districts. These are

<sup>&</sup>lt;sup>11</sup> Current law says that Lake Michigan water cannot be removed from the Lake Michigan watershed. Bull Valley is outside the Lake Michigan watershed.

demonstrably unique and irreplaceable groundwater recharge areas that are qualified for more stringent standards of protection<sup>13</sup>.

# Protection of Our Groundwater Recharge function and our Water Dependent Environmental Features.

The Village policy of large parcels, low density and open space contributes to protection of the recharge function of the soils and the underlying aquifers by leaving much of the ground open to infiltration of rainwater. Every development proposal in the Village planning area must be presented with an accompanying Natural Resource Inventory by the McHenry County Soil and Water Division that identifies the soils and resources of the site.

Development in the watershed can impair the quality of groundwater due to discharges of nutrients, salt and other pollutants. Impervious coverage in the form of structures, parking lots, driveways, roads, etc reduce the area available for infiltration, reducing recharge.

Conventional development practices of mass grading, removal of topsoil, removal of tree cover and alteration of the natural topography of the site interfere with natural infiltration. Artificial storm water systems are installed that direct water off site or into concentrated retaining basins. Storm water that is redirected contributes to erosion and concentrates significant amounts of pollutants into one location, greatly increasing the chance that pollution load will reach and contaminate the aquifers.

The Village has adopted the McHenry County Stormwater Management Ordinance (January, 2004). This ordinance addresses wetland and stream corridor protection, soil erosion, sediment control and stormwater detention. The Village should review this ordinance to determine whether stricter controls are necessary in the Bull Valley planning area.

Areas identified on the <u>McHenry County Sensitive Aquifers Recharge Map<sup>14</sup></u> and the Boone Creek Watershed Alliance Sensitive Areas  $Map^{15}$  should be

<sup>&</sup>lt;sup>13</sup> For more information on our Class III Watersheds see "Boone Creek Watershed and Class III Special Resource Districts" page of this plan

<sup>&</sup>lt;sup>14</sup> Attachment 8)Sensitive Aquifer Recharge Areas (SARA) Map

protected by strict development standards. These areas should have the amount of land cover restricted and require the use of best management practices such as bioswales, buffers, rain gardens, permeable paving and natural landscaping. Development must be designed to "fit into the natural land forms" rather than requiring grading and alteration. Natural rainfall collection areas such as glacial kettles must be allowed to remain intact. Development on steep slopes and removal of native trees and native vegetation contribute to erosion and must be prohibited.

All these practices should be applicable to redevelopment activities as well as new. Protection of natural resource and sensitive areas should be required as part of approval of development plans.

Preservation of open space and natural resource areas by deed restriction, dedicated conservation easements and private and public nature preserves, a practice already established in the Village, must be continued and expanded to include new development proposals.

## Wetlands and Other Inventoried Natural Areas

Within the Bull Valley boundaries lie many high quality wetlands. High quality wetlands, particularly rare springs, seeps and fen ecosystems, depend on recharge of cool, clean groundwater from shallow aquifers to maintain their hydrology and habitat diversity. Over-pumping can put a strain on these natural areas by reducing the amount of groundwater flowing into them. Therefore, aquifer draw-down must be prevented in order to maintain groundwater discharge areas.<sup>16</sup>

Wetland soils may also be impacted by development. Potential impacts include groundwater pollution, increased runoff and erosion, loss of wildlife habitat, surface water pollution due to sediment, nutrients and pesticides. It also can threaten the integrity of Boone Creek and other surface waters through the introduction of sediments and pollution.

<sup>15</sup> Addendum to the Bull Valley Comprehensive Land Use and Preservation Plan, Addendum IV, Boone Creek Watershed Sensitivity Map

<sup>16</sup> See Attachment 6)Designated Conservation Areas, page 69, for the INAI sites in the Bull Valley area.

In addition to the wetlands, the Village has extensive areas of drained hydric soils that were former wetlands. These are areas with high flood potential. Development and fill in hydric soils should be prohibited as it not only reduces the natural storage and conveyance capacity of flood waters, it puts the built structures at risk for serious flood damage. Because many of the watershed's hydric soils have been drained, wetland and wildlife habitat restoration potential is great and should always be considered.

## Regulations Regarding Floodplains & Wetlands

Due to its glacial topology, wetlands (swamps, bogs, fens, and similar lowlands) comprise a good portion of the Bull Valley area. Nationally, in 1992, the Environmental Protection Agency (EPA) started the ADvanced IDentification study (ADID) program to identify wetland sites that would be considered unsuitable for disposal of dredged or fill material. Managed by the US Army Corp of Engineers, the ADID study identifies many properties within the Boone Creek Watershed as wetlands and thus are highly regulated by that agency<sup>17</sup>.

Likewise, at the state level, through the Interagency Wetlands Policy Act of 1989, Illinois has established the goal that there be "no overall net loss of the state's existing wetland acres or their functional values due to state supported activities".

Both these programs make building on wetlands difficult, if not outright prohibited. All construction projects on wetland property must be reviewed and permitted by these agencies except for projects that fall under a limited number of nationwide blanket permits.

A flood plain is an area that is subject to natural flooding from an adjoining waterway. The Federal Emergency Management Agency (FEMA) has released maps showing areas subject to 100 year floods. Another way to say this is that these FEMA designated floodplains have a 1% probability of flooding in any one year, or a 26% of flooding over a typical 30 year mortgage lifetime. These maps are used for property insurance purposes to determine if flood insurance is required for a property. While there are no Federal or State regulations specifically prohibiting building in a flood

<sup>&</sup>lt;sup>17</sup> See Attachment 9) ADID Wetlands of the Bull Valley

plain, flood insurance may be required and the floodplain itself may be considered a wetland.

Bull Valley has several floodplains within its planning area. Floodplains exist along Boone, Powers, and Sleepy Hollow Creeks<sup>18</sup>.

Floodplains and wetlands often times overlap, but not necessarily. In both cases, for both wetlands and floodplains, dumping and filling should be prohibited to preserve the storage capacity of a floodplain and to preserve the natural topology and elevations of a wetland. Construction within both wetlands and floodplains is to be discouraged and properties within so designated wetland/floodplain areas should be set aside as open space to prevent environmentally incompatible uses.

Act of 1989, Illinois has established the goal that there be "no overall net loss of the state's existing wetland acres or their functional values due to state supported activities".

#### Good Stewardship Practices

Efforts should be made to reduce the use of lawn chemicals, household chemicals, and water softener salts throughout the Boone Creek Watershed. Specific information on the use of chlorides both as road salts for deicing and in household water softeners, and coal tar sealants for parking areas and driveways should be distributed.

Information on the benefits of native landscaping and instructional materials on how to design and maintain native landscapes should be made available<sup>19</sup>.

In addition to a wealth of informative material available by research, the County Water Resources Action  $Plan^{20}$  (includes the County Sensitive

<sup>20</sup> Water Resources Action Plan website:

<sup>&</sup>lt;sup>18</sup> See Attachment 10) Floodplains of the Bull Valley Area.

<sup>&</sup>lt;sup>19</sup> Addendum to the Bull Valley Comprehensive Land Use and Preservation Plan, Addendum V, Native Landscaping Notes for Homeowners

http://www.co.mchenry.il.us/departments/waterresources/Pages/WRAP.aspx

Aquifer Recharge Areas Map<sup>21</sup>, (SARA) and information on best management practices, sustainable landscaping practices, coal tar and other pollutants among other topics.

#### Open Space Protections and Benefits

The preservation of open space and the rural environment is fundamental to environmental and ecological stability, and of vital importance in an expanding metropolitan area.

Fields, forests, streams, ponds, and wetlands provide habitat for a desirable and enjoyable variety of wildlife, and support many threatened species. Open space permits human beings to co-exist harmoniously with the rest of the natural world.

Our woodlands contribute to the air quality of the entire region. An acre of trees can remove about 13 tons of dust and gases from the surrounding environment every year.

Open space is essential to the recharge of ground water, on which wells in the Village and the surrounding area depend. On small parcels, family water use may deplete the water supply by 2~ times the recharge rate. Open space is essential for replenishment.

Open space is required for the safe and efficient operation of septic systems, for the filtration of non-point pollutants and the preservation of water recharge areas. On-site soil and geological testing of individual parcels must be considered within the larger context of overall land use.

Our environment also includes cultural and educational resources. Within the Village natural areas there are geological, archaeological, and settlement sites which should be identified and preserved wherever possible.

## Land Use Guidelines

To ensure the safety and welfare of residents, to protect the ecosystem, and to offer our citizens the broadest possible experience of their natural and historical heritage, the Village should set standards that meet or exceed County standards, employ independent experts, determine

<sup>&</sup>lt;sup>21</sup> A portion of this map is attached to this document: Attachment 8)Sensitive Aquifer Recharge Areas (SARA) Map

investigative methods, and require cumulative review of land use within the Village and its zone of influence. High-density development, radical alteration of traffic patterns, and any changes that impact the environment should be subject to the maximum controls legally available to Village authorities.

Commercial farming in the area is expected to continue to decrease. Therefore, the Village must preserve open space through its firm commitment to low-density residential development, and through various public and private instrumentalities, donations, conservation easements, etc. created for that purpose.

All our drinking water and water for daily use comes from the groundwater in the aquifers that supply our wells. All of Bull Valley residents are on well water and septic systems. Recent studies indicate that parts of our county will have water shortages by the year 2030. Preservation of water supplies through protection of the aquifers is a priority of this plan. All village ordinances pertaining to development including the zoning, and subdivision ordinances, and related ordinances should be reviewed and revised to reflect this priority.

In addition, we must protect the diversity of plant and animal habitat, fields, forests, streams, ponds, and wetlands that are integral to Village character and support many threatened species.

The impact on ground water levels and quality, in the Boone Creek Watershed and particularly in the sensitive Boone Creek Fen, Parker Fen and Gladstone Fen Class III Special Resource districts will be a key determinant of the types and density of development that will be considered in these areas. The amount of impermeable surface coverage permitted in these areas must be strictly limited by zoning ordinance.

Numerous studies have shown that within a watershed or sub-watershed, water quality declines when impervious surfaces exceed 10 percent of total land surface. Approximately 27 percent of the Boone Creek INAI Class III District lies within the City of Woodstock's corporate limits, or planning jurisdiction. Most of this area is already urbanized or zoned for urbanization at a level that will result in impervious surfaces of about 25 percent. It follows that impervious surfaces within the Village's planning jurisdiction must be limited to no more than 5 percent of the gross buildable area of any proposed subdivision or re-subdivision, if the District impervious coverage is to be kept at 10 percent.

Commercial, industrial and high-density residential uses shall be prohibited within the Class III area. Other development is generally not encouraged unless substantial mitigation and conservation design techniques are applied to the maximum extent practical. In general, conservation design entails practices that preserve open space, protect natural areas, minimize impervious surfaces and maintain natural "hydrologic" functions, thereby preserving the quantity and quality of groundwater in the District. See NIPC publications Conservation Design Resource Manual and Environmental Considerations in Comprehensive Planning.

All natural communities and sensitive areas within the Boone Creek Watershed - including wetlands, kettle holes, hydric soils, floodplains and regulated buffers - must be strictly avoided in any development plan. The number of houses allowed in any proposed development should be based on the amount of *buildable* acres on a site - i.e., first eliminating wetlands, floodplains, hydric soils, natural depressional areas and regulated buffers from consideration. Other non-regulated natural areas, such as woodlands and savannas, must be protected, preferably by locating building sites away from them.

The Village has imposed strict constraints on development within the Class III areas. Details are contained in Chapter 12, Subdivision regulations of the Village ordinances. These Class III regulations should be reviewed, strengthened and made applicable to all development in the Class III areas.

Industrial and high-density residential uses are incompatible in the Village planning area. Area Three, Retail Development must also avoid natural communities and sensitive areas within the Boone Creek Watershed - including wetlands, kettle holes, hydric soils, floodplains and regulated buffers. Development plans should be based on the amount of *buildable (meaning able to accommodate buildings, drives, septic fields, etc...)\_acres on a site - i.e.,* first eliminating wetlands, floodplains, hydric soils, natural depressional areas and regulated buffers from consideration. Other non-regulated natural areas, such as woodlands and savannas, should be protected, preferably by locating building and septic sites away from them.

## Goals and Objectives

## Goal:

• Exercise responsible stewardship and make informed land use decisions that protect the quality and quantity of our groundwater and surface waters and provide permanent protection of our diverse glacial landscapes, including the resulting high quality natural communities and rare, threatened or endangered species within them.

## Objectives:

- Utilize the McHenry County Sensitive Aquifers Recharge Map and the Boone Creek Watershed Alliance Sensitive Areas Map as tools in determining approval of development plans.
- Require every development proposal in the Village planning area to include a Natural Resource Inventory by the McHenry County Soil and Water Division.
- Utilize soil types to guide development and determine appropriate native plantings for landscaping;
- Utilize the Illinois Natural Areas Inventory and McHenry County Natural Areas Inventory as a guide to protect inventoried areas and the nature preserves therein, including preserving the natural processes of the fens and seeps;
  - Restrict development in wetlands, floodplains, hydric soils, natural depressional areas and regulated buffers.
  - Require that development fit the natural topography of the intended site and avoid sensitive areas.
  - Limit impervious surfaces, as well as grading and compaction of surficial soils and underlying materials, which could affect recharge capabilities and reduce water quality;
  - Enact strict limits on impermeable coverage in sensitive areas such as the Class III Watersheds, and other Natural Resource Overlay District areas.

- Prohibit land use changes that would impair or compromise the recharge function or that could be the source of future groundwater reduction or contamination.
- Prohibit high density and industrial development within the Class III Districts.
- Require new development proposals to include an identified source of water to meet long-term demand as part of any new development approval.
- Prohibit activities that would cause pollution, erosion, sedimentation, or channelization of Boone Creek (ADID Class A) and other high quality surface waters.
- Require new development to avoid documented natural areas and protect woodlands, savannas, wetlands etc by buffering native trees from construction activity and locating septic sites downstream of the water flow and away from these areas.
- Review the Class III ordinance for applicability to all development.
- Review and update the water pollution study;
- Prevent the installation of drainage, septic systems and sanitary sewer systems where they might degrade the underlying aquifers;
- Review the McHenry County Stormwater Management Ordinance and develop a stricter ordinance for the Bull Valley planning area if necessary to achieve the above goal.
- Prevent further fragmentation by incompatible residential development in woodland properties;
- Encourage developers and owners to clear invasive species and encourage new oaks and other native hardwoods to be planted to replace the declining stands of older trees;
- Promote the restoration and conservation of natural landscapes, wildlife and open spaces for the education, recreation and general welfare of the public;

- Encourage dedication of properties and easements to such agencies as The Land Conservancy of McHenry County, The Nature Conservancy, local land trusts, to conserve and restore high quality natural areas;
- Encourage the preservation of open space and natural resource areas by private citizens through deed restrictions, dedicated conservation easements and private Illinois Nature Preserves.
- Require the preservation of open space and natural resource areas by developers through deed restrictions, dedicated conservation easements and public and private Illinois Nature Preserves when sensitive areas are included in sites to be developed.
- Protect, conserve, and enhance open space through appropriate land use, density control, and creative site planning;
- Preserve structures, features and areas of historical, ecological, and recreational value;
- Protect residents against the problems, dangers, and costs of development on unsuitable sites;
- Create and disseminate educational materials on the benefits of native landscaping, and on the reduction of pollutants such as lawn chemicals, chlorides and coal tar sealants.

## VI. HOUSING

Extensive research was done in the writing of this chapter. The full text of that research is available in the addendum to the comprehensive plan, Addendum  ${\rm II}^{22}$ .

#### Current Housing Profile

The majority (87%) of the homes in Bull Valley were built after World War II (1950 and beyond). The condition of the housing stock is sound with the median age being 26 years.

The housing stock consists entirely of single-family houses situated on large lots. With a median home value of \$594K, the price of a house in Bull Valley is considerably higher than that in surrounding McHenry County, where the median price is \$223K. This is due in large part to the larger estate zoning of Bull valley compared to that of McHenry County. With a housing density of just 50 households/sq mile, Bull Valley is considerably less dense than the 699 households/sq mile of surrounding McHenry County. Bull Valley also has no downtown area with its corresponding usually higher household density. This high cost of housing means that few housing units are affordable under Illinois law.

As of 2007 there were only 5 rental properties in Bull valley with a median rent of \$1863 per month. There is currently no subsidized housing in Bull Valley.

## Affordable Housing

In 2004 the Illinois legislature passed the Illinois Affordable Housing Planning and Appeal Act. This law is intended to encourage communities to provide affordable housing and requires communities without sufficient affordable housing to adopt an affordable housing plan. Not all communities are affected. Communities with less than 1000 residents and communities that already meet affordable housing requirements are exempt. According to the 2010 Census, Bull Valley's population has grown from 726 in the year 2000 to 1077 in 2010, making Bull Valley subject to the Act.

<sup>&</sup>lt;sup>22</sup> Addendum to the Bull Valley Comprehensive Land Use and Preservation Plan, Addendum II, Research on Current Housing.

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## The Affordable Housing Plan

The Village must now undertake to develop and approve an affordable housing plan, according to the guidelines of the Illinois Housing Development Authority guidelines as researched and outlined in the Comprehensive Plan Addendum, Addendum II, Research on Current Housing, p23.

## The Aging Population and the Need for Affordable Housing

Until recently, the baby boomer generation has driven the trend to ever larger and more expensive houses. The first of the boomer generation is now reaching age 65, retirement age. One in 5 people will be over age 65 by the year 2030. The emerging trend is to downsize housing.

The baby boom generation will be selling their houses in greater and greater numbers over the next 10 years and looking to buy smaller, more easily maintained houses. Statistics show that 47%<sup>23</sup> of these people remain within the same county when they move. They want to stay in the area but would be forced to move elsewhere if there is no smaller, elderly-friendly housing available.

Smaller, maintenance free, low cost, high quality housing must be built to meet these needs in the coming decade. People who have lived in the Village and wish to stay in the Village should have that option available to them.

In 2007, the Village accepted a donation of 51 acres of farmland on the west boundary of the Village. Plans for the use of that land include preservation of the natural wetland areas and oak savannah and could include walking trails, creating another passive use park in the Village. Coordinating this restoration with the development of modest well-constructed senior housing units could meet the statutory requirements for affordable housing as well as the needs of senior citizens of the Village who want to remain in the Village as they retire and give up their larger homes.

<sup>&</sup>lt;sup>23</sup> Source: Document P23-209, 65+ in the United States: 2005, US Census Bureau

## Energy Efficient Housing

In 2009, Illinois passed into law the Energy Efficient Building Act of 2009, Chapter 20, ILCS, Act 3125. It mandates minimum construction practices for new or remodeled buildings to reduce energy consumption.

The Village building inspector should become knowledgeable of IECC requirements as this will be required of all construction going forward.

The Village should consider adopting its own energy efficiency ordinance, specifying support for the Illinois Energy Efficient Building Act, to give itself enforcement capabilities.

## Goals and Objectives

## Goal:

Develop a plan for affordable housing that meets the requirements of the Illinois Housing Development Authority guidelines as detailed in the Comprehensive Plan Addendum<sup>24</sup>.

## Objectives:

- Meet the requirements of the Illinois Affordable Housing Planning and Appeal Act while being consistent with the overall character and vision of the Village;
- Review affordable housing plans in adjacent communities; and
- Develop zoning ordinances that facilitate and control limited development of affordable housing that is consistent with the character and vision of the Village.

## Goal:

Develop a plan for aging residents to stay in the community as their housing needs change.

<sup>&</sup>lt;sup>24</sup> Addendum to the Bull Valley Comprehensive Land Use and Preservation Plan, Addendum II, Research on Current Housing.

## Objectives

- Create a limited amount of smaller, maintenance free, low cost housing to accommodate an aging population and at the same time contribute toward meeting the requirements for affordable housing;
- Encourage the building of universal-design/elder-supportive housing, utilizing common design elements conducive to elder populations; and
- Develop an energy efficiency ordinance, specifying support for the Illinois Energy Efficient Building Act

## VII. ECONOMIC DEVELOPMENT

The jurisdictional area of the Village of Bull Valley lies between four rapidly growing municipalities (Crystal Lake, McHenry, Woodstock and Wonder Lake). Established commercial development in those cities provides goods, services, and employment to residents of our community. Historically commercial use in the Village has been limited to commercial agricultural operations and home-based businesses.

## Commercial Agricultural Use

The Village should continue to encourage commercial farming on parcels where practical. Other commercial agricultural usages, compatible with the overall objectives of the Plan, should be considered, and zoning ordinances amended to permit such use.

The Village has recently approved commercial horse stables as a Special Use with specified restrictions, (See Section 6 of the zoning ordinance) but such uses should be strictly regulated to protect the AREA One core environmental resources.

## Commercial Home Use

While many commercial activities are clearly undesirable within the core of a low-density, semi-rural, residential community, the rapid technological decentralization of American business now enables many people to work at home. The Village should recognize and accommodate this environmentally desirable trend towards residential business activity. Such a category might include a broad range of occupations from professional services (architects, engineers, accountants) to crafts. The Village should identify resident home business owners to make sure they are correctly registered with the state.

The Village should also encourage development of cottage-type industries and in-home businesses that can operate from within residences and are compatible with the residential nature of the Village. This approach serves as a business incubator until the business expands to a point that requires relocation to an area that is appropriately zoned.

## Retail Development

The Village has determined that it is necessary at this time to attract retail development to supplement the tax base, provide local jobs and provide

for the shopping needs of its residents. It has created a Retail Planned Development zoning classification available in specific identified locations in the Village, and concurrent Special Use, Retail Planned Development guidelines imposing commercial design standards. (Section IV of this Plan and Section 6.5 of the Bull Valley Zoning Ordinance) New annexations in the designated area should be evaluated for commercial as well as residential desirability.

To ensure stable, long-term growth, market studies etc must accompany proposals for commercial annexation, and all such development must meet Village aesthetic and environmental standards.

Those standards address protection of open space and sensitive natural resources; potential donations of park land and/or fees; buffering for neighborhoods; bike paths and walking trails to and between commercial sites; storm water and runoff control for infiltration; natural landscaping standards; parking and parking lot restrictions; signage and lighting standards, etc. These standards should be applied equally to all commercial development, and be reviewed periodically.

Areas designated for Retail Planned development are located in Area Three on the plan map.

Although the Village of Bull Valley is primarily a residential community, it is important for the Village to identify its strengths and weaknesses in regard to its ability to attract various economic development activities.

## Labor Force Analysis

The Labor Force available in the Village of Bull Valley is minimal. The 2010 census data indicates there are 1077 people in the Village of Bull Valley.

The lack of population density in the community limits the employment base for potential retail development in the Village. However, a look at the populations of surrounding towns and the potential for future concentrations of development at the perimeter of the Village may improve the potential for increased retail and service activity. All retail development should be located in areas that have been carefully considered with respect to location, adjacent uses, environmental sensitivity and suitability. (See 0.

There are currently no major employment opportunities in the Village. Most employed residents travel throughout McHenry County and the surrounding counties.

#### Economic Base Analysis

The Village has no commercial economic base at this time. Residents of the Village have access within a few minutes' drive to the towns of Woodstock, McHenry and Crystal Lake for their service and retail shopping needs, as well as to surrounding counties.

## Overcoming Limitations of the Infrastructure.

The Village has extensive vacant land available in the designated retail development areas (Area Three). To develop these areas, infrastructure and services must be agreed upon between potential developers and the Village.

Access to internet providers and cable services is limited due to the rural nature of the area. However, access to electrical and natural gas utilities, as well as telephone service is comparable to surrounding communities. Police protection is provided by the Village Police Department. Fire and ambulance service is provided by several Fire Protection Districts.

While there are some limitations, they do not preclude the Village from attracting businesses. There are many businesses that do not have the need for extensive infrastructure. Area Three Retail Planned Development districts are proposed in limited locations in Area Two of the Village, consistent with the community's desire to maintain the rural atmosphere Cooperative agreements at the boundaries of neighboring municipalities for provision of sewer and water to retail developments could be pursued.

## Funding

The Illinois Department of Commerce has several grant programs that could be available to the Village. The federally funded Community Development Block Grant (CDBG) program can be used for housing, economic development, and public facility improvements. The program is designed to assist economically distressed smaller communities with improvements to such things as utilities and streets, fire stations, community centers, and housing rehabilitation as well as many other improvements needed by a community. Specifically, the CDBG-Public Facilities for Economic Development (PFED) program is designed to assist communities with expanding or upgrading

their infrastructure to accommodate businesses that have made a firm commitment to create jobs and invest in the community. The CDBG-Economic Development (ED) Program assists businesses that invest private funds and create jobs as they expand or relocate in the area. Funds are awarded to a community which then loans the funds to a business. The community may retain the repaid loan to capitalize a local revolving loan fund.

Several federal programs could assist the Village in economic development including the Rural Business Opportunity Grants Program.

Rural Business Opportunity Grant funds provide technical assistance, training and planning activities that improve economic conditions in rural area of 50,000 people or less.

## Environmental Sensitivity in Commercial Development

Non-residential developments must remain sensitive to and work with the primarily rural image that typifies the Village. These developments must have minimal impact on the residential areas of the Village and should contribute to the Village tax base without imposing an unacceptable burden on Village residents.

Just as is required in all residential development, all commercial development in the Village must be designed with consideration of the level of environmental stewardship the Village has accepted and with respect for the open space, rural atmosphere and countryside way of life the residents cherish. Developers should be required to make donations of fees when appropriate. They should be strongly encouraged to dedicate areas of their projects to conservation easements to maintain visual appeal and include for example but not limited to: connecting greenways, equestrian trails, bike trails and pedestrian paths between residential and retail areas.

The McHenry County 2030 Land Use Plan includes a strong emphasis on attracting economic development. At times commercial development may be proposed in the Village planning area that is incompatible with Bull Valley plan and philosophy. Every effort must be made to intervene and constrain proposed commercial development plans that will negatively impact the rural character of the Village.

To facilitate environmental stewardship in commercial development, as well as residential development, the Village must provide guidance in the

form of ordinances for design standards, lighting standards, tree preservation, natural landscaping, waste disposal etc.

#### Goals and Objectives

## Goal:

Permit commercial land uses in designated areas of the Village of Bull Valley, compatible with the purpose of our incorporation, the protection of the Village character and landscape, and if shown to provide benefits to Village revenue.

## Objectives:

- Define commercial uses permitted within the Village;
- Annex properties identified as priorities of the Village Board;
- Locate commercial development in previously approved areas that are appropriate based on location, adjacent uses, environmental sensitivity and suitability and specifically avoid areas designated as sensitive aquifer recharge areas;
- Consult the Illinois Natural Areas Inventory, the ADD Wetlands inventory, the McHenry County Sensitive Aquifers Map, the Oaks of McHenry County in locating areas for commercial development and develop best management practices for development that is permitted.
- Require that commercial development be sufficiently buffered and meet development and design standards that preserve and enhance Village character and atmosphere as determined by the Village;
- Pursue cooperative agreements with bordering municipalities on commercial development within our joint areas of influence;
- Prohibit existing or permitted commercial use from being cited as precedent for future developments of commercial use;
- Develop ordinances governing design standards, lighting standards tree preservation, natural landscaping and waste disposal;
- Reexamine the current Retail Planned Development Ordinance for adequacy of existing buffer, lighting, aesthetic and environmental

requirements for minimizing the impact on adjacent and nearby residential parcels.

## VIII. COMMUNITY FACILITIES, AMENITIES AND SERVICES

## Community Center and Government Facilities

Until the late 1980's the Village of Bull Valley did not have within its boundaries an area that serves as a town center and lacked a focal point for interaction of its residents. It does, however, own a building of historical significance known as the Stickney House. The Stickney House has become the Village Hall, Police Department and Community Center, housing government offices. Regular meetings of the Board of Trustees and various committees and commissions are held there. It is used by community groups such as the Bull Valley Riding Club and Bull Valley Association for meetings and social functions. The limitation of the Stickney House Meeting room, however is its lack of ability to accommodate larger functions. Completing renovation of the barn into a community center should be considered.

#### Parks

The land surrounding Village Hall should be developed as a passive use Community Park for the use of residents, organizations, and city officials. A recent residents' survey by the Plan Commission shows a preference for passive use parkland that includes natural areas for observation of native species of plants and wildlife.

In 2007, the Village accepted a donation of 51 acres of farmland on the west boundary of the Village. Plans for the use of that land must include preservation of the natural wetland areas and oak savannah and could include walking trails, creating another passive use park in the Village. Coordinating this restoration with the development of a small number of modest well-constructed senior housing units could meet statutory requirements for affordable housing as well as the needs for senior citizens of the Village who want to remain in the Village as they retire and give up their larger homes.

The Village includes other man-made and natural amenities that should be recognized as assets and preserved for the benefit of residents: areas of geological, botanical and archaeological interest, as well as miles of private equestrian trails.

#### Equestrian Trails

The Bull Valley Riding Club, Inc. was formed in 1963 and incorporated as a not-for-profit, private club in 1963. Today the club maintains 44

approximately 80 miles of trails, comprised mostly of off-road paths through woods and fields, on private property, by individual agreement between the property owners and the club. The club has been an integral part of the lifestyle and philosophy of the Village of Bull Valley, promoting open space land use and environmental sensitivity

The existence of a riding club in the area and particularly a riding trail on a property has a positive effect on salability and sales price. The Village frequently receives inquiries about properties for sale on the trail system.

Horse owners need room to ride. They are willing to pay higher prices for property in an area that offers open space and beautiful vistas.

Each spring, the club hosts an Appreciation Brunch for property owners. The club sponsors an annual fall gathering, organized group trail rides, and other events.

## Natural Amenities

Included in the Village limits are properties owned by the McHenry County Conservation District and the Illinois Department of Natural Resources, as well as several privately dedicated nature preserves and privately owned conservation easements<sup>25</sup>.

#### Water and Sewer

All drinking water and water for daily use by Bull Valley residents comes from private wells. All wastewater is discharged into septic fields. The Village does not have a municipal water supply or wastewater treatment facility, but in anticipating the future needs of the community, new technologies and methods of managing such facilities should be periodically reviewed. The need for public water and sewer facilities is dependent on the capabilities of the natural environment as well as the characteristics of the man-made environment. Village policy is to consider such utilities in the future only as needed to protect and promote Village public health and safety and not as a way to foster additional growth. The availability of such services from adjacent communities or regulated private utilities also may be

<sup>&</sup>lt;sup>25</sup> Attachment 6) Designated Conservation Areas

considered to meet the needs of projected development, particularly anticipated development in Area Three, Retail Planned Development.

Provision of sewer and water by a municipality must be pursuant to guidelines approved by the Chicago Metropolitan Agency for Planning (CMAP) by establishment through that agency of a Facilities Planning Area (FPA). The Village Facilities Planning Area (FPA) covers most of east side of the Village but ends at Cold Springs Road. Therefore approximately half of the Village lies in the Woodstock FPA. This is partially due to growth of the Village into Woodstock's FPA over the past twenty years , and partially because of expansion of Woodstock's FPA during the same period. Every effort should be made to bring the Village FPA boundary in line with the current Boundary agreement with the City of Woodstock.

Incorporated Bull Valley should have control of its own facilities planning through its own FPA.

## Storm water

Bull Valley is committed to maintaining the natural flow of surface water within the Village. Storm drainage is permitted to follow the natural flow of the land throughout the Village using roadside swales where necessary and culvert systems in subdivisions. Artificial water diversions should be kept to a minimum in all future development. Because of the glacial topography, natural overland flow routes consisting of swales and other natural drainage channels are strongly encouraged in new development. The use of bioswales with native plantings and pervious surfaces to the greatest extent possible are strongly encouraged and may be required as a condition of approval for development plans. In addition, standing pockets of water may form in natural depressional areas providing storage during major rainfall events. These areas should be preserved and included in development plans for their storage and recharge functions.

The Village has adopted the McHenry County Stormwater Ordinance. That ordinance should be reviewed periodically to evaluate amendments by the County and to assess the need for amendments particular to the Village.

With the continuation of low density development, a more extensive storm water drainage system may not be necessary in Bull Valley except in limited non-residential areas, where factors such as paved areas may require storm water systems in conjunction with retention and detention basins and

similar facilities. If the pattern of low-density development were to be changed, however, more extensive and expensive storm water drainage facilities would be required that are beyond the Village's current fiscal means and inconsistent with this plan.

## Communications

Telephone service, electrical power and some cable services are delivered through overhead lines, resulting in continued maintenance requirements for the providers and unsightly tree trimming. The Village should continue to monitor tree trimming by utility companies and restrict trimming to only what is necessary. New and existing utility lines should be installed underground with any new construction or redevelopment.

The Village should pursue attracting providers of broadband communication services. Many Village residents currently obtain these services through satellite providers, however this option is becoming increasingly less attractive as faster and lower cost technologies become available. Enabling broadband services while preserving the character and environment of the Village will require a measured approach. Buried cable in new developments would be consistent with the desire to also bury electrical services in new developments, but doing so in older areas could potentially destroy roadside vegetation essential to the rural character. Newer underground cabling techniques mitigate, but do not eliminate this problem.

In addition, the lack of residential density makes the expense of burying cable in the residential core areas unattractive for the service providers. Overhead cabling is more cost effective but still quite expensive to deploy and maintain. Wireless services may need to be considered as the best option. Wireless technologies are being deployed which can both cover larger areas with fewer antennas and can cover the challenging contours and foliage densities within the Village. The Village should encourage the use of stealth antenna configurations, co-location and extensive landscape buffering of any such facilities in appropriate areas of the Village in an effort to minimize the visual impact and to be consistent with the countryside and estate character of the Village. The Village should explore the most current technologies as advances are made that can enable service without detracting from the character of the area. Wireless services should also be considered the best option for voice communication services.

## Police and Fire Protection

The Village provides police protection using full-time and part-time police officers, under the direction of a full-time police chief. <u>The</u> Village's main characteristics include narrow roads, lack of shoulders, hidden driveways, winding roads with sharp curves, frequent wildlife crossings, and dark skies at night to protect the natural environment. Because of these characteristics, the Village is known for its scenic drives and attracts a diverse group of recreational users, both resident and nonresident, including runners, walkers, bicyclists, motorcyclists, horseback riders and carriage drivers, as well as automobile traffic. The same characteristics that attract this diverse group of users can also pose safety concerns for them. The Village police department's vigilance in monitoring this situation and enforcing appropriate speed limits and road use protects users and allows the Village to continue to offer these recreational opportunities on Village roads.

Fire protection is provided by the various adjacent Fire Protection Districts. At this time, Village population does not justify establishment of a Village fire protection district, but as the Village population grows this could become a consideration.

## Goals and Objectives

## Goal:

Preserve, maintain, and enhance the features that make the Village of Bull Valley unique and enrich the quality of life for its citizens.

#### Objectives:

- Continue restoration of the Stickney House and particularly the barn as a municipal focal point, encouraging more residents to meet in various pursuits and furthering a growing sense of community;
- Acquire acreage to bring the site surrounding the Stickney House parcel up to National Park Standards of at least 25-30 acres for creation of a Community Park;
- Appoint a Park Commission, responsible to the Village Board, to maintain the Stickney House and design a low-intensity and passive use Park plan, implement that plan with monies from developer

donations, grants, donations and fund-raising activities, and supervise the utilization of the property;

- Identify natural areas and historical features, create and disseminate brochures and other forms of communications with information about such features to residents and developers so they will be preserved or restored, protection of such sites by acquisition, easements or whatever methods the Village can negotiate;
- Cooperate with efforts to maintain and extend equestrian trails and the development of a private trail plan within the Village. Encourage all new development to include equestrian trails;
- Continue use of individual septic systems with research into other methods of providing waste disposal when it becomes necessary;
- Protect Village resident's water supply by any legal means available;
- Require the use of best management practices and new technology in developing storm water drainage for new and redeveloped areas;
- Review the existing Facilities Planning Area on regular basis and update as needed to provide the best service to our residents;
- Actively seek to acquire enhanced communications for Village residents via broadband provider; and
- Continue to support our police department.

## IX. STREETS AND ROADS

## Definitions of Terms

## Expressways.

Expressways are high speed, high volume, and grade separated facilities (accessed by on and off ramps) that form the backbone of the nations Interstate Highway System. There are currently no Expressways in Bull Valley.

## Arterials.

Principal and minor arterial streets are strategically located roads that provide a through connection for extended distances between communities and across the metropolitan area and thus carry sizable volumes of traffic. Illinois Route 120 is the only principal arterial street in Bull Valley and Greenwood Rd is classified as a minor arterial where it runs through the Village

#### Collectors.

The typical collector street system is designed primarily to distribute traffic between local streets and arterial streets. Collector streets can be divided into two: major and minor collectors. Major collectors distribute traffic to arterials and serve as overflows for congested arterials. Minor Collectors serve the same function but with less traffic.

Country Club Road and Bull Valley Road are major collector roads in Bull Valley. Queen Anne, Fleming, Ridge, and Thompson roads all function as minor collector streets in Bull Valley, but they do not have certain features commonly associated with such collector streets in most suburbs. More specifically, these streets are narrow and of modest construction (without curb and gutter or lighting) to enhance the countryside character of the Village. They are designed to accommodate the limited number of local streets and residences in the Village.

#### Local Streets.

These streets, also known as minor streets, have the primary function of providing land access. Various public and private streets serve this function in Bull Valley. As with collectors, there are two classes of local streets: residential streets and non-residential streets. Bull Valley has both types. The residential street serves to provide direct access to a relatively small number of houses. These range from rural roads such as Cold Springs Rd to narrow subdivision streets such as Woodland Drive to small private lanes. The narrower the residential street and the more closely trees encroach on it, the better it slows traffic.

#### Present Situation

Not all roads within Bull Valley are Village-maintained. Fleming Road is maintained by the County. Parts of Country Club, Greenwood and Walkup are maintained by the county. This can create conflicts where county design standards are applied to road improvements that have a negative impact on the character of that road within the Village. Design of the roadways is crucial to maintaining the character of an area. Radical alterations of traffic patterns and changes that impact the roadway environment should be subject to the maximum controls legally available to Village authorities. The Village has implemented a strict speed control policy. This policy should be maintained.

The Village participates in the countywide Natural Heritage Corridor program with The Land Conservancy of McHenry County (TLC). With this program, homeowners can place portions of their property along the roadways in dedicated conservation easements held jointly by TLC and the Village, to preserve that land in perpetuity for the public purpose of conservation. The first of these Natural Heritage Corridors is in place along Fleming Road. Residents along other roads should be made aware of this opportunity and encouraged to form Heritage Corridors along their roads.

Fleming Road and Mason Hill Road have both been designated Scenic Routes by the McHenry County Historic Preservation Commission. The Village should pursue Natural Heritage Corridors and Scenic Route designations on other Village Roads as well.

The Village must adequately maintain its roads to serve residents and local traffic, including reasonable transient traffic, but should discourage the use of local roads as connecting thoroughfares between adjacent municipalities. All roads must be built and maintained to meet or exceed Village standards to ensure adequate emergency service, such as fire and ambulance, to residents and to locations in other areas that can be most expeditiously served by using Village roads.

Private roads should be strongly encouraged in all new subdivisions.

Individual access points to all but local streets should be avoided. For subdivisions a single subdivision road into the property is encouraged rather than an entry for each subdivided parcel.

Four State highways serve the area. There is no need for further State highway construction within the Village or its jurisdictional authority. -There are currently no expressways within the boundaries of the Village or its jurisdictional authority, and none should be permitted.

Within the area bounded by those State highways, there exist a mix of arterial and collector roads, though primarily local residential roads. These Village roads are often used as "shortcuts" between surrounding towns. Since the Village roads are often narrow, winding, hilly, and present non-resident drivers with unfamiliar agricultural traffic, stray deer and other wildlife, equestrians, pedestrians, bicyclists and other surprises, reasonable speed limits and other traffic safety measures are imposed and enforced.

The natural condition of rural roadsides should be maintained as far as possible: trimming, mowing, ditching, etc. necessary for good road maintenance and safe driving should not be unnecessarily destructive.

The Village should maintain its practice of limiting weights on our roads, to the extent possible.

Consistent with the rural character of the Village none of the Village roads should have sidewalks or curbs and gutters.

Any activities that would engender increased traffic in the Village should be carefully controlled. Commercial zoning to the extent permitted, should be located and planned only after full consideration of vehicular impact.

Special activities involving Village roads appropriate to rural roads may be permitted subject to the judgment of the Village Trustees.

There are no plans to upgrade or widen Village roads. They are relatively narrow corridors originally designed to serve only the homes that front directly on them and have therefore been improved with a pavement that is not required to meet the standards associated with higher traffic volumes. This makes them much more in keeping with the rural character of the development they serve.

Further, upgrading the engineering standards for these roadways would overburden the limited tax base of the Village and destroy the countryside character of the Village.

Local streets to serve new development should be made unattractive as bypasses but should accommodate the needs of police, fire and rescue to gain quick access to residential areas. Generally, these roads should be designed to be compatible with the character of the area in which they are located. Moreover, the Village should continue its practice of providing access to non-residential areas only where access can be attained without driving through the residential heart of the Village.

## Bridges

There are two bridges within the Village boundaries that are tracked by the State of Illinois<sup>26</sup>. Both are in good shape with no major repairs expected soon. The bridge on Bull Valley Rd. west of Valley Hill Rd. (Snyder's Hill) has a sufficiency rating of 88.8% and is owned by the Village. The bridge on Mason Hill Rd. west of Crystal Lake Rd. has a sufficiency rating of 81.5% and is owned by Nunda Township.

## Traffic Reduction

In a recent public opinion survey, Roads and Traffic were the number 1 & 2 most cited items that residents would change about the Village. Unfortunately, there's no good news here. Projections show a 16% increase in county population by 2020, with Algonquin, McHenry, Nunda, and Grafton Townships having 72% of the projected increase in population<sup>27</sup>, resulting in a corresponding increase in traffic. Being bounded by 3 strategic arterial routes, State Routes 120, 31 and 14, it might seem reasonable to think that there would be little cut-through traffic through the Village, but in reality there is significant non-resident traffic on all Village roads due to congestion on these arterial routes. With expected widening of Route 120, and the proposed building of the Ridgefield and East Woodstock Metra Stations, local roads can expect increased cut-through traffic by vehicles looking to avoid congestion on Routes 14, 120 and 47.

<sup>&</sup>lt;sup>26</sup> Source: Illinois Department of Transportation, bridge Information Webpage, http://wrc.dot.il.gov/bridgeinformation/main.aspx

<sup>&</sup>lt;sup>27</sup> Source: McHenry County 2020 Unified Plan, chapter 2, page 1.

Bull Valley's traffic problems are entirely created by external factors. Particularly during rush hours, congestion on the state roads between the municipal centers of McHenry, Crystal Lake and Woodstock creates considerable encouragement for drivers to find creative bypasses on Village roads. Regional traffic is inappropriate and hazardous on the residential roads in Bull Valley where the roads are intended to serve a small population. Bull Valley, Mason Hill and Fleming Roads carry traffic loads well in excess of those caused by the local population. Ridge, Cherry Valley and Queen Anne are country roads that do not have modern pavement bases and are much narrower than major collectors. Furthermore, the regional use is not supported by regional funding for the roads. Most of the fiscal responsibility for road maintenance is paid for by local Bull Valley residents. It may become necessary for both fiscal and safety reasons to deal with this problem by regulating through traffic in a fashion that prohibits short cuts on the Village's roads during peak traffic times.

There are two ways to control traffic volume:

1. Make it difficult to traverse Village roads: Techniques such as speed bumps, speed humps, one way roads, road closures, intersection medians, narrowing roads, etc. rarely are effective at controlling traffic. They affect all vehicles, residents and non-residents alike, restrict emergency vehicle access, and make it difficult to maintain the roads during adverse weather. For these reasons, they should not be considered as part of any traffic management program.

Radar enforcement of traffic speeds is effective in limiting cut through traffic. The Village already relies heavily on this and it should continue to do so. If and when the state legislature approves usage of unmanned radar speed cameras for traffic control, the Village should investigate using these devices too. The Village should also explore options for reducing speed limits on Village roads.

2. Make it easier to bypass Village roads: Unfortunately, this is the most effective means of alleviating cut through traffic, yet it lies entirely outside of Village control. Widening Rt14 between Crystal Lake and Woodstock, widening Rt47 in Woodstock, and creating a Rt31 bypass around McHenry, all would keep vehicles on these regional arterial roads and keep them off local roads. The Village should support these, and any other regional efforts, that might offload traffic to roads outside of the Village.

A downside to road construction on these arterial roads is that in the short term, while construction is ongoing, local traffic will become heavier as people seek to avoid the construction areas. Once people identify short cuts, there is rarely a decrease back to pre-construction traffic levels once congestion is cleared and this congestion should be considered permanent. In the long run though, improving arterial traffic flow serves to keep traffic on the arteries and thus deserves whatever support can be given.

## Public Transportation

There is no public transportation operating within the Village. There are no rail lines within the Village limits. Pace bus service makes no stops in the Village. In the 2009 resident opinion survey, 78% of respondents said they would not use Pace if it were available.

## Non Motorized Transportation

Statistical research done to facilitate this chapter is available in the Comprehensive Plan Addendum  $^{28}. \label{eq:comprehensive}$ 

## Bicycles

Bull Valley, with its varied terrain and rural scenic vistas attracts bicyclists from all over northeast Illinois. The McHenry County Bike Club regularly holds group rides that traverse the Village. Thus, there are large numbers of cyclists vying for the same roads as automobiles, especially on weekend mornings when it's a common sight to see large groups of cyclists on the road. These cyclists often create a problem by riding 2 abreast, blocking and backing up traffic.

Illinois law states:

"Sec. 11-1505.1. - Persons riding bicycles or motorized pedal cycles upon a roadway shall not ride more than 2 abreast, except on paths or parts of roadways set aside for their exclusive use. Persons riding 2 abreast shall not impede the normal and reasonable movement of traffic and, on a laned roadway, shall ride within a single lane subject to the provisions of Section 11-1505."

<sup>&</sup>lt;sup>28</sup> Addendum to the Bull Valley Comprehensive Land Use and Preservation Plan, Addendum III, Research on Non Motorized Transportation.

Thus riding 2 abreast violates the law and creates animosity toward cyclists. In fact, in the 2009 Village opinion survey, restricting bicycles was ranked 6<sup>th</sup> of things people wanted changed in Bull Valley.

In addition, bicycle etiquette says that large groups of riders should ride single file and break into smaller groups of 2 or 3 bikes when riding on a roadway. This way, a car, when passing need only pass 2 or 3 bikes at a time before merging back into its normal traffic lane. This practice is very rarely seen and a car, in order to pass, must pass all cyclists at once, again slowing traffic.

However, use of bicycles and other non-motorized methods of transportation contribute to a "greener" environment and a healthier lifestyle. There is a strong trend in transportation planning at the federal level on down, supported by available funding opportunities, to encourage the addition of bicycle lanes and multiple use trails as part of road improvements. . This will encourage the widening of roads to accommodate bike lanes and extended right-of-ways for trails, in contradiction of the Village commitment to maintain the rural character of the roads and to avoid making them attractive as cut-throughs. The village will be faced with some decisions over this issue. Over the next 20 years, we can expect to see more bike and walking paths in neighboring communities and more pressure to connect through Bull Valley. This is particularly true of Bull Valley Road and Crystal Springs Roads that are designated as planned future bike trails by the Chicago Metropolitan Agency for Planning as part of their Northeastern Illinois Regional Greenways and Trails Plan.

The Village needs to be aware of this trend and develop a policy statement explaining its position and exploring its options. The very nature of Bull Valley's zoning - estates in isolated, non-connected subdivisions, with narrow, shoulder-less two lane roads - does little to provide a safe biking environment with the level of automobile traffic on the roads.

## Walking/Hiking/Running/Horseback Riding

Pedestrians, to a greater degree, face the same risk as bicyclists: vulnerability to automobiles. There are no sidewalks in the Village so pedestrians on foot must walk in the street or on road shoulders and face greater risk of harm due to the greater difference in speed between pedestrians and traffic.

By providing alternate walking routes, pedestrians can be kept away from the major roads. Just by looking at a map it can be seen that large parcels of land are subdivided independently of other parcels with no interconnection to adjacent developments. Thus, the Village is collection of residential islands with no connections between them except for the major roads.

Visiting an adjacent neighborhood requires getting into a car and driving, or walking to the main road, driving/walking over to the next subdivision, and then driving/walking to the destination. Interconnecting adjacent subdivisions with pedestrian trails, will keep pedestrians away from heavily automobile traffic and if extensively built, provides means for both pedestrians and bikes to travel Village-wide off the major roads and away from the roads. These trails could also benefit the equestrian community in the Village as there are several subdivisions with equestrian trails that are not connected to each other.

It should be recognized that currently, all walking/hiking in the Village is of a recreational nature. There is no "destination" walking occurring because there are no destinations, i.e. retail stores, within the Village to walk too. With the introduction of retail areas at the perimeter of the Village, there is the opportunity to plan for "walkable communities" around the retail facilities by either including residential housing within the retail area or building a network of walking/biking paths linking the retail area with its surrounding residential neighbors. In an era of an increasingly aged population, this becomes vitally important to serve a population without access to motorized transportation.

#### Current Governmental Activity

In March of 2010, Transportation Secretary Raymond LaHood issued a policy statement calling for full inclusion of pedestrians and bicyclists in

transportation projects<sup>29</sup>. Toward this goal, a number of bills have been introduced into the US legislature. See the Comprehensive Plan Addendum.<sup>30</sup>

The Chicago Metropolitan Agency for planning (CMAP) has identified two routes through Bull Valley as potential links in the CMAP's Northeastern Illinois Regional Greenways and Trails Plan.

As stated on the CMAP web site, "The Northeastern Illinois Regional Greenways and Trails Plan sets out a vision for an interconnected network of stream- and land-based green corridors and 2,700 miles of multi-use trails throughout the seven-county region. The plan envisions a network of continuous greenway and trail corridors, linked across jurisdictions, providing scenic beauty, natural habitat, and recreational and transportation opportunities for our communities". And, "The map and plan serve as a basis for planning and programming funding for greenways and trails, as a framework and guide for making connections between communities and other greenways and trails, and as a consideration in major infrastructure investment decisions."

McHenry County is in the process of developing a Greenways and Trails Plan. Bull Valley should develop its own plan and should examine the CMAP and County plans and determine the Village's level of participation and coordination with those plans.

## Goals and Objectives

## Goal:

Develop and maintain a system of streets, roads, and traffic controls consistent with the rural character of the Village.

## Objectives:

 Prevent the air and noise pollution associated with heavy vehicular traffic;

<sup>29</sup> http://www.fhwa.dot.gov/environment/bikeped/policy\_accom.htm. United States Department of Transportation, Policy Statement on Bicycle and Pedestrian Accommodation, Regulations and Recommendations, Signed on March 11, 2010 and announced March 15, 2010

<sup>30</sup> Addendum to the Bull Valley Comprehensive Land Use and Preservation Plan, Addendum III, Research on Non Motorized Transportation.

- Maintain safe driving conditions for residents and through traffic that meet all local and state standards;
- Implement traffic calming methods and strict speed enforcement to slow traffic and maintain safety, particularly on Bull Valley Road and other roads used as "cut throughs."
- Maintain the rural character of the Village roads through more narrow, winding, hilly roads that follow the lay of the land and allow vegetation to grow up alongside the roads.
- Prohibit of environmental blight resulting from construction of major highways or expressways through the Village and its planning jurisdiction; and
- Continue to pursue implementation of road impact fees on future development.

## Goal:

Develop a policy statement explaining the Village position on bicycle access to Village roads and exploring available options.

## Objectives:

- All open spaces should be accessible by trails, bikeways, horses;
- Develop a Greenways Plan that identifies the Village's level of participation in the McHenry County and CMAP Greenways and Trails plans;
- Link commercial development to the surrounding community with trails, bikeways. Pedestrian and bicycle amenities, such as benches, water fountains, bicycle racks, hitching posts, should be provided for all commercial developments;
- As roads are rebuilt/repaved, bike routes should be considered within the right of way along Bull Valley road and Crystal Springs road;
- Continue to identify hiking/biking/equine connections into new developments; and

## Goal:

Improve bicycle safety and lessen motorist angst toward cyclists

## Objectives:

- Post signage along Bull Valley and Crystal Springs roads indicating bicyclists should maintain single file riding
- Interconnect subdivision roads with hiking/bike paths so that hikers and bicyclists need not travel on main roads.

## X. SUMMARY/CONCLUSION: ISSUES AND OPPORTUNITIES

The vision of Bull Valley in this plan is to retain its rural character and protect the natural features that mark its identity as different from other communities. Bull Valley has been fortunate to have founding families and subsequent leaders who were prescient enough to understand the values inherent in this protection and willing to take a stand. The challenge is to maintain this philosophy despite trends encouraging growth, development, and technology. Balancing preservation of natural amenities with these trends will be an ongoing discussion in the Village.

The world population will reach seven billion people and counting, sometime in the next year (2011-2012) and around eight billion by 2025-2030<sup>31</sup>. For the State of Illinois this means 13.4 million people by 2030<sup>32</sup> McHenry county projects 495,000 people will live in the county by 2030<sup>33</sup>. Our local Bull Valley population is projected to reach between 2300 and 2400 residents<sup>34</sup>. This increase in population will drive other issues related to development, technology, and environmental protection.

Development trends nation-wide are favoring smaller lot sizes, higher densities, more centralized, walkable communities, conservation development, multi-use transportation corridors and transit oriented developments. These trends contribute toward a larger goal of resource preservation and sustainability by preserving more land in its natural state and creating more open space. While other plans may embrace these trends, our special community emphasizes resource preservation in a different way, and can contribute to a more diverse, regional appeal.

<sup>31</sup> World Population: 1950-2050. U.S. Census Bureau, Population Division. Update as at June 2010. http://www.census.gov/ipc/www/idb/worldpopgraph.php. Retrieved 3 July 2010

<sup>32</sup> Source: U.S. Census Bureau, Population Division, Interim State Population Projections, 2005.

<sup>33</sup> McHenry County 2030 Land Use Plan

<sup>34</sup> CMAP

The Village development style is a commitment to resource preservation and open space as expressed through large-parcel homesteads, dedicated Illinois Nature Preserves, undeveloped woodlands and farm fields, and the preservation and propagation of native plant life. Bull Valley's expression of resource preservation and sustainability has since its inception, been the product of the collective will of individual residents and local environmental groups rather than prescribed development trends. Bull Valley's challenge in the next twenty years will be to maintain this expression and pass it on to the next generations in family homesteads and to new residents coming into the Village.

The Village can expect to continue to be economically challenged for the next several years due to the ongoing recession's impact on the property tax base and resulting drop in revenues. In addition to exploring every available avenue of funding, the Village must initiate selective commercial development in areas set aside for this purpose, and seek creative fundraising ventures.

The Village will also face mandated statutory challenges in the area of Affordable Housing and Multi-Use Transportation trends. Policies must be developed on both issues.

Coordination with county and regional plans, as well as bordering municipalities, is important to the success of Bull Valley's Village plan. Areas of agreement and conflict should be identified and noted. Early identification should then lead to discussions intended to resolve such concerns.

With respect to intergovernmental coordination, a near-term opportunity is the pending expiration of boundary agreements with the cities of Woodstock and McHenry. Every effort should be made to renew these agreements or reach new agreements prior to the expiration date.

As noted in previous text, the Village Facility Planning Area (for provision of water and sewer) covers approximately the east half the Village. West of Cold Springs Road, the Village is mostly within the Woodstock FPA. The Village should address this and bring the FPA in line with the Village boundary agreements with Woodstock.

As all water for homes in the Village is obtained from private wells, the Village has a vested interest in protecting the recharge capacity of the 62

underlying aquifers. This will require vigilance, creativity and a high level of active engagement.

In summary, the Village is facing many issues during this planning period that embody both challenges and opportunities. First and foremost is to honor and preserve the natural environmental features that permit Bull Valley to identify itself as a unique and valuable community in its own right. The Village also has an opportunity over the planning period to selectively adopt new development trends and technologies that best fit with the Village philosophy and that provide for stability and growth that is appropriate to the values expressed by its residents.

Given the numerous issues and opportunities outlined above, the Village should develop a five-year strategic plan to prioritize and act on these recommendations.

## Goals and Objectives

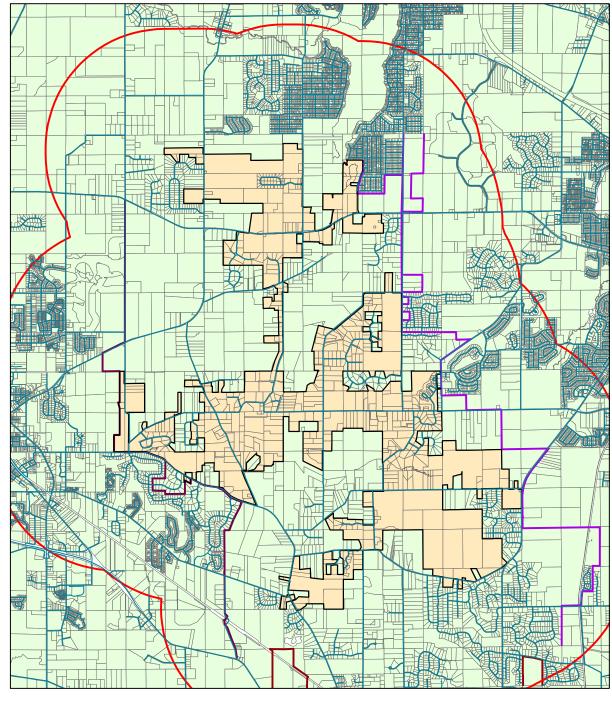
## Goal:

Maintain the Village rural, countryside character and philosophy of open space preservation, making informed decisions on new development trends and compliance with legal requirements in the next twenty years.

## Objectives:

- Create a Comprehensive Land Use and Preservation Plan that will clearly define areas of the Village that must be protected and identify areas that can accommodate alternate growth trends and retail development; and
- Utilize all available legal means including conservation dedications, deed restrictions, zoning restrictions and others, to maintain the Village's expression of collective will to preserve open space and native landscapes and pass it on to next generations.

## XI. Attachments

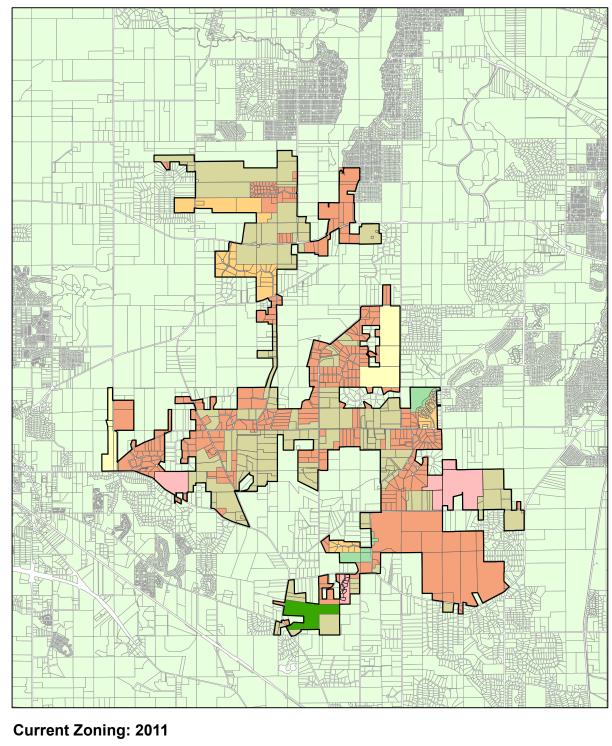


Attachment 1) Map of Village Boundaries: 2011

# Village Boundaries: November 2011

----- Planning Area

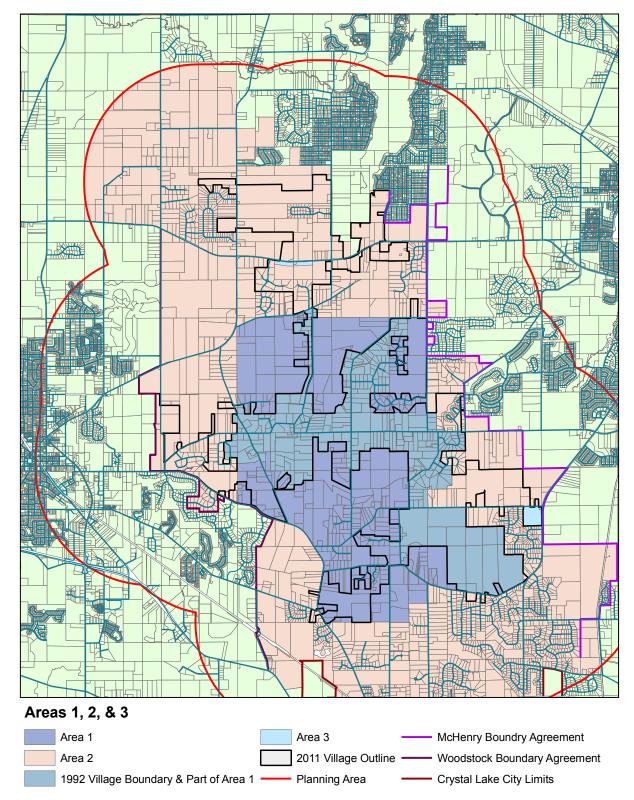
- Crystal Lake City Limits
- McHenry Boundary Agreement
  E
- Bull Valley City Limits
- ---- Woodstock Boundary Agreement

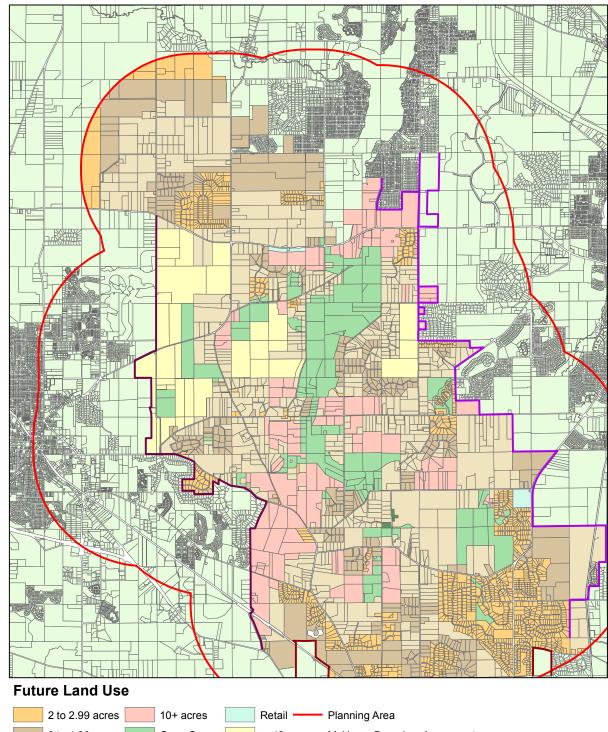


Attachment 2) Map of Current **Zoning:** 2011

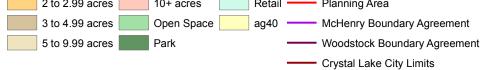


Attachment 3) Map of Areas 1, 2, & 3

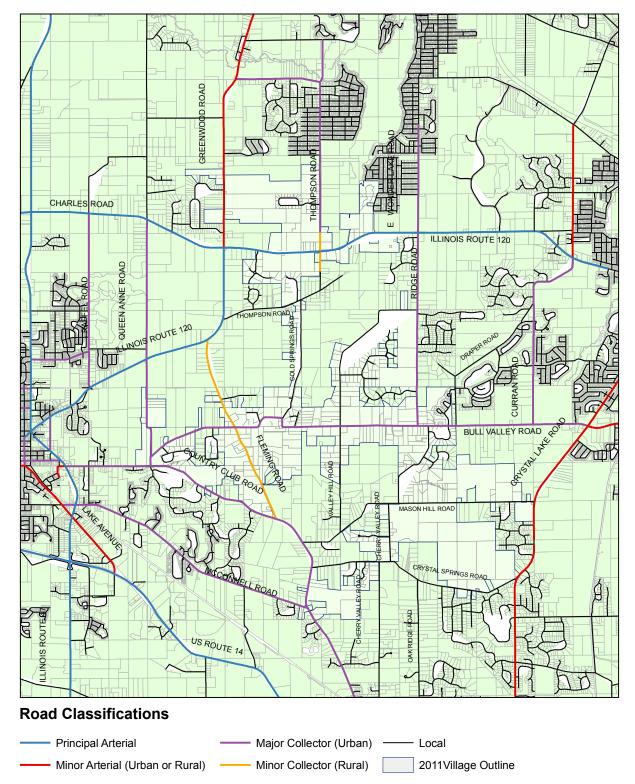


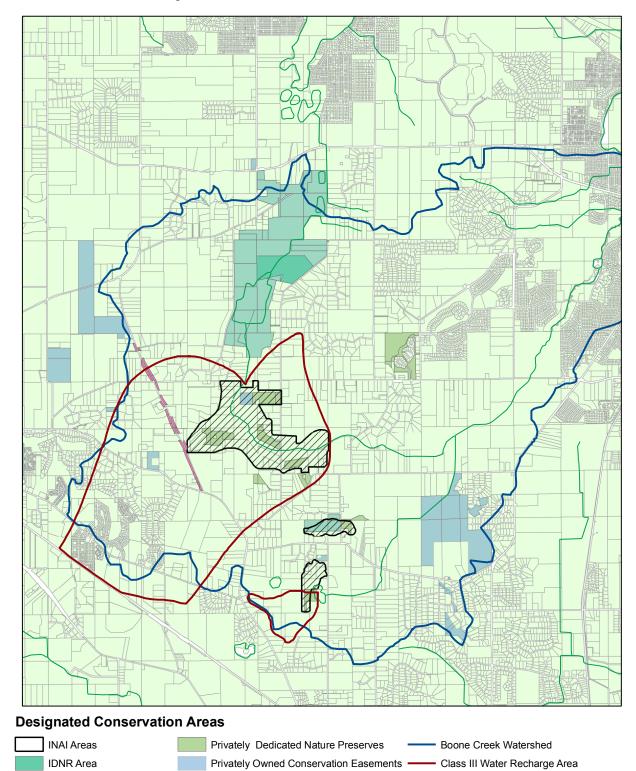


Attachment 4) Map of Future Land Use



Attachment 5) Road Classifications



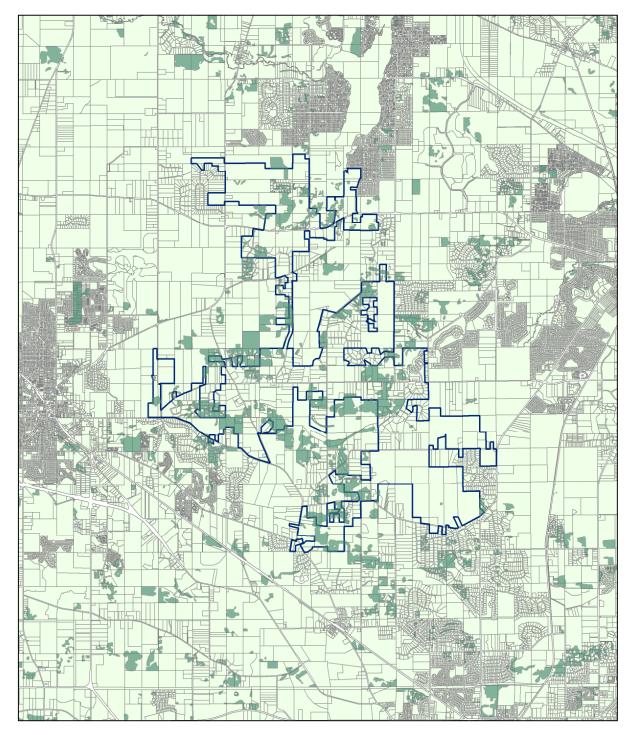


Fleming Road Heritage Corridor

- streams

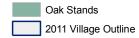
Attachment 6) Designated Conservation Areas

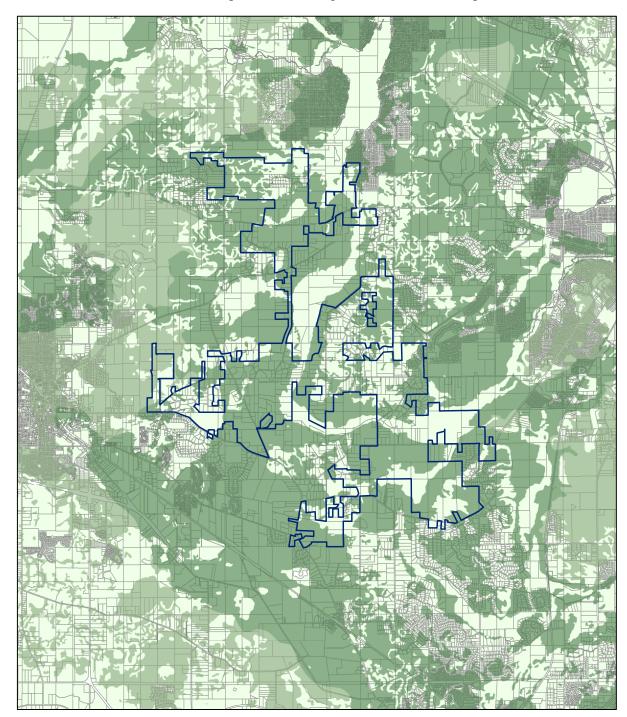
MCCD Conservation Lands



Attachment 7) Oak Stands of McHenry County

Oak Stands in Bull Valley: 2005

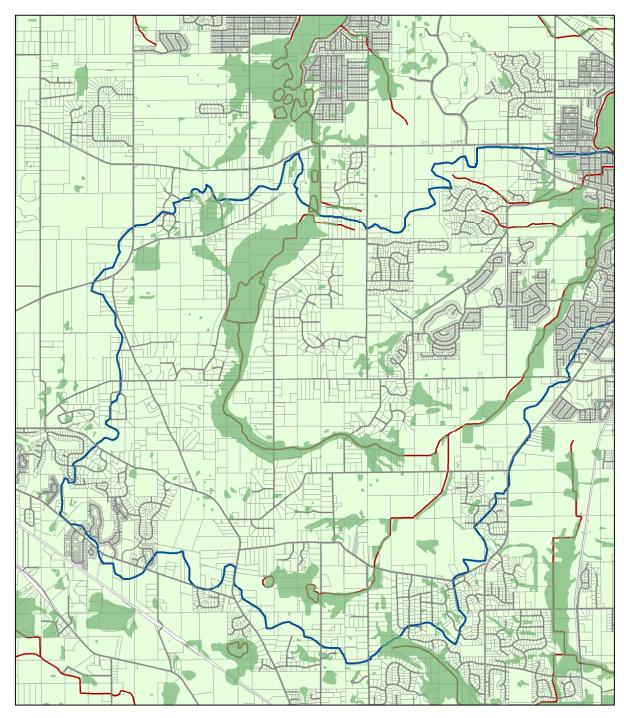




Attachment 8) Sensitive Aquifer Recharge Areas (SARA) Map

## Sensitive Aquifer Recharge Areas

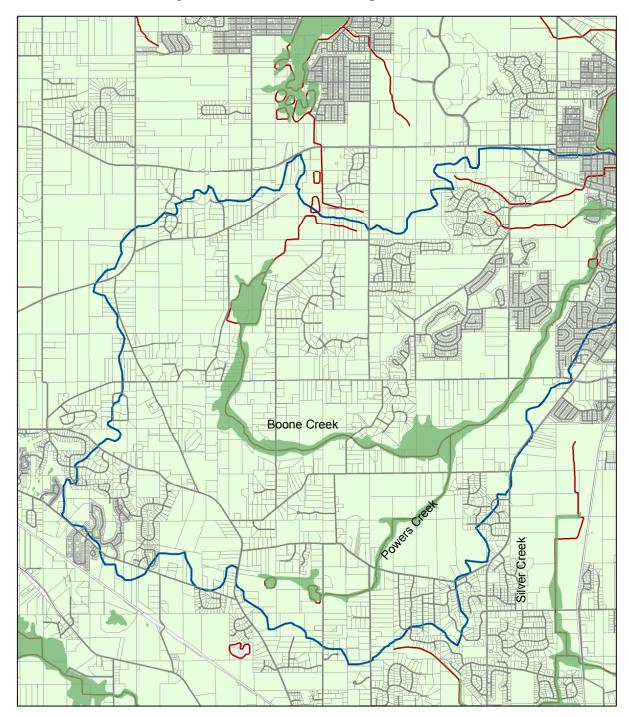
- High Potential for Aquifer Recharge/Contamination
- Moderately High Potential for Aquifer Recharge/Contamination
- 2011 Village Outline



Attachment 9) ADID Wetlands of the Bull Valley Area

# ADvanced IDentification (ADID) Wetlands of Bull Valley

Wetlands —— streams —— Boone Creek Watershed



Attachment 10) Floodplains of the Bull Valley Area

# Floodplains of Bull Valley

Floodplain —— streams —— Boone Creek Watershed

Attachment 11) Projected 2030 Ground Water Surplus/Shortage

CHEMUNG	ALDEN	HEBRON	RICHMOND BURTON
0.23	0.10	0.07	0.10 0.20
DUNHAM	HARTLAND	GREENWOO	MCHENRY
0.11	0.10	0.16	0.53
MARENGO	SENECA	DORR	NUNDA
0.21	0.06	0.45	0.37
RILEY	CORAL	GRAFTON	ALGONQUIN
0.11	0.28	0.32	0.96

CHEMUNG	ALDEN	HEBRON	RICHMOND BURTON
0.33	0.17	0.10	0.46 0.62
DUNHAM	HARTLAND	GREENWOO	MCHENRY
0.11	0.10	0.27	0.91
MARENGO	SENECA	DORR	NUNDA
0.29	0.12	0.74	0.71
RILEY	CORAL	GRAFTON	Algonquin
0.21	0.47	1.27	1.42

Areas of Surplus Capacity - Ratios 0.0 - 0.6

Areas of Concern - Ratios 0.6 - 0.8

Areas with Potential for Shortage - Ratios > 0.8

2030

## XII. LPTAA TRACE MATRIX

In August 2002, the State of Illinois enacted the Local Planning Technical Assistance Act, which has among its purposes, encouraging local governments to engage in planning, regulatory and development approaches that promote and encourage comprehensive planning, and supporting planning efforts that include one or more units of local government working together. Municipalities that have adopted plans in accordance with the new guidelines may be eligible for additional preferences in funding under State economic development, transportation, planning, natural resource and agricultural programs.

The following table lists the corresponding sections of the Bull Valley Development and Preservation Plan that fulfill all requirements of the Local Planning Technical Assistance Act.

Issues and opportunities. The purposes of	Section IV.
this element are to state the vision of the	Community Character
community, identify the major trends and forces	
affecting the local government and its citizens,	
set goals and standards, and serve as a series of	
guiding principles and priorities to implement the	
vision.	
Land use and natural resources. The purposes	Section V.
of this element are to translate the vision	Land Use and Natural
statement into physical terms; provide a general	Resources
pattern for the location, distribution, and	
characteristics of future land uses over a 20-year	
period; and serve as the element of the	
comprehensive plan upon which all other elements	
are based. The land use element must be in text and	
map form. It must include supporting studies on	
population, the local economy, natural resources,	
and an inventory of existing land uses.	
Transportation. The purposes of this element	Section IX.
are to consider all relevant modes of	Transportation
transportation, including mass transit, air, water,	

rail, automobile, bicycle, and pedestrian modes of	
transportation; accommodate special needs;	
establish the framework for the acquisition,	
preservation, and protection of existing and future	
rights-of-way; and incorporate transportation	
performance measures.	
Community facilities (schools, parks, police,	Section VIII.
fire, and water and sewer). The purposes of this	Community Facilities,
element are to provide community facilities;	Amenities, and Services
establish levels of service; ensure that facilities	
are provided as needed; and coordinate with other	
units of local government that provide the needed	
facilities.	
Telecommunications infrastructure. The	Section VIII.
purposes of this element are to coordinate	Communications
telecommunications initiatives; assess short-term	
and long-term needs, especially regarding economic	
development; determine the existing	
telecommunications services of telecommunications	
providers; encourage investment in the most	
advanced technologies; and establish a framework	
for providing reasonable access to public rights-	
of-way.	
Housing. The purposes of this element are to	Section VI.
document the present and future needs for housing	Housing
within the jurisdiction of the local government,	
including affordable housing and special needs	
housing; take into account the housing needs of a	
larger region; identify barriers to the production	
of housing, including affordable housing; assess	
the condition of the local housing stock; and	
develop strategies, programs, and other actions to	
address the needs for a range of housing options.	
Economic development. The purposes of this	Section VII.
element are to coordinate local economic	Economic Development
erement are to coordinate local economic	Pronomite Development

development initiatives with those of the State;	
ensure that adequate economic development	
opportunities are available; identify the strategic	
competitive advantages of the community and the	
surrounding region; assess the community's	
strengths and weaknesses with respect to attracting	
and retaining business and industry; and define the	
municipality's and county's role.	
Natural resources. The purposes of this	Section V.
element are to identify and define the natural	Land Use and Natural
resources in the community with respect to water,	Resources
land, flora, and fauna; identify the land and water	
areas in relation to these resources; assess the	
relative importance of these areas to the needs of	
the resources; and identify mitigation efforts that	
are needed to protect these resources.	
Public participation. This element must	Section II
include a process for engaging the community in	Public Participation in
outreach; the development of a sense of community;	the Planning Process
a consensus building process; and a public	
education strategy.	

Bull Valley Development and Preservation Plan Draft 11/18/21