



environmental corridors

In many planning processes, a dominant element or character can be identified to serve as a framework from which a plan can be built. Whereas Chicago focuses on the Loop and the lakefront, it is appropriate for the Village of Barrington Hills to focus on its own dominant characteristics; i.e., waterways, limited shallow aquifers, wooded rolling countryside, inter-related ecosystems, and the reliance on individual wells as the sole available source of water throughout the Village.

An “environmental corridor” is a linear geographic area of interdependent natural features. These features include waterways, soils, geology, topography, sub-surface hydrology, vegetation and wildlife. The key to the natural balance of these elements is the minimum intervention of “man” and his minimized development activities. But where man-made impacts are unavoidable, it is wise to identify how and where the corridor’s natural balance might be threatened and to mitigate adverse impacts if possible.

Four environmental corridors exist within the planning jurisdiction of the Village. They focus on Spring Creek, Flint Creek, Poplar Creek, and other unnamed subsets of watersheds off the Fox River including Chapel, Church Haegers Bend. The natural features and man-made elements of each corridor have been inventoried and divided into segments, or “watershed sub-areas”. Environmental corridors are not land use designations; even though they effect the use of land. The recommendations for these corridors should be considered an overlay to the land use recommendations, providing a link to the characteristics of the underlying land and natural resources.

Common Recommendations

Because of the proximity and similarity of the three Fox River environmental corridors (*Spring Creek Corridor, Flint Creek Corridor, and Poplar Creek Corridor*), conditions exist which would generate common planning recommendations. These overall recommendations include:

- Protect and maintain the natural character of stream channels.
- Use natural measures to control the erosion of stream banks.
- Control stormwater runoff and associated pollutants.
- Regulate development in flood plains and on steep slopes (12% or more).
- Protect sensitive woodlands, native prairies and wetlands.
- Protect the shallow aquifers from over-mining and from contamination.

More specific recommendations relating to particular watershed sub-areas of each corridor are included in the following pages.



Spring Creek Corridor

The Spring Creek corridor is the major environmental element in the Village of Barrington Hills. The Creek extends the length of the Village, from its headwaters near Higgins Road at the southern limits to the most northern boundary at Plum Tree Road. Although water volume in the Creek is not substantial, the ecosystem it supports is significant.

The Spring Creek corridor is comprised of woodlands, wetlands, prairies, streams, and lakes. Included within this corridor are the Spring Lake Nature Preserve and the Spring Creek Valley Forest Preserve. These two preserves, controlled by the Illinois Nature Preserves Commission and the Cook County Forest Preserve District, respectively, occupy approximately 3,150 acres of the total area of the Village. Pursuant to Illinois law, they are legislated to be protected in perpetuity.

Watershed sub-area One (R1)

R1 extends from the northern-most portion of the corridor near Plum Tree Road through the Hill 'n Dale Farm to Lake-Cook Road, including the western tributary of the Creek south of Spring Creek Road. The natural features of R1 consist of a narrow floodplain, a mixture of steep slopes (12% or more), woodlands, open fields and pastures. Land use is predominately agricultural, although residential impact is increasing. Scenic pasture land exists in the northern-most portion, while cultivated fields exist to the south. Residential development along the western tributary of the Creek is mature in character and nestles well within the surrounding natural features.

The 221-acre Foxmoor Subdivision just north of Plum Tree Road in Fox River Grove presents the greatest single threat to water quality in Watershed sub-area One, because of its relatively high density of 2.6 dwelling units per acre. New subdivisions in Barrington Hills are also of concern, because they include areas of floodplains and steep slopes. Potential problems associated with residential development in this watershed sub-area include road debris carried into the Creek by stormwater runoff, soil erosion from steep slopes, sedimentation from exposed soils during the construction process, and changes in wildlife habitat as the result of developmental encroachment.

Agricultural areas also pose threats to water quality. Where soil-conserving tillage practices are not implemented, stormwater run-off can erode topsoil, decreasing the productivity of farmland. Such erosion can also pollute the Creek waters, not only with sediments, but with chemicals used as fertilizers, pesticides and herbicides. Where agricultural land is used for the raising of animals, waste by-products may be washed off the land into the Creek. In addition to the common recommendations expressed at the beginning of this chapter, the following specific recommendations are made in order to preserve and enhance environmental quality in R1.



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1. Strongly encourage land management practices which induce groundwater recharge and which minimize the burden on shallow aquifers and other limited capacity resources.
2. Encourage the preservation of open spaces through land conservancy; efforts should be coordinated with the Barrington Hills Conservation Trust and Citizens for Conservation.
3. Regulate development in the floodplain and on steep slopes.
4. Prohibit stream channel modification and encourage bank stabilization by various accepted means of conservation.
5. Pursue intergovernmental agreement with Fox River Grove to protect the headwaters of Spring Creek.

Watershed sub-area Two (R2)

R2 is the largest and best protected watershed sub-area in the Village because it consists of the Spring Lake Nature Preserve south of Lake-Cook Road, between Sutton Road and Bateman Road, and north of the abandoned portion of Donlea Road; and the entire Spring Creek Valley Forest Preserve, which extends south from the abandoned portion of Donlea Road to Illinois Route 72. The outstanding natural features of Watershed sub-area Two include prime examples of glacial lakes, wetlands, native prairies, and woodlands. All of these natural features combine to support a wide variety of plants and animals.

Potential man-made threats are nonexistent from within the Spring Lake Nature Preserve. According to the Illinois Nature Preserves Commission rules, “No measures shall be taken to alter the natural growth or features for the purpose of enhancing the beauty, neatness, or amenities of the preserve.” Specific objectives for the Nature Preserve are delineated in the list of objectives included in its master plan. They include the following:

1. Preserve and enhance the natural quality of the vegetation, wildlife, and other natural features of the nature preserve.
2. Assure perpetuation of the nature preserve in as nearly a natural condition as possible.
3. Facilitate observation and study for education and pleasure in such a manner and to such a degree as will not modify natural conditions or adversely affect use of the preserve as a wildlife refuge.
4. Provide perpetual protection of the nature preserve against intrusions and incompatible uses.

For those natural features of R2 which are located within the Spring Creek Valley Forest Preserve, protection is provided by Cook County Forest Preserve District policy aimed at “protecting and preserving the flora, fauna, and scenic beauty within (the preserve) and to restore, restock, protect, and preserve the natural forests and said land together with their flora and fauna, as nearly as may be, in their natural state and condition, for the purpose of the education, pleasure and recreation of the public...”

Management techniques being utilized to achieve these objectives include reforestation, prairie restoration and management.



Watershed sub-area Three (R3)

R3 extends west of Bateman Road between Lake-Cook Road to the north and Algonquin Road to the southwest. Among this area's unique features is its stream which flows directly into Mud Lake in the Spring Lake Nature Preserve. Upstream drainage places an added emphasis on the need for protection of the watershed sub-area's water quality. The combination of natural features and undulating topography makes R3 one of the most scenic watershed sub-areas of the corridor. Numerous homes are nestled among the wooded slopes overlooking the wetlands and floodplain of the tributary. The potential of animal-waste pollution exists from horses that are stabled in the lower portion of the watershed sub-area.

Recommendations for R3 include the following:

1. Encourage the preservation and maintenance of scenic vistas overlooking all of the lowland of Spring Creek.
2. Maintain wetlands in their natural conditions.
3. Regulate further residential development in areas which have historically exhibited water drainage problems.
4. Control pollution from animal wastes.

Watershed sub-area Four (R4)

R4 is located east of the Spring Creek Valley Forest Preserve and consists of the natural features generally bounded by Donlea Road to the north, Dundee Road to the south, the Elgin, Joliet and Eastern Railroad tracks to the east, and Old Sutton Road to the west.

Land uses in R4 include residential development north and south of Otis Road. Environmentally, R4 is one of the most sensitive watershed sub-areas in the corridor. Its dominant natural feature is Goose Lake, located south of Otis Road. Along with numerous small lakes north of Otis Road R4 also contains the 420-acre Horizon Farms. Through the desire of the land owner(s) and efforts of the Barrington Hills Conservation Trust, the farm has a conservation easement that keeps most of the farm free from development. Throughout the remainder of R4 are scattered steep slopes and large areas of flat woodland. Goose Lake and its surrounding wetlands serve as a significant wildlife habitat for aquatic life as well as for small fur-bearing animals and birds. The Lake provides a daytime feeding area for the Giant Canada Geese which visit it from the Crabtree Nature Center.

The presence of Goose Lake introduces a special set of concerns. Whereas soil erosion and stream sedimentation present problems in other watershed sub-areas, they are particularly acute where water enters this Lake, because soil particles settle out and begin to fill up the lakebed. This infilling process is often accompanied by an increase in algae blooms and eventual eutrophication of the Lake's life support system.



To ensure against the occurrence of these and other problems, the following objectives are recommended:

1. Encourage the preservation and maintenance of the shoreland and wetlands associated with Goose Lake so as to protect wildlife habitats, minimize erosion, and control lake sedimentation.
2. Protect and maintain woodlands and associated wildlife habitat.
3. Preserve vistas of Spring Creek from Sutton Road.

Watershed sub-area Five (R5)

R5 is located east of Bateman Road; it crosses Algonquin Road to the north and extends to Penny Road on the south. The dominant feature of R5 is a tributary and wetland of Spring Creek, most of which lies within the Spring Creek Valley Forest Preserve.

Another of the unique features in this watershed sub-area is that it has one of the few remaining examples of native prairie (which once dominated Northeastern Illinois). This prairie remnant is located approximately one mile west of the point where Spring Creek flows under Dundee Road. Fortunately, the northerly portion of this natural feature is under the jurisdiction of the Cook County Forest Preserve District. Periodically, the District burns this parcel of land as part of a maintenance program intended to simulate the periodic natural fires which repeatedly swept across the prairies of the Midwest, serving to eliminate invasive species. The easterly portion of the prairie remnant is on privately owned property and is subject to developmental pressures. The preservation of such a unique landscape is an important link to the natural history of Northeastern Illinois.

The following recommendations are made for R5:

1. Protect prairie remnants from development or other adverse impacts.
2. Establish continuity within the forest preserve along Spring Creek.
3. Regulate development in the floodplain and associated waterways.



Watershed sub-area Six (R6)

R6 consists of the tributary areas east of New Sutton Road near the intersection of Bartlett and Penny Roads. It contains the headwater areas for the Spring Creek corridor, so that activities here impact the entire downstream corridor to the north. Accordingly, appropriate land use in R6 becomes critical.

Developmental pressure is encroaching upon the watershed sub-area from the southeast, mostly from the Villages of Hoffman Estates and South Barrington. The Woods of South Barrington, an approximate 400 unit single-family residential and commercial development on the former Klemm Nursery site, is currently being developed by Toll Brothers in the R6 subarea. In order to minimize the potential impacts of this development on the Spring Creek corridor and the overall R6 watershed, the Village must assure proper maintenance and management of the two (2) existing stormwater facilities located within the development site – located east of Illinois Route 59. For example, long-term exposure of disturbed earth on the development site might fill the drainageway with silt.

The dominant land uses in R6 are agricultural which, if not preserved, may succumb to developmental pressure. Therefore, it is recommended that the following objectives be considered and applied whenever feasible:

1. Protect Spring Creek headwaters from the degrading impacts of development and construction by intergovernmental agreement with South Barrington.
2. Encourage the use of soil-conserving agricultural practices.
3. Encourage the retention of open space surrounding the headwaters of Spring Creek.

FLINT CREEK CORRIDOR

The Flint Creek corridor traverses the northeastern portions of the Village. A second branch of Flint Creek drains Baker Lake and then traverses the eastern and northern portions of the Village of Barrington. The Barrington sewage treatment plant is located on this branch. Both branches meet near Old Hart Road and Oak Knoll Road.

The corridor includes the Crabtree Nature Center at the intersection of Palatine and Algonquin Roads. Following the Corridor to the north, the Creek fills a series of glacial depressions in the vicinity of Otis and Dundee Roads which have become Hawley, Keene, and Hawthorne Lakes. Further north, the Creek meanders back and forth across the Barrington Hills/Barrington municipal boundary between the Elgin, Joliet and Eastern Railroad tracks and New Hart Road. The Creek turns west in the vicinity of Old Hart and Oak Knoll Roads and flows through areas of residential development, agriculture, and the Barrington Hills Country Club. The Creek bends sharply northeast near the intersection of Oak Knoll and Ridge Roads and flows underneath the Union Pacific Railroad (formerly Chicago & North Western) tracks and Route 14, between Cuba and Kelsey Roads.



Watershed sub-area Seven (R7)

R7 extends from the southern edge of the wetland on Cuba Road, across Route 14 and the Union Pacific Railroad (formerly Chicago & North Western) tracks, through the northeast sector of the Village, and southerly along the common boundary of Barrington and Barrington Hills to a point just north of Hawthorne Lake.

Threats to the environment include the Barrington sewage treatment plant. Although the expansion of the plant promised to improve downstream water quality, it must be monitored closely as population increases. The proper operation of the private sewage disposal systems in the industrial park located north of Route 14 in the Village of Lake Barrington is also of concern with respect to water quality.

In the eastern portion of the watershed sub-area, along the common municipal boundary, the quality of stormwater run-off from urban Barrington presents a hazard. Potential problems relating to the remainder of R7 include soil erosion, sedimentation, and chemical pollution of the Creek which may be introduced into the stream by stormwater running off residential and agricultural land and fertilized open space.

Recommendations for R7 include the following:

1. Ensure the cleanliness of Barrington sewage treatment plant effluent by frequent and rigorous water quality monitoring.
2. Protect Flint Creek from any industrial septage (seepage) which might escape treatment.
3. Encourage the use of stormwater detention and irrigation techniques to minimize the impacts of chemical pollutants entering Flint Creek.

Watershed sub-area Eight (R8)

R8 includes Hawley, Keene, and Hawthorne Lakes and the tributary which extends from Keene Lake to the east across Barrington Road. R8 marks the highest concentration of open bodies of water within the Village and focuses attention upon problems peculiar to lakes as opposed to streams.

Potential lake-oriented problems include possible septic infiltration, sedimentation, and the growth of undesirable aquatic plants which tend to visibly change the appearance of the lake. Algae blooms also tend to appear in lake waters as biological balances change. Ultimately, the process of eutrophication could end recreational use of lake waters prematurely unless controlled.



In order to prevent such an occurrence, the following objectives are recommended:

1. Maintain flow of fresh water through the lake system.
2. Encourage the practice of soil conservation and shoreline stabilization to minimize the amount of sediments which enter the water bodies.
3. Protect and enhance the shoreline of the lakes in order to maintain their visual quality.
4. Encourage the use of native plants which have deeper, more extensive root systems.
5. Closely monitor the operation of septic systems in close proximity to lake shores.
6. Monitor water quality in lakes and encourage appropriate lake management programs.

Watershed sub-area Nine (R9)

R9 includes the Crabtree Nature Center and the area to its east. The watershed sub-area is bounded by Illinois Route 68 on the north, the eastern extent of the Village's planning jurisdiction, Bradwell and Palatine Roads to the south, and Barrington Road to the west. The Cook County Forest Preserve District, through the Crabtree Nature Center, offers the same protection to the natural environment as mentioned in the District's policy statement in the narrative concerning R2. The Center emphasizes the educational aspects of the directive through environmental research made available to the public. The Center's principal feature is Crabtree Lake, home of the Giant Canada Geese and many other species of waterfowl which inhabit the area permanently and during migration. The Lake is a critical link in the flyway and is worth of extraordinary protection. Upland oak and hickory woodlands and wetlands, restored prairie, and associated wildlife are also open to observation by the general public. The area to the east of the Center is characterized by the narrow floodplain of Flint Creek and one small lake. Encroaching residential development from the east promises to have significant impact upon the area in the near future.

Given the value of the Nature Center and vulnerability of R9's eastern sector, the following objectives are recommended:

1. Whenever feasible, and to the greatest extent, minimize developmental encroachment and environmental threats against the vulnerable natural resources of the Crabtree Nature Center.
2. Encourage the implementation of soil-conserving site preparation techniques throughout the developmental process.
3. Support Cook County Forest Preserve District efforts of environmental enhancement via vegetational sampling, prairie restoration, and reforestation of the Nature Center.



Poplar Creek Corridor

Located in the southeast corner of the Village's planning jurisdiction, the Poplar Creek corridor consists of only a portion of Poplar Creek and its associated natural features.

Watershed sub-area Ten (R10)

R10 portion of the Poplar Creek corridor is very significant. Two large wetlands along Palatine Road on either side of Barrington Road mark the headwaters of Poplar Creek, and opposing land-use philosophies are being applied to them. The western wetland is located in the southern portion of the forest preserve within which the Crabtree Nature Center is located. This 30-acre wetland has been identified by the U. S. Department of the Interior, Fish and Wildlife Service as an inland, shallow freshwater marsh. The surrounding land use, both north and south of Palatine Road, is devoted to feed grain and experimental agriculture and enjoys the protection and enhancement of the policies established by the Cook County Forest Preserve District.

The second wetland to the east of Barrington Road is called the Palatine Road Marsh. It is designated as an inland, freshwater, deep marsh. The Palatine Road Marsh is one of the last important wetlands to remain unprotected from developmental encroachment. It is a mature marsh and it supports a diverse plant population and abundant wildlife. Residential development which is occurring throughout the surrounding area poses an immediate threat to the environmental quality of the marsh and the Corridor in general. Permanent changes have already occurred in its ecosystem as a result of the filling of the marsh's east end.

The remainder of the Poplar Creek corridor, as it extends south to the Northwest Tollway near Higgins Road, has as its major natural feature the Creek itself and its narrow floodplain. The Creek is bordered by willow and cottonwood trees providing good habitat for a variety of small mammals, songbirds, and waterfowl. The Corridor, interspersed with small wetlands and lakes among residential and agricultural uses, includes additional idle land. Therefore, the greatest threat to the environment is continual development.

The following objectives are offered to help insure continued environmental quality in this watershed sub-area:

1. Encourage the acquisition by an appropriate entity of the Palatine Marsh as recommended in the Poplar Creek Watershed Environmental Assessment and Floodwater Management Plan prepared under the authority of the Watershed Protection and Flood Prevention Act.
2. Protect existing mature vegetation along creek banks so as to perpetuate an adequate wildlife habitat.
3. Maintain continuous stream flow to control undesirable levels of aquatic plants.
4. Encourage the use of native plants which have deeper, more extensive root systems.
5. Require adequate soil conservation practices during the construction process.
6. Pursue intergovernmental agreements with Inverness and South Barrington to protect headwaters of Poplar Creek.

