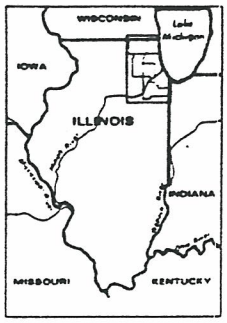
MODEL STREAM AND WETLAND PROTECTION ORDINANCE

FOR THE CREATION OF A LOWLAND CONSERVANCY OVERLAY DISTRICT

A GUIDE FOR LOCAL OFFICIALS

ANOTHER IN THE SERIES OF PLANNING AIDS FROM THE:
NORTHEASTERN ILLINOIS PLANNING COMMISSION

REPRINT OCTOBER 1999



Northeastern Illinois is diverse in its land use and complex in its political structure. It has some of the most productive farms on earth — also one of the world's greatest cities. It contains 3,714 square miles of land and 38 square miles of water. It is home to 7 million people, organized in more than 1,250 units of government.

In 1957, following a decade of rapid urbanization in the Chicago suburban area, the Illinois General Assembly created the Northeastern Illinois Planning Commission (NIPC) to conduct comprehensive planning for the six-county greater Chicago region.

The Commission has three statutory charges: conduct research and collect data for planning; assist local government; and prepare comprehensive plans and policies to guide the development of the counties of Cook, DuPage, Kane, Lake, McHenry and Will.

By necessity, regional planning deals with general development policies not local land use detail. NIPC supports and coordinates county and municipal planning. The Commission has advisory powers only and relies upon voluntary compliance with its plans and policies.

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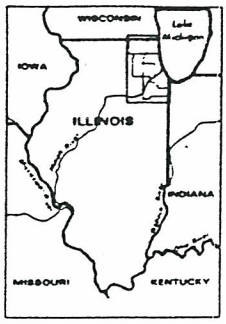

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To the Public Officials and Citizens of Northeastern Illinois:

I am pleased to present the Model Stream and Wetland Protection Ordinance recommended for consideration by local governments in northeastern Illinois.

Enactment and enforcement of this or a similar ordinance can help preserve the benefits provided by natural streams, wetlands and other water bodies. Given our current and past investment in wastewater treatment facilities, it is not sound public policy to discharge clean water into channels that cannot support life or provide aesthetic or recreational benefits. Given the costs of building and maintaining remedial flood and stormwater control facilities we need to take maximum advantage of the management capabilities offered by natural floodplains, streams and wetlands.

While this model ordinance is not a complete solution to the region's stream and wetland resource management problems, it does represent an important component of an overall strategy. The adoption of such an ordinance by municipal and county governments is an important step in preserving the environmental quality and attractiveness of the region.

Sincerely,

Charlie A. Thurston
President

CAT:ca
enclosure

MODEL STREAM AND WETLAND PROTECTION ORDINANCE
for the creation of a
Lowland Conservancy Overlay District

Northeastern Illinois Planning Commission
400 West Madison Street
Chicago, Illinois 60606
October 1988

The preparation of this document has been financed, in part, by the Federal Highway Administration, the Urban Mass Transportation Administration, the Illinois Department of Transportation, and through local funds. Additional support was provided to the NIPC stream and wetland protection program by the Illinois Environmental Protection Agency using federal Water Pollution Control Act Section 205j funds and by the Environmental Research Program of the Illinois Department of Energy and Natural Resources. The opinions, findings and conclusions expressed herein are not necessarily those of the funding agencies.

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INTRODUCTION

This is one of a series of planning aids and manuals prepared by the Northeastern Illinois Planning Commission (NIPC) as a service to local governments.

The streams, wetlands and other surface water resources of northeastern Illinois compose one of the region's greatest assets. In their natural state these areas provide water quality, flood and stormwater, habitat, recreational and aesthetic benefits. Modification of streams, floodplains, and wetlands has altered or destroyed the natural conditions of over half the streams and the vast majority of the wetlands in northeastern Illinois. This has an adverse impact on the region's environment and negatively affects the region's economic development potential as well.

Since state and federal regulations are not adequate currently to protect these resources, local regulation is all the more important. Such regulation is within the police power authority granted to local government. It is also at the local level that effective day-to-day decisions can be made in support of a high quality growth management process.

With these factors in mind, the Northeastern Illinois Planning Commission has developed a Model Stream and Wetland Protection Ordinance. This ordinance creates a "Lowland Conservancy Overlay District" as a complement to a jurisdiction's (municipal or county) zoning ordinance. Within a designated overlay district, special criteria and procedures are applied so that the development process results in protection and conservation of streams, wetlands and related resource areas. The model will need to be modified to satisfy the particular needs of each jurisdiction.

This document is divided into two main sections. The first is a question and answer section which provides background for the model ordinance in terms of certain technical aspects of stream and wetland management as well as the legal framework for such regulations. The second part is the text of the model ordinance with a side-by-side "commentary" which explains the reasons for certain provisions, the ways in which provisions can be tailored to local conditions, and sources of additional information.

This model may be used in conjunction with other suggested ordinances and planning aids prepared by NIPC: Suggested Soil Erosion and Sedimentation Control Ordinance, Suggested Flood Damage Prevention Ordinance, Suggested On-Site Stormwater Detention Ordinance, and Stormwater Detention for Water Quality Benefits.

Part I: Questions and Answers Regarding Streams and Wetland Protection

1. Q. What is a wetland?

   A. A wetland is defined in this ordinance as an area where water is at or near or above the land surface long enough to support aquatic or hydrophytic vegetation and which has soils indicative of wet conditions. What this means in simple terms is that a wetland is an area so influenced by water that only plants and animals that are specifically adapted to a wet environment survive there. Places that are wet only for short periods of time, for example, after a hard rain, or in the spring, but which do not contain aquatic plants and animals or characteristic wetland soils, are not wetlands and are not covered by this ordinance.

2. Q. Why are wetlands important?

   A. Historically, wetlands have been thought of as wasteland that should be converted to better uses. And, historically, wetlands were converted—about one-half of the original American wetlands (and more than 90 percent of Illinois') are now gone. Unfortunately, we have discovered that the conversion was not to a necessarily better use.

   Wetlands are highly complex natural systems; no two wetland areas provide the same levels or rates of function in the maintenance of the environment. Wetlands represent the edge between the land and the water and are generally highly productive in terms of supporting plants and animals. Some wetlands provide places for the breeding, nesting, and rearing of young wildlife species of birds, mammals, fish and reptiles. Recreational activities, such as hiking, fishing, hunting, etc. are enjoyed in wetlands.

   Wetlands are particularly important in protecting water resources, drainage and hydrologic functions. Wetlands are often groundwater recharge areas that provide protection against contamination of groundwater supplies. Wetlands provide temporary detention and storage of floodwaters and runoff, which reduces flood damage and maintains a hydrologic balance between ground and surface waters. Wetlands serve to filter pollutants and allow sediment in stormwater runoff to settle before the pollutants and sediments reach the state's water bodies, resolving pollution problems at a nominal cost to the state's citizens. Wetlands also enhance scenic beauty and provide logical barriers to urban development as well as buffers between incompatible land uses.

3. Q. What effect does unregulated development in a stream watershed have upon water quantity?

   A. Unregulated development, with an increase of impervious surfaces and the destruction of vegetation and wetlands, results in an absolute increase in water runoff. Soils, vegetation and wetlands normally absorb runoff which prevents flooding and allows the runoff to filter slowly into groundwater reservoirs. An increased flow of runoff causes irregular groundwater levels and increases the chances of stream flooding. To maintain a stable surface and groundwater supply, protective soils, vegetation and wetlands must be maintained.

4. Q. What effect does unregulated development in a stream watershed have upon water quality?

   A. Increased runoff results in erosion of stream banks and increased sedimentation of stream beds. An increase in sediments can cause water turbidity, an increase in suspended particles, that reduces the light necessary for keeping stream plants and animals alive. An increase in organic sediments entering the stream can cause oxygen depletion affecting plants and animals, and the destruction of shading vegetation increases water temperature, also to the detriment of plants and animals. Impervious surfaces not only increase the quick flow of runoff into streams but that runoff carries pollutants such as de-icing salts, nutrients, heavy metals, and petroleum products. As sediment or pollution-laden runoff is carried quickly to streams, the natural filtering capacity of soils and vegetation is lost, and the streams become polluted.

5. Q. Are there economic costs associated with the degradation of stream and wetland areas?

   A. Many private landowners and communities learn about stream and wetland degradation the hard way, after the land is eroded or the water polluted. The direct economic costs at that point can be very high indeed. Private landowners will pay dearly with a reduction of property value or the actual destruction of their property. The public may incur high costs in finding alternative water sources or in having to construct expensive storm sewers, flood control projects, or water purification systems.

6. Q. What are the benefits of local stream and wetland protection zoning?

   A. Stream and wetland zoning ensures that the valuable functions of streams and wetlands will be protected. This includes protection of the areas' ability to hold flood waters, to provide habitats for fish and wildlife, to maintain water of high quality, to protect the areas for recreational values and uses, and to protect the areas' aesthetic character for the adjacent property owners and the general public. Adjacent landowners are ensured of a reasonable use of their property without the fear that future development will spoil the character and quality of water areas.

Local governments have an important opportunity in adopting zoning regulations for the protection of these natural resources. The long tradition of local zoning authority means that residents are accustomed to turning to their local government, rather than the state, for approval of development. Local zoning in stream and wetland areas helps ensure that fragmentation of development controls does not occur. Various local controls, such as planning, subdivision, zoning, building codes, soil erosion and floodplain management, can be coordinated locally in an effective manner.

7. Q. Don't existing state and federal regulations adequately protect streams and wetlands?

   A. No. The U.S. Army Corps of Engineers, under Section 10 of the Rivers and Harbors Act, regulates construction in, and other work affecting, "navigable waters" which include only Lake Michigan and the major waterways. Under Section 404 of the Clean Water Act, the Corps issues permits for deposition of dredged and fill materials in the water of the United States. This program is of limited effectiveness because of discretion used in evaluating practicable alternatives and in regulating activities in small streams and wetlands. Also, activities that may have adverse impact but do not involve deposition of dredged or fill material are beyond the scope of the regulatory program.

   The Division of Water Resources in the Illinois Department of Transportation (IDOT) issues permits for activities such as channel modification, bridge and level construction, utility crossings, sewer outfalls, and construction in the floodway. Under current policy, IDOT does not consider environmental impacts in its review of projects involving non-public water bodies (about 90% of the stream miles in northeastern Illinois). Even though Illinois law authorizes IDOT to require permits for construction activities on smaller streams, they are regulated only for hydrologic and hydraulic considerations, and not for impacts on habitat, water quality or aesthetic impacts. There is no state regulation of wetlands unless they are adjacent to public water bodies.

8. Q. Why is an overlay district along streams and wetlands important?

   A. Within the overlay district, there are natural vegetation buffer strips along streams and around wetlands or ponds which protect water resources. These buffer strips provide pollution control by allowing natural vegetation in the buffer strips to filter sediments and contaminants from surface runoff which enters water bodies. These buffer strips also allow vegetation to stabilize erosion of the natural drainageway and streambank.

   In many instances, stream buffer strips provide a significant amount of open space and recreational opportunities for neighborhoods or subdivisions. These strips also provide a continuous wildlife habitat which is especially important in urban or urbanizing areas. The buffer strips enhance scenic beauty and provide logical barriers to urban development as well as buffers between incompatible land uses.

9. Q. Why is the Lowland Conservancy District created as an overlay district as compared to alternative zoning techniques?

A. There are three principal methods for creating a stream and wetland protection ordinance. For those jurisdictions that do not have a zoning ordinance, a partial zoning ordinance could be structured affecting land activities in the stream and wetland areas, leaving the rest of the jurisdiction unzoned. For those jurisdictions that have zoning, the current ordinance can be amended to create a separate stream and wetland district or zone. The third method is to amend a current zoning ordinance to create an overlay zone that covers the stream and wetland areas, and impose regulations in addition to those regulations in the underlying district.

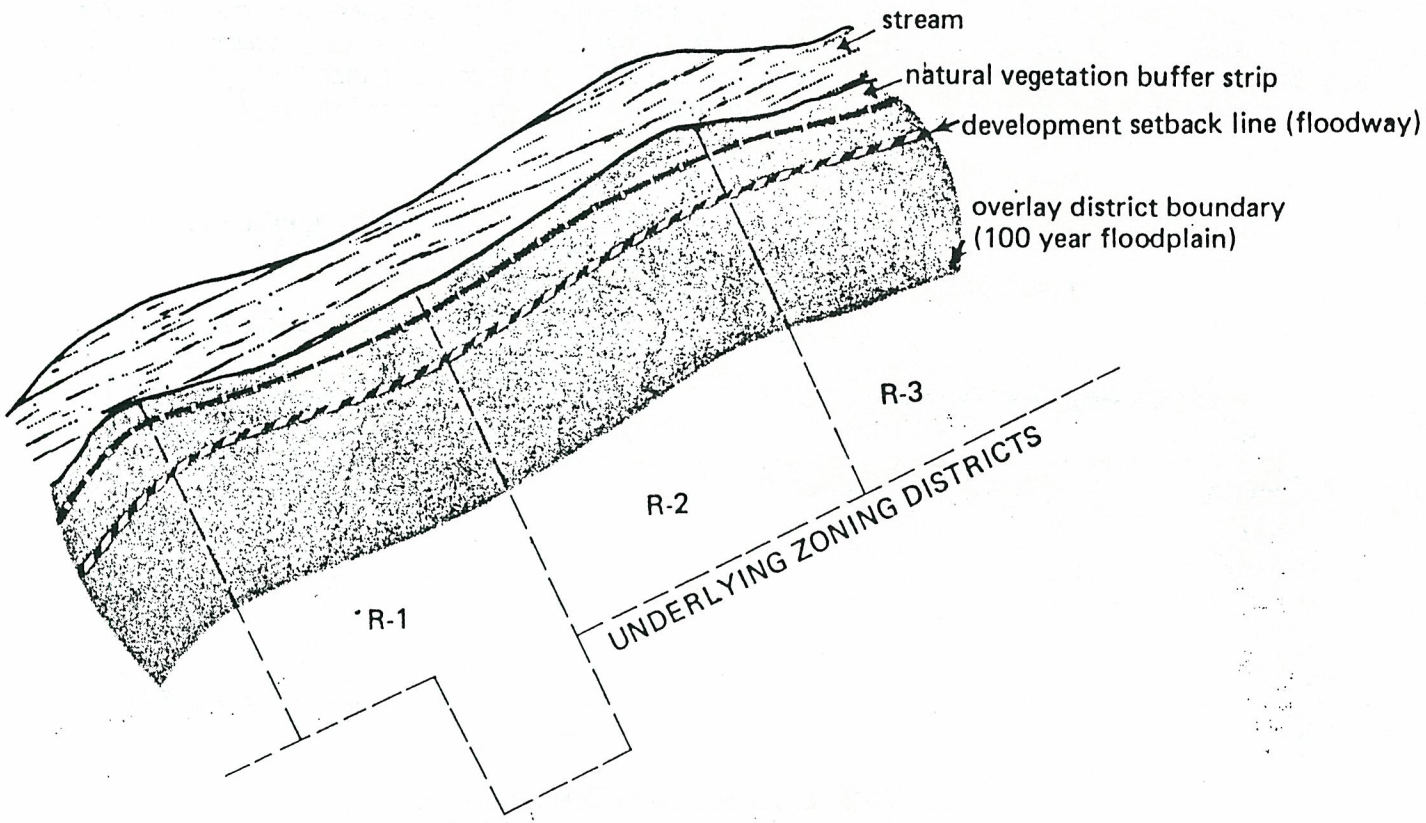
We have assumed in adopting the Lowland Conservancy Overlay District that the communities we are addressing have an existing comprehensive zoning ordinance. However, for those communities that do not have a zoning ordinance, the stream and wetland overlay district ordinance can be amended to become a partial zoning ordinance. A partial zoning ordinance (containing only those provisions necessary to effectively protect the stream and wetland areas) would have to be adopted in accordance with all the procedures of the state's zoning enabling act, just as would a comprehensive zoning ordinance.

The creation of a separate natural stream and wetland district, with permitted activities and site development requirements specific to the district, has the advantage of focusing attention on regulations designed to achieve very specific public objectives and wetland management. An overlay district, however, is probably the most acceptable to communities because the district does not greatly disturb the communities' underlying zoning, in order to achieve appropriate stream and wetland management objectives.

As long as the uses permitted in the underlying district are compatible with the objectives of the stream and wetland protection ordinance, an overlay district is more effective.

An overlay district is a mapped zone that imposes an additional set of requirements upon those of the underlying zoned district. The land must then be used under the conditions and requirements of both zones. The most restrictive requirements prevail in cases of conflict. Provisions of the zone are administered through the usual zoning processes.

A LOWLAND CONSERVANCY OVERLAY DISTRICT



The adoption of stream and wetland overlay districts easily withstands judicial attack. The restrictions do not constitute an uncompensated taking of property, because the property can be improved provided the appropriate special use permit conditions are met. Furthermore, the Illinois Constitution specifically recognizes the importance of the environment:

> Section 1. Public Policy-Legislative Responsibility
>
> The public policy of the State and the duty of each person is to provide and maintain a healthful environment for the benefit of this and future generations. The General Assembly shall provide by law for the implementation and enforcement of this public policy.

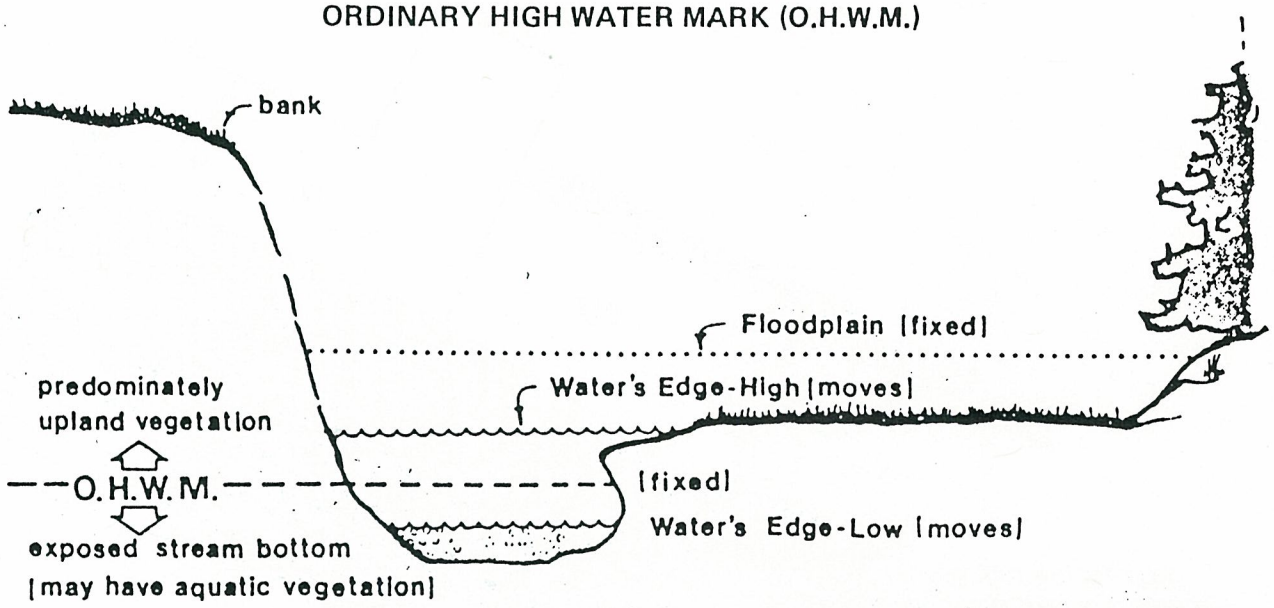
The stream and wetland overlay district zoning technique is merely a means toward achieving this end.

10. Q. What is a stream's "ordinary high water mark (OHWM)?"

A. Streams pose unusual problems with regard to measuring the distance from the stream across the land and determining the area which is to be included in the Lowland Conservancy Overlay District. Streams move (that is, change their location) over time and also rise and fall with the seasons, rainfall, and drought. To administer this ordinance uniformly, the edge of the stream should be measured from the ordinary high water mark for the stream. The ordinary high water mark is fairly easily delineated in the field. As defined by the ordinance:

> Ordinary high water mark means the point on the bank or shore up to which the presence and action of surface water is so continuous so as to leave a distinctive mark such as by erosion, destruction or prevention of terrestrial vegetation, predominance of aquatic vegetation, or other easily recognized characteristics.

ORDINARY HIGH WATER MARK (O.H.W.M.)



The overlay district requires that development be set back a distance from the OHWM. On-site determination of the overlay district setback boundaries can be made by identifying the ordinary high water mark along the property water frontage (using at lease three points) and measuring the setback horizontally from, and perpendicular to, the landward side of each point.

11. Q. Where does a municipality obtain the authority to impose stream and wetland setbacks?

A. The power to impose setback restrictions has been delegated to municipalities and counties by Illinois' basic zoning enabling legislation. Communities usually employ this zoning technique in a roadway context; that is, the technique usually relates building location to the street or right-of-way line.

Setback regulations are, however, also a powerful tool for managing the vital stream and wetland resources in northeastern Illinois.

12. Q. Why utilize a special use permit procedure?

A. Development activities which require a special use permit have a strong potential for damaging the environment or conflicting with surrounding uses. Through the special use permit process, these activities may be allowed in a given district as long as they can meet standards and conditions specified in the zoning ordinance. A special use permit is ideal in a stream and wetland protection overlay district because it assumes that any development can impair the values of the district if there is not proper attention given to the conditions under which the development proceeds. A special use permit procedure provides local zoning bodies with the flexibility that may not otherwise be available in the zoning ordinance to deal with difficult situations.

The standards for approval of special uses must be specified in the zoning ordinance. If a request is made for a special use that complies with all the requirements, the use, after thorough review, must be approved. Every special use permit should contain: 1) procedures for application for a special use permit; 2) the criteria or standards which must be met; 3) an identification of the decision-making body; 4) the requirements for a hearing, presentation of evidence, documentation of the findings and the decision, and 5) the procedures for appeal. Of course, many of these items need not be contained in the Lowland Conservancy Overlay District Ordinance but rather in the underlying zoning ordinance.

13. Q. Must the special use permit provisions be very specific?

A. Yes. Because each instance of development occurring in the overlay district is approved by testing whether it meets the special use permit criteria, there is a heavy burden on the administrative process. This burden can easily become time-consuming and costly for both administrators and property owners, yet can be alleviated by defining the conditions and application procedures as precisely as possible.

14. Q. Why doesn't the model ordinance contain a list of permitted and prohibited uses in the overlay district?

A. The uses permissible in the overlay district are those listed in the underlying zoning district. For example, if the underlying district is a residential district such as an R-1 district, those uses permitted and prohibited in the R-1 district are allowed to stand in the overlay district. However, these uses must meet the special use requirements specified for the overlay district as well as the requirements of the underlying district.

15. Q. Will the stream and wetland overlay protection ordinance create nonconforming uses?

A. At the time that the ordinance becomes effective, it is likely that certain existing uses in the stream and wetland areas will not meet the requirements of the ordinance. Specific provisions covering nonconforming uses are not contained in the model ordinance. Rather, reference is made to the underlying zoning ordinance.

The abatement of nonconforming uses is a traditional land use management technique that has been upheld by the courts when supported by consistent public interest justifications. Amortization provisions can be incorporated into the ordinance by a community that so desires.

16. Q. Is the protection of aesthetics appropriate in the stream and wetland ordinance?

A. The acceptance of aesthetic criteria as a lawful land use management technique has been slow. However, today the Illinois courts readily uphold the reasonable aesthetic concerns of communities as enunciated in the communities' zoning ordinance.

Typically, Illinois' shoreline communities have been in the vanguard of those municipalities with aesthetic regulations. The basic thrust of the model stream and wetland ordinance is to protect a fragile resource, yet this protection surely can be accomplished in an aesthetically-pleasing manner. For some communities adopting the model ordinance, aesthetics will be a very important concern.

17. Q. Should the ordinance contain more elaborate references to procedures and processes?

A. Illinois zoning enabling legislation sets forth the broad parameters for legislative/administrative processes that protect the constitutional rights of due process and equal protection of the law. Furthermore, Illinois courts require strict adherence to the formalities of notice and hearing contained in a community's comprehensive zoning ordinance. Because the overlay district must also comply with a municipality's zoning ordinance, the procedures and processes contained in that ordinance apply to the overlay district.

18. Q. Should the community adopting the stream and wetland protection ordinance amend their zoning map?

A. Yes. Although the community will probably rely on the mapping of streams and wetlands as carried out by the U.S. Geological Survey and the U.S. Fish and Wildlife Service, the local community may have to adjust these maps for specific site inaccuracies or to provide greater detail. Furthermore, citizens who live in the area or plan to develop in the area should be aware of the boundaries of the overlay district.

19. Q. Could limitations on development within the overlay district be viewed as an uncompensated, hence unconstitutional taking of property?

A. Those opposing restrictions on development in general have traditionally advanced the argument that such regulations result in the confiscation of private property without providing just compensation. Proponents of the regulations counter these claims by stating that it is the responsibility of government to protect the public from unwise land use that may cause physical harm and property damage. If the ordinance prohibits development that constitutes neither a hazard to its occupants nor a nuisance to the public, and further, reduces the value of the property towards zero, its invalidation in the courts as a taking of property would be likely. The fact that the stream and wetland protection ordinance allows administrative discretion to grant variances in case of extreme hardship will insulate the ordinance from constitutional attack as an uncompensated taking.

20. Q. How is the stream and wetland protection ordinance different from floodplain regulations?

A. Floodplain ordinances serve as overlay districts and are, in form, very similar to the stream and wetland overlay district regulations. The purpose of floodplain regulations is to reduce risk of human injury and damage to property due to flooding. Those regulations restrict the construction of buildings in flood prone areas and require "flood proofing" of structures. The stream and wetland protection ordinance has more comprehensive objectives, dealing also with water quality and resource management. The areas affected by these ordinances will be the same or similar, but each has its own requirements. Administration of the ordinance is simplified where the stream protection district and the regulated floodplain are made to coincide.

21. Q. Do the communities of northeastern Illinois already have zoning provisions for the protection of the environment?

A. Several communities throughout northeastern Illinois have ordinances complementary to the stream and wetland protection ordinance. For example, many communities have soil erosion and sedimentation ordinances that govern and regulate the clearing, grading, excavating and

transporting of soil to reduce the hazards of erosion. These ordinances do not set forth regulations regarding the permissible types of development, but do establish construction procedures. Also of specific concern to many communities is the regulation of septic systems where communities rely exclusively on individual wastewater treatment systems. Used in conjunction with the stream and wetland overlay ordinances, existing septic system ordinances help ensure that septic effluent is not released directly into any of an area's drainage systems.

22. Q. Will local zoning regulation along streams and wetlands become ineffective because streams and wetlands tend to cut across jurisdictions?

A. Ideally, uniform regulations would cover development near streams and wetlands throughout northeastern Illinois. While it may be difficult to achieve uniform regulations, it is important that some form of control be established to prevent the degradation of streams and wetlands.

Jurisdictions in a drainage basin are encouraged to cooperate in the development of uniform regulations for development affecting streams and wetlands. In Illinois, P.A. 85-905 enables five northeastern Illinois counties (excluding Cook) to prepare and implement county-wide watershed stormwater plans. This legislation provides an excellent opportunity for northeastern Illinois jurisdictions to incorporate stream and wetland protection into the stormwater management planning process.

23. Q. Is the Lowland Conservancy Overlay District sufficient to protect water resources in a community?

A. This ordinance, although important, is just one tool in an array of potential water resources protection measures. The effectiveness of this ordinance will be enhanced by the adoption of a sediment and erosion control ordinance, a stormwater drainage and detention ordinance, and a floodplain protection ordinance. Stream maintenance programs are important for keeping streams clear of debris. In addition, where public access is desired (e.g. for fishing, hiking or bicycling), a program of stream corridor (greenway) open space acquisition is necessary. In situations where public recreational access is not desirable, the dedication of conservation easements to a public jurisdiction or an appropriate open space/conservation organization can help ensure the protection of the stream corridor resources.

Part II: MODEL STREAM AND WETLAND PROTECTION ORDINANCE
Lowland Conservancy Overlay District

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Ordinance Text

Sec. 1.00 Authority

The Lowland Conservancy Overlay District is adopted by the (legislative body) of _____, Illinois, under the authority of (village/city/county's) Home Rule Powers as set forth in Article VII, Section 6, of the 1970 Illinois Constitution (home rule city or county); of the Illinois Revised Statutes, Chapter 34, Paragraphs 3151 et seq. (non-home rule county); of the Illinois Revised Statutes, Chapter 24, Paragraphs 11-13-1 et seq. (non-home rule village or city).

Sec. 2.00 Short Title

This ordinance shall be known and may be cited as the (local government name) Lowland Conservancy Overlay District Ordinance.

Sec. 3.00 Purpose and Intent

It is the purpose and intent of this ordinance to promote the health, safety and general welfare of the present and future residents of (local government name) and downstream drainage areas by providing for the protection, preservation, proper maintenance, and use of (local government name) watercourses, lakes, ponds, floodplain and wetland areas. The ordinance is more specifically adopted:

a. to prevent flood damage by preserving storm and flood water storage capacity;

b. to maintain the normal hydrologic balance of streams, floodplains, ponds, lakes, wetlands, and groundwater by storing and providing for infiltration of wet-period runoff in floodplains and wetlands, and releasing it slowly to the stream to maintain in-stream flow;

Commentary

Sec. 1:00 Authority

State legal authority for local government regulations such as the Lowland Conservancy Overlay District, is granted in one of three ways. The Illinois Constitution provides the authority to home rule governments as provided within the parentheses to the left. State statutes provide the authority for non-home rule counties (Illinois Revised Statutes, Chapter 34, Paragraphs 3151 et seq.) and non-home rule villages and cities (Illinois Revised Statutes, Chapter 24, Paragraphs 11-13-1 et seq.). The information within the parentheses should be replaced as appropriate for the municipality adopting this ordinance.

Sec. 3.00 Purpose and Intent

The purpose and intent is broadly delineated in order to establish the public purpose and benefit (i.e. interest) on which the legality of this exercise of the police power is based.

The rationale for this type of regulation is significantly strengthened if the regulation is an outgrowth of a planning process which establishes public policy for stream protection and which has involved significant citizen participation and input.

Ordinance Text	Commentary
c. to manage stormwater runoff and maintain natural runoff conveyance systems, and minimize the need for major storm sewer construction and drainageway modification;	
d. to improve water quality, both by filtering and storing sediments and attached pollutants, nutrients, and organic compounds before they drain into streams or wetlands, and by maintaining the natural pollutant-assimilating capabilities of streams, floodplains and wetlands;	
e. to protect shorelines and stream banks from soil erosion, using natural means and materials wherever possible;	
f. to protect fish spawning, breeding, nursery and feeding grounds;	
g. to protect wildlife habitat;	
h. to preserve areas of special recreational, scenic, or scientific interest, including natural areas and habitats of endangered species;	
i. to maintain and enhance the aesthetic qualities of developing areas; and	
j. to encourage the continued economic growth and high quality of life of the (local government name) which depends in part on an adequate quality of water, a pleasing natural environment, and recreational opportunities in proximity to the (local government name).	
In order to achieve the purpose and intent of this ordinance, (local government name) hereby designates the Lowland Conservancy Overlay District which shall be	

considered as an overlay to the zoning districts created by (local government name) zoning ordinances as amended. (See Section 1.00) Any proposed development activity within the District must obtain a Special Use Permit as approved by the governing body of (local government name). See Section 5.00.

Sec. 4.00 Definitions

a. "Armoring" is a form of channel modification which involves the placement of materials (concrete, riprap, bulkheads, etc.) within a stream channel or along a shoreline to protect property above streams, lakes and ponds from erosion and wave damage caused by wave action and stream flow.

b. "Bulkhead" means a retaining wall that protects property along water.

c. "Channel" means a natural or artificial watercourse of perceptible extent that periodically or continuously contains moving water, or which forms a connecting link between two bodies of water. It has a definite bed and banks that serve to contain the water.

d. "Channel modification" or "channelization" means to alter a watercourse by changing the physical dimension or materials of the channel. Channel modification includes damming, riprapping (or other armoring), widening, deepening, straightening, relocating, lining and significant removal of bottom or woody vegetation. Channel modification does not include the clearing of debris or trash from the watercourse. Channelization is a severe form of channel modification involving a significant change in the channel cross-section and typically involving relocation of the existing channel (e.g. straightening).

Ordinance Text	Commentary
e. "Control structure" means a structure designed to control the rate of stormwater runoff that passes through the structure, given a specific upstream and downstream water surface elevation.	
f. "Culvert" means a structure designed to carry drainage water or small streams below barriers such as roads, driveways, or railway embankments.	
g. "Depression l area" means any area which is lower in elevation on all sides than surrounding properties (i.e. does not drain freely), or whose drainage is severely limited such as by a restrictive culvert. A depressional area will fill with water on occasion when runoff into it exceeds the rate of infiltration into underlying soil or exceeds the discharge through its controlled outlet. Large depressional areas may provide significant stormwater or floodplain storage.	
h. "Development" means the carrying out of any building, agricultural, or mining operation, or the making of any change in the use or appearance of land, and the dividing of land into two or more parcels. The following activities or uses shall be taken, for the purposes of this ordinance, to involve development as defined herein:	
1. any construction, reconstruction, or alteration of a structure to occupy more or less ground area, or the on-site preparation for same;	
2. any change in the intensity of use of land, such as an increase in the number of dwelling units on land, or a material increase in the site coverage of businesses, manufacturing establishments, offices, and dwelling units, including mobile homes, campers, and recreational vehicles, on land;	

Ordinance Text	Commentary
3. any agricultural use of land including, but not limited to, the use of land in horticulture, floriculture, forestry, dairy, livestock, poultry, beekeeping, pisciculture, and all forms of farm products and farm production;	3. This ordinance is primarily intended for use in developing urban and suburban areas. The unit of government should consider whether, or to what extent, it wishes to apply the ordinance to agricultural areas and agricultural activities, recognizing that row crop production and livestock grazing can have significant non-point pollution impacts. At a minimum there may be a need in agricultural areas to provide for the natural vegetation buffer strip. It would also be recommended that livestock be removed from the buffer strip area as well. Note that Section 5.05, Permit Exceptions, removes farm drainage ditches from regulation, but a vegetated buffer strip is recommended.
4. the commencement of drilling, except to obtain soil samples, or the commencement of mining, filling, excavation, dredging, grading or other alterations of the topography;	
5. demolition of a structure or redevelopment of a site;	
6. clearing of land as an adjunct of construction for agricultural, private residential, commercial or industrial use;	
7. deposit of refuse, solid or liquid waste, or fill on a parcel of land, or the storage of materials;	
8. construction, excavation, or fill operations relating to the creation or modification of any road, street, parking facility or any drainage canal, or to the installation of utilities or any other grading activity that alters the existing topography;	
9. construction or erection of dams, levees, walls, fences, bridges or culverts; and	
10. any other activity that might change the direction, height, or velocity of flood or surface waters.	
i. "District" means the Lowland Conservancy Overlay District as defined in Section 6.02 of this ordinance.	

Ordinance Text	Commentary
j. "Erosion" means the general process whereby soils are moved by flowing water or wave action.	
k. "Filtered view" means the maintenance or establishment of woody vegetation of sufficient density to screen developments from a stream or wetland, to provide for streambank stabilization and erosion control, to serve as an aid to infiltration of surface runoff, and to provide cover to shade the water. The vegetation need not be so dense as to completely block the view. Filtered view means no clear cutting.	
l. "Floodplain" means that land adjacent to a body of water with ground surface elevations at or below the 100-year frequency flood elevation.	l. The report, "Floodplain Regulations" (Local Assistance Series 2C), January 1987, published by the Illinois Department of Transportation/Division of Water Resources, provides an excellent overview of state and federal floodplain regulations as well as explanations and definitions of technical flood management terminology. Maps published by the Federal Emergency Management Agency (FEMA) indicate the location and extent of floodplains (Special Flood Hazard Area, SFHA) and are available from the Northeastern Illinois Planning Commission. Questions regarding floodways should be directed to FEMA, 175 West Jackson Boulevard, Chicago, Illinois 60604, and the Illinois Department of Transportation/Division of Water Resources, 201 West Center Court, Schaumburg, Illinois 60196-1096.
m. "Floodway" means that portion of the floodplain (sometimes referred to as the base floodplain or Special Flood Hazard Area) required to store and convey the base flood. The floodway is the 100-year floodway as designated and regulated by the Illinois Department of Transportation /Division of Water Resources. The remainder of the floodplain which is outside the regulatory floodway is referred to as the flood fringe or floodway fringe.	
n. "Hydraulic characteristics" means the features of a watercourse which determine its water conveyance capacity. These features include but are not limited to: size and configuration of the cross-section of the watercourse and floodway; texture and roughness of materials along the watercourse; alignment of watercourse; gradient of watercourse; amount and type of vegetation within the watercourse; and size, configuration, and other characteristics of structures within the watercourse. In low-lying areas the characteristics of the overbank area also determine water conveyance capacity.	

Ordinance Text	Commentary
o. "Lot" means an area of land, with defined boundaries, that is designated in official assessor's records as being one parcel.	
p. "Lake or pond" means any inland waterbody, fed by spring or surface water flow.	p. Local jurisdictions, after studying the water bodies within their boundaries, may wish to adopt criteria in order to bring certain lakes or ponds under the ordinance regulations. Generally speaking, smaller ponds and especially retention facilities are more difficult to manage and maintain as "natural" water bodies because they are less resilient to the impacts of adjacent development and inflow as well as the natural aging processes.
q. "Natural" in reference to watercourses means those stream channels, grassed waterways and swales formed by the existing surface topography of the earth prior to changes made by unnatural causes. A natural stream tends to follow a meandering path; its floodplain is not constrained by levees; the area near the bank has not been cleared, mowed or cultivated; the stream flows over soil and geologic materials typical of the area with no alteration of the course or cross-section of the stream caused by filling or excavating.	
r. "Ordinary high water mark" (OHWM) means the point on the bank or shore up to which the presence and action of surface water is so continuous so as to leave a distinctive mark such as by erosion, destruction or prevention of terrestrial vegetation, predominance of aquatic vegetation, or other easily recognized characteristics.	
s. "Qualified professional" means a person trained in one or more of the disciplines of biology, geology, soil science, engineering, or hydrology whose training and experience ensure a competent analysis and assessment of stream, lake, pond and wetland conditions and impacts.	s. and t. Persons trained as environmental engineers have training in the environmental sciences as well as engineering, and are therefore generally qualified to work with the requirements of this ordinance. Geoscientists and biologists have training that allows assessment of environmental impacts. Not all engineers are familiar with non-structural management approaches that are encouraged by this ordinance.
t. "Registered professional engineer" means a professional engineer registered under the provisions of "The Illinois Professional Engineering Act" and any act amendatory thereof.	

Ordinance Text	Commentary
u. "Retention/detention facility" means a facility that provides for storage of storm water runoff and controlled release of this runoff during and after a flood or storm.	u. A retention facility maintains a permanent pool of water. A detention facility does not.
v. "Runoff" means the portion of precipitation on the land that is not absorbed by the soil or plant material and which runs off the land.	
w. "Sedimentation" means the processes that deposit soils, debris, and other materials either on other ground surfaces or in water bodies or watercourses.	
x. "Setback" means the horizontal distance between any portion of a structure or any development activity and the ordinary high water mark of a perennial or intermittent stream, the ordinary high water mark of a lake or pond, or the edge of a wetland, measured from the structure's or development's closest point to the ordinary high water mark, or edge.	
y. "Stream" means a body of running water flowing continuously or intermittently in a channel on or below the surface of the ground. 7.5 minute topographic maps of the U.S. Geological Survey are one reference for identifing perennial and intermittent streams. For purposes of this ordinance, the term "stream" does not include storm sewers.	
z. "Structure" means anything that is constructed, erected or moved to or from any premise which is located above, on, or below the ground including, but not limited to roads, signs, billboards, and mobile homes. Temporary recreational facilities including, but not limited to, tents, camper trailers, and recreation vehicles are not considered structures when used less than 180 days per year and located landward of the minimum setback provided as a natural vegetation strip.	

Ordinance Text	Commentary
aa. "Vegetation" means all plant growth, especially trees, shrubs, mosses, and grasses.	aa. Wherever possible, native species should be preserved or introduced as necessary. "Naturalized" species should be utilized if proven that there will be no negative impacts such as rapid takeover and "choking" of other beneficial species. The Illinois Department of Conservation may be consulted regarding appropriate stream and wetland vegetation.
bb. "Watercourse" means any river, stream, creek, brook, branch, natural or artificial depression, ponded area, slough, gulch, draw, ditch, channel, conduit, culvert, swale, grass waterway, gully, ravine, wash, or natural or man-made drainageway, which has a definite channel, bed and banks, in or into which stormwater runoff and floodwater flow either regularly or intermittently.	
cc. "Wetland" means those transitional lands between terrestrial and aquatic system where the water table is usually at or near the surface or the land is covered by shallow water. Classification of areas as wetlands shall follow the "Classification of Wetlands and Deepwater Habitats of the United States" as published by the U.S. Fish and Wildlife Service (FWS/OBS-79/31).	cc. NIPC is a distributor of the U.S. Fish and Wildlife Service/Illinois Department of Conservation National Wetlands Inventory maps, as is Northern Illinois University. Additional references include Wetland Plants of the State of Illinois, 1986, Hydric Soils of the State of Illinois, 1985, and A Field Guide to the Wetlands of Illinois, Illinois Department of Conservation, 1988.

Sec. 5.00 Special Use Permit

To ensure that proposed development activity can be carried out in a manner which is compatible and harmonious with the natural amenities of the Lowland Conservancy Overlay District and with surrounding land uses, a request for a Special Use Permit for such development activity must be submitted for approval by the governing body of (local government name).

No special use permit shall be issued unless the (local government name) finds that:

a. the development will not detrimentally affect or destroy natural features such as ponds, streams, wetlands, and forested areas, nor impair their natural functions, but will preserve and incorporate such features into the development's site;

Ordinance Text	Commentary
b. the location of natural features and the site's topography have been considered in the designing and siting of all physical improvements;	
c. adequate assurances have been received that the clearing of the site of topsoil, trees, and other natural features will not occur before the commencement of building operations; only those areas approved for the placement of physical improvements may be cleared;	
d. the development will not reduce the natural retention storage capacity of any watercourse, nor increase the magnitude and volume of flooding at other locations; and that in addition, the development will not increase stream velocities; and	
e. the soil and subsoil conditions are suitable for excavation and site preparation, and the drainage is designed to prevent erosion and environmentally deleterious surface runoff.	
There shall be no development, including the immediate or future clearing or removal of natural ground cover and/or trees, within the Lowland Conservancy Overlay District for any purpose, unless a special use permit is granted subject to the provisions of this ordinance or the provisions of the (local government name) zoning ordinance.	The ordinance is not intended to preclude removal of vegetation (for example, removal of exotic species or selective thinning in order to increase sunlight penetration) as part of a management program for maintenance and restoration of natural areas. Jurisdictions may wish to add specific language to this effect.
Dumping, filling, mining, excavating, dredging, or transferring of any earth material within the district is prohibited unless a special use permit is granted.	
No ponds or impoundments shall be created nor other alterations or improvements shall be allowed in the district for recreational uses, storm water management, flood control, agricultural uses or as scenic features unless a special use permit is granted.	

Ordinance Text

Sec. 5.01 Application for Permit

Application for a special use permit shall be made by the owner of the property, or his/her authorized agent, to the (local government name) on a form furnished for that purpose. Each application shall bear the name(s) and address(es) of the owner or developer of the site and of any consulting firm retained by the applicant together with the name of the applicant's principal contact at such firm, and shall be accompanied by a filing fee of _____. Each application shall include certification that any land clearing, construction, or development involving the movement of earth shall be in accordance with the plans approved upon issuance of the permit.

Sec. 5.02 Submissions

Each application for a special use permit shall be accompanied by the following information as specified in the ordinance sections cited:

General Provisions:

Site Development Plan	Sec. 6.04
Geologic and Soil Report	Sec. 6.05
Drainage Control Plan	Sec. 6.06
Site Grading & Excavation Plan	Sec. 6.07
Landscape Plan	Sec. 6.08

Justification for Watercourse Relocation and Minor Modifications:

Stream Modification/Relocation Plan	Sec. 7.02
Channel and Bank Armoring	Sec. 7.03
Culverts	Sec. 7.04
On-Stream Impoundments	Sec. 7.05
Impact Assessment	Sec. 8.00

(at option of (local government name))

Commentary

Sec. 5.02 Submissions

Large development projects require submittal of extensive documentation. In order that the regulation does not become unreasonable and onerous for very small development projects, the local jurisdiction should have the flexibility of waiving or simplifying submission requirements.

Where ordinance requirements are considered to be burdensome due to unusual lot configurations, for example, a very small lot area covered by the District, the special use permit applicant may petition for a variance under the provisions of Section 11.01.

The submissions called for in Sections 6.04 through 6.08 may be required by existing ordinances. If so, they may be deleted from this ordinance with a cross-reference to the other ordinance or ordinances.

In some instances, a jurisdiction may wish to amend existing ordinances with provisions from this ordinance rather than, or in addition to, adopting a new ordinance.

Ordinance Text

Commentary

Where a proposed development activity is less than 2 1/2 acres in area the (permit issuing agency), upon approval of the (local government name) engineer, may waive or simplify any or all of the submission requirements (Sec. 6.04-6.08) provided that the person responsible for any such development shall implement necessary protection measures to satisfy the purpose and intent set forth in Section 3.00 of this ordinance. (See Sec. 11.01, Variances)

Sec. 5.03 Bonds

The applicant may be required to file with the (local government name) a faithful performance bond or bonds, letter of credit, or other improvement security satisfactory to the (municipal attorney), in an amount deemed sufficient by the (local government name) to cover all costs of improvements, landscaping, or maintenance of improvements and landscaping, for such period as specified by the (local government name), and engineering and inspection costs to cover the cost of failure or repair of improvements installed on the site.

Sec. 5.04 Review and Approval

Each application for a special use permit shall be reviewed and acted upon according to the following procedures:

1. The (local government name) will review each application for a special use permit to determine its conformance with the provisions of this ordinance. The (local government name) may also refer any application to the (county) Soil and Water Conservation District and/or any other local government or public agency within whose jurisdiction the site is located for review and comments. Within thirty (30) days after receiving an application, the (local government name) shall in writing, (a) approve the permit application, if it is found to be in conformance with

the provisions of this ordinance, and issue the permit; (b) approve the permit application subject to such reasonable conditions as may be necessary to secure substantially the objectives of this ordinance, and issue the permit subject to these conditions; or (c) disapprove the permit application, indicating the deficiencies and the procedure for submitting a revised application and/or submission.

2. No special use permit shall be issued for an intended development site unless:

   a. the development, including but not limited to subdivisions and planned unit developments, has been approved by the (local government name) where applicable; or

   b. such permit is accompanied by or combined with a valid building permit issued by the (local government name); or

   c. the proposed development is coordinated with any overall development program previously approved by the (local government name) for the area in which the site is situated.

3. Failure of the (local government name) to act on an original or revised application within thirty days of receipt shall authorize the applicant to proceed in accordance with the plans as filed, unless such time is extended by agreement between the (local government name) and the applicant. Pending preparation and approval of a revised plan, development activities shall be allowed to proceed in accordance with conditions established by the (local government name).

Ordinance Text

Commentary

Sec. 5.05 Permit Exceptions

The provisions of this ordinance shall not apply to:

a. emergency work necessary to preserve life or property; when emergency work is performed under this section, the person performing it shall report the pertinent facts relating to the work to the (permit issuing agency) within ten (10) days after commencement of the work and shall thereafter obtain a special use permit and shall perform such work as may be determined by the agency to be reasonably necessary to correct any impairment to the watercourse, lake, pond, floodplain or wetland (in terms of the purposes of this ordinance Section 3.00 a-j);

b. work consisting of the operation, repair, or maintenance of any lawful use of land existing on the date of adoption of this ordinance;

c. lands adjacent to farm ditches if:

   1. such lands are not adjacent to a natural stream or river; or

   2. those parts of such drainage ditches adjacent to such lands were not streams before ditching; or

   3. such lands are maintained in agricultural uses without buildings and structures.

Where farm ditches are found to contribute to adverse environmental impacts or hazards to persons or property, the (local government name) may include designated farm ditches in the District. The (local government name) may also require that linings, bulkheads, dikes and culverts be removed to mitigate hazards, or that other mitigative measures be taken, such as the maintenance of a natural vegetation buffer strip.

c. Many drainageways in the region were created as agricultural drainage ditches, or drainage ditches were created by channelizing streams or swales. The primary purpose of this ordinance is not to regulate agricultural activities and farm ditches specifically. Therefore this language is provided. Where streams flowing through agricultural areas have a reasonable degree of natural amenity, the jurisdiction is justified in regulating them, particularly if a planning process has specifically identified such streams and if protection of those streams in agricultural areas is necessary for managing water resources in downstream areas that are urbanizing or are already urbanized. It is recommended that a vegetation buffer strip be maintained on both sides of agricultural drainage ditches.

Ordinance Text

Sec. 5.06 Effect on Other Permits

The granting of a special use permit under the provisions herein shall in no way affect the owner's responsibility to obtain the approval required by any other statute, ordinance, or regulation of any state agency or subdivision thereof, or to meet other (local government name) ordinances and regulations. Where state and/or federal permits are required, a special use permit will not be issued until they are obtained.

Sec. 6.00 General Provisions: Area Affected

This ordinance applies to development in or near streams, lakes, ponds and wetlands within (local government name). Streams, lakes, and ponds (including intermittent streams) are those which are shown on the United States Department of the Interior Geological Survey (USGS) 7.5 minute quadrangle maps and those additional streams, lakes, and ponds delineated on maps adopted as part of this ordinance. Those maps are hereby made a part of this ordinance, and two copies thereof shall remain on file in the office of the (local government name) administrator for public inspection. Within the jurisdiction of (local government name), those waterbodies and watercourses that are named and are subject to the provisions of this ordinance are (list of water bodies and water courses). Wetlands are those designated in the U.S. Fish and Wildlife Service/Illinois Department of Conservation wetland inventory and those additional wetlands delineated on maps adopted as part of this ordinance.

If new drainage courses, lakes, ponds or wetlands are created as part of a development, the requirements for setbacks and uses within setbacks, and the criteria for watercourse relocation and minor modification shall apply. The District shall be amended as appropriate to include these areas.

Commentary

Sec. 5.06 Effect on Other Permits

The U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, and the Illinois Department of Transportation/Division of Water Resources all have water resource management and regulatory authority which is independent of, and in addition to, any requirements of this ordinance. Their regulations may or may not apply to the streams covered by this ordinance.

Sec. 6.00 General Provisions: Area Affected

USGS quadrangle maps may not be up to date in all areas, and they may not be of sufficient detail except to serve as a general location reference. It is recommended that the ordinance contain more detailed maps which show the location of drainageways, wetlands and ponds to be regulated, with careful attention to the end points of stream reaches affected. The width of the District can also be mapped in addition to width specifications in the ordinance text.

The width of the District may need to vary in order to reflect stream conditions, need for non-point source pollution control, and planned land use considerations (e.g. need for public access in certain areas). A rationale should exist for variations in District width, and all areas with similar characteristics should be treated uniformly. The ordinance would have to identify the locations of the various District widths.

The U.S. Fish and Wildlife Service/Illinois Department of Conservation Wetland Inventory, although very detailed, may not include all wetlands within a given jurisdiction. The local jurisdiction may want to review wetlands in their area with technical personnel of the Illinois Department of Conservation or local experts before deciding which wetlands to regulate with this ordinance.

Ordinance Text

Sec. 6.01 The Lowland Conservancy Overlay District

The Lowland Conservancy Overlay District shall be considered as an overlay to the zoning districts created by the (local government name) zoning ordinance as amended. In addition to the requirements of this ordinance, applicants for a special use permit within the District shall meet all requirements of the underlying zoning districts. In the event of a conflict between the overlay district requirements and the underlying zoning district requirements, the most restrictive requirements prevail.

Sec. 6.02 District Boundary

The procedures, standards and requirements contained in this ordinance shall apply to all lots within wetlands and streams, and all lots lying wholly or in part:

a. within the Special Flood Hazard Area (SFHA) designated by the Federal Emergency Management Agency (FEMA); or

b. within 100 feet of the ordinary high water mark (OHWM) of a perennial stream or intermittent stream, the ordinary high water mark of a lake or pond, or the edge of a wetland; or

c. within depressional areas serving as floodplain or stormwater storage areas, as designated on the Lowland Conservancy District Map.

The District is designated on a map labeled "Lowland Conservancy Overlay District Map", which is made to be part of this ordinance and which has the same force and effect as if all the notations, references, and descriptions shown thereon were set forth or described herein. Designated areas are attached as Exhibits _____ and additional areas may be approved from time to time and be made exhibits hereto.

Commentary

Sec. 6.02 District Boundary

An overlay district can be defined by fixed or floating boundaries. A fixed boundary is set at a certain number of feet from the ordinary high water mark of a stream, lake or pond, or the edge of a wetland. A floating boundary varies in width according to the location of sensitive areas along the stream or wetland.

The value and the problems associated with either type of boundary are obvious. Fixed boundaries, although easy to set and administer, may be rigid and potentially arbitrary. A review of ordinances from around the country indicates that fixed boundaries can be anywhere from 25 to 300 feet wide. Floating boundaries are more sensitive to critical areas along streams and adjacent to wetlands, yet defining a floating boundary takes both investigation and evaluation of environmental data (a relatively difficult task when staff and other resources are limited). The criteria included in the model ordinance use a combination approach. The boundary is defined by the floodplain (SFHA) which has been delineated for most streams in the region, or by a fixed distance which is a minimum. Not all floodplain areas have been mapped by FEMA.

Ordinance Text

Commentary

Sec. 6.03 Minimum Setback of Development Activity from Streams, Lakes, Ponds, and Wetlands

Absolutely no development activity (except as provided below) may occur within the minimum setback which is defined as 75 feet from the ordinary high water mark of streams, lakes and ponds, or the edge of wetlands, or within a designated depressional area. In no case shall the setback be less than the boundary of the 100-year floodway as defined by FEMA. These setback requirements do not apply to a stream in a culvert unless the stream is taken out of the culvert as part of development activity. If a culvert functions as a low-flow culvert, where water is intended to periodically flow over it, the setback requirements apply.

The following development activities may be permitted, subject to issuance of a special use permit, within the minimum setback areas only if, as a practical matter, they cannot be located outside the setback area. Such development activities will only be approved based upon a report, prepared by a qualified professional, which demonstrates that they will not adversely affect water quality; destroy, damage or disrupt significant habitat area; adversely affect drainage and/or stormwater retention capabilities; adversely affect flood conveyance and storage; lead to unstable earth conditions, create erosion hazards, or be materially detrimental to any other property in the area of the subject property or to the (local government name) as a whole, including the loss of open space or scenic vistas:

a. minor improvements such as walkways, benches, comfort stations, informational displays, directional signs, foot bridges, observation decks, and docks;

b. the maintenance, repair, replacement, and reconstruction of existing highways and bridges, electrical transmission and telecommunication lines, poles, and towers; and

The publication, "Manual of Conservation Engineering Guidelines" (Illinois Department of Conservation, 1983), is an excellent resource. It contains a chapter on streambank erosion control with discussion of vegetative stabilization.

Ordinance Text

Commentary

c. the establishment and development of public and private parks and recreation areas, outdoor education areas, historic natural and scientific areas, game refuges, fish and wildlife improvement projects, game bird and animal farms, wildlife preserves and public boat launching ramps.

Review of the proposed development activity within the minimum setback area will consider the following:

a. Only limited filling and excavating necessary for the development of public boat launching ramps, swimming beaches, or the development of park shelters or similar structures is allowed. The development and maintenance of roads, parking lots and other impervious surfaces necessary for permitted uses are allowed only on a very limited basis, and where no alternate location outside of the setback area is available.

b. Land surface modification within the minimum setback shall be permitted for the development of stormwater drainage swales between the developed area of the site (including a stormwater detention facility on the site) and a stream, lake or pond, or wetland. Detention basins within the setback are generally discouraged, unless it can be shown that resultant modifications will not impair water quality, habitat, or flood storage functions.

c. No filling or excavating within wetlands is permitted except to install piers for the limited development of walkways and observation decks. Walkways and observation decks should avoid high quality wetland areas, and should not adversely affect natural areas designated in the Illinois Natural Areas Inventory or the habitat of rare or endangered species.

Ordinance Text

Commentary

d. Wetland area occupied by the development of decks and walkways must be mitigated by an equal area of wetland habitat improvement.

e. Modification of degraded wetlands for purposes of stormwater management is permitted where the quality of the wetland is improved and total wetland acreage is preserved. Where such modification is permitted, wetlands shall be protected from the effects of increased stormwater runoff by measures such as detention or sedimentation basins, vegetated swales and buffer strips, and sediment and erosion control measures on adjacent developments. The direct entry of storm sewers into wetlands shall be avoided. Environmental impact analysis of wetland modification may be required in accordance with Section 8.00 of this ordinance.

An applicant for a special use permit (See Section 5.00) must stabilize areas left exposed after land surface modification with vegetation normally associated with that stream or wetland. The planting of native riparian vegetation is recommended as the preferred stabilization measure. Other techniques should be used only when and where vegetation fails to control erosion. The preferred alternative is riprap, using natural rock materials where practicable, installed on eroding bank areas in a manner that provides interstitial space for vegetative growth and habitat for macroinvertebrates and other stream organisms. Lining of the stream channel bottom is not permitted.

The applicant shall minimize access to the applicant's proposed development activity within all or part of the Lowland Conservancy Overlay District where such access could adversely affect the stream, lake, pond, wetland, or related environmentally sensitive areas.

Ordinance Text

Commentary

Sec. 6.04 Site Development Plan

A site development plan must be prepared for any proposed development within, or partly within, the Lowland Conservancy Overlay District and must indicate:

a. dimension and area of parcel, showing also the vicinity of the site in sufficient detail to enable easy location, in the field, of the site for which the special use permit is sought, and including the boundary line, underlying zoning, a legend, a scale, and a north arrow. (This requirement may be satisfied by the submission of a separate vicinity map.);

b. location of any existing and proposed structures;

c. location of existing or proposed on-site sewage systems or private water supply systems;

d. location of any perennial or intermittent stream, lake or pond, and its ordinary high water mark;

e. location and landward limit of all wetlands;

f. location of setback lines as defined in this ordinance;

g. location of the 100-year floodway;

h. location of existing or future access roads;

i. specifications and dimensions of stream, wetland or other water areas proposed for alterations;

j. cross-sections and calculations indicating any changes in flood storage volumes; and

k. such other information as reasonably requested by (local government name).

The applicant shall present evidence, prepared by a qualified professional, that demonstrates that the proposed development activity will not endanger health and safety, including danger from the obstruction or diversion of flood flow. The developer shall also show, by submitting appropriate calculations and resource inventories, that the proposed development activity will not substantially reduce natural floodwater storage capacity, destroy valuable habitat for aquatic or other flora and fauna, adversely affect water quality or ground water resources, increase stormwater runoff velocity so that water levels on other lands are substantially raised or the danger from flooding increased, or adversely impact any other natural stream, floodplain, or wetland functions, and is otherwise consistent with the intent of this ordinance.

Sec. 6.05 Geologic and Soil Characteristics/Geologic and Soil Report

The site proposed for development shall be investigated to determine the soil and geologic characteristics, including soil erosion potential. A report, prepared by a licensed professional engineer, geoscientist, or soil scientist experienced in the practice of geologic and soil mechanics, shall be submitted with every application for land development within the Lowland Conservancy Overlay District. This report shall include a description of soil type and stability of surface and subsurface conditions. Any area which the investigation indicates as being subject to geologic or soil hazards shall not be subjected to development, unless the engineer or soil scientist can demonstrate conclusively that these hazards can be overcome.

Ordinance Text

Sec. 6.06 Hydrologic Controls/Drainage Control Plan

A drainage control plan that describes the hydraulic characteristics of on-site and nearby watercourses as well as the proposed drainage plan, prepared by a registered professional engineer experienced in hydrology and hydraulics, shall be submitted with each application for land development within the Lowland Conservancy Overlay District. Unless otherwise noted, the following restrictions, requirements and standards shall apply to all development within the Lowland Conservancy Overlay District:

a. natural open-channel drainageways shall be preserved; and

b. runoff from areas of concentrated impervious cover (e.g., roofs, driveways, streets, patios, etc.) shall be collected and transported to a drainageway (preferably a natural drainageway) with sufficient capacity to accept the discharge without undue erosion or detrimental impact. Vegetated drainage swales are preferred over conveyances constructed of concrete or other manufactured materials.

The drainage control plan shall identify appropriate measures, such as recharge basins and detention/retention basins, which will limit the quantitative and qualitative effects of stormwater runoff to pre-development conditions.

Sec. 6.07 Site Grading and Excavation Plan

Section 6.07 applies to the extent that grading and excavation and erosion control plans, which satisfy the following requirements, are not already required by a jurisdiction.

Commentary

Sec. 6.06 Hydrologic Controls/Drainage Control Plan

It is desirable to have the drainage control plan reviewed by a qualified professional from the environmental field.

Sec. 6.07 Site Grading and Excavation Plan

Reference: NIPC Planning Aid No. 11, Suggested Soil Erosion and Sedimentation Control Ordinance: A Guide for Local Officials, January 1980.

Ordinance Text

Commentary

A site grading and excavation plan, prepared by a registered professional engineer, trained and experienced in civil engineering, shall be submitted with each application for a special use permit and shall include the following:

a. details of the existing terrain and drainage pattern with one-foot contours;

b. proposed site contours at one-foot intervals;

c. dimensions, elevation and contours of grading, excavation and fill;

d. a description of methods to be employed in disposing of soil and other material that is removed from allowable grading and excavation sites, including location of the disposal site if on the property;

e. a schedule showing when each stage of the project will be completed, including the total area of soil surface to be disturbed during each stage, and estimated starting and completion dates. The schedule shall be prepared so as to limit, to the shortest possible period, the time soil is exposed and unprotected. In no case shall the existing natural vegetation be destroyed, removed or disturbed more than fifteen (15) days prior to initiation of the improvements; and

f. a detailed description of the revegetation and stabilization methods to be employed, to be prepared in conjunction with the landscape plan per Section 6.08. This description should include locations of erosion control measures such as sedimentation basins, straw bales, diversion swales, etc.

Ordinance Text	Commentary
The grading and excavation plan must be consistent with all the provisions of this ordinance.	
Unless otherwise provided in this ordinance, the following restrictions, requirements and standards shall apply to all development within the District:	
a. every effort shall be made to develop the site in such a manner so as to minimize the alteration of the natural topography;	
b. no grading, filling, cleaning, clearing, terracing or excavation of any kind shall be initiated until final engineering plans are approved and the special use permit is granted by the (local government name); and	
c. the depositing of any excavation, grading or clearing material within a stream, lake, pond or wetland area (i.e. within the District) shall be prohibited.	
In addition to locating all site improvements on the subject property to minimize adverse impacts on the stream, lake, pond, or wetland, the applicant shall install a berm, curb, or other physical barrier during construction, and following completion of the project, where necessary, to prevent direct runoff and erosion from any modified land surface into a stream, lake, pond, or wetland. All parking and vehicle circulation areas should be located as far as possible from a stream, lake, pond, or wetland.	
(Local government name) may limit development activity in or near a stream, lake, pond, or wetland to specific months, and to a maximum number of continuous days or hours, in order to minimize adverse impacts. Also, the (local government name) may require that equipment be operated from only one side of a stream, lake, or pond in order to minimize bank disruption. Other development	

Ordinance Text

techniques, conditions, and restrictions may be required in order to minimize adverse impacts on streams, lakes, ponds or wetlands, and on any related areas not subject to development activity.

Sec. 6.08 Natural Vegetation Buffer Strip Required: Vegetation and Revegetation/Landscape Plan

To minimize erosion, stabilize the streambank, protect water quality, maintain water temperature at natural levels, preserve fish and wildlife habitat, to screen man-made structures, and also to preserve aesthetic values of the natural watercourse and wetland areas, a natural vegetation strip shall be maintained along the edge of the stream, lake, pond or wetland. The natural vegetation strip shall extend landward a minimum of 25 feet from the ordinary high water mark of a perennial or intermittent stream, lake or pond and the edge of a wetland.

Within the natural vegetation strip, trees and shrubs may be selectively pruned or removed for harvest of merchantable timber, to achieve a filtered view of the waterbody from the principal structure and for reasonable private access to the stream, lake, pond, or wetland. Said pruning and removal activities shall ensure that a live root system stays intact to provide for streambank stabilization and erosion control.

A landscape plan, prepared by a professional landscape architect, shall be submitted with each special use permit application for development activity within the Lowland Conservancy Overlay District and contain the following:

a. a plan describing the existing vegetative cover of the property and showing those areas where the vegetation will be removed as part of the proposed construction; and

Commentary

Sec. 6.08 Natural Vegetation Buffer Strip Required: Vegetation and Revegetation/Landscape Plan

One purpose of this ordinance is to provide for the protection of a natural vegetation buffer strip. It is desirable to provide for maximum width of natural vegetation as a buffer area. Urban areas present constraints which require consideration of local conditions including stream width, the potential need for public access etc. The U.S. Department of Agriculture (USDA), through its Conservation Reserve Program, encourages farmers to create "water quality enhancement zones" along streams, wetlands and lakes. The USDA recommend that these "filter strips" extend 66 to 99 feet from stream banks. The Dane County (WI) Regional Planning Commission has made buffer strip recommendations based upon stream size and need for public access. (See following page.)

Ordinance Text

b. a plan describing the proposed revegetation of disturbed areas specifying the materials to be used.

The vegetation must be planned in such a way that access for stream maintenance purposes shall not be prevented.

Sec. 7.00 Watercourse Relocation and Minor Modifications (including Channelization and Relocation)

Watercourse relocation or modification is generally not permitted because these activities are not usually consistent with the purposes of this ordinance. Under certain circumstances, relocation and minor modification may be permitted through a special use permit where certain problems can be mitigated by relocation and/or minor modification, specifically when:

a. off-site hydrologic conditions are causing erosion, flooding and related problems; or

b. on-site soil and geologic conditions are resulting in unstable conditions that pose hazards to life, health, and existing structures or property; or

c. the quality of previously modified or relocated streams can be improved through restoration; or

d. officially adopted stormwater management plans call for placement of detention or retention facilities in a stream; or

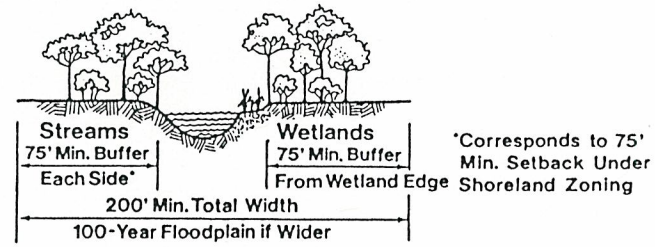
e. public utilities, including sanitary sewers, pipelines, and roadways require stream crossing or relocation where there are not practical alternatives.

Modification of watercourses as a convenience for site design purposes is not permitted.

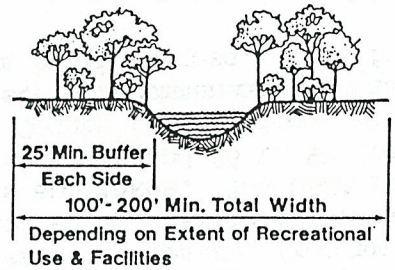
Commentary

BUFFER STRIP EXAMPLES*

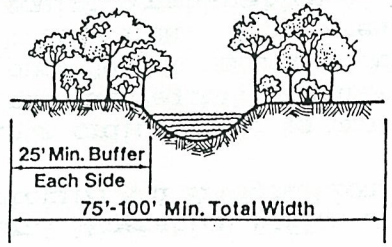
NAVIGABLE STREAMS & WETLANDS



INTERMITTENT STREAMS & DRAINAGEWAYS WITH PUBLIC ACCESS FOR RECREATION



INTERMITTENT STREAMS & DRAINAGEWAYS NO RECREATIONAL ACCESS



*Recommendations of the Dane County (WI) Regional Planning Commission

Ordinance Text

Commentary

Sec. 7.01 Conditions and Restrictions for Permitting Stream Modification

Stream modification, when permitted, is subject to the following conditions and restrictions:

a. water quality, habitat and other natural functions must be significantly improved by the modification; no significant habitat area may be destroyed;

b. the amount of flow and velocity of a stream is not to be increased or decreased as the stream enters or leaves a subject property, unless this reflects an improvement over previous conditions in terms of reduced flooding, reduced erosion, or enhanced low-flow conditions;

c. prior to diverting water into a new channel, a qualified professional approved by the (local government name) shall inspect the stream modification, and issue a written report to the (local government name) that the modified stream complies with the requirements in Section 7.02; and

d. stream channel enlargement, or other modifications that would increase conveyance, shall not be permitted if the intended purpose is to accommodate development activies in the floodplain.

Sec. 7.02 Required Content of Stream Modification/Relocation Plan

Stream relocation may be permitted in accordance with a stream relocation plan which provides for:

a. the creation of a natural meander pattern, pools, riffles, and substrate;

Sec. 7.02 Required Content of Stream Modification/Relocation Plan

Also see, Manual of Conservation Engineering Guidelines, p. IV-17

Ordinance Text	Commentary
b. the formation of gentle side slopes (at least three feet horizontally per one foot vertically), including installation of erosion control features;	
c. the utilization of natural materials wherever possible;	
d. the planting of vegetation normally associated with streams, including primarily native riparian vegetation;	
e. the creation of spawning and nesting areas wherever appropriate;	
f. the re-establishment of the fish population wherever appropriate;	
g. the restoration of water flow characteristics compatible with fish habitat areas, wherever appropriate;	
h. the filling and revegetation of the prior channel;	h. In some instances it may be desirable to retain the prior channel as a backwater lake for habitat management purposes.
i. a proposed phasing plan, specifying time of year for all project phases;	
j. plans for sediment and erosion control; and	
k. establishment of a low-flow channel which reflects the conditions of a natural stream.	
Sec. 7.03 Criteria for Permitting Armoring of Channels and Banks	**Sec. 7.03 Criteria for Permitting Armoring of Channels and Banks**
Armoring in the form of bulkheads, riprap or other materials or devices is not permitted except in accordance with the following:	See also Manual of Conservation Engineering Guidelines, p.IV-21 - IV-26.

Ordinance Text

a. significant erosion cannot be prevented in any other way and the use of vegetation and gradual bank slopes has not sufficiently stabilized the shoreline or bank;

b. the bulkhead or other device is not placed within a wetland, or between a wetland and a lake or pond;

c. the bulkhead, riprap or other device will minimize the transmittal of wave energy or currents to other properties; and

d. the change in the horizontal or vertical configuration of the land must be kept to a minimum.

Where permission to install bulkheads or other armoring devices is requested as part of the special use permit application, documentation and certification pertaining to the items above must be submitted.

Sec. 7.04 Criteria for Permitting the Use of Culverts

Culverts are not permitted in streams except in accordance with the following:

a. where a culvert is necessary for creating access to a property; use of culverts as a convenience, in order to facilitate general site design, is not to be considered;

b. the culvert must allow passage of fish inhabiting the stream, and accommodate the 100-year flood event without increasing upstream flooding, except where a restricting culvert is desirable as part of an overall storm and floodwater management plan;

c. the culvert must be maintained free of debris and sediment to allow free passage of water, and if applicable, fish; and

Commentary

Sec. 7.04 Criteria for Permitting the Use of Culverts

See also Manual of Conservation Engineering Guidelines, p.III-17.

Ordinance Text

d. the stream bottom should not be significantly widened for the placement of a culvert as this increases siltation; if multiple culverts must be installed, one culvert should be at the level of the bottom of the stream and the others at or above normal water elevation.

Sec. 7.05 Criteria for Permitting On-Stream Impoundments

Impoundment of streams is not permitted except in accordance with the following:

a. the impoundment is determined to be in the public interest by providing regional stormwater detention, flood control, or public recreation;

b. the impoundment will not prevent the upstream migration of indigenous fish species;

c. a non-point source control plan has been implemented in the upstream watershed to control the effects of sediment runoff as well as minimize the input of nutrients, oil and grease, metals, and other pollutants;

d. impoundments without permanent low-flow pools are preferred except where a permanent pool is necessary to achieve the intended benefits of the impoundment (e.g. recreation or water quality mitigation); and

e. impoundment design shall include gradual bank slopes, appropriate bank stabilization measures, and a pre-sedimentation basin.

Sec. 8.00 Impact Assessment

(Local government name) may ask an applicant to submit a report prepared by a qualified professional, and approved

Commentary

Sec. 7.05 Criteria for Permitting On-Stream Impoundments

Impoundment of urban streams is often undesirable, for several reasons. Impoundments create conditions conducive to the accumulation of polluted sediments and the proliferation of excessive plant and algae growth. Dams on streams may prevent the upstream migration of fish. In general, these concerns are most significant when permanent pools are constructed on larger streams (i.e. with watersheds larger than two or three square miles), or where nutrient-rich point source discharges are present. Use of on-stream impoundments for stormwater retention, without upstream non-point source pollutant controls, utilizes the stream for pollutant removal but may impair potential recreational and aquatic habitat uses of the impoundment.

Ordinance Text

by the (local government name), in order to assess the potential impact of proposed development on a lake, stream or wetland and associated environmentally sensitive areas, including loss of flood storage potential, loss of habitat, changes in species diversity and quantity, impacts on water quality, increases in human intrusion, and impacts on associated streams, lakes, ponds, wetlands or downstream areas.

Sec. 9.00 Stream Maintenance Easement

The applicant shall grant an access easement for stream maintenance purposes to the (local government name) over twenty-five feet parallel to the stream bank.

Sec. 10.00 Nonconforming Uses

(To conform with the appropriate section of the (local government name) zoning ordinance.)

Sec. 11.00 Board of Appeals

(To conform with the appropriate section of the (local government name) zoning ordinance.)

Sec. 11.01 Variances

(To conform with the appropriate section of the (local government name) zoning ordinance.)

Sec. 11.02 Appeals

(To conform with the appropriate section of the (local government name) zoning ordinance.)

Commentary

Sec. 9.00 Stream Maintenance Easement

In one sample out-of-state ordinance, the dedication of a conservation easement was required. Such an easement could be granted to a county or municipality, or to a private organization such as Corlands or the Nature Conservancy. Such easements are not for purposes of allowing general public access across private property. Where communities require dedication of open space for public access, the dedication can be encouraged or required to occur along streams or adjacent to wetlands or lakes.

Sec. 11.01 Variances

While special uses are permitted in the Overlay District as long as they meet certain conditions, variances are allowed only to relieve a unique hardship created by the application of the Overlay District which is borne by an individual property owner. A variance can be granted to permit the reasonable use of property which, often due to unusual natural conditions on the site, would not otherwise permit development in accordance with this ordinance's requirements. However, variances can be improperly approved to grant a special favor to one property owner that is not granted to others, and variances too-liberally approved can undermine the objectives of the stream and wetland protection ordinance. To prevent this occurrence, the stream and wetland protection ordinance and/or the underlying zoning ordinance should provide the standards concerning the proper situations in which a zoning variance may be approved.

Ordinance Text

Commentary

Sec. 12.00 Bonds

(Local government name) may require the posting of a bond or surety to ensure compliance with any aspect of this ordinance.

Sec. 13.00 Liability

Prior to issurance of a construction permit, the applicant shall enter into an agreement with the (local government name) which runs with the property, in a form acceptable to the (local government name) attorney, indemnifying the (local government name) for any damage resulting from development activity on the subject property which is related to the physical condition of the stream or wetland.

Sec. 14.00 Separability

Every section, provision, or part of this ordinance is declared separable from every other section, provision, or part; and if any section, provision, or part thereof shall be held invalid, it shall not affect any other section, provision, or part.

Sec. 15.00 Retroactivity

The requirements of this ordinance apply to all platted and unplatted lands within the jurisdiction of (local government name.)

Sec. 16.00 Enforcement

Authority for administration of this ordinance resides with the Zoning Administrator. (To conform with appropriate section of the (local government name) zoning ordinance.) Appeals regarding decisions of the Zoning Administrator in granting special permits shall be made according to the provisions of Section 11.02.

Ordinance Text

Commentary

Sec. 16.01 Stop-Work Order; Revocation of Permit

In the event any person holding a special use permit pursuant to this ordinance violates the terms of the permit, or carries on site development in such a manner so as to materially and adversely affect the health, welfare, or safety of persons residing or working in the neighborhood of the development site, or so as to be materially detrimental to the public welfare or injurious to property or improvements in the neighborhood, the (local government name) may suspend or revoke the special use permit.

1. Suspension of a permit shall be by a written stop-work order issued by the (local government name) and delivered to the permittee or his agent or the person performing the work. The stop-work order shall be effective immediately, shall state the specific violations cited, and shall state the conditions under which work may be resumed. A stop-work order shall remain in effect until the next regularly scheduled meeting of the Board of Appeals, at which the conditions of sub-paragraph 2 below can be met.

2. No special use permit shall be permanently suspended or revoked until a hearing is held by the Board of Appeals. Written notice of such hearing shall be served on the permittee, either personally or by registered mail, and shall state:

   a. the grounds for complaint or reasons for suspension or revocation, in clear and concise language; and

   b. the time when and place where such hearing will be held.

Such notice shall be served on the permittee at least five (5) days prior to the date set for the hearing. At such hearing, the permittee shall be given an opportunity to be heard and may call witnesses and present evidence on his/her behalf. At the conclusion of the hearing the Board of Appeals shall determine whether the permit shall be suspended or revoked.

Sec. 16.02 Violations and Penalties

No person shall undertake or continue any development activity contrary to or in violation of any terms of this ordinance. Any person violating any of the provisions of this ordinance shall be deemed guilty of a misdemeanor, and each day during which any violation of any of the provisions of this ordinance is committed, continued, or permitted shall constitute a separate offense. Upon conviction of any such violation, such person, partnership, or corporation shall be punished by a fine of not more than _____ for each offense. In addition to any other penalty authorized by this section, any person, partnership, or corporation convicted of violating any of the provisions of this ordinance shall be required to restore the site to the condition existing prior to commission of the violation, or to bear the expense of such restoration.

Sec. 17.00 Effective Date

This ordinance shall be in full force and effect from and after its passage and publication. The effective date is _____, 19 ____.