MODEL SOIL EROSION AND SEDIMENT CONTROL ORDINANCE

Northeastern Illinois Planning Commission
400 West Madison Street • Suite 200
Chicago, Illinois 60606

September 1991

This is another in a series of planning aids and manuals prepared by the Northeastern Illinois Planning Commission as a service to local governments under a section of its enabling act which authorizes the Commission to "prepare and make available to units of government standards for planning and regulatory ordinances, practices, and procedures." This ordinance has been prepared as a model to assist local units of government in developing their own regulations. This model ordinance is also available on computer diskettes at no charge to local governments.

Price: $4.50

The preparation of revisions to this model ordinance was financed using federal Water Pollution Control Act Section 205(j) funds from the Illinois Environmental Protection Agency. The policies contained herein are not necessarily those of the Illinois Environmental Protection Agency.

northeastern illinois planning commission
400 west madison street · chicago · illinois 60606 · (312) 454-0400 · FAX (312) 454-0411

EXECUTIVE COMMITEE
Sheila H. Schultz
President
Jerry Butler
Vice President
Dean C. Cunat
Secretary
Donna P. Schiller
Treasurer
Eleanor S. Rostron
Vice President for Planning
Constance C. Zimmermann
Vice President for Water Resources
Ruth K. Kretschmer
Past Commission President
Charlie A. Thurston
Past Commission President
Edgar Vanneman, Jr.
Past Commission President
Lawrence B. Christmas
Executive Director

COMMISSIONERS
Appointed by the Governor of Illinois
Alan D. Cornue, *Member, Plan Commission, City of Woodstock*
Ruth K. Kretschmer, *Commissioner, Illinois Commerce Commission*
Donna P. Schiller, *Executive Director, Citizens for Court Reform*
Charlie A. Thurston, *Vice President, Northern Illinois Gas Company*
Edgar Vanneman, Jr. *Former Mayor, City of Evanston*
Appointed by the Mayor of Chicago
Lemuel Austin, Jr., *Alderman, 34th Ward, Chicago*
Ed H. Smith, *Alderman, 28th Ward, Chicago*
Mary Ann Smith, *Alderman, 48th Ward, Chicago*
David R. Mosena, *Chief of Staff*
Rosanna A. Marquez, *Assistant to the Mayor*
Elected by the Assembly of Mayors
Betty M. Cheever, *President, Village of Downers Grove*
Jo Ann Eckmann, *Mayor, Village of Libertyville*
Robert F. Huson, *President, Village of LaGrange Park*
William Ottilie, *Mayor, City of Geneva*
Sheila H. Schultz, *President, Village of Wheeling*
Daniel J. Shea, *President, Village of Fox River Grove*
Anthony Uremovic, *Councilman, City of Joliet*
Appointed by the County Board Chairmen
Jerry Butler, *Member, Cook County Board of Commissioners*
Irene C. Hernandez, *Member, Cook County Board of Commissioners*
Herbert T. Schumann, *Member, Cook County Board of Commissioners*
Constance C. Zimmermann, *Member, DuPage County Board*
Patricia Sjurseth, *Member, Kane County Board*
Eleanor S. Rostron, *Member, Lake County Board*
Dean C. Cunat, *Member, McHenry County Board*
Mary Ann Gearhart, *Member, Will County Board*
Appointed by the Board of the Regional Transportation Authority
Kathleen K. Parker
Appointed by the Board of the Chicago Transit Authority
Arthur F. Hill, Jr.
Appointed by the Board of Metra
Donald A. Udstuen
Appointed by the Board of Pace
Robert Parker Coffin
Appointed by the Board of the Metropolitan Water Reclamation District of Greater Chicago
Kathleen T. Meany
Appointed by the Board of the Illinois Association of Park Districts
Ralph Cianchetti, *Vice President, Park District of Highland Park*
Appointed by the Board of the Chicago Park District
Margaret T. Burroughs

October 9, 1991

To the Public Officials and Citizens of Northeastern Illinois:

I am pleased to present to you this updated Model Soil Erosion and Sediment Control Ordinance.

This ordinance was prepared by Northeastern Illinois Planning Commission staff with financial assistance from the Illinois Environmental Protection Agency. Technical support was provided by an ad hoc group of regional soil erosion and sediment control experts.

The policy basis for this ordinance comes from the Areawide Water Quality Management Plan for Northeastern Illinois. The technical basis for this ordinance reflects new insights gained from a recent Commission study, "Investigation of the Effectiveness of Urban Soil Erosion and Sediment Control Programs in Northeastern Illinois." This investigation concluded that while many local ordinance programs are effective in controlling nuisance effects of construction site erosion, they are not effective in controlling the effects of erosion on downstream water quality, flood storage, and aquatic habitat. To improve this effectiveness, the updated ordinance incorporates technical criteria derived from a number of ordinances from other parts of the country as well as new ordinances from northeastern Illinois.

It is hoped that this ordinance will assist local governments in better regulating construction site erosion impacts. In that connection, I urge that special attention be given to the need for adequate inspection of installed erosion and sediment control practices. I also suggest that units of local government which have already adopted similar ordinances review the attached model and determine what changes are necessary to reinforce their minimum requirements.

Sincerely,

Sheila H. Schultz

Sheila H. Schultz
President

northeastern illinois planning commission
400 west madison street · chicago · illinois 60606 · (312) 454-0400 · FAX (312) 454-0411

October 9, 1991

To the Public Officials and Citizens of Northeastern Illinois:

I am pleased to present to you this updated Model Soil Erosion and Sediment Control Ordinance.

This ordinance was prepared by Northeastern Illinois Planning Commission staff with financial assistance from the Illinois Environmental Protection Agency. Technical support was provided by an ad hoc group of regional soil erosion and sediment control experts.

The policy basis for this ordinance comes from the Areawide Water Quality Management Plan for Northeastern Illinois. The technical basis for this ordinance reflects new insights gained from a recent Commission study, "Investigation of the Effectiveness of Urban Soil Erosion and Sediment Control Programs in Northeastern Illinois." This investigation concluded that while many local ordinance programs are effective in controlling nuisance effects of construction site erosion, they are not effective in controlling the effects of erosion on downstream water quality, flood storage, and aquatic habitat. To improve this effectiveness, the updated ordinance incorporates technical criteria derived from a number of ordinances from other parts of the country as well as new ordinances from northeastern Illinois.

It is hoped that this ordinance will assist local governments in better regulating construction site erosion impacts. In that connection, I urge that special attention be given to the need for adequate inspection of installed erosion and sediment control practices. I also suggest that units of local government which have already adopted similar ordinances review the attached model and determine what changes are necessary to maintore high minimum requirements.

Sincerely,

Sheila H. Seturk
President

northeastern illinois planning commission
400 west madison street · chicago · illinois 60606 · (312) 454-0400 · FAX (312) 454-0411

EXECUTIVE COMMITEE
Sheila H. Schultz
President
Jerry Butler
Vice President
Dean C. Cunat
Secretary
Donna P. Schiller
Treasurer
Eleanor S. Rostron
Vice President for Planning
Constance C. Zimmermann
Vice President for Water Resources
Ruth K. Kretschmer
Past Commission President
Charlie A. Thurston
Past Commission President
Edgar Vanneman, Jr.
Past Commission President
Lawrence B. Christmas
Executive Director

COMMISSIONERS
Appointed by the Governor of Illinois
Alan D. Cornue, *Member, Plan Commission, City of Woodstock*
Ruth K. Kretschmer, *Commissioner, Illinois Commerce Commission*
Donna P. Schiller, *Executive Director, Citizens for Court Reform*
Charlie A. Thurston, *Vice President, Northern Illinois Gas Company*
Edgar Vanneman, Jr. *Former Mayor, City of Evanston*
Appointed by the Mayor of Chicago
Lemuel Austin, Jr., *Alderman, 34th Ward, Chicago*
Ed H. Smith, *Alderman, 28th Ward, Chicago*
Mary Ann Smith, *Alderman, 48th Ward, Chicago*
David R. Mosena, *Chief of Staff*
Rosanna A. Marquez, *Assistant to the Mayor*
Elected by the Assembly of Mayors
Betty M. Cheever, *President, Village of Downers Grove*
Jo Ann Eckmann, *Mayor, Village of Libertyville*
Robert F. Huson, *President, Village of LaGrange Park*
William Ottilie, *Mayor, City of Geneva*
Sheila H. Schultz, *President, Village of Wheeling*
Daniel J. Shea, *President, Village of Fox River Grove*
Anthony Uremovic, *Councilman, City of Joliet*
Appointed by the County Board Chairmen
Jerry Butler, *Member, Cook County Board of Commissioners*
Irene C. Hernandez, *Member, Cook County Board of Commissioners*
Herbert T. Schumann, *Member, Cook County Board of Commissioners*
Constance C. Zimmermann, *Member, DuPage County Board*
Patricia Sjurseth, *Member, Kane County Board*
Eleanor S. Rostron, *Member, Lake County Board*
Dean C. Cunat, *Member, McHenry County Board*
Mary Ann Gearhart, *Member, Will County Board*
Appointed by the Board of the Regional Transportation Authority
Kathleen K. Parker
Appointed by the Board of the Chicago Transit Authority
Arthur F. Hill, Jr.
Appointed by the Board of Metra
Donald A. Udstuen
Appointed by the Board of Pace
Robert Parker Coffin
Appointed by the Board of the Metropolitan Water Reclamation District of Greater Chicago
Kathleen T. Meany
Appointed by the Board of the Illinois Association of Park Districts
Ralph Cianchetti, *Vice President, Park District of Highland Park*
Appointed by the Board of the Chicago Park District
Margaret T. Burroughs

October 9, 1991

To the Public Officials and Citizens of Northeastern Illinois:

I am pleased to present to you this updated Model Soil Erosion and Sediment Control Ordinance.

This ordinance was prepared by Northeastern Illinois Planning Commission staff with financial assistance from the Illinois Environmental Protection Agency. Technical support was provided by an ad hoc group of regional soil erosion and sediment control experts.

The policy basis for this ordinance comes from the Areawide Water Quality Management Plan for Northeastern Illinois. The technical basis for this ordinance reflects new insights gained from a recent Commission study, "Investigation of the Effectiveness of Urban Soil Erosion and Sediment Control Programs in Northeastern Illinois." This investigation concluded that while many local ordinance programs are effective in controlling nuisance effects of construction site erosion, they are not effective in controlling the effects of erosion on downstream water quality, flood storage, and aquatic habitat. To improve this effectiveness, the updated ordinance incorporates technical criteria derived from a number of ordinances from other parts of the country as well as new ordinances from northeastern Illinois.

It is hoped that this ordinance will assist local governments in better regulating construction site erosion impacts. In that connection, I urge that special attention be given to the need for adequate inspection of installed erosion and sediment control practices. I also suggest that units of local government which have already adopted similar ordinances review the attached model and determine what changes are necessary to reinforce their minimum requirements.

Sincerely,

Sheila H. Schultz

Sheila H. Schultz
President

northeastern illinois planning commission
400 west madison street chicago, illinois 60606 (312)454-0400 FAX(312)454-0411

October 9, 1991

To the Public Officials and Citizens of Northeastern Illinois:

I am pleased to present to you this updated Model Soil Erosion and Sediment Control Ordinance.

This ordinance was prepared by Northeastern Illinois Planning Commission staff with financial assistance from the Illinois Environmental Protection Agency. Technical support was provided by an ad hoc group of regional soil erosion and sediment control experts.

This policy basis for this ordinance comes from the Areawide Water Quality Management Plan for Northeastern Illinois. The technical basis for this ordinance reflects new insights gained from a recent Commission study, "Investigation of the Effectiveness of Urban Soil Erosion and Sediment Control Programs in Northeastern Illinois." This investigation concluded that while many local ordinance programs are effective in controlling nuisance effects of construction site erosion, they are not effective in controlling the effects of erosion on downstream water quality, flood storage, and aquatic habitat. To improve this effectiveness, the updated ordinance incorporates technical criteria derived from a number of ordinances from other parts of the country as well as new ordinances from Northeastern Illinois.

It is hoped that this ordinance will assist local governments in better regulating construction site erosion impacts. In that connection, I urge that special attention be given to the need for adequate inspection of installed erosion and sediment control practices. I also suggest that units of local government which have already adopted similar ordinances review the attached model and determine what changes are necessary to reinforce their minimum requirements.

Sincerely,

Sheila H. Schulz
President

TABLE OF CONTENTS

Page

Introduction i

100.0 Findings and Purpose 1
101.0 Findings 1
102.0 Purpose 2

200.0 Definitions 2

300.0 General Principles 5

400.0 Site Development Permit 7
401.0 Permit Required 7
402.0 Exceptions 7
403.0 Application for Permit 9
404.0 Submissions 9
405.0 Bonds 12
406.0 Review and Approval 13
407.0 Expiration of Permit 15
408.0 Appeals 15
409.0 Retention of Plans 16

500.0 Design and Operation Standards and Requirements 16
501.0 Applicability 16
502.0 Responsibility 16
503.0 Site Design Requirements 17
504.0 Handbooks Adopted by Reference 21
505.0 Maintenance of Control Measures 22
506.0 Inspection 22
507.0 Special Precautions 23
508.0 Amendment of Plans 24

600.0 Enforcement 24
601.0 Exceptions 24
602.0 Stop Work Order; Revocation of Permit 26
603.0 Violations and Penalties 27
604.0 Separability 27

INTRODUCTION

Soil erosion and offsite sediment runoff are continuing serious environmental problems in northeastern Illinois. Each year, millions of tons of soil are eroded by water and wind from agricultural land, areas undergoing development, and developed areas which are improperly protected. The Illinois Water Quality Management Plan identifies sedimentation as a major water pollution problem in both rural and urbanized areas. Sediment reduces the carrying capacity of streams, transports pesticides and other pollutants, and degrades aquatic habitat. In addition, uncontrolled erosion and sedimentation lower the economic value of farmland, reduce the effectiveness of stormwater management facilities, and create hazards on streets and sidewalks.

The model ordinance which follows addresses one aspect of this problem: erosion and sedimentation from areas undergoing urbanization. The ordinance provides a means by which county and municipal governments can assure that site planning and development take potential erosion problems into account and include effective measures for their control. While the principal intent of the ordinance is preventive, it also includes provisions for enforcement action where this becomes necessary.

The Illinois Water Quality Management Plan recommends that erosion and sedimentation control ordinances be adopted by all counties and municipalities. More recently, the U.S. Environmental Protection Agency (USEPA) has promulgated regulations which will require stormwater permits for construction sites. All construction activities of 5 acres or greater will be required to implement erosion and sediment control measures and to perform routine maintenance and inspection of these measures.

The majority of local governments in northeastern Illinois have already adopted ordinances. Many of their ordinances are similar to the Commission model prepared in 1980. If effectively enforced, these ordinances satisfy basic erosion and sediment control objectives and need not be discarded. However, it is recommended that revisions contained in the new model be considered by local governments to enhance the achievement of ordinance objectives, particularly water quality protection, and to conform to USEPA guidelines.

The present model uses the 1980 model as a base and includes additions and revisions based on experience gained in this region and in other parts of the country. Many of the changes are based on ordinances previously adopted or currently under consideration by other agencies, including: the DuPage County Stormwater Committee; Kane County; Lake County Stormwater Commission; Dane County, Wisconsin; Loudoun County, Virginia; St. Charles, Missouri SWCD; and the states of Georgia, Maryland, Ohio, and Wisconsin.

This ordinance is similar to others in the series of planning aids prepared by the Commission. It is presented as a model for the guidance of local governments in adopting their own erosion and sediment control programs. It is understood that each local government may wish to modify the model presented here to conform to its existing regulations and practices.

The Commission will provide technical assistance upon request in developing such modifications. However, it is important that each local government submit the model to careful review by administrative officials and legal counsel prior to adoption. Another potential source of technical assistance is the county Soil and Water Conservation District (SWCD) office. SWCD's in northeastern Illinois are becoming more attuned to urban issues, such as construction site erosion control, and can offer advice on ordinance implementation and site inspection.

The model ordinance contained herein is intended to stand by itself alongside other county or municipal development regulations. It provides for the issuance of a site development permit based on development plans and erosion control measures proposed by a developer and submitted to the local government with land use jurisdiction. Developments below a minimum size would not be required to secure a separate permit but would still be expected to include effective erosion control measures during construction.

This model may not be equally applicable to all communities. For example, a community which is largely built-up and experiencing relatively little new construction may require only amendment of its building code. Where large-scale development is going on, the development permit or subdivision approach may be more effective in regulating land-disturbing activities which take place prior to application for building permits. Some local governments will wish to adopt ordinances or amendments applicable to both small and large-scale developments.

The new model ordinance contains a section specifying minimum site design requirements. Beyond these requirements, though, the model ordinance must be supported by technical standards and specifications for the design of erosion control measures if they are to be effective. The ordinance identifies both "Illinois Procedures and Standards for Urban Soil Erosion and Sedimentation Control" (the Green Book) and IEPA's "Standards and Specifications for Soil Erosion and Sediment Control" (the Yellow Book) as appropriate technical references. In its recent "Investigation of the Effectiveness of Urban Soil Erosion and Sediment Control Programs in Northeastern Illinois," NIPC noted that there are some deficiencies in both of these documents as stand-alone technical references. There also are some obvious inconsistencies between them. Until this situation is resolved, however, it is recommended in the model ordinance that these manuals be adopted by reference as guides to the design engineer in preparing, and the local government in reviewing, site plans and erosion control measures.

MODEL SOIL EROSION AND SEDIMENT CONTROL ORDINANCE

AN ORDINANCE PROVIDING FOR THE CONTROL OF SOIL EROSION AND SEDIMENT RUNOFF FROM AREAS UNDERGOING DEVELOPMENT

ORDINANCE	COMMENTARY
100.0 Findings and Purpose	**100.0 Findings and Purpose**
101.0 Findings	101.0 Findings
The (Board of Trustees) of the (village) hereby finds that:	This section identifies a range of circumstances which threaten the public health, safety, or welfare and from which protection is sought by the enactment of this ordinance. At a number of points in the ordinance, the name of the unit of local government enacting it is to be entered. While the references in this model are to a village, the ordinance is also applicable to a city or county. The reference to the Board of Trustees may be changed to City Council or Board of Commissioners as appropriate.
101.1 Excessive quantities of soil may erode from areas undergoing development for certain non-agricultural uses including but not limited to the construction of dwelling units, commercial buildings and industrial plants, the building of roads and highways, the modification of stream channels and drainageways, and the creation of recreational facilities;	
101.2 The washing, blowing, and falling of eroded soil across and upon roadways endangers the health and safety of users thereof, by decreasing vision and reducing traction of road vehicles;	
101.3 Soil erosion necessitates the costly repairing of gulleys, washed-out fills, and embankments;	
101.4 Sediment from soil erosion tends to clog sewers and ditches and to pollute and silt rivers, streams, lakes, wetlands, and reservoirs;	
101.5 Sediment limits the use of water and waterways for most beneficial purposes, promotes the growth of undesirable aquatic weeds, destroys fish and other desirable aquatic life, and is costly and difficult to remove; and	
101.6 Sediment reduces the channel capacity of waterways and the storage capacity of floodplains and natural depressions, resulting in increased	

chances of flooding at risk to public health and safety

102.0 Purpose

The (Board of Trustees) therefore declares that the purpose of this ordinance is to safeguard persons, protect property, prevent damage to the environment, and promote the public welfare by guiding, regulating and controlling the design, construction, use and maintenance of any development or other activity which disturbs or breaks the topsoil or otherwise results in the movement of earth on land situated in the (village). It is the intention of this ordinance that the delivery of sediment from sites affected by land disturbing activities be limited, as closely as practicable, to that which would have occurred if the land had been left in its natural undisturbed state.

200.0 Definitions

For the purposes of this Ordinance certain terms used herein are defined as set forth below:

200.1 BUILDING PERMIT: A permit issued by the (village) for the construction, erection or alteration of a structure or building.

200.2 CERTIFY OR CERTIFICATION: Formally attesting that the specific inspections and tests where required have been performed, and that such tests comply with the applicable requirements of this Ordinance.

200.3 CLEARING: Any activity which removes vegetative ground cover.

200.4 CUBIC YARDS: The amount of material in excavation and/or fill measured by the method of "average end areas."

200.0 Definitions

The local government adopting the ordinance may wish to expand or shorten the list of definitions provided here, depending on the terms already defined in other ordinances or regulations.

ORDINANCE	COMMENTARY

200.5 EXCAVATION: Any act by which organic matter, earth, sand, gravel, rock or any other similar, material is cut into, dug, quarried, uncovered, removed, displaced, relocated or bulldozed and shall include the conditions resulting therefrom.

200.6 EXISTING GRADE: The vertical location of the existing ground surface prior to excavation or filling.

200.7 FILL: Any act by which, earth, sand, gravel, rock or any other material is deposited, placed, replaced, pushed, dumped, pulled, transported or moved by man to a new location and shall include the conditions resulting therefrom.

200.8 FINAL GRADE: The vertical location of the ground or pavement surface after the grading work is completed in accordance with the site development plan.

200.9 GRADING: Excavation or fill or any combination thereof and shall include the conditions resulting from any excavation or fill.

200.10 NATURAL DRAINAGE: Channels formed in the existing surface topography of the earth prior to changes made by unnatural causes.

200.11 PARCEL: All contiguous land in one ownership.

200.12 PERMITTEE: Any person to whom a site development permit is issued.

200.13 PERSON: Any individual, firm or corporation, public or private, the State of Illinois and its agencies or political subdivisions, and the United States, of America, its agencies and instrumentalities, and any agent, servant, officer or employee of any of the foregoing.

200.14 REMOVAL: Cutting vegetation to the ground or stumps, complete extraction, or killing by spraying.

ORDINANCE	COMMENTARY
200.15 SITE: A lot or parcel of land, or a contiguous combination thereof, where grading work is performed as a single unified operation.	
200.16 SITE DEVELOPMENT: Altering terrain and/or vegetation and constructing improvements.	
200.17 SITE DEVELOPMENT PERMIT: A permit issued by the (village) for the construction or alteration of ground improvements and structures for the control of erosion, runoff and grading.	
200.18 STREAM: Any river, creek, brook, branch, flowage, ravine, or natural or man-made drainageway which has a definite bed and banks or shoreline, in or into which surface or groundwater flows, either perennially or intermittently.	200.18 STREAM: For purposes of this ordinance, a stream does not include very small headwater swales or ditches which generally would not be mapped on U.S.G.S. 7.5 minute quadrangle maps.
200.19 STRIPPING: Any activity which removes the vegetative surface cover including tree removal, clearing, and storage or removal of top soil.	
200.20 VACANT: Land on which there are no structures or only structures which are secondary to the use or maintenance of the land itself.	
200.21 VILLAGE: The Village of _____, _____ County, Illinois.	200.21 VILLAGE: Identification of the City or County should be substituted in the appropriate alphabetic position where one of these is the unit adopting the ordinance.
200.22 WETLANDS: Areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.	200.22 WETLANDS: In the context of this ordinance, wetlands are intended to refer to areas which are subject to regulations of the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act. It is not intended that very small areas meeting the wetland definition (e.g., a roadside ditch) would be subject to the special provisions of this ordinance which require an erosion and sediment control permit for very minor disturbances.

ORDINANCE	COMMENTARY
300.0 General Principles	**300.0 General Principles**
It is the objective of this ordinance to control soil erosion and sedimentation caused by development activities, including clearing, grading, stripping, excavating, and filling of land, in the (village). Measures taken to control soil erosion and offsite sediment runoff should be adequate to assure that sediment is not transported from the site by a storm event of ten-year frequency or less. The following principles shall apply to **all** development activities within the (village) and to the preparation of the submissions required under Section 400.0 of this ordinance:	The approaches outlined here have been proven effective in minimizing soil erosion from development sites and in reducing the damaging effects of that erosion which does occur. They should serve as guidelines for the preparation of site development and erosion control plans required under Section 400.0, and in the conduct of development activities which are exempted from the permit requirements of this ordinance. The erosion and sedimentation control practices discussed in this ordinance and the manual of "Illinois Procedures and Standards for Urban Soil Erosion and Sedimentation Control" (prepared by the Northeastern Illinois Erosion & Sedimentation Control Steering Committee, in cooperation with area Soil and Water Conservation Districts and the U.S. Soil Conservation Service, and known as the Green Book) are designed to provide protection against sediment leaving the site during a ten-year storm.
300.1 Development should be related to the topography and soils of the site so as to create the least potential for erosion. Areas of steep slopes where high cuts and fills may be required should be avoided wherever possible, and natural contours should be followed as closely as possible.	
300.2 Natural vegetation should be retained and protected wherever possible. Areas immediately adjacent to natural watercourses, lakes, ponds, and wetlands should be left undisturbed wherever possible. Temporary crossings of watercourses, when permitted, must include appropriate stabilization measures.	300.2 In its floodplain and wetland protection model ordinances, NIPC recommends that a minimum 25 foot buffer strip be preserved along waterbodies and wetlands. It is recognized that mitigation wetlands will involve disturbance in their immediate proximity. In these situations, the time of disturbance should be kept to a minimum.
300.3 Special precautions should be taken to prevent damages resultant from any necessary development activity within or adjacent to any stream, lake, pond, or wetland. Preventative measures should reflect the sensitivity of these areas to erosion and sedimentation.	
300.4 The smallest practical area of land should be exposed for the shortest practical time during development.	

ORDINANCE	COMMENTARY
300.5 Sediment basins or traps, filter barriers, diversions, and any other appropriate sediment or runoff control measures should be installed prior to site clearing and grading and maintained to remove sediment from run-off waters from land undergoing development.	
300.6 The selection of erosion and sedimentation control measures should be based on assessment of the probable frequency of climatic and other events likely to contribute to erosion, and on evaluation of the risks, costs, and benefits involved.	
300.7 In the design of erosion control facilities and practices, aesthetics and the requirements of continuing maintenance should be considered.	
300.8 Provision should be made to accommodate the increased run-off caused by changed soil and surface conditions during and after development. Drainageways should be designed so that their final gradients and the resultant velocities and rates of discharge will not create additional erosion onsite or downstream.	
300.9 Permanent vegetation and structures should be installed and functional as soon as practical during development.	
300.10 Those areas being converted from agricultural purposes to other land uses should be vegetated with an appropriate protective cover prior to development.	
300.11 All waste generated as a result of site development activity should be properly disposed of and should be prevented from being carried off the site by either wind or water.	
300.12 All construction sites should provide measures to prevent sediment from being tracked onto public or private roadways.	

ORDINANCE	COMMENTARY
400.0 Site Development Permit	**400.0 Site Development Permit**
401.0 Permit Required	401.0 Permit Required
Except as otherwise provided in this ordinance, no person shall commence or perform any clearing, grading, stripping, excavating, or filling of land which meets the following provisions without having first obtained a site development permit from the (permitting authority) of the (village).	The requirement of a site development permit is the means by which the local government can assure that adequate steps are taken before and during development to control erosion and its effects. The adopted ordinance should specify the official or department (the "permitting authority") responsible for issuing permits, inspecting work in progress, and taking enforcement action if necessary. In most cases, this will be the administrative official responsible for other aspects of development regulation. Depending on practice in the particular local government, this may be the Building Officer, Zoning Officer, Plat Officer, Engineer, or other official with related responsibilities including enforcement authority. Identification of this authority should also be included among the definitions in Section 200.0.
401.1 Any land disturbing activity (i.e., clearing, grading, stripping, excavation, fill, or any combination thereof) that will affect an area in excess of 5000 square feet;	
401.2 Any land disturbing activity that will affect an area in excess of 500 square feet if the activity is within 25 feet of a lake, pond, stream, or wetland; or	
401.3 Excavation, fill, or any combination thereof that will exceed 100 cubic yards.	
402.0 Exceptions	402.0 Exceptions
A permit shall not be required for any of the following provided that the person responsible for any such development shall implement necessary soil erosion and sediment control measures to satisfy the principles set forth in Section 300.0 of this Ordinance:	For certain soil-disturbing activities, it may be unnecessary or impractical to require application for and issuance of a permit. This is due to the type or scale of development activities involved. These exceptions should be clearly specified in the ordinance. On development sites below a minimum size, it may be impractical to require the developer to prepare full site development and erosion control

ORDINANCE	COMMENTARY
	plans, given the relatively small area of soil disturbance. However, effective erosion and sedimentation controls should still be required during development to avoid silting of streets and drainage channels and offsite water quality impacts. The local government may wish to include the requirement of basic erosion and sedimentation control measures as a condition for issuance of a building permit in such cases. Some local governments may wish to establish a more restrictive minimum area for the issuance of permits than the 5000 square feet suggested here. This would be appropriate in areas of relatively steep slopes or erodible soils, in addition to areas involving streams, lakes, and wetlands referenced in the ordinance. An alternative approach is to base the need for a permit on the anticipated soil loss from the site during development. A model ordinance developed in Ohio limits erosion from development sites to an average annual soil loss of 15 tons/acre/year. Such a quantitative standard can take into account the existence of small but steep and highly erodible lots on which stringent erosion controls may be necessary, and larger but extremely pervious and flat areas, from which erosion may not be a serious problem. However, the most common soil-loss estimation techniques are not applicable to sites of much less than 50 acres, making the administration of such an ordinance impractical. The present model ordinance contains procedures for the granting of exceptions which may be applied to unique development sites.
402.1 Excavation below final grade for the basement and footings of a single-family residence and appurtenant structures on a site in excess of two acres for which a building permit has been issued by the (village);	402.1 This provision permits the construction of single residences in estate-zoned or agricultural areas where much potential sediment may be absorbed by the site itself. Again, the local government should include basic sediment control measures in its building permit requirements.
402.2 Agricultural use of land, including the implementation of conservation measures included in a farm conservation plan approved by the Soil and Water Conservation District, and including the construction of agricultural structures;	

ORDINANCE	COMMENTARY
402.3 Installation, renovation, or replacement of a septic system to serve an existing dwelling or structure.	
403.0 Application for Permit	403.0 Application for Permit
Application for a site development permit shall be made by the owner of the property or his authorized agent to the (permitting authority) 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.	The application form for the permit can be relatively brief. It need contain only (1) identification of the applicant and of the person or firm responsible for development activity and for preparation of the required plans, (2) identification of the plans and other documents submitted with the application, and (3) certification that development will take place in accordance with the plans as approved upon issuance of the permit. The local government may wish to require that each application be signed by a licensed professional engineer as an assurance of the technical validity of the submissions. The filing fee is intended to defray the local government's cost of reviewing and acting upon the permit application. The amount of the fee should be consistent with existing practice of the local government, and may either be a flat amount or be based on a sliding fee scale related to the size and character of the proposed development. It may also be desired to provide for a separate supplemental fee where a hearing is required on an exception requested under Section 600.0.
404.0 Submissions	404.0 Submissions
Each application for a site development permit shall be accompanied by the following information:	The application for a site development permit is to be accompanied by sufficient information to describe the erosion control measures which the developer proposes to take and to permit evaluation of the adequacy of those measures by local authorities. While these submissions are to be included as attachments to the permit application, the local government may wish to have them submitted informally for staff review in advance of the formal application. A local government may wish to expand or reduce the

ORDINANCE	COMMENTARY
	amount of detailed information to be submitted from that suggested here, taking into consideration the size of the area disturbed.
404.1 A vicinity map in sufficient detail to enable easy location in the field of the site for which the permit is sought, and including the boundary line and approximate acreage of the site, existing zoning, and a legend and scale.	
404.2 A development plan of the site showing:	
a. Existing topography of the site and adjacent land within approximately 100 feet of the boundaries, drawn at no greater than two-foot contour intervals and clearly portraying the conformation and drainage pattern of the area.	a. In most of northeastern Illinois, two-foot contour intervals are adequate to portray the topography of the construction site. Local governments which anticipate development of exceptionally flat sites may wish to specify one-foot contour intervals instead of or in addition to the two-foot intervals suggested here. The local government may wish to specify that a boundary area greater or less than 100 feet be shown.
b. The location of existing buildings, structures, utilities, streams, lakes, floodplains, wetlands and depressions, drainage facilities, vegetative cover, paved areas, and other significant natural or man-made features on the site and adjacent land within 100 feet of the boundary.	
c. A general description of the predominant soil types on the site, their location, and their limitations for the proposed use.	
d. Proposed use of the site, including present development and planned utilization; areas of clearing, stripping, grading, excavation, and filling; proposed contours, finished grades, and street profiles; provisions for storm drainage, including storm sewers, swales, detention basins and any other measures to control the rate of runoff, with a drainage area map, indications of flow directions, and computations; kinds and locations of utilities; and areas and acreages proposed to be paved, covered, sodded or seeded, vegetatively stabilized, or left undisturbed.	d. The local government may wish to waive the requirement of proposed contours where finished grades are adequate to evaluate the plan.

ORDINANCE	COMMENTARY
404.3 An erosion and sediment control plan showing all measures necessary to meet the objectives of this ordinance throughout all phases of construction and permanently after completion of development of the site, including:	
a. Location and description, including standard details, of all sediment control measures and design specifics of sediment basins and traps, including outlet details.	
b. Location and description of all soil stabilization and erosion control measures, including seeding mixtures and rates, types of sod, method of seedbed preparation, expected seeding dates, type and rate of lime and fertilizer application, kind and quantity of mulching for both temporary and permanent vegetative control measures, and types of non-vegetative stabilization measures.	
c. Location and description of all runoff control measures, including diversions, waterways, and outlets.	
d. Location and description of methods to prevent tracking of sediment offsite, including construction entrance details, as appropriate.	
e. Description of dust and traffic control measures.	
f. Locations of stockpiles and description of stabilization methods.	
g. Description of off-site fill or borrow volumes, locations, and methods of stabilization.	
h. Provisions for maintenance of control measures, including type and frequency of maintenance, easements, and estimates of the cost of maintenance.	
i. Identification (name, address, and telephone) of the person(s) or entity which will have legal responsibility for maintenance of erosion control structures and measures during development and after development is completed.	i. Permanent maintenance of erosion control measures may be the responsibility of various entities, including the homeowner, the park district, and the village or county. These responsibilities should be identified as precisely as possible in the plan.

ORDINANCE	COMMENTARY
404.4 The proposed phasing of development of the site, including stripping and clearing, rough grading and construction, and final grading and landscaping. Phasing should identify the expected date on which clearing will begin, the estimated duration of exposure of cleared areas, and the sequence of installation of temporary sediment control measures (including perimeter controls), clearing and grading, installation of temporary soil stabilization measures, installation of storm drainage, paving streets and parking areas, final grading and the establishment of permanent vegetative cover, and the removal of temporary measures. It shall be the responsibility of the applicant to notify the (permitting authority) of any significant changes which occur in the site development schedule after the initial erosion and sediment control plan has been approved.	404.4 It is strongly recommended that a standard manual of practices and procedures for erosion control be adopted by reference to provide the technical basis for the development and review of erosion control plans. The Green Book provides valuable guidance on the development of an erosion and sediment control plan. The Yellow Book provides additional guidance on the selection and design of appropriate control measures. Presently, there are some inconsistencies between the two references. Also, in some cases this ordinance is more stringent than one or both references. In those cases, the ordinance shall govern.
These submissions shall be prepared in accordance with the requirements of this ordinance and the standards and requirements contained in "Standards and Specifications for Soil Erosion and Sediment Control" (the Yellow Book) published by the Illinois Environmental Protection Agency and the "Illinois Procedures and Standards for Urban Soil Erosion and Sedimentation Control" (the Green Book) prepared by the Northeastern Illinois Soil Erosion and Sedimentation Control Steering Committee and adopted by the (county) Soil and Water Conservation District, which standards and requirements are hereby incorporated into this ordinance by reference.	
The (permitting authority) may waive specific requirements for the content of submissions upon finding that the information submitted is sufficient to show that the work will comply with the objectives and principles of this ordinance.	
405.0 Bonds	405.0 Bonds
The applicant is required to file with the (village) a faithful performance bond or bonds, letter of credit, or other improvement security satisfactory to the (municipal attorney) in an amount deemed	The filing of a performance bond by the developer may be made mandatory with respect to all developments or left at the discretion of the permitting authority. Some local governments in

sufficient by the (permitting authority) to cover all costs of improvements, landscaping, maintenance of improvements and landscaping, and soil erosion and sediment control measures for such period as specified by the (village), and engineering and inspection costs to cover the cost of failure or repair of improvements installed on the site.

northeastern Illinois have specified the amount of the performance bond as a percentage of the cost of improvements and erosion controls on the site. Bonds for development performance and maintenance may be separate. Where permanent maintenance will be assumed by an agency or entity other than the developer, the time period of the maintenance bond should be limited accordingly.

406.0 Review and Approval

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

406.1 The (permitting authority) will review each application for a site development permit to determine its conformance with the provisions of this ordinance. The (authority) 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 comment. Within thirty (30) days after receiving an application, the (permitting authority) shall in writing:

406.1 A reasonable time limit should be placed on local government action on permit applications in order to minimize the serious financial costs to the developer of delays. Informal review of the project prior to submittal of the final application can contribute to this objective.

The Soil and Water Conservation Districts have specialized expertise in soils analysis and erosion control techniques. The quality of local plan reviews may be improved by referring projects to the appropriate District for advisory technical review. Review of some projects (e.g., subdivision of agricultural lands) within the overlapping jurisdiction of the local government and a District may be required under 5 Ill. Rev. Stat. 127.2a. Communities which do not wish to retain specialized staff may choose to enter into a contract or intergovernmental agreement with the District for the conduct of all reviews and the preparation of recommended actions. Approval or disapproval of applications would remain the responsibility of the local government.

Where another public body (such as a park district) is to assume ownership and/or maintenance responsibility for part of a development, it should also be given an opportunity to review the development plans. This review should be completed within the 30-day period allowed the permitting authority, in order that the permitting authority may take action on the application within the time allowed.

ORDINANCE	COMMENTARY
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.	
406.2 No site development permit shall be issued for an intended development site unless:	406.2 Before earth movement begins, the local government will wish to be assured that the proposed development will comply with all applicable regulations. This can be done by mandating that the other required approvals or permits be secured prior to or concurrent with the site development permit, or by finding that the proposed earth moving is related to an annexation agreement, planned unit development, or other approved development program.
a. the development, including but not limited to subdivisions and planned unit development, has been approved by the (village) where applicable, or	
b. such permit is accompanied by or combined with a valid building permit issued by the (village), or	
c. the proposed earth moving is coordinated with any overall development program previously approved by the (village) for the area in which the site is situated; and	
d. all relevant federal and state permits (i.e., for floodplains and wetlands) have been received for the portion of the site subject to soil disturbance.	d. This paragraph is not intended to address all federal and state permits, only those relevant to soil erosion and sediment control. For example, a site development permit could be issued while a developer awaits final IEPA approval regarding wastewater service.

ORDINANCE	COMMENTARY
406.3 Failure of the (permitting authority) to act on an original or revised application within thirty (30) 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 (permitting authority) 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 (permitting authority).	406.3 This provision is directed at reducing development costs by avoiding delays in government action. When some aspects of a proposed plan require modification, it may be reasonable to permit other parts of development to proceed as long as they do not render the modifications nugatory.
407.0 Expiration of Permit	407.0 Expiration of Permit
Every site development permit shall expire and become null and void if the work authorized by such permit has not been commenced within one hundred and eighty (180) days, or is not completed by a date which shall be specified in the permit; except that the (permitting authority) may, if the permittee presents satisfactory evidence that unusual difficulties have prevented work being commenced or completed within the specified time limits, grant a reasonable extension of time if written application is made before the expiration date of the permit. The (permitting authority) may require modification of the erosion control plan to prevent any increase in erosion or offsite sediment runoff resulting from any extension.	Because the erosion control measures required on a site are related to seasonal variations and other factors, changes may be required if the development does not proceed on the anticipated schedule. Some communities in northeastern Illinois have established 90 days (rather than 180) as the period within which development should begin. It is suggested that any fixed completion date be omitted from the ordinance and that this date be specified in the permit itself, relating the date to the developer's proposed schedule.
408.0 Appeals	408.0 Appeals
The applicant, or any person or agency which received notice of the filing of the application, may appeal the decision of the (permitting authority) as provided in Section 406.0, to the (board of appeals). Upon receipt of an appeal, the (board of appeals) shall schedule and hold a public hearing, after giving 15 days notice thereof. The (board) shall render a decision within thirty (30) days after the hearing. Factors to be considered on review shall include, but need not be limited to, the effects of the proposed development activities on the surface water flow to tributary and downstream lands, any comprehensive watershed management plans, or the use of any retention facilities; possible saturation of fill and unsupported cuts by water,	Provision should be made for the appeal of administrative decisions to a policy body of the local government. Appeal should be available to the applicant or to any body (e.g., the local Planning Commission or Soil and Water Conservation District) which has received the permit application for review. The ordinance should specify the body responsible for hearing and acting upon appeals, and for granting exceptions to the ordinance under Section 600.0. Depending on local practice, this may be the Zoning Board of Appeals, the Council or Trustees or Commissioners or its Planning or Development Committee, or the Planning Commission. The body should be identified among the definitions in Section 200.0. It may be desired to provide that

both natural and domestic; runoff surface waters that produce erosion and silting of drainageways; nature and type of soil or rock which when disturbed by the proposed development activities may create earth movement and produce slopes that cannot be landscaped; and excessive and unnecessary scarring of the natural landscape through grading or removal of vegetation.

this body seek a recommendation from those bodies which themselves have the right of appeal before it acts.

409.0 Retention of Plans

Plans, specifications, and reports for all site developments shall be retained in original form or on microfilm by the (permitting authority).

500.0 Design and Operation Standards and Requirements

501.0 Applicability

All clearing, grading, stripping, excavating, and filling which is subject to the permit requirements of this ordinance shall be subject to the applicable standards and requirements set forth in this Section 500.0.

500.0 Design and Operation Standards and Requirements

501.0 Applicability

It is reiterated that developments which are exempted from the permit requirements of this ordinance are still required to take actions to control erosion and sedimentation leaving the development site, and that those actions shall be generally consistent with this Section 500.0.

502.0 Responsibility

The permittee shall not be relieved of responsibility for damage to persons or property otherwise imposed by law, and the (village) or its officers or agents will not be made liable for such damage, by (1) the issuance of a permit under this ordinance, (2) compliance with the provisions of that permit or with conditions attached to it by the (permitting authority), (3) failure of (village) officials to observe or recognize hazardous or unsightly conditions, (4) failure of (village) officials to recommend denial of or to deny a permit, or (5) exemptions from the permit requirements of this ordinance.

ORDINANCE	COMMENTARY
503.0 Site Design Requirements	
503.1 On-site sediment control measures, as specified by the following criteria, shall be constructed and functional prior to initiating clearing, grading, stripping, excavating or fill activities on the site.	
a. For disturbed areas draining less than 1 acre, filter barriers (including filter fences, straw bales, or equivalent control measures) shall be constructed to control all offsite runoff as specified in referenced handbooks. Vegetated filter strips, with a minimum width of 25 feet, may be used as an alternative only where runoff in sheet flow is expected.	a. Filter barriers are appropriate sediment control measures for small drainage areas where concentrated flow is not present. Existing references specify a range of appropriate drainage areas for their application. The Green Book recommends that filter barrier usage be limited to 1/2 acre drainage areas, except for individual lots where the drainage area may be increased to 1 acre. Draft USEPA guidance allows filter barriers for drainage areas up to 10 acres. The Green Book recommends a minimum vegetative filter width of 15 feet to protect adjacent property or streams. While there is no clearly recognized standard for this width, NIPC recommends 25 feet for consistency with its stream and wetland protection ordinance and floodplain ordinance.
b. For disturbed areas draining more than 1 but less than 5 acres, a sediment trap or equivalent control measure shall be constructed at the downslope point of the disturbed area.	b. Sediment traps or basins are required to control sediment runoff in situations where concentrated or channelized flow is likely to be present. Generally speaking, sediment barriers such as silt fences are ineffective and unreliable in such situations. In particular, they are subject to undercutting and blowout due to high water velocities. It is recommended that the construction of sediment traps or basins be coordinated with the needs for stormwater detention. If properly designed, located, and maintained, sediment basins can be readily converted to permanent detention basins after the site is fully stabilized.
c. For disturbed areas draining more than 5 acres, a sediment basin or equivalent control	

measure shall be constructed at the downslope point of the disturbed area.

d. Sediment basins and sediment traps designs shall provide for both detention storage and sediment storage. The detention storage shall be composed of equal volumes of "wet" detention storage and "dry" detention storage and each shall be sized for the 2-year, 24-hour runoff from the site under maximum runoff conditions during construction. The release rate of the basin shall be that rate required to achieve minimum detention times of at least 10 hours. The elevation of the outlet structure shall be placed such that it only drains the dry detention storage.

d. Capacity must be provided in sediment basins for both sediment storage and detention storage. The detention storage detains the water for a sufficient period of time to settle out the eroded sediment. The sediment storage stores the settled sediment so that there is no loss of detention storage during the life of the sediment basin.

Both "wet" detention storage and "dry" detention storage are needed to maximize the effectiveness of the sediment basin. The total detention storage equal to twice the volume needed to detain the 2-year, 24-hour runoff for ten hours is approximately equal to the 10-year detention storage recommended by the Green Book and also recommended in draft USEPA guidance. For a typical site, this combined wet/dry storage is equivalent to 2.0 inches of runoff from the site.

The wet portion of the detention storage contains a permanent pool which drains by evaporation and infiltration only. The permanent pool prevents resuspension of previously deposited sediment and creates better settling conditions than a basin with no wet detention storage by reducing the energy of the incoming runoff. If the wet detention storage drys between events, it will detain with no release, the majority of runoff generated by the site for most events. The sediment basin should be equally effective if the wet detention storage drys between events or remains a permanent pool.

The dry portion of the detention storage is drained by an outlet structure and temporarily stores runoff for a sufficient period of time to allow settling of the settleable solids. The Green Book has examples and figures for calculating the required storage to achieve the design detention times and also has illustrations of outlet control devices. For most applications a release rate of 0.06 cfs/acre-inch of runoff should achieve the required detention time of ten

ORDINANCE	COMMENTARY
	hours. The Greenbook recommends using a Curve Number of 90 for sites under construction.
e. The sediment storage shall be sized to store the estimated sediment load generated from the site over the duration of the construction period with a minimum storage equivalent to the volume of sediment generated in one year. For construction periods exceeding 1 year, the 1-year sediment load and a sediment removal schedule may be substituted.	e. The required sediment storage volume may be calculated using the Universal Soil Loss Equation or from Figure 6-20 in the Green Book.
503.2 Stormwater conveyance channels, including ditches, swales, and diversions, and the outlets of all channels and pipes shall be designed and constructed to withstand the expected flow velocity from the 10-year frequency storm without erosion. All constructed or modified channels shall be stabilized within 48 hours, consistent with the following standards:	503.2 Conveyance channels, because of the presence of concentrated flows typically having high velocities, warrant special consideration. The slope categories and recommended control measures presented here are derived from language in the Kane County, Illinois draft ordinance. Diversion channels, which are intended to route off-site flows away from disturbed areas, should be constructed as soon as possible in the construction process.
a. For grades up to 4 percent, seeding in combination with mulch, erosion blanket, or an equivalent control measure shall be applied. Sod or erosion blanket or mat shall be applied to the bottom of the channel.	
b. For grades of 4 to 8 percent, sod or an equivalent control measure shall be applied in the channel.	
c. For grades greater than 8 percent, rock, riprap, or an equivalent control measure shall be applied, or the grade shall be effectively reduced using drop structures.	
503.3 Disturbed areas shall be stabilized with temporary or permanent measures within 7 calendar days following the end of active disturbance, or redisturbance, consistent with the following criteria:	503.3 Early stabilization of disturbed areas is essential. USEPA guidance for the permitting of construction activities requires vegetative stabilization within 7 days. The Green Book recommends stabilization within 15 days.

ORDINANCE	COMMENTARY
a. Appropriate temporary or permanent stabilization measures shall include seeding, mulching, sodding, and/or non-vegetative measures.	
b. Areas having slopes greater than 12 percent shall be stabilized with sod, mat or blanket in combination with seeding, or equivalent.	b. This provision recognizes the fact that steep slopes generally cannot be effectively stabilized with seeding and mulching alone. Slope instability and high runoff velocities necessitate the use of more substantial measures. The reference to a maximum slope of 12 percent, based on a Kane County criterion, is subject to local discretion and soil conditions. Other ordinances refer to slopes as steep as 33 percent as needing special measures.
503.4 Land disturbance activities in stream channels shall be avoided, where possible. If disturbance activities are unavoidable, the following requirements shall be met:	
a. Construction vehicles shall be kept out of the stream channel to the maximum extent practicable. Where construction crossings are necessary, temporary crossings shall be constructed of non-erosive material, such as riprap or gravel.	
b. The time and area of disturbance of stream channels shall be kept to a minimum. The stream channel, including bed and banks, shall be restabilized within 48 hours after channel disturbance is completed, interrupted, or stopped.	
c. Whenever channel relocation is necessary, the new channel shall be constructed in the dry and fully stabilized before flow is diverted.	
503.5 Storm sewer inlets and culverts shall be protected by sediment traps or filter barriers meeting accepted design standards and specifications.	503.5 Protection of storm sewer inlets should be implemented in a manner which will avoid unacceptable flooding of public streets.
503.6 Soil storage piles containing more than 10 cubic yards of material shall not be located with	

a downslope drainage length of less than 25 feet to a roadway or drainage channel. Filter barriers, including straw bales, filter fence, or equivalent, shall be installed immediately on the downslope side of the piles.

503.7 If dewatering devices are used, discharge locations shall be protected from erosion. All pumped discharges shall be routed through appropriately designed sediment traps or basins, or equivalent.

503.8 Each site shall have graveled (or equivalent) entrance roads, access drives, and parking areas of sufficient length and width to prevent sediment from being tracked onto public or private roadways. Any sediment reaching a public or private road shall be removed by shoveling or street cleaning (not flushing) before the end of each workday and transported to a controlled sediment disposal area.

503.9 All temporary and permanent erosion and sediment control practices must be maintained and repaired as needed to assure effective performance of their intended function.

503.10 All temporary erosion and sediment control measures shall be disposed of within 30 days after final site stabilization is achieved with permanent soil stabilization measures. Trapped sediment and other disturbed soils resulting from the disposition of temporary measures should be permanently stabilized to prevent further erosion and sedimentation.

504.0 Handbooks Adopted by Reference

The standards and specifications contained in "Standards and Specifications for Soil Erosion and Sediment Control" (the Yellow Book) and the "Illinois Procedures and Standards for Urban Soil Erosion and Sedimentation Control" (the Green Book) cited in Section 400.0, are hereby incorporated into this Section 500.0 and made a part hereof by reference for the purpose of delineating procedures and methods of operation under site development and erosion and sedimentation control plans approved under

504.0 Handbooks Adopted by Reference

As previously indicated, there are certain inconsistencies between this ordinance and the manuals adopted by reference. For example, Paragraph 503.1 specifies design criteria for the sizing of sediment traps and basins. These criteria are similar to, but more explicit than, the Green Book. However, the Yellow Book specifies radically different criteria for the sizing of sediment traps and basins. In these cases, this ordinance governs.

ORDINANCE	COMMENTARY
Section 400.0. In the event of conflict between provisions of said manuals and of this ordinance, the ordinance shall govern.	Nonetheless, the two references can be valuable in the development of the erosion and sediment control plan and in the design and implementation of erosion and sediment control measures. In particular, the Yellow Book provides design specifications not provided by either the Ordinance or the Green Book.
505.0 Maintenance of Control Measures	505.0 Maintenance of Control Measures
All soil erosion and sediment control measures necessary to meet the requirements of this ordinance shall be maintained periodically by the applicant or subsequent land owner during the period of land disturbance and development of the site in a satisfactory manner to ensure adequate performance.	Effective maintenance of control measures is critical to their success and should be budgeted into the erosion and sediment control plan. Particular emphasis should be placed on the following types of maintenance needs: repair and replacement of sediment barriers, such as straw bales; removal of excess accumulated sediment from traps, basins, and channels; irrigation, fertilization, or reseeding of vegetatively stabilized areas; repair of scour or gully development on slopes and in channels; removal of sediment from roadways; and control of dust.
506.0 Inspection	506.0 Inspection
The (permitting authority) shall make inspections as hereinafter required and shall either approve that portion of the work completed or shall notify the permittee wherein the work fails to comply with the site development or erosion and sedimentation control plan as approved. Plans for grading, stripping, excavating, and filling work bearing the stamp of approval of the (permitting authority) shall be maintained at the site during progress of the work. In order to obtain inspections and to ensure compliance with the approved erosion and sediment control plan, the grading or building permit, and this Ordinance, the permittee shall notify the (permitting authority) within two (2) working days of the completion of the construction stages specified below:	On-site inspections are provided at critical junctures in the development process to assure that development practices and erosion control measures are effective in securing the objectives of the ordinance. Local governments will wish to coordinate this inspection schedule with those required under other permits. In general, inspection should be provided at least monthly, or more frequently in the event of major rainfall events. In some instances (e.g., very small sites), fewer inspections than the six suggested here may be sufficient. Provision is made for development to proceed in the event the local government cannot provide timely inspection, and for inspection at the stage of partial completion in the case of large, phased developments. The phases or areas for which separate inspections will be requested should be identified in the plan. The "Illinois Field Manual for Implementation and Inspection of Erosion and Sediment Control Plans" is an excellent reference for conducting inspections. This manual includes a detailed

ORDINANCE	COMMENTARY
	checklist of inspection criteria and recommends that inspection be performed by a designated site inspector after every storm. USEPA recommends inspection by onsite personnel at least once every 7 days.
1. Upon completion of installation of sediment and runoff control measures (including perimeter controls and diversions), prior to proceeding with any other earth disturbance or grading, 2. After stripping and clearing, 3. After rough grading, 4. After final grading, 5. After seeding and landscaping deadlines, and 6. After final stabilization and landscaping, prior to removal of sediment controls. If stripping, clearing, grading and/or landscaping are to be done in phases or areas, the permittee shall give notice and request inspection at the completion of each of the above work stages in each phase or area. If an inspection is not made and notification of the results given within five working days after notice is received by the (village) from the permittee, the permittee may continue work at his/her own risk, without presuming acceptance by the (village). Notification of the results of the inspection shall be given in writing at the site.	
507.0 Special Precautions	507.0 Special Precautions
507.1 If at any stage of the grading of any development site the (permitting authority) determines by inspection that the nature of the site is such that further work authorized by an existing permit is likely to imperil any property, public way, stream, lake, wetland, or drainage structure, the (permitting authority) may require, as a condition of allowing the work to be done, that such reasonable special precautions to be taken as is considered advisable to avoid the likelihood of such peril. "Special precautions" may include, but shall not be limited to, a more level exposed slope, construction of additional drainage facilities, berms, terracing, compaction, or cribbing, installation of plant materials for	507.1 Unanticipated (1) site conditions or (2) storm events may require that erosion control measures beyond those provided for in the approved plan be instituted. These should be reasonable in terms of the additional costs or delays they impose on the developer in relationship to the risks incurred by the failure to undertake such measures.

erosion control, and recommendations of a registered soils engineer and/or engineering geologist which may be made requirements for further work.

507.2 Where it appears that storm damage may result because the grading on any development site is not complete, work may be stopped and the permittee required to install temporary structures or take such other measures as may be required to protect adjoining property or the public safety. On large developments or where unusual site conditions prevail, the (permitting authority) may specify the time of starting grading and time of completion or may require that the operations be conducted in specific stages so as to insure completion of protective measures or devices prior to the advent of seasonal rains.

508.0 Amendment of Plans

Major amendments of the site development or erosion and sedimentation control plans shall be submitted to the (permitting authority) and shall be processed and approved or disapproved in the same manner as the original plans. Field modifications of a minor nature may be authorized by the (permitting authority) by written authorization to the permittee.

508.0 Amendment of Plans

Particularly on large or phased developments, changed conditions during development may require changes in the plans on which the permit was based. Whether these are of such magnitude as to require a complete review of the project and the adequacy of erosion control measures is a matter of administrative judgment as to potential costs to the developer and the public.

600.0 <u>Enforcement</u>

601.0 Exceptions

The (board of appeals) may, in accordance with the following procedures, authorize exceptions to any of the requirements and regulations set forth in this ordinance:

600.0 <u>Enforcement</u>

601.0 Exceptions

Exceptions to the requirements of the ordinance may be granted where such exception would not be contrary to the public welfare and where enforcement of the requirements would work undue hardship on the landowner. The required findings and procedures (including public hearing) are intended to assure that exceptions are granted only after full assessment of their benefits and costs, including any adverse environmental impacts. If it is the local government's practice to permit decisions by the

ORDINANCE	COMMENTARY
	board of appeals to be referred to the principal policy body (county or municipal board or council), provisions for this second appeal should be added to this Section.
601.1 Application for any exception shall be made by a verified petition of the applicant for a site development permit, stating fully the grounds of the petition and the facts relied upon by the applicant. Such petition shall be filed with the site development permit application. In order for the petition to be granted, it shall be necessary that the (board of appeals) find all of the following facts with respect to the land referred to in the petition: a. That the land is of such shape or size or is affected by such physical conditions or is subject to such title limitations of record,that it is impossible or impractical for the applicant to comply with all of the requirements of this ordinance; b. That the exception is necessary for the preservation and enjoyment of a substantial property right of the applicant; and c. That the granting of the exception will not be detrimental to the public welfare or injurious to other property in the vicinity of the subject property.	
601.2 Each application for an exception shall be referred to the (permitting authority) for review. The (authority) shall transmit its recommendations to the (board of appeals), which shall review such recommendations prior to granting or denying the exception.	
601.3 The (board of appeals) shall hold a public hearing on each application for exception, within thirty (30) days after receiving application, in the manner provided with respect to appeals. After public hearing, the (board) may approve the site development permit application with the exceptions and conditions it deems necessary or it may disapprove such site development permit application and exception application or it may take such other action as appropriate.	601.3 If local practice includes the use of a hearing officer who makes a report and recommendation to the board of appeals, this provision may be added here.

ORDINANCE	COMMENTARY
602.0 Stop-Work Order; Revocation of Permit In the event any person holding a site development permit pursuant to this ordinance violates the terms of the permit, or carries on site development in such a manner as to materially 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 (permitting authority) may suspend or revoke the site development permit. 602.1 Suspension of a permit shall be by a written stop-work order issued by the (permitting authority) 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 602.2 below can be met. 602.2 No site development 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: 1. the grounds for complaint or reasons for suspension or revocation, in clear and concise language; and 2. 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 behalf. At the conclusion of the hearing the (board of appeals) shall determine whether the permit shall be suspended or revoked.	602.0 Stop-Work Order; Revocation of Permit A stop-work order may be issued in the event the requirements of the ordinance are violated. This order is temporary unless confirmed by the body responsible for hearing appeals and exceptions. A local government may wish to specify a maximum term for such a temporary permit (e.g., 30 days), after which action by the appeal body will be necessary for the order to remain in force, rather than referring to the board of appeals' next regular meeting.

ORDINANCE	COMMENTARY
603.0 Violations and Penalties No person shall construct, enlarge, alter, repair, or maintain any grading, excavation or fill, or cause the same to be done, 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 ($500) 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.	603.0 Violations and Penalties Financial penalties are provided for conviction of violation of the ordinance. Several referenced ordinances also allow for imprisonment. Depending on local practice, it may be desired to identify in the ordinance the official by whom action against alleged violations will be brought and the procedure to be followed. The amount of the penalty should be related to the local government's overall fine schedule.
604.0 Separability The provisions and sections of this ordinance shall be deemed to be separable, and the invalidity of any portion of this ordinance shall not affect the validity of the remainder.	