



Illinois Environmental Protection Agency

Bureau of Water • 1021 N. Grand Avenue E. • P.O. Box 19276 • Springfield • Illinois • 62794-9276

Division of Water Pollution Control ANNUAL FACILITY INSPECTION REPORT

for NPDES Permit for Storm Water Discharges from Separate Storm Sewer Systems (MS4)

This fillable form may be completed online, a copy saved locally, printed and signed before it is submitted to the Compliance Assurance Section at the above address. Complete each section of this report.

Report Period: From March, 2021 To March, 2022

Permit No. ILR40 0638

MS4 OPERATOR INFORMATION: (As it appears on the current permit)

Name: Village of Minooka Mailing Address 1: 121 E. McEvilly Road

Mailing Address 2: County: Grundy

City: Minooka State: IL Zip: 60447 Telephone: 815-467-8868

Contact Person: Ryan Anderson Email Address: ryan.anderson@minooka.com
(Person responsible for Annual Report)

Name(s) of governmental entity(ies) in which MS4 is located: (As it appears on the current permit)

Grundy County Will County
Kendall County

THE FOLLOWING ITEMS MUST BE ADDRESSED.

A. Changes to best management practices (check appropriate BMP change(s) and attach information regarding change(s) to BMP and measurable goals.)

- | | | | |
|--|--------------------------|---|--------------------------|
| 1. Public Education and Outreach | <input type="checkbox"/> | 4. Construction Site Runoff Control | <input type="checkbox"/> |
| 2. Public Participation/Involvement | <input type="checkbox"/> | 5. Post-Construction Runoff Control | <input type="checkbox"/> |
| 3. Illicit Discharge Detection & Elimination | <input type="checkbox"/> | 6. Pollution Prevention/Good Housekeeping | <input type="checkbox"/> |

B. Attach the status of compliance with permit conditions, an assessment of the appropriateness of your identified best management practices and progress towards achieving the statutory goal of reducing the discharge of pollutants to the MEP, and your identified measurable goals for each of the minimum control measures.

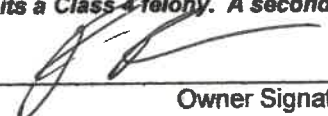
C. Attach results of information collected and analyzed, including monitoring data, if any during the reporting period.

D. Attach a summary of the storm water activities you plan to undertake during the next reporting cycle (including an implementation schedule.)

E. Attach notice that you are relying on another government entity to satisfy some of your permit obligations (if applicable).

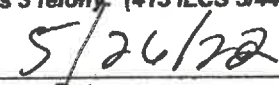
F. Attach a list of construction projects that your entity has paid for during the reporting period.

Any person who knowingly makes a false, fictitious, or fraudulent material statement, orally or in writing, to the Illinois EPA commits a Class 4 Felony. A second or subsequent offense after conviction is a Class 3 felony. (415 ILCS 5/44(h))


Owner Signature:

Ryan Anderson

Printed Name:


Date:

Supt. of Public Works

Title:

EMAIL COMPLETED FORM TO: epa.ms4annualinsp@illinois.gov

or Mail to: ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
WATER POLLUTION CONTROL
COMPLIANCE ASSURANCE SECTION #19
1021 NORTH GRAND AVENUE EAST
POST OFFICE BOX 19276
SPRINGFIELD, ILLINOIS 62794-9276

IL 532 2585 WPC 691 Rev 6/10 This Agency is authorized to require this information under Section 4 and Title X of the Environmental Protection Act (415 ILCS 5/4, 5/39). Failure to disclose this information may result in: a civil penalty of not to exceed \$50,000 for the violation and an additional civil penalty of not to exceed \$10,000 for each day during which the violation continues (415 ILCS 5/42) and may also prevent this form from being processed and could result in your application being denied. This form has been approved by the Forms Management Center.

Village of Minooka

NPDES Permit No. ILR40 0638

Annual Facility Inspection Report Attachment 1

March 2021 to March 2022

June 1, 2022

Content:	Page Number:
Attachment Title Page	1
Item A: Description of Changes to BMPs	2
Item B: Status of compliance with permit conditions and assessment of minimum control measures	2
Item C: Results of information collected and analyzed, monitoring data (if any).	6
Item D: Summary of stormwater activities you plan to undertake during the next reporting cycle (and implementation schedule).	6
Item E: Notice that you are relying on another governmental entity to satisfy some of your permit obligations (if applicable).	6
Item F: List of construction projects that your entity has paid for during the reporting period.	6
Sample Documentation for Minimum Control Measures	7+

Any questions or comments regarding this report shall be directed to either of the following:

Mr. Ryan Anderson, Supt. of Public Works, Village of Minooka
815-467-8868 or ryan.anderson@minooka.com

Mr. Kevin J. Biscan, PE, PLS, Robinson Engineering, Ltd.
815-464-2692 or kbiscan@reltd.com



Village of Minooka, NPDES Permit No. ILR40 0638
Annual Facility Inspection Report – Attachment 1

March 2021 to March 2022

June 1, 2022

Item A: Description of Changes to BMPs

There have been no changes in Village BMPs during this cycle.

**Item B: Status of compliance with permit conditions
and assessment of minimum control measures**

The Village believes that the BMPs completed within the reporting period are appropriate for the permit conditions. The status of each BMP is as follows:

Public Education and Outreach

1. **A1: Distributed Paper Material (Newsletter)**

The Village Newsletter is used to communicate information to the public. With each newsletter mailing, approximately 5,500 copies are mailed out to Village residents.

2. **A4: Community Event**

The Village's annual Village-wide Cleanup Day was canceled due to inclement weather. All residents can participate. This BMP coincides with BMP B7. The next Cleanup Day will be held in the fall of 2022.

3. **A6: Other Public Education (Website)**

The Village Website is used to post information for Public Works throughout the reporting cycle.

Public Participation and Involvement

4. **B4: Public Hearing**

The Village will now hold its informational Public Hearing on an annual basis. It is planned to be held during the next reporting cycle.

5. **B7: Other Public Involvement (Cleanup Day)**

This Village goal is to hold at least one Village-wide Cleanup Day through the year. On average, more than 50 people participate in the Cleanup Day and collect numerous 35-gallon bags of refuse from roadside ditches, parks, vacant lots, etc., throughout the

Village. Within the next cycle, the Cleanup Day will be held in the fall of 2022 and will be reported again next cycle.

Illicit Discharge Detection and Elimination

6. C1: Storm Sewer Map Preparation

The Village has a Storm Sewer Atlas map on which storm sewer information is shown. The original atlas is dated 7/13/10 and continues to undergo further review. The map is updated as new storm sewer is installed, it will continue to be updated with any changes in the future. Essentially, it is up to date.

7. C2: Regulatory Control Program (Ordinance)

The Village Sewer Use Ordinance addresses issues related to illicit Discharge. The Village continues to enforce this ordinance and other development ordinances that include soil erosion and sediment control through the plan review process. The Village ordinances are posted on the website (see enclosed).

The Village Board passed an Illicit Discharge and Connection Ordinance at the March 2016 Village Board meeting enacting stricter requirements for enforcement of illicit discharges and connections. (Copy of ordinance previously submitted).

8. C7: Visual Dry Weather Screening

The Village last prepared an outfall location aerial photo exhibit in July 2012. The Village attempts to inspect its outfalls and perform its dry weather Outfall Inspections at least once during each reporting cycle.

9. C10: Other Illicit Discharge Controls (Visual Monitoring Inspections)

Visual Monitoring Inspections at upstream and downstream locations were performed during this cycle. Since this is now an annual requirement, the BMP has been revised to include annual Monitoring Inspections at upstream and downstream locations within the Village. The goal is to continue to conduct these inspections in the future. As part of the Village's aquatic weed control program, the Village contracted with Premier Ponds of Illinois to perform testing of several ponds within the Village.

Construction Site Runoff Control

10. D1: Regulatory Control Program (Ordinance)

The Village Ordinance Title 4 (Building Regulations) - Chapter 9 (Soil Erosion and Sediment Control) regulates soil erosion and sediment control in runoff from construction sites. The Village continues to enforce this ordinance and other development ordinances through the plan review process. The Village ordinances are posted on the website.

11. D2: Erosion and Sediment Control BMPs

Erosion and Sediment Control BMPs are required under the current ordinance. These requirements are enforced through the plan review process.

12. D4: Site Plan Review Procedures

Development projects are reviewed under local County ordinances by Village Staff and/or engineering consultants, especially regarding stormwater and erosion and sediment control measures. Projects over one acre are required to obtain a Notice of Intent prior to construction. A SWPPP is required with plan sets. A copy of the written Site Plan Review Process is available upon request.

13. D6: Site Inspection/Enforcement Procedures

Weekly inspection reports are required from developers of active projects. Periodic or surprise audit inspections are conducted by the Village or its consultant as needed.

Post-Construction Runoff Control

14. E2: Regulatory Control Program (Ordinance)

The Village ordinance Title 4 (Building Regulations) - Chapter 9 (Soil Erosion and Sediment Control) regulates soil erosion and sediment control in runoff from construction sites. The Village continues to enforce this ordinance and other development ordinances through the plan review process. The Village ordinances are posted on the website.

15. E3: Long Term O&M Procedures

These are required and reviewed where applicable during the site plan review process.

16. E4: Pre-Construction Review of BMP Designs

The ordinance requirements are enforced during the site plan review stage of a development. The site plan reviews include a review of the BMP designs.

17. E5: Site Inspections During Construction

Weekly inspection reports are required from developers of active projects. Periodic or surprise audit inspections are conducted by the Village or its consultant as needed.

18. E6: Post-Construction Inspections

Stormwater management systems are inspected during the year depending on staff availability. Inspected storm sewers and structures that are found to need maintenance are cleaned, vacuumed, or jetted as needed. Several event forms are enclosed illustrating a sampling of the inspections and work performed throughout the year.

Pollution Prevention and Good Housekeeping

19. F1: Employee Training Program

The goal is to conduct at least one training session per reporting cycle. The Public Works staff typically discusses proper procedures for disposal of oil, salt storage and spreading, and snow-plowing. No training beyond that which is typical was conducted during this cycle. Village Staff participated Lower DuPage River Watershed Coalition Activities and

Workshops. Village Staff attended 2021 Virtual Deicing Workshop presented by Salt Smart .ORG during this reporting cycle. Flyer attached.

20. F2: The Inspection and Maintenance Program

Routine maintenance of Village streets, storm sewer, ditches, creeks and stormwater facilities is part of the Public Works responsibilities. This includes sweeping, vacuuming, jetting, repair, and debris, branch and leaf collection. The Village also has a Mosquito Control Program, tree maintenance and removal, snow removal and ice control, and yard waste services.

- a. Street-sweeping is performed regularly via contracted arrangements. For example, materials and decaying leaves were picked up from along 120 miles of Village streets. Copies of sweeping Invoices are attached.
- b. Catch Basins are regularly inspected and cleaned as needed during the reporting period.
- c. Storm Sewers were inspected and cleaned or jetted on an as needed and irregular basis during the reporting cycle.
- d. Detention Pond Maintenance is performed as needed throughout the cycle.
- e. Maintenance Yard is kept as clean and tidy as possible with current staffing.

21. F3: Municipal Operations Storm Water Control

The Municipal Operations Program for Storm Water Control is ongoing. The Village does cleaning and removal of debris in ditches, creeks, and detention basins on an as needed basis.

By Proclamation, the Village endorsed the Greenest Region Compact 2 proposed by the Metropolitan Mayors Caucus which will guide coordinated efforts toward enhanced quality of life for residents, protection and stewardship of the environment and sustainable economic vitality.

22. F4: Municipal Operations Waste Disposal

Maintenance Records and Logs are kept for routine maintenance of Village vehicles and equipment. All fluid changes are performed by outside contractors and fluid disposal is included in their contract. Any waste oils from minor onsite activities are collected and put into waste oil containers only. Disposal of collected materials was not required in this reporting period.

23. F5: Flood Management/Assessment Guidelines

The Village Ordinance includes Title 4 (Building Regulations) – Chapter 7 (Flood Hazard Areas) which enforces floodplain and flood hazard regulations for any development in or near to floodplains. The Village continues to enforce this ordinance and other development ordinances through the plan review process. The Village ordinances are posted on the website.

Item C: Results of information collected and analyzed, monitoring data (if any).

No illicit discharges or incidents of non-compliance were identified. No chemical samples were taken.

Item D: Summary of stormwater activities you plan to undertake during the next reporting cycle (and implementation schedule).

See the attached Summary that is numbered to correspond with the original Notice of Intent.

Item E: Notice that you are relying on another governmental entity to satisfy some of your permit obligations (if applicable).

The Village relies on Will County for its residential recycling program for electronic waste. The Village does not rely on any other government entity to satisfy NPDES permit obligations at this time.

Item F: List of construction projects that your entity has paid for during the reporting period.

The Village has not constructed any project during this reporting period.

Sample Documentation for Minimum Control Measures

The remaining sheets in this report include some available documentation for various Best Management Practices discussed under Item B.

VILLAGE OF MINOOKA

SUMMARY AND SCHEDULE OF PROPOSED BEST MANAGEMENT PRACTICES											
MINIMUM CONTROL MEASURE	PREVIOUSLY COMPLETED	MAR-14	MAR-15	MAR-16	MAR-17	MAR-18	MAR-19	MAR-20	MAR-21	MAR-22	MAR-23
A. Public Education and Outreach on Stormwater Impacts											
A1	Literature Distribution (brochure, newsletter)	X	X	X	X	X	X	X	X	X	R
A4	Community Event (Cleanup day)	X	X	X	D	X	X	D	D	D	R
A6	Other Public Education (website)	X	X	X	X	X	X	X	X	X	R
B. Public Involvement/ Participation											
B4	Public Hearing	X		D	D	D	D	D	D	D	R
B7	Other Public Involvement (Cleanup day)	X	X	X	X	X	X	D	D	D	R
C. Illicit Discharge Detection and Elimination											
C1	Storm Sewer Map Assessment	X									
	Storm Sewer Map Preparation	X									
	Field Identification of Outfalls	X									
	Storm Sewer Map Update Program	X	X	X	X	X	X	X	X	X	R
C2	Regulatory Control Program	X									
	- Sewer Use Ordinance - Ord 1986-1	X	X	X	X	X	X	X	X	X	R
C7	Visual Dry Weather Screening Program	X	X	X	X	X	D	X	X	X	R
C10	Other Illicit Discharge Controls (Monitoring)				D	X	X	X	X	X	R
D. Construction Site Storm Water Runoff Control											
D1	Regulatory Control Program	X	X	X	X	X	X	X	X	X	R
	- Review of Current Ordinances	X									
	- Draft of Proposed Ordinance	X									
	- Board Review of Proposed Ordinance	X									
	- Public Hearing on Proposed Ordinance	X									
	- Adopt Ordinance - Chapter 9	X									
	- Enforcement Ongoing	X	X	X	X	X	X	X	X	X	X
D2	Erosion and Sediment Control BMP's	X	X	X	X	X	X	X	X	X	R
D4	Site Plan Review Procedures	X	X	X	X	X	X	X	X	X	R
D6	Site Inspection/Enforcement Procedures	X	X	X	X	X	X	X	X	X	R
E. Post-Construction Storm Water Management											
E2	Regulatory Control Program	X	X	X	X	X	X	X	X	X	R
	- Review of Current Ordinances	X									
	- Draft of Proposed Ordinance	X									
	- Board Review of Proposed Ordinance	X									
	- Public Hearing on Proposed Ordinance	X									
	- Adopt Ordinance - Chapter 9	X									
	- Enforcement Ongoing	X	X	X	X	X	X	X	X	X	X
E3	Long Term O&M Procedures	X	X	X	X	X	X	X	X	X	R
E4	Pre-Construction Review of BMP Designs	X	X	X	X	X	X	X	X	X	R
E5	Site Inspections During Construction	X	X	X	X	X	X	X	X	X	R
E6	Post-Construction Inspections	X	X	X	X	X	X	X	X	X	R
F. Pollution Prevention/Good Housekeeping											
F1	Employee Training Program	X	D	D	X	X	X	X	X	X	R
F2	Inspection & Maintenance Program	X	X	X	X	X	X	X	X	X	R
F3 & F4	Municipal Operations for Stormwater Control and Waste Disposal	X	X	X	X	X	X	X	X	X	R
	- Audit existing BMP's	X									
	- Audit problem areas	X									
	- Plan new BMP's and Procedures	X									
	- Implement Program	X	X	X	X	X	X	X	X	X	R
F5	Flood Management/Assess Guidelines - Chap 7	X	X	X	X	X	X	X	X	X	R

A = Future Required/Planned Annual Activity
R = Future One-time Required/Planned Activity
D = Deferred Activity

X = Completed Activity

VILLAGE OF MINOOKA

SITE PLAN REVIEW PROCESS

The Village of Minooka strives to be a business friendly environment, while maintaining a visually pleasing community. Consistency in the application of our site plan review process and building codes is a priority. The following is the process used to expedite the review of your project. Any questions should be addressed to the Village Planner or Village Administrator.

A concept plan submission is required. It will allow village staff to identify potential changes and improvements prior to the preparation of the site plan. Following concept plan approval, Site Plans/Landscape Plans are submitted for review by staff. All plans and supporting documents are submitted to the Village Planner, who will distribute them for review.

Final Site Plans/Landscape Plans are then reviewed by the Village President, the Board of Trustees and Planning & Zoning Commissioners during workshop sessions. Workshop sessions are generally held on the second and fourth Thursdays of the month, though this schedule is subject to change.

To be reviewed at a workshop session, a complete set of all required drawings and supporting documents must be submitted four weeks prior to the date of the workshop. See Attachment A, B and C for submittal requirements. A Professional Fee Agreement (attached) and the appropriate fee must also be submitted at this time.

Staff will meet with the applicant to review the submittal based on attachments A, B& C and determine whether all the required materials have been submitted. If not, the applicant will be informed of the additional materials that will be required.

The Landscape Consultant and Village Planner will provide preliminary review comments on the landscape plans, zoning compliance, building façade and signage requirements within 10 calendar days of complete submittal. Upon the applicant's prompt response to the review comments, and plan revision if required, final staff approval of these non-engineering aspects of the site plan will be provided no later than 10 days prior to the date of the workshop. To expedite the review process, revisions may be submitted to the Village Planner via electronic files provided the files contain the entire image of the site plan or landscape plan.

Engineering review of the Site Plan and Final Engineering Plans will be conducted concurrently and the preliminary review comments will be provided no later than 10 days prior to the date of the workshop. If the preliminary review indicates that the site plan is viable, a letter indicating site plan approval will be issued.

Following staff approval of the site plan, 25 copies of “11 X 17” plan sets must be provided for distribution to village officials no later than seven days prior to the workshop session.

The village staff will make every effort to have site plans available for review at the next workshop session within the four week timetable described above. However, incomplete submittals, failure to respond to review comments in a timely manner, and plans that require significant revisions may result in a delay in the process.

Though not subject to review at a workshop session (except for the façade), building plan reviews may be conducted concurrently with the site plan review process. Building plans should be submitted directly to the Building Department. The Building Officer will meet with the applicant to review the submittal and determine whether all of the required materials and documents have been submitted. If not, the applicant will be informed of additional materials and documents that will be required. See Attachment D for submittal requirements.

ATTACHMENT A

VILLAGE OF MINOOKA

GENERAL SITE PLAN SUBMITTAL REQUIREMENTS

10 Full-Sized Sets of Complete Plans Shall Be Submitted to the Village Planner

INFORMATION

- Development Name and Name, Address and Phone Number of Owner and Consultant
- Date with all Revision Dates and Sheet Numbers
- Gross Area and Buildable Area of Site
- Location of Wetlands, Floodplains, Floodways and Open Water
- Number of Required Parking Spaces Including Handicapped
- Number of Provided Parking Spaces Including Handicapped

DRAWINGS

- Layout of Proposed Buildings
- Property and Street Right of Way Lines
- Parking Areas Marked With Stalls
- Detention or Retention Areas
- Sidewalks, Pedestrian Ways and Bike Paths
- Landscaped Area Location
- Driveways, Points of Ingress and Egress, Including Left-Turn Lanes
- Location, Design and Size of Proposed Signage
- Dimensions of Buildings, Parking Spaces/Aisles and Street Widths
- Building Elevations of all Four Sides Showing Height and Other Dimensions,
- Materials and Colors
- Location of Utility Easements and Underground Utilities
- Floor and Seating Plan for Restaurants

ATTACHMENT B

Village of Minooka Engineering Submittal Requirements

Concept Plan Submittal

- ❑ Conceptual Site Plan with location map
- ❑ Existing Topography
- ❑ ALTA Survey
- ❑ Aerial Photo
- ❑ Copy of NWI Maps and any other wetland information
- ❑ Copy of FEMA Maps

Site Plan Submittal

- ❑ Preliminary Site Plan with suspect wetlands and FIRM lines shown
- ❑ Preliminary Grading Plan
- ❑ Preliminary Utility Layout
- ❑ Preliminary Cost Estimate
- ❑ Turning Templates (B-40 and largest expected delivery vehicle)
- ❑ Existing topography with overland flow routes (including a minimum of 100' in all directions)
- ❑ IEPA Water and Sewer Permits (unsigned) – *recommended but not required*
- ❑ Notice of Intent (NOI) – *recommended but not required*
- ❑ Preliminary Stormwater Management Report – use Will County Stormwater Management Committee Technical Guidance Manual
 - ❑ Preliminary Detention Calculations
 - ❑ Pond Volume Provided Calculations
 - ❑ Preliminary analysis of Depressional Storage
 - ❑ Preliminary Compensatory Storage Calculations
 - ❑ Floodplain Submittal - if unstudied zone A is shown within 100' of site
- ❑ Preliminary Landscape Plan
- ❑ Additional Preliminary Engineering Calculations
 - ❑ Preliminary PE Calculations

Final Engineering Submittal

- ❑ Final Engineering Drawings
 - ❑ Existing conditions
 - ❑ Geometrics & Paving
 - ❑ Grading
 - ❑ Site Plan
 - ❑ Utilities
 - ❑ Erosion Control
 - ❑ Construction Specifications and Details

- ❑ Final Cost Estimate
- ❑ Plat of Easement
- ❑ Stormwater Pollution Prevention Plan
- ❑ NOI
- ❑ Field Tile Survey
- ❑ Photometrics Plan
- ❑ Final Stormwater Management Report
 - ❑ Off-site tributary areas
 - ❑ Floodplain and floodway analysis
 - ❑ Detention Calculations
 - ❑ Pond Drawdown Time Calculation
 - ❑ Release rate calculations
 - ❑ Tc calculations
 - ❑ Orifice calculations
 - ❑ Overflow Weir calculations
 - ❑ Depressional Storage Analysis
 - ❑ Runoff Calculations
 - ❑ Compensatory Storage Calculations
 - ❑ Storm sewer Calculations (10-year HGL and EGL)
 - ❑ Overland Drainage Calculations
- ❑ IEPA Water and Sewer Permits (signed by Engineer and Developer)
- ❑ Additional Final Engineering Calculations:
 - ❑ Final PE Calculations
 - ❑ Manhole Sizing
- ❑ Turning Templates (B-40 and largest expected delivery vehicle) if changed
- ❑ Identification of on-site wetlands and floodplain/floodway
- ❑ Tree Survey
- ❑ Traffic Study
- ❑ Archaeological Survey
- ❑ Endangered Species Consultation Action Report (IDNR)
- ❑ Final Landscape Plan
- ❑ Copies of Additional Permits
 - ❑ IDNR
 - ❑ US Army Corps of Engineer
 - ❑ Will, South Cook Soil Conservation District (if applicable)

Chapter 9

SOIL EROSION AND SEDIMENT CONTROL

4-9-1: FINDINGS AND PURPOSE:

A. Findings: The Board of Trustees of the Village hereby finds that:

1. Excessive quantities of soil may erode from areas undergoing development for certain nonagricultural 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;
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;
3. Soil erosion necessitates the costly repairing of gulleys, washed-out fills, and embankments;
4. Sediment from soil erosion tends to clog sewers and ditches and to pollute and silt rivers, streams, lakes, wetlands, and reservoirs;
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
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.

B. Purpose: The Board of Trustees therefore declares that the purpose of this Chapter 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 Chapter 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. (Ord. 1996-2, 1-9-1996)

4-9-2: DEFINITIONS:

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

BUILDING PERMIT: A permit issued by the Village of Minooka for the construction, erection or alteration of a structure or building.

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 Chapter.

CLEARING: Any activity which removes vegetative ground cover.

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

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.

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

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.

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

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

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

PARCEL: All contiguous land in one ownership.

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

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.

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

SITE: A lot or parcel of land, or a contiguous combination thereof, where grading work is

performed as a single unified operation.

SITE DEVELOPMENT: Altering terrain and/or vegetation and constructing improvements.

SITE DEVELOPMENT PERMIT: A permit issued by the village of Minooka for the construction or alteration of ground improvements and structures for the control of erosion, runoff and grading.

STOCKPILE: Earth, soil, or other similar material stripped and piled into a mound which is greater than one hundred (100) square yards and remaining in place for more than seven (7) days.

STREAM: Any river, creek, brook, branch, flowage, ravine, or natural or manmade drainageway which has a definite bed and banks or shoreline, in or into which surface or ground water flows, either perennially or intermittently.

STRIPPING: Any activity which removes the vegetative surface cover including tree removal, clearing, and storage or removal of topsoil.

VACANT: Land on which there are no structures or only structures which are secondary to the use or maintenance of the land itself.

VILLAGE: The village of Minooka, Will County and Grundy County, Illinois.

WETLANDS: Areas that are inundated or saturated by surface water or ground water 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. (Ord. 1996-2, 1-9-1996; amd. Ord. 2008-33, 12-17-2008)

4-9-3: GENERAL PRINCIPLES:

It is the objective of this chapter 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 off site sediment runoff should be adequate to assure that sediment is not transported from the site by a storm event of 10-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 [4-9-4](#) of this chapter:

- A. 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.

- B. 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.

- C. Special precaution 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.

- D. The smallest practical area of land should be exposed for the shortest practical time during development.

- E. 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 runoff waters from land undergoing development.

- F. 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.

- G. In the design of erosion control facilities and practices, aesthetics and the requirements of continuing maintenance should be considered.

- H. Provision should be made to accommodate the increased runoff 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 on site or downstream.

- I. Permanent vegetation and structures should be installed and functional as soon as practical during development.

- J. Those areas being converted from agricultural purposes to other land uses should be vegetated with an appropriate protective cover prior to development.
- K. 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.
- L. All construction sites should provide measures to prevent sediment from being tracked onto public or private roadways. (Ord. 1996-2, 1-9-1996)

4-9-4: SITE DEVELOPMENT PERMIT:

- A. Permit Required: Except as otherwise provided in this chapter, 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 village board.
 - 1. Any land disturbing activity (i.e., clearing, grading, stripping, excavation, fill, or any combination thereof) that will affect an area in excess of one acre;
 - 2. Any land disturbing activity that will affect an area in excess of five thousand (5,000) square feet if the activity is within twenty five feet (25') of a lake, pond, stream, or wetland; or
 - 3. Excavation, fill, or any combination thereof that will exceed one hundred (100) cubic yards.
- B. 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 [4-9-3](#) of this chapter:
 - 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 (2) acres for which a building permit has been issued by the village;
 - 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;

3. Installation, renovation, or replacement of a septic system to serve an existing dwelling or structure.

C. Application For Permit; Fee: Application for a site development permit shall be made by the owner of the property or his authorized agent to the village board 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 twenty five dollars (\$25.00). 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.

D. Submissions: Each application for a site development permit shall be accompanied by the following information:

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.
2. A development plan of the site showing:
 - a. Existing topography of the site and adjacent land within approximately one hundred feet (100') of the boundaries, drawn at no greater than two foot (2') contour intervals and clearly portraying the conformation and drainage pattern of the area.
 - 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 manmade features on the site and adjacent land within one hundred feet (100') 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.
3. An erosion and sediment control plan showing all measures necessary to meet the objectives of this chapter 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 nonvegetative 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 off site, including construction entrance details, as appropriate.
 - e. Description of dust and traffic control measures. (Ord. 1996-2, 1-9-1996)
 - f. An exhibit indicating location and dimensions of all stockpiles, description of stabilization methods, and approximate dates from the creation of each stockpile until complete removal. (Ord. 2008-33, 12-17-2008)
 - 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.
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 Village Board of any significant changes which occur in the site development schedule after the initial erosion and sediment control plan has been approved.

These submissions shall be prepared in accordance with the requirements of this Chapter 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 Will County and/or Grundy County Soil and Water Conservation District, which standards and requirements are hereby incorporated into this Chapter by reference.

The Village Board 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 Chapter.

- E. 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 Village Attorney in an amount deemed sufficient by the Village Board 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.
- F. Review And Approval: Each application for a site development permit shall be reviewed and acted upon according to the following procedures:
1. The Village Board will review each application for a site development permit to determine its conformance with the provisions of this Chapter. The Board may also refer any application to the Will and/or Grundy 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 Village Board shall in writing:
 - a. Approve the permit application if it is found to be in conformance with the provisions of this Chapter 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 Chapter 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 site development permit shall be issued for an intended development site unless:
 - 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.
 3. Failure of the Village Board 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 Village Board 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 Village Board.

- G. 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 eighty (180) days, or is not completed by a date which shall be specified in the permit; except that the Village Board 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 Village Board may require modification of the erosion control plan to prevent any increase in erosion or offsite sediment runoff resulting from any extension.
- H. Appeals: The applicant, or any person or agency which received notice of the filing of the application, may make an appeal of the decision of the Village Board. Upon receipt of an appeal, the Village Board shall schedule and hold a public hearing, after giving fifteen (15) days' notice thereof. The Village 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, 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.
- I. Retention Of Plans: Plans, specifications, and reports for all site developments shall be retained in original form or on microfilm by the Village Board. (Ord. 1996-2, 1-9-1996)

4-9-5: DESIGN AND OPERATION STANDARDS AND REQUIREMENTS:

- A. Applicability: All clearing, grading, stripping, excavating, and filling which is subject to the permit requirements of this Chapter shall be subject to the applicable standards and requirements set forth in this Section [4-9-5](#).

B. 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 Chapter, 2) compliance with the provisions of that permit or with conditions attached to it by the Village Board, 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 Chapter.

C. Site Design Requirements:

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 one acre, filter barriers (including filter fences, straw bales, or equivalent control measures) shall be constructed to control all off-site runoff as specified in referenced handbooks. Vegetated filter strips, with a minimum width of twenty five feet (25'), may be used as an alternative only where runoff in sheet flow is expected.
 - b. For disturbed areas draining more than one but less than five (5) acres, a sediment trap or equivalent control measure shall be constructed at the downslope point of the disturbed area.
 - c. For disturbed areas draining more than five (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 ten (10) hours. The elevation of the outlet structure shall be placed such that it only drains the dry detention storage.
 - 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 one year, the 1-year sediment load and a sediment removal schedule may be substituted.
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 forty eight (48) hours, consistent with the following standards:

- a. For grades up to four percent (4%), 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 four percent (4%) to eight percent (8%), sod or an equivalent control measure shall be applied in the channel.
 - c. For grades greater than eight percent (8%), rock, riprap, or an equivalent control measure shall be applied, or the grade shall be effectively reduced using drop structures.
3. Disturbed areas shall be stabilized with temporary or permanent measures within seven (7) calendar days following the end of active disturbance, or redisturbance, consistent with the following criteria:
- a. Appropriate temporary or permanent stabilization measures shall include seeding, mulching, sodding, and/or nonvegetative measures.
 - b. Areas having slopes greater than twelve percent (12%) shall be stabilized with sod, mat or blanket in combination with seeding, or equivalent.
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 nonerosive 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 forty eight (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.
5. Storm sewer inlets and culverts shall be protected by sediment traps or filter barriers meeting accepted design standards and specifications. (Ord. 1996-2, 1-9-1996)
6. 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.
7. 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.
8. All temporary and permanent erosion and sediment control practices must be maintained and repaired as needed to assure effective performance to their intended function.

9. All temporary erosion and sediment control measures shall be disposed of within thirty (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. (Ord. 1996-2, 1-9-1996; amd. Ord. 2008-33, 12-17-2008)

D. 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 [4-9-4](#) of this chapter, are hereby incorporated into this section 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 section [4-9-4](#) of this chapter. In the event of conflict between provisions of said manuals and of this chapter, this chapter shall govern.

E. Maintenance Of Control Measures: All soil erosion and sediment control measures necessary to meet the requirements of this chapter shall be maintained periodically by the applicant or subsequent landowner during the period of land disturbance and development of the site in a satisfactory manner to ensure adequate performance.

F. Inspection: The village board or its designee 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 village board or its designee 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 chapter the permittee shall notify the village board or its designee within two (2) working days of the completion of the construction stages specified below:

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 (5) working days after notice is received by the village from the permittee, the permittee may continue work at his own risk, without presuming acceptance by the village. Notification of the results of the inspection shall be given in writing at the site.

G. Special Precautions:

1. If at any stage of the grading of any development site the village board 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 village board 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 erosion control, and recommendations of a registered soils engineer and/or engineering geologist which may be made requirements for further work.
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 village board 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 ensure completion of protective measures or devices prior to the advent of seasonal rains.

H. Amendment Of Plans: Major amendments of the site development or erosion and sedimentation control plans shall be submitted to the village board 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 village board by written authorization to the permittee. (Ord. 1996-2, 1-9-1996)

I. Stockpiles:

1. The area of land exposed during site development should be limited to the smallest working area practicable. The period of time during which land is exposed without vegetation should be limited to the shortest period practicable.
2. The base of stockpiles shall not be located within two hundred feet (200') of the perimeter of the development or within two hundred feet (200') from the nearest home,

and stockpiles shall not be located on floodplains, overflow routes, areas subject to frequent inundation, or park sites. Stockpiles shall not be located with a downslope drainage length of less than twenty five feet (25') 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 stockpiles.

3. Stockpiles shall not exceed twenty five feet (25') in height.
4. Any stockpile that remains undisturbed longer than seven (7) days shall have approved sediment and erosion control measures, such as a silt fence, surrounding the entire base of the stockpile, and a gradient ratio of not more than three to one (3:1).
5. No stockpile shall be allowed to remain in the development phase after completion of the last structure in that development phase, and no occupancy permit shall be issued for the last structure in the development phase until all dirt stockpiles are removed from that phase. Without prior written approval from the village, all dirt stockpiles shall be removed for each phase no later than three (3) years after the first building permit is issued for that phase or prior to the issuance of the last occupancy permit in the phase, whichever is first to occur.
6. The permittee, developer, and/or owner shall abide by the village's noxious weeds ordinance ([title 7, chapter 3](#) of this code), and shall not permit weeds such as jimson, burdock, ragweed, thistle, cocklebur, poison ivy, poison oak, poison sumac or other weeds of a like kind, to grow in and around any stockpile.
7. Any stockpile that remains in the same place longer than one year must be seeded or sodded and maintained in that condition for the remainder of the term of that stockpile.
8. Stockpiles must be maintained in such a way as to minimize the height and to minimize the danger to children, including the removal of all potentially harmful debris.
9. All stockpiles in existence at the time of passage of this subsection, but which do not conform to one or more provisions of this subsection, shall be brought into compliance by July 30, 2009. (Ord. 2008-33, 12-17-2008)

4-9-6: ENFORCEMENT:

- A. Exceptions: The village board may, in accordance with the following procedures, authorize exceptions to any of the requirements and regulations set forth in this chapter:
 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 village board 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 chapter;
 - 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.
2. Each application for an exception shall be referred to the village board for review.
 3. The village board 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 village 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.
- B. Stop Work Order; Revocation Of Permit: In the event any person holding a site development permit pursuant to this chapter 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 village board may suspend or revoke the site development permit.
1. Suspension of a permit shall be by a written stop work order issued by the village board 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 village board at which the conditions of the subsections below can be met.
 2. No site development permit shall be permanently suspended or revoked until a hearing is held by the village board. 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 behalf. At the conclusion of the hearing the village board shall determine whether the permit shall be suspended or revoked.

C. 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 chapter. Any person violating any of the provisions of this chapter shall be deemed guilty of a misdemeanor, and each day during which any violation of any of the provisions of this chapter 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 one thousand dollars (\$1,000.00) 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 chapter 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.

D. Separability: The provisions and sections of this chapter shall be deemed to be separable, and the invalidity of any portion of this chapter shall not affect the validity of the remainder. (Ord. 1996-2, 1-9-1996)

Chapter 10

STREAM AND WETLAND PROTECTION

4-10-1: AUTHORITY:

The lowland conservancy overlay district is adopted by the board of trustees, pursuant to 65 Illinois Compiled Statutes 5/11-13-1. (Ord. 1996-1, 1-9-1996)

4-10-2: SHORT TITLE:

This chapter shall be known and may be cited as the MINOOKA LOWLAND CONSERVANCY OVERLAY DISTRICT ORDINANCE. (Ord. 1996-1, 1-9-1996)

4-10-3: PURPOSE AND INTENT:

It is the purpose and intent of this chapter to promote the health, safety and general welfare of the present and future residents of Minooka and downstream drainage areas by providing for the protection, preservation, proper maintenance, and use of Minooka watercourses, lakes, ponds, floodplain and wetland areas. This chapter 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 ground water 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;
- 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 Village which depends in part on an adequate quality of water, a pleasing natural environment, and recreational opportunities in proximity to the Village.

In order to achieve the purpose and intent of this Chapter, Village hereby designates the Lowland Conservancy Overlay District which shall be considered as an overlay to the zoning districts created by the Village zoning ordinances as amended. Any proposed development activity within the District must obtain a special use permit as approved by the governing body of the Village. (Ord. 1996-1, 1-9-1996)

4-10-4: DEFINITIONS:

ARMORING: 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.

BULKHEAD: A retaining wall that protects property along water.

CHANNEL: A natural or artificial watercourse of perceptible extent that periodically or continuously contains moving water, or which forms a connecting link between two (2) bodies of water. It has a definite bed and banks that serve to contain the water.

CHANNEL MODIFICATION OR CHANNELIZATION: 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).

CONTROL STRUCTURES: A structure designed to control the rate of stormwater runoff that passes through the structure, given a specific upstream and downstream water surface elevation.

CULVERT: A structure designed to carry drainage water or small streams below barriers such as roads, driveways, or railway embankments.

DEPRESSION 1 AREA: 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 depression 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 depression areas may provide significant stormwater or floodplain storage.

DEVELOPMENT: 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 (2) or more parcels. The following activities or uses shall be taken, for the purposes of this Chapter, to involve development as defined herein:

- A. Any construction, reconstruction, or alteration of a structure to occupy more or less ground area, or the on-site preparation for same;
- B. 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;
- C. 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;
- D. The commencement of drilling, except to obtain soil samples, or the commencement of mining, filling, excavation, dredging, grading or other alterations of the topography;
- E. Demolition of a structure or redevelopment of a site;
- F. Clearing of land as an adjunct of construction for agricultural, private residential, commercial or industrial use;

- G. Deposit of refuse, solid or liquid waste, or fill on a parcel of land, or the storage of materials;
- H. 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;
- I. Construction or erection of dams, levees, walls, fences, bridges or culverts; and
- J. Any other activity that might change the direction, height, or velocity of flood or surface waters.

DISTRICT: The Lowland Conservancy Overlay District as defined in Section [4-10-6-2](#) of this Chapter.

EROSION: The general process whereby soils are moved by flowing water or wave action.

FILTERED VIEW: 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.

FLOODPLAIN: That land adjacent to a body of water with ground surface elevations at or below the 100-year frequency flood elevation.

FLOODWAY: 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.

HYDRAULIC CHARACTERISTICS: 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.

LAKE OR POND: Any inland waterbody, fed by spring or surface water flow.

LOT: An area of land, with defined boundaries, that is designated in official assessor's records as being one parcel.

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.

ORDINARY HIGH WATER MARK (OHWM): 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.

QUALIFIED PROFESSIONAL: 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.

REGISTERED PROFESSIONAL ENGINEER: A professional engineer registered under the provisions of "The Illinois Professional Engineering Act" and any act amendatory thereof.

RETENTION/DETENTION FACILITY: A facility that provides for storage of storm water runoff and controlled release of this runoff during and after a flood or storm.

RUNOFF: The portion of precipitation on the land that is not absorbed by the soil or plant material and which runs off the land.

SEDIMENTATION: The processes that deposit soils, debris, and other materials either on other ground surfaces or in water bodies or watercourses.

SETBACK: 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.

STREAM: 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 identifying perennial and intermittent streams. For purposes of this Chapter, the term "stream" does not include storm sewers.

STRUCTURE: Anything that is constructed, erected or moved to or from any premises 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 one hundred eighty (180) days per year and located landward of the minimum setback provided as a natural vegetation strip.

VEGETATION: All plant growth, especially trees, shrubs, mosses, and grasses.

WATERCOURSE: 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.

WETLAND: 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). (Ord.

1996-1, 1-9-1996)

4-10-5: 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 the Village.

No special use permit shall be issued unless the Village 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;
- 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 Chapter or the provisions of the Village Zoning Ordinance¹.

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. (Ord. 1996-1, 1-9-1996)

4-10-5-1: APPLICATION FOR PERMIT; FEE:

Application for a special use permit shall be made by the owner of the property, or his/her authorized agent, to the Village 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 one hundred dollars (\$100.00). 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. (Ord. 1996-1, 1-9-1996)

4-10-5-2: SUBMISSIONS:

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

	<u>Section</u>
General Provisions:	
Site Development Plan	4-10-6-4
Geologic and Soil Report	4-10-6-5
Drainage Control Plan	4-10-6-6
Site Grading and Excavation Plan	4-10-6-7
Landscape Plan	4-10-6-8
Justification for Watercourse Relocation and Minor Modifications:	
Stream Modification/Relocation Plan	4-10-7-2
Channel and Bank Armoring	4-10-7-3
Culverts	4-10-7-4
On-Stream Impoundments	4-10-7-5
Impact Assessment	4-10-8

(at option of the Village)

Where a proposed development activity is less than two and one-half (2¹/₂) acres in area the Village, upon approval of the Village Engineer, may waive or simplify any or all of the submission requirements (Sections [4-10-6-4](#) through [4-10-6-8](#)); provided, that the person responsible for any such development shall implement necessary protection measures to satisfy the purpose and intent set forth in Section [4-10-3](#) of this Chapter. (See Section [4-10-11-1](#), Variances.) (Ord. 1996-1, 1-9-1996)

4-10-5-3: BONDS:

The applicant may be required to file with the Village a faithful performance bond or bonds, letter of credit, or other improvement security satisfactory to the Village Attorney, in an amount deemed sufficient by the Village to cover all costs of improvements, landscaping, or maintenance of improvements and landscaping, 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. (Ord. 1996-1, 1-9-1996)

4-10-5-4: REVIEW AND APPROVAL:

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

A. The Village Board will review each application for a special use permit to determine its conformance with the provisions of this Chapter. The Board may also refer any application to the Will County and/or Grundy 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 Village Board shall in writing: 1) approve the permit application, if it is found to be in conformance with the provisions of this Chapter and issue the permit; 2) approve the permit application subject to such reasonable conditions as may be necessary to secure substantially the objectives of this Chapter, and issue the permit subject to these conditions; or 3) disapprove the permit application, indicating the deficiencies and the procedure for submitting a revised application and/or submission.

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

1. The development, including but not limited to subdivisions and planned unit developments, has been approved by the Village where applicable; or

2. Such permit is accompanied by or combined with a valid building permit issued by the Village; or
 3. The proposed development is coordinated with any overall development program previously approved by the Village for the area in which the site is situated.
- C. Failure of the Village 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 Village 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 Village. (Ord. 1996-1, 1-9-1996)

4-10-5-5: PERMIT EXCEPTIONS:

The provisions of this Chapter 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 Village 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 Chapter, subsection [4-10-3A](#) through J);
- B. Work consisting of the operation, repair, or maintenance of any lawful use of land existing on the date of adoption of the Ordinance codified in this Chapter;
- 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 Village may include designated farm ditches in the District. The Village may also require that linings, bulkheads, dikes and culverts to be removed to mitigate hazards, or that other mitigative measures be taken, such as the maintenance of

a natural vegetation buffer strip. (Ord. 1996-1, 1-9-1996)

4-10-5-6: 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 Village ordinances and regulations. Where State and/or Federal permits are required, a special use permit will not be issued until they are obtained. (Ord. 1996-1, 1-9-1996)

4-10-6: GENERAL PROVISIONS; AREA AFFECTED:

This Chapter applies to development in or near streams, lakes, ponds and wetlands within the Village. 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 Chapter. Those maps are hereby made a part of this Chapter, and two (2) copies thereof shall remain on file in the office of the Village Clerk for public inspection. Within the jurisdiction of the Village, those waterbodies and watercourses that are named and are subject to the provisions of this Chapter are: (list of waterbodies and watercourses). 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 Chapter.

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. (Ord. 1996-1, 1-9-1996)

4-10-6-1: LOWLAND CONSERVANCY OVERLAY DISTRICT:

The Lowland Conservancy Overlay District shall be considered as an overlay to the zoning districts created by the Village Zoning Ordinance as amended². In addition to the requirements of this Chapter, 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. (Ord. 1996-1, 1-9-1996)

4-10-6-2: DISTRICT BOUNDARY:

The procedures, standards and requirements contained in this Chapter 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 one hundred feet (100') 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 Chapter 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 shown on said Map which shall be and remain on file in the office of the Village Clerk, and additional areas may be approved from time to time and be made exhibits hereto. (Ord. 1996-1, 1-9-1996)

4-10-6-3: MINIMUM SETBACK OF DEVELOPMENT ACTIVITY FROM STREAMS:

- A. Minimum Setback: Absolutely no development activity (except as provided below) may occur within the minimum setback which is defined as seventy five feet (75') 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.
- B. Development Activities: The following development activities may be permitted, subject to issuance of a special use permit, as set out in Section [5-10-9](#) of this Code, 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 Village as a whole, including the loss of open space or scenic vistas:

1. Minor improvements such as walkways, benches, comfort stations, informational displays, directional signs, foot bridges, observation decks, and docks;
2. The maintenance, repair, replacement, and reconstruction of existing highways and bridges, electrical transmission and telecommunication lines, poles, and towers; and
3. 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.

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

1. 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.
2. 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 wetlands 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.
3. 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.
4. Wetland area occupied by the development of decks and walkways must be mitigated by an equal area of wetland habitat improvement.
5. 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 [4-10-8](#) of this Chapter.

D. Applicants For Special Use Permit:

1. An applicant for a special use permit 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.
2. 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. (Ord. 1996-1, 1-9-1996)

4-10-6-4: 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 Chapter;
- 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 the Village.

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 Chapter. (Ord. 1996-1, 1-9-1996)

4-10-6-5: GEOLOGIC AND SOIL CHARACTERISTICS; 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. (Ord. 1996-1, 1-9-1996)

4-10-6-6: 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. (Ord. 1996-1, 1-9-1996)

4-10-6-7: SITE GRADING AND EXCAVATION PLAN:

Section [4-10-6-7](#) applies to the extent that grading and excavation and erosion control plans, which satisfy the following requirements, are not already required by a jurisdiction.

- A. Application; Contents Of Plan: 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:
 - 1. Details of the existing terrain and drainage pattern with one foot (1') contours;

2. Proposed site contours at one foot (1') intervals;
 3. Dimensions, elevation and contours of grading, excavation and fill;
 4. A description of methods to be employed in disposing of soil and other materials that is removed from allowable grading and excavation sites, including location of the disposal site if on the property;
 5. 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
 6. A detailed description of the revegetation and stabilization methods to be employed, to be prepared in conjunction with the landscape plan per Section [4-10-6-8](#). This description should include locations of erosion control measures such as sedimentation basins, straw bales, diversion swales, etc.
- B. Compliance With Chapter: The grading and excavation plan must be consistent with all the provisions of this Chapter.
- C. Restrictions And Requirements: Unless otherwise provided in this Chapter, the following restrictions, requirements and standards shall apply to all development within the District:
1. Every effort shall be made to develop the site in such a manner so as to minimize the alteration of the natural topography;
 2. 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 Village; and
 3. 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.
- D. Installation Of Physical Barrier: 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.
- E. Limit Activity: The Village 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 Village may require that equipment be operated from only one side of a stream, lake, or pond in order to minimize bank disruption. Other development 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. (Ord. 1996-1, 1-9-1996)

4-10-6-8: NATURAL VEGETATION BUFFER STRIP REQUIRED:

To minimize erosion, stabilize the stream bank, protect water quality, maintain water temperature at natural levels, preserve fish and wildlife habitat, to screen manmade 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 twenty five feet (25') 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 water body 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 stream bank 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
- 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. (Ord. 1996-1, 1-9-1996)

4-10-6-9: MITIGATION OF DIRECT IMPACTS:

Direct impacts to jurisdictional waters of the United States, including jurisdictional wetland, shall be mitigated at a minimum replacement ratio of 1.5:1 (replacement area:impact area).

Mitigation for the impacts shall meet or exceed the quality of the area impacted based on a floristic evaluation of the impacted area. Mitigation areas shall be managed and monitored for a period of five (5) years following seeding of the mitigation area(s). The development of the mitigation area and its management and monitoring program shall be described in a written document submitted as part of the special use permit application. The document shall be based on the most current guidelines for mitigation available from the Chicago district of the corps of engineers. (Ord. 2007-08, 1-23-2007)

4-10-7: WATERCOURSE RELOCATION AND MINOR MODIFICATIONS:

Watercourse relocation or modification is generally not permitted because these activities are not usually consistent with the purposes of this chapter. 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 storm water 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. (Ord. 1996-1, 1-9-1996)

4-10-7-1: 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 village shall inspect the stream modification, and issue a written report to the village that the modified stream complies with the requirements of section [4-10-7-2](#) of this chapter; and
- D. Stream channel enlargement, or other modifications that would increase conveyance, shall not be permitted if the intended purpose is to accommodate development activities in the floodplain. (Ord. 1996-1, 1-9-1996)

4-10-7-2: 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, substrate;
- B. The formation of gentle side slopes (at least 3 feet horizontally per 1 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 reestablishment 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;
- 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. (Ord. 1996-1, 1-9-1996)

4-10-7-3: 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:

- 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 exchange 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. (Ord. 1996-1, 1-9-1996)

4-10-7-4: 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
- 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. (Ord. 1996-1, 1-9-1996)

4-10-7-5: 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 nonpoint 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. (Ord. 1996-1, 1-9-1996)

4-10-8: IMPACT ASSESSMENT:

The Village may ask an applicant to submit a report prepared by a qualified professional, and approved by the Village, 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. (Ord. 1996-1, 1-9-1996)

4-10-9: STREAM MAINTENANCE EASEMENT:

The applicant shall grant an access easement for stream maintenance purposes to the Village over twenty five feet (25') parallel to the stream bank. (Ord. 1996-1, 1-9-1996)

4-10-10: NONCONFORMING USES:

See [Title 5, Chapter 10](#) of the Village Code. (Ord. 1996-1, 1-9-1996)

4-10-11: BOARD OF APPEALS:

See [Title 2, Chapter 1](#) of the Village Code. (Ord. 1996-1, 1-9-1996)

4-10-11-1: VARIANCES:

See Section [5-11-6](#) of the Village Code. (Ord. 1996-1, 1-9-1996)

4-10-11-2: APPEALS:

See Section [5-11-7](#) of the Village Code. (Ord. 1996-1, 1-9-1996)

4-10-12: BONDS:

The Village may require the posting of a bond or surety to ensure compliance with any aspect of this Chapter. (Ord. 1996-1, 1-9-1996)

4-10-13: LIABILITY:

Prior to issuance of a construction permit, the applicant shall enter into an agreement with the Village which runs with the property, in a form acceptable to the Village Attorney, indemnifying the Village for any damage resulting from development activity on the subject property which is related to the physical condition of the stream or wetland. (Ord. 1996-1, 1-9-1996)

4-10-14: SEPARABILITY:

Every section, provision, or part of this Chapter 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. (Ord. 1996-1, 1-9-1996)

4-10-15: RETROACTIVITY:

The requirements of this Chapter apply to all platted and unplatted lands within the jurisdiction of the Village. (Ord. 1996-1, 1-9-1996)

4-10-16: ENFORCEMENT:

Authority for administration of this Chapter resides with the Village Board. Appeals regarding decisions of the Village Board in granting special permits shall be made according to the provisions of Section [4-10-11-2](#). (Ord. 1996-1, 1-9-1996)

4-10-16-1: STOP-WORK ORDER; REVOCATION OF PERMIT:

In the event any person holding a special use permit pursuant to this Chapter 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 Village may suspend or revoke the special use permit.

- A. Suspension of a permit shall be by a written stop-work order issued by the Village 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 Village Board, at which the conditions of subsection B below can be met.
- B. No special use permit shall be permanently suspended or revoked until a hearing is held by the Village Board. 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/her behalf. At the conclusion of the hearing the Village Board shall determine whether the permit shall be suspended or

revoked. (Ord. 1996-1, 1-9-1996)

4-10-16-2: VIOLATIONS AND PENALTIES:

No person shall undertake or continue any development activity contrary to or in violation of any terms of this Chapter. Any person violating any of the provisions of this Chapter shall be deemed guilty of a misdemeanor, and each day during which any violation of any of the provisions of this Chapter 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 as provided in Section [1-4-1](#) of this Code 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 Chapter 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. (Ord. 1996-1, 1-9-1996)

Chapter 7

FLOOD HAZARD AREAS

4-7-1: PURPOSE:

This Chapter is enacted pursuant to the police powers granted to this Village by 65 Illinois Compiled Statutes 5/1-2-1, 5/11-12-12, 5/11-12-12m, 5/11-30-8 and 5/11-31-2. The purpose of this Chapter is to maintain this Village's eligibility in the National Flood Insurance Program; to minimize potential losses due to periodic flooding including loss of life, loss of property, health and safety hazards, disruption of commerce and governmental services, extraordinary public expenditures for flood protection and relief, and impairment of the tax base, all of which adversely affect the public health, safety and general welfare; and to preserve and enhance the quality of surface waters, conserve economic and natural values and provide for the wise utilization of water and related land resources. This Chapter is adopted in order to accomplish the following specific purposes:

- A. To meet the requirements of 615 Illinois Compiled Statutes 5/18(g), "An Act in Relation to the Regulation of the Rivers, Lakes and Streams of the State of Illinois", approved June 10, 1911, as amended.
- B. To assure that new development does not increase the flood or drainage hazards to others, or create unstable conditions susceptible to erosion;
- C. To protect new buildings and major improvements to buildings from flood damage;
- D. To protect human life and health from the hazards of flooding;
- E. To lessen the burden on the taxpayer for flood control projects, repairs to flood-damaged public facilities and utilities, and flood rescue and relief operations; and
- F. To make federally subsidized flood insurance available for property in the Village by fulfilling the requirements of the National Flood Insurance Program.

- G. To comply with the rules and regulations of the National Flood Insurance Program codified as 44 CFR 59-79, as amended.
- H. To protect, conserve and promote the orderly development of land and water resources;
- I. To preserve the natural hydrologic and hydraulic functions of watercourses and flood plains and to protect water quality and aquatic habitats;
- J. To preserve the natural characteristics of stream corridors in order to moderate flood and storm water impacts, improve water quality, reduce soil erosion, protect aquatic and riparian habitat, provide recreational opportunities, provide aesthetic benefits and enhance community and economic development. (Ord. 1995-28, 8-8-1995)

4-7-2: DEFINITIONS:

For the purposes of this Chapter, the following definitions are adopted:

ACT: "An Act in Relation to the Regulation of the Rivers, Lakes and Streams of the State of Illinois", 615 Illinois Compiled Statutes 5/5 et seq.

APPLICANT: Any person, firm, corporation or agency which submits an application.

APPROPRIATE USE: Only uses of the regulatory floodway that are permissible and will be considered for permit issuance. The only uses that will be allowed are as specified in subsection [4-7-7B](#) of this Chapter.

BASE FLOOD: The flood having a one percent (1%) probability of being equaled or exceeded in any given year. The base flood is also known as the 100-year frequency flood event. Application of the base flood elevation at any location is as defined in Section [4-7-5](#) of this Chapter.

BUILDING: A structure that is principally above ground and is enclosed by walls and a roof. The term includes a gas or liquid storage tank, a manufactured home, mobile home or prefabricated building. This term also includes recreational vehicles and travel trailers to be installed on a site for more than one hundred eighty (180) days.

CHANNEL: Any river, stream, creek, brook, branch, natural or artificial depression, ponded area, flowage, slough, ditch, conduit, culvert, gully, ravine, wash or natural or manmade drainageway, which has a definite bed and banks or shoreline, in or into which surface or ground water flows, either perennially or intermittently.

CHANNEL MODIFICATION: Alteration of a channel by changing the physical dimensions or materials of its bed or banks. Channel modification includes damming, rip-rapping or other armoring, widening, deepening, straightening, relocating, lining and significant removal of bottom or woody vegetation. Channel modification does not include the clearing of dead or dying vegetation, debris or trash from the channel. Channelization is a severe form of channel modification typically involving relocation of the existing channel (e.g., straightening).

COMPENSATORY STORAGE: An artificially excavated hydraulically equivalent volume of storage within the SFHA used to balance the loss of natural flood storage capacity when artificial fill or structures are placed within the flood plain. The uncompensated loss of natural flood plain storage can increase off-site flood water elevations and flows.

CONDITIONAL APPROVAL OF A REGULATORY FLOODWAY MAP CHANGE:
Preconstruction approval by DNR and the Federal Emergency Management Agency of a proposed change to the Floodway Map. This preconstruction approval, pursuant to this Chapter, gives assurances to the property owner that once an appropriate use is constructed according to permitted plans, the Floodway Map can be changed, as previously agreed, upon review and acceptance of as-built plans.

CONDITIONAL LETTER OF MAP REVISION (CLOMR): A letter which indicates that the Federal Emergency Management Agency will revise base flood elevations, flood insurance rate zones, flood boundaries or floodway as shown on an effective Flood Hazard Boundary Map or Flood Insurance Rate Map, once the as-built plans are submitted and approved.

CONTROL STRUCTURE: A structure designed to control the rate of flow that passes through the structure, given a specific upstream and downstream water surface elevation.

DNR: Illinois Department of Natural Resources, Office of Water Resources.

DAM: All obstructions, wall embankments or barriers, together with their abutments and appurtenant works, if any, constructed for the purpose of storing or diverting water or creating a pool. Underground water storage tanks are not included.

DEVELOPMENT: Any manmade change to real estate, including:

- A. Construction, reconstruction, repair or placement of a building or any addition to any building.
- B. Installing a manufactured home on a site, preparing a site for a manufactured home or installing a travel trailer on a site for more than one hundred eighty (180) days.
- C. Drilling, mining, installing utilities, construction of roads, bridges or similar projects.

- D. Demolition of a structure or redevelopment of a site.
- E. Clearing of land as an adjunct of construction.
- F. Construction or erection of levees, walls, fences, dams or culverts; channel modification; filling, dredging, grading, excavating, paving or other nonagricultural alterations of the ground surface; storage of materials; deposit of solid or liquid waste.
- G. Any other activity of a man that might change the direction, height or velocity of flood or surface water, including extensive vegetation removal.

Development does not include maintenance of existing buildings and facilities such as reroofing or resurfacing of roads when there is no increase in elevation, or gardening, plowing and similar agricultural practices that do not involve filling, grading or construction of levees.

ELEVATION CERTIFICATES: A form published by the federal emergency management agency that is used to certify the elevation to which a building has been elevated.

EROSION: The general process whereby soils are moved by flowing water or wave action.

EXEMPT ORGANIZATIONS: Organizations which are exempt from this chapter per the Illinois Compiled Statutes including state, federal or local units of government.

FEMA: Federal emergency management agency and its regulations at 44 CFR 59-79 effective as of October 1, 1986. This incorporation does not include any later editions or amendments.

FLOOD: A general and temporary condition of partial or complete inundation of normally dry land areas from overflow of inland or tidal waves, or the unusual and rapid accumulation or runoff of surface waters from any source.

FLOOD FREQUENCY: A period of years, based on a statistical analysis, during which a flood of a stated magnitude may be expected to be equaled or exceeded.

FLOOD FRINGE: That portion of the floodplain outside of the regulatory floodway.

FLOOD INSURANCE RATE MAPS (FIRM): A map prepared by the federal emergency management agency that depicts the special flood hazard areas (SFHAs) within a community. This map includes insurance rate zones and floodplains and may or may not depict floodways.

FLOOD PROTECTION ELEVATION (FPE): The elevation of the base flood or 100-year frequency flood plus one foot (1') of freeboard at any given location in the SFHA.

FLOODPLAIN: That land typically adjacent to a body of water with ground surface elevations at

or below the base flood or the 100-year frequency flood elevation. Floodplains may also include detached special flood hazard areas, ponding areas, etc. The floodplain is also known as the special flood hazard area (SFHA). The floodplains are those lands within the jurisdiction of the village that are subject to inundation by the base flood or 100-year frequency flood. The SFHAs of the village are generally identified as such on the flood insurance rate map of the village prepared by the federal emergency management agency and dated September 6, 1995, and such other amendments or revisions to such study and maps as may be prepared from time to time. The SFHAs of those parts of unincorporated Will County that are within the extraterritorial jurisdiction of the village or that may be annexed into the village are generally identified as such on the flood boundary and floodway map prepared for Will County by the federal emergency management agency and dated September 6, 1995, and such other amendments or revisions to such study and maps as may be prepared from time to time. The SFHAs of those parts of unincorporated Grundy County that are within extraterritorial jurisdiction of the village or that may be annexed to the village are generally identified as such on the flood insurance rate map prepared for Grundy County by the federal emergency management agency and dated August 2, 2012, and such other amendments or revisions to such study and maps as may be prepared from time to time. The SFHAs of those parts of unincorporated Kendall County that are within extraterritorial jurisdiction of the village or that may be annexed to the village are generally identified as such on the flood insurance rate map prepared for Kendall County by the federal emergency management agency and dated January 8, 2014, and such other amendments or revisions to such study and maps as may be prepared from time to time.

FLOODPROOFING: Any combination of structural and nonstructural additions, changes or adjustments to structures which reduce or eliminate flood damage to real estate or improved real property, water and sanitary facilities, structures and their contents.

FLOODPROOFING CERTIFICATE: A form published by the federal emergency management agency that is used to certify that a building has been designed and constructed to be structurally dry floodproofed to the flood protection elevation.

FREEBOARD: An increment of elevation added to the base flood elevation to provide a factor of safety for uncertainties in calculations, unknown localized conditions, wave actions and unpredictable effects such as those caused by ice or debris jams.

HYDROLOGIC AND HYDRAULIC CALCULATIONS: Engineering analyses which determine expected flood flows and flood elevations based on land characteristics and rainfall events.

LETTER OF MAP AMENDMENT (LOMA): Official determination by FEMA that a specific structure is not in a 100-year flood zone, amends the effective flood hazard boundary map or FIRM.

LETTER OF MAP REVISION (LOMR): Letter that revises base flood or 100-year frequency flood elevations, flood insurance rate zones, flood boundaries or floodways as shown on an effective FHBM or FIRM.

MANUFACTURED HOME: A structure, transportable in one or more sections, which is built on a permanent chassis and is designated for use with or without a permanent foundation when connected to the required utilities. The term manufactured home also includes park trailers, travel trailers and other similar vehicles placed on site for more than one hundred eighty (180) consecutive days.

MANUFACTURED HOME PARK OR SUBDIVISION: A parcel (or contiguous parcels) of land divided into two (2) or more manufactured home lots for rent or sale.

MITIGATION: Includes those measures necessary to minimize the negative effects which floodplain development activities might have on the public health, safety and welfare. Examples of mitigation include compensatory storage, soil erosion and sedimentation control, and channel restoration.

NGVD: National geodetic vertical datum of 1929. Reference surface set by the national geodetic survey deduced from a continental adjustment of all existing adjustments in 1929.

NATURAL: When used in reference to channels means those channels formed by the existing surface topography of the earth prior to changes made by man. 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 substantial alteration of the course or cross section of the stream caused by filling or excavating. A modified channel may regain some natural characteristics over time as the channel meanders and vegetation is reestablished. Similarly, a modified channel may be restored to more natural conditions by man through regrading and revegetation.

ORDINARY HIGH WATER MARK (OHWM): 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.

PUBLIC FLOOD CONTROL PROJECT: A flood control project which will be operated and maintained by a public agency to reduce flood damages to existing buildings and structures which includes a hydrologic and hydraulic study of the existing and proposed conditions of the watershed. Nothing in this definition shall preclude the design, engineering, construction or financing, in whole or in part, of a flood control project by persons or parties who are not public agencies.

PUBLICLY NAVIGABLE WATERS: All streams and lakes capable of being navigated by watercraft.

REGISTERED LAND SURVEYOR: A land surveyor registered in the state of Illinois, under the Illinois land surveyors act¹.

REGISTERED PROFESSIONAL ENGINEER: An engineer registered in the state of Illinois, under the Illinois professional engineering act².

REGULATORY FLOODWAY: The channel, including on stream lakes, and that portion of the floodplain adjacent to a stream or watercourse as designated by DNR, which is needed to store and convey the existing and anticipated future of 100-year frequency flood discharge with no more than a one-tenth foot (0.1') increase in stage due to the loss of flood conveyance or storage, and no more than a ten percent (10%) increase in velocities. The regulatory floodways for those parts of unincorporated Kendall and Grundy Counties within the extraterritorial jurisdiction of the village that may be annexed to the village are designated for Aux Sable Creek on the flood insurance rate map prepared by FEMA, for Kendall County, and dated January 8,

2014, and for Grundy County, dated August 2, 2012, and such other amendments or revisions to such study and maps as may be prepared from time to time. The regulatory floodways for those parts of unincorporated Will County that are within the extraterritorial jurisdiction of the village that may be annexed to the village are designated for the DuPage River and the I and M Canal on the flood boundary and floodway map prepared by FEMA and dated September 6, 1995, and such other amendments or revisions to such study and maps as may be prepared from time to time. To locate the regulatory floodway boundary on any site, the regulatory floodway boundary should be scaled off the regulatory floodway map and located on a site plan, using reference marks common to both maps. Where interpretation is needed to determine the exact location of the regulatory floodway boundary, the office of water resources should be contacted for the interpretation.

REPAIR, REMODELING OR MAINTENANCE: Development activities which do not result in any increases in the outside dimensions of a building or any changes to the dimensions of a structure.

REPETITIVE LOSS: Flood related damages sustained by a structure on two (2) separate occasions during a ten (10) year period for which the cost of repairs at the time of each such flood event on the average equals or exceeds twenty five percent (25%) of the market value of the structure before the damage occurred.

RETENTION/DETENTION FACILITY: A retention facility stores stormwater runoff without a gravity release. A detention facility provides for storage of stormwater runoff and controlled release of this runoff during and after a flood or storm.

RIVERINE SFHA: Any SFHA subject to flooding from a river, creek, intermittent stream, ditch, on stream lake system or any other identified channel. This term does not include areas subject to flooding from lakes, ponding areas, areas of sheet flow or other areas not subject to overbank flooding.

RUNOFF: The water derived from melting snow or rain falling on the land surface, flowing over the surface of the ground or collected in channels or conduits.

SEDIMENTATION: The processes that deposit soils, debris and other materials either on other ground surfaces or in bodies of water or watercourses.

SPECIAL FLOOD HAZARD AREA (SFHA): Any base flood area subject to flooding from a river, creek, intermittent stream, ditch or any other identified channel or ponding and shown on a flood hazard boundary map or flood insurance rate map as zone A, AO, A1-30, AE, A99, AH, VO, V30, VE, V, M or E.

STRUCTURE: The results of a manmade change to the land constructed on or below the ground, including the construction, reconstruction or placement of a building or any addition to a building; installing a manufactured home on a site; preparing a site for a manufactured home or installing a travel trailer on a site for more than one hundred eighty (180) days.

SUBSTANTIAL DAMAGE: Damage of any origin sustained by a structure whereby the cumulative percentage of damage during a ten (10) year period equals or exceeds fifty percent (50%) of the market value of the structure before the damage occurred regardless of actual repair work performed. Volunteer labor and materials must be included in this determination.

This term includes "repetitive loss" buildings.

SUBSTANTIAL IMPROVEMENT: Any repair, reconstruction or improvement of a structure, the cost of which equals or exceeds fifty percent (50%) of the market value of the structure, either: a) before the improvement or repair is started, or b) if the structure has been damaged and is being restored, before the damage occurred. For the purposes of this definition "substantial improvement" is considered to occur when the first alteration of any wall, ceiling, floor or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure. The term does not, however, include either: a) any project for improvement of a structure to comply with existing state or local health, sanitary, or safety code specifications which are solely necessary to assure safe living conditions, or b) any alteration of a structure listed on the national register of historic places or a state inventory of historic places.

TRANSITION SECTION: Reaches of the stream or floodway where water flows from a narrow cross section to a wide cross section or vice versa. (Ord. 1995-28, 8-8-1995; amd. Ord. 1997-03, 1-28-1997; Ord. 2008-34, 12-17-2008; Ord. 2012-19, 7-24-2012; Ord. 2013-29, 11-26-2013)

4-7-3: HOW TO USE THIS CHAPTER:

The building officer and inspector shall be responsible for fulfilling all of the duties listed in section [4-7-4](#) of this chapter.

To fulfill those duties, the building officer and inspector first should use the criteria listed in section [4-7-5](#), "Base Flood Elevation", of this chapter to determine whether the development site is located within a floodplain. Once it has been determined that the site is located within a floodplain, the building officer and inspector must determine whether the development site is within a flood fringe, a regulatory floodway or within an SFHA or floodplain on which no floodway has been identified. If the site is within a flood fringe, the building officer and inspector shall require that the minimum requirements of section [4-7-6](#) of this chapter be met. If the site is within a floodway, the building officer and inspector shall require that the minimum requirements of section [4-7-7](#) of this chapter be met. If the site is located within an SFHA or floodplain for which no detailed study has been completed and approved, the building officer and inspector shall require that the minimum requirements of section [4-7-8](#) of this chapter be met.

In addition, the general requirements of section [4-7-9](#) of this chapter shall be met for all developments meeting the requirements of section [4-7-6](#), [4-7-7](#), or [4-7-8](#) of this chapter. The building officer and inspector shall assure that all subdivision proposals shall meet the requirements of section [4-7-10](#) of this chapter.

If a variance is to be granted for a proposal, the building officer and inspector shall review the requirements of section [4-7-11](#) of this chapter to make sure they are met. In addition, the building officer and inspector shall complete all notification requirements.

In order to assure that property owners obtain permits as required in this chapter, the building officer and inspector may take any and all actions as outlined in section [4-7-13](#) of this chapter. (Ord. 1995-28, 8-8-1995)

4-7-4: DUTIES OF THE ENFORCEMENT OFFICIAL(S):

The building officer and inspector shall be responsible for the general administration and enforcement of this chapter which shall include the following:

- A. **Determining The Floodplain Designation:** Check all new development sites to determine whether they are in a special flood hazard area (SFHA). If they are in an SFHA, determine whether they are in a floodway, flood fringe or a floodplain on which a detailed study has not been conducted which drains more than one square mile.
- B. **Professional Engineer Review:** If the development site is within a floodway or in a floodplain on which a detailed study has not been conducted which drains more than one square mile then the permit shall be referred to a registered professional engineer (PE) under the employ or contract of the village for review to ensure that the development meets the requirements of section [4-7-7](#) of this chapter. In the case of an appropriate use, the PE shall state in writing that the development meets the requirements of section [4-7-7](#) of this chapter.
- C. **Dam Safety Requirements:** Ensure that a DNR dam safety permit has been issued or a letter indicating no dam safety permit is required, if the proposed development activity includes construction of a "dam" as defined in section [4-7-2](#) of this chapter. Regulated dams may include weirs, restrictive culverts or impoundment structures.
- D. **Other Permit Requirements:** Ensure that any and all required federal, state and local permits are received prior to the issuance of a floodplain development permit.
- E. **Plan Review And Permit Issuances:** Ensure that all development activities within the SFHAs of the jurisdiction of the village meet the requirements of this chapter and issue a floodplain development permit in accordance with the provisions of this chapter and other regulations of this community when the development meets the conditions of this chapter.
- F. **Inspection Review:** Inspect all development projects before, during and after construction to assure proper elevation of the structure and to ensure they comply with the provisions of this chapter.
- G. **Elevation And Floodproofing Certificates:** Maintain in the permit files an elevation certificate certifying the elevation of the lowest floor (including basement) of a residential or nonresidential building or the elevation to which a nonresidential building has been

floodproofed, using a floodproofing certificate, for all buildings subject to section [4-7-9](#) of this chapter for public inspection and provide copies of same.

- H. Records For Public Inspection: Maintain for public inspection and furnish upon request base flood data, SFHA and regulatory floodway maps, copies of federal or state permit documents, variance documentation, conditional letter of map revision, letter of map revision, letter of map amendment and "as built" elevation and floodproofing or elevation and floodproofing certificates for all buildings constructed subject to this chapter.
- I. State Permits: Ensure that construction authorization has been granted by the Illinois office of water resources, for all development projects subject to sections [4-7-7](#) and [4-7-8](#) of this chapter, unless enforcement responsibility has been delegated to the village. Upon acceptance of this chapter by DNR and FEMA, responsibility is hereby delegated to the village as per 92 Illinois administrative code 708 for construction in the regulatory floodway and floodplain when floodways have not been defined in sections [4-7-7](#) and [4-7-8](#) of this chapter. However, the following review approvals are not delegated to the village and shall require review or permits from DNR:
1. Organizations which are exempt from this chapter, as per the Illinois Compiled Statutes.
 2. Department of transportation projects, "dams" or impoundment "structures" as defined in section [4-7-2](#) of this chapter and all other state, federal or local unit of government projects, including projects of the village and county, except for those projects meeting the requirements of subsection [4-7-7B6](#) of this chapter.
 3. An engineer's determination that an existing bridge or culvert crossing is not a source of flood damage and the analysis indicating the proposed flood profile, per subsection [4-7-7B2e](#) of this chapter.
 4. An engineer's analysis of the flood profile due to subsection [4-7-7B2d](#) of this chapter.
 5. Alternative transition sections and hydraulically equivalent compensatory storage as indicated in subsections [4-7-7B2a](#), [B2b](#) and [B2h](#) of this chapter.
 6. Permit issuance of structures within or over publicly navigable rivers, lakes and streams.
 7. Any changes in the base flood elevation or floodway locations.
 8. Base flood elevation determinations where none now exist.
- J. Cooperation With Other Agencies: Cooperate with state and federal floodplain management agencies to improve base flood or 100-year frequency flood and floodway data and to improve the administration of this chapter. Submit data to DNR and the federal emergency management agency for proposed revisions of a regulatory map. Submit reports as required for the national flood insurance program. Notify the federal emergency management agency of any proposed amendments to this chapter.

- K. Promulgate Regulations: Promulgate rules and regulations as necessary to administer and enforce the provisions of this chapter, subject however to the review and approval of DNR and FEMA for any chapter changes. (Ord. 1995-28, 8-8-1995)

4-7-5: BASE FLOOD ELEVATION:

This chapter's protection standard is based on the flood insurance study for the village. If a base flood elevation or 100-year frequency flood elevation is not available for a particular site, then the protection standard shall be according to the best existing data available in federal, state or other sources. When a party disagrees with the best available data, he/she may finance the detailed engineering study needed to replace existing data with better data and submit it to DNR and FEMA. (Ord. 2012-34, 12-18-2012)

- A. The base flood or 100-year frequency flood elevation for the SFHAs of the DuPage River shall be as delineated on the 100-year flood profiles in the flood insurance study of the village prepared by FEMA and dated September 6, 1995, and such amendments to such study and maps as may be prepared from time to time. (Ord. 1995-28, 8-8-1995)
- B. The base flood or 100-year frequency flood elevation for the SFHAs of those parts of unincorporated Will County that are within the extraterritorial jurisdiction of the village or that may be annexed into the village shall be delineated on the 100-year flood profiles in the flood insurance study of Will County prepared by FEMA and dated September 6, 1995, and such amendments or revisions to such study and maps as may be prepared from time to time. The base flood or 100-year frequency flood elevation for the SFHAs of those parts of unincorporated Grundy County that are within the extraterritorial jurisdiction of the village or that may be annexed into the village shall be as delineated on the 100-year flood profiles in the flood insurance study of Grundy County prepared by FEMA and dated August 2, 2012, and such amendments or revisions to such study and maps as may be prepared from time to time. The base flood or 100-year frequency flood elevation for the SFHAs of those parts of unincorporated Kendall County that are within the extraterritorial jurisdiction of the village or that may be annexed into the village shall be as delineated on the 100-year flood profiles in the flood insurance study of Kendall County prepared by FEMA and dated January 8, 2014, and such other amendments or revisions to such study and maps as may be prepared from time to time. (Ord. 2013-29, 11-26-2013)
- C. The base flood or 100-year frequency flood elevation for each SFHA delineated as an "AH zone" or "AO zone" shall be that elevation (or depth) delineated on the flood insurance rate map of the village. (Ord. 1995-28, 8-8-1995)

- D. The base flood or 100-year frequency flood elevation for each of the remaining SFHAs delineated as an "A zone" on the flood insurance rate map of the village shall be according to the best existing data available from federal, state or other sources. When no base flood or 100-year frequency flood elevation exists, the base flood or 100-year frequency flood elevation for a riverine SFHA shall be determined from a backwater model approved by the village engineer. The flood flows used in the hydraulic models shall be obtained from a hydrologic model, such as HEC-I, TR-20, or HIP, or by techniques presented in various publications prepared by the United States geological survey for estimating peak flood discharges. Flood flows should be based on anticipated future land use conditions in the watershed as determined from adopted local and regional land use plans. Along any watercourses draining more than one square mile, the above analyses shall be submitted to DNR for approval. (Ord. 2012-19, 7-24-2012)

4-7-6: OCCUPATION AND USE OF FLOOD FRINGE AREAS:

Development in and/or filling of the flood fringe will be permitted if protection is provided against the base flood or 100-year frequency flood by proper elevation and compensatory storage and other provisions of this chapter are met. No use will be permitted which adversely affects the capacity of drainage facilities or systems. Developments located within the flood fringe shall meet the requirements of this section, along with the requirements of section [4-7-9](#) of this chapter.

- A. Development Permit: No person, firm, corporation or governmental body not exempted by state law shall commence any development in the SFHA without first obtaining a development permit from the building officer and inspector.
1. Application for a development permit shall be made on a form provided by the building officer and inspector. The application shall be accompanied by drawings of the site, drawn to scale, showing property line dimensions and legal description for the property, and sealed by a licensed engineer, architect or land surveyor; existing grade elevations in mean sea level (1929 adjustment) datum of NGVD and all changes in grade resulting from excavation or filling; the location and dimensions of buildings and additions to buildings. For all proposed buildings, the elevation of the lowest floor (including basement) and lowest adjacent grade shall be shown on the submitted plans and the development will be subject to the requirements of section [4-7-9](#) of this chapter.
 2. Upon receipt of a development permit application, the building officer and inspector shall compare the elevation of the site to the base flood or 100-year frequency flood elevation. Any development located on land that can be shown to have been higher than the base flood elevation as of the sites first flood insurance rate map identification is not in the SFHA and, therefore, not subject to the requirements of this chapter. The building officer and inspector shall maintain documentation of the existing ground elevation at the development site and certification that this ground elevation existed prior to the date of the site's first flood insurance rate map identification.

3. A soil erosion and sedimentation control plan for disturbed areas shall be submitted. This plan shall include a description of the sequence of grading activities and the temporary sediment and erosion control measures to be implemented to mitigate their effects. This plan shall also include a description of final stabilization and revegetation measures and the identification of a responsible party to ensure postconstruction maintenance.
4. The building officer and inspector shall be responsible for obtaining from the applicant, copies of all other local, state and federal permits, approvals or permit not required letters that may be required for this type of activity. The building officer and inspector shall not issue a permit unless all other local, state and federal permits have been obtained.

B. Preventing Increased Damages: No development in the flood fringe shall create a threat to public health and safety.

1. Elevation Of Site: If fill is being used to elevate the site above the base flood or 100-year frequency flood elevation, the applicant shall submit sufficient data and obtain a letter of map revision (LOMR) from FEMA for the purpose of removing the site from the floodplain.
2. Compensatory Storage: Whenever any portion of a floodplain is authorized for use, the volume of space which will be occupied by the authorized fill or structure below the base flood or 100-year frequency flood elevation shall be compensated for and balanced by a hydraulically equivalent volume of excavation taken from below the base flood or 100-year frequency flood elevation. The excavation volume shall be at least equal to one and five-tenths (1.5) times the volume of storage lost due to the fill or structure. In the case of streams and watercourses, such excavation shall be made opposite or adjacent to the areas so filled or occupied. All floodplain storage lost below the existing 10-year flood elevation shall be replaced below the proposed 10-year flood elevation. All flood plain storage lost above the existing 10-year flood elevation shall be replaced above the proposed 10-year flood elevation. All such excavations shall be constructed to drain freely and openly to the watercourse. (Ord. 1995-28, 8-8-1995)

4-7-7: OCCUPATION AND USE OF IDENTIFIED FLOODWAYS:

This Section applies to proposed development, redevelopment, site modification or building modification within a regulatory floodway. The regulatory floodway for DuPage River shall be as delineated on the regulatory floodway maps designated by DNR and referenced in Section [4-7-2](#) of this Chapter. Only those uses and structures will be permitted which meet the criteria in this Section. All floodway modifications shall be the minimum necessary to accomplish the purpose of the project. The development shall also meet the requirements of Section [4-7-9](#) of this Chapter.

- A. Development Permit: No person, firm, corporation, or governmental body not exempted by State law shall commence any development in a floodway without first obtaining a development permit from the Building Officer and Inspector.

1. Application for a development permit shall be made on a form provided by the Building Officer and Inspector. The application shall include the following information:
 - a. Name and address of applicant;
 - b. Site location (including legal description) of the property, drawn to scale, on the Regulatory Floodway Map, indicating whether it is proposed to be in an incorporated or unincorporated area;
 - c. Name of stream or body of water affected;
 - d. Description of proposed activity;
 - e. Statement of purpose of proposed activity;
 - f. Anticipated dates of initiation and completion of activity;
 - g. Name and mailing address of the owner of the subject property if different from the applicant;
 - h. Signature of applicant or the applicant's agent;
 - i. If the applicant is a corporation, the president or other authorized officer shall sign the application form;
 - j. If the applicant is a partnership, each partner shall sign the application form; and
 - k. If the applicant is a land trust, the trust officer shall sign the name of the trustee by him as trust officer. A disclosure affidavit shall be filed with the application, identifying each beneficiary of the trust by name and address and defining the respective interest therein.
- l. Plans of the proposed activity shall be provided which include as a minimum:
 - (1) A vicinity map showing the site of the activity, name of the waterway, boundary lines, names of roads in the vicinity of the site, graphic or numerical scale, and north arrow;
 - (2) A plan view of the project and engineering study reach showing existing and proposed conditions including principal dimensions of the structure or work, elevations in mean sea level (1929 adjustment) datum of NGVD, adjacent property lines and ownership, drainage and flood control easements, location of any channels and any existing or future access roads, distance between proposed activity and navigation channel (when the proposed construction is near a commercially navigable body of water), regulatory floodway limit, flood plain limit, specifications and dimensions of any proposed channel modifications, location and orientation of cross sections, north arrow, and a graphic or numerical scale.
 - (3) Cross section views of the project and engineering study reach showing existing and proposed conditions including principal dimensions of the work as shown in plan view, existing and proposed elevations, normal water elevation, 10-year frequency flood elevation, 100-year frequency flood elevation, and graphic or numerical scales (horizontal and vertical).

- (4) A soil erosion and sedimentation control plan for disturbed areas. This plan shall include a description of the sequence of grading activities and the temporary sediment and erosion control measures to be implemented to mitigate their effects. This plan shall also include a description of final stabilization and revegetation measures, and the identification of a responsible party to ensure post-construction maintenance.
 - (5) A copy of the Regulatory Floodway Map, marked to reflect any proposed change in the regulatory floodway location.
- m. Any and all other local, State and Federal permits or approval letters that may be required for this type of development.
 - n. Engineering calculations and supporting data shall be submitted showing that the proposed work will meet the permit criteria of subsection [4-7-7B](#) of this Chapter.
 - o. If the regulatory floodway delineation, base flood or 100-year frequency flood elevation will change due to the proposed project, the application will not be considered complete until the DNR has indicated conditional approval of the Regulatory Floodway Map change. No structures may be built until a letter of map revision has been approved by FEMA.
 - p. The application for a structure shall be accompanied by drawings of the site, drawn to scale showing property line dimensions and existing ground elevations and all changes in grade resulting from any proposed excavation or filling, and flood plain and floodway limits; sealed by a registered professional engineer, licensed architect or registered land surveyor; the location and dimensions of all buildings and additions to buildings; and the elevation of the lowest floor (including basement) of all proposed buildings subject to the requirements of Section [4-7-9](#) of this Chapter.
 - q. If the proposed project involves a channel modification, the applicant shall submit the following information:
 - (1) A discussion of the purpose of and need for the proposed work;
 - (2) A discussion of the feasibility of using alternative locations or methods to accomplish the purpose of the proposed work;
 - (3) An analysis of the extent and permanence of the impacts the project would have on the physical and biological conditions of the body of water affected;
 - (4) An analysis of the extent and permanence of the impacts each feasible alternative identified in subsection B2d(1) of this Section would have on the physical and biological conditions of the body of water affected; and
 - (5) An analysis of the impacts of the proposed project, considering cumulative effects on the physical and biological conditions of the body of water affected.
2. The Building Officer and Inspector shall be responsible for obtaining from the applicant copies of all other local, State and Federal permits and approvals that may be required for this type of activity. The Building Officer and Inspector shall not issue the development permit unless all required Federal and State permits have been obtained. A registered

professional engineer, under the employ or contract of the Village shall review and approve applications reviewed under this Section.

B. Preventing Increased Damages And A List Of Appropriate Uses:

1. Floodway Development: The only development in a floodway which will be allowed are appropriate uses, which will not cause a rise in the base flood elevation, and which will not create a damaging or potentially damaging increase in flood heights or velocity or be a threat to public health and safety and welfare or impair the natural hydrologic and hydraulic functions of the floodway or channel, or permanently impair existing water quality or aquatic habitat. Construction impacts shall be minimized by appropriate mitigation methods as called for in this Chapter. Only those appropriate uses listed in 92 Illinois Administrative Code 708 will be allowed. Appropriate uses do not include the construction or placement of any new structures, fill, building additions, buildings on stilts, excavation or channel modifications done to accommodate otherwise nonappropriate uses in the floodway, fencing (including landscaping or planting designed to act as a fence) and storage of materials except as specifically defined above as an appropriate use. The approved appropriate uses are as follows:
 - a. Flood control structures, dikes, dams and other public works or private improvements relating to the control of drainage, flooding, erosion or water quality or habitat for fish and wildlife;
 - b. Structures or facilities relating to the use of, or requiring access to, the water or shoreline, such as pumping and treatment facilities and facilities and improvements related to recreational boating, commercial shipping and other functionally water dependent uses;
 - c. Storm and sanitary sewer outfalls;
 - d. Underground and overhead utilities;
 - e. Recreational facilities such as playing fields and trail systems including any related fencing (at least 50 percent open when viewed from any one direction) built parallel to the direction of flood flows and including open air pavilions;
 - f. Detached garages, storage sheds or other nonhabitable accessory structures without toilet facilities to existing buildings that will not block flood flows, nor reduce floodway storage;
 - g. Bridges, culverts, roadways, sidewalks, railways, runways and taxiways and any modification thereto;
 - h. Parking lots and any modifications thereto (where depth of flooding at the 100-year frequency flood event will not exceed 1.0 foot) and aircraft parking aprons built at or below ground elevation;
 - i. Regulatory floodway regrading, without fill, to create a positive nonerosive slope toward a watercourse;

- j. Floodproofing activities to protect previously existing lawful structures including the construction of watertight window wells, elevating structures or construction of floodwalls around residential, commercial or industrial principal structures where the outside toe of the floodwall shall be no more than ten feet (10') away from the exterior wall of the existing structure, and which are not considered substantial improvements to the structure;
- k. In the case of damaged or replacement buildings, reconstruction or repairs made to a building that are valued at less than fifty percent (50%) of the market value of the building before it was damaged or replaced and, which do not increase the outside dimensions of the building;
- l. Additions to existing buildings above the BFE³ that do not increase the building's footprint and are valued at less than fifty percent (50%) of the market value of the building.
2. Appropriate Use: Within the regulatory floodway, as identified on the regulatory floodway maps designated by DNR, the construction of an appropriate use will be considered permissible provided that the proposed project meets the following engineering and mitigation criteria and is so stated in writing with supporting plans, calculations and data by a registered professional engineer and provided that any structure meets the protection requirements of Section [4-7-9](#) of this Chapter:
- a. Preservation Of Flood Conveyance, So As Not To Increase Flood Stages Upstream: For appropriate uses other than bridge or culvert crossings, on-stream structures or dams, all effective regulatory floodway conveyance lost due to the project will be replaced for all flood events up to and including the 100-year frequency flood. In calculating effective regulatory floodway conveyance, the following factors shall be taken into consideration:
- (1) Regulatory floodway conveyance,
- $$K' = \frac{1.486}{n} AR^{2/3}$$
- where "n" is Manning's roughness factor, "A" is the effective area of the cross section and "R" is the ratio of the area to the wetted perimeter. (See Open Channel Hydraulics, Ven Te Chow, 1959, McGraw-Hill Book Company, New York.)
- (2) The same Manning's "n" value shall be used for both existing and proposed conditions unless a recorded maintenance agreement with a Federal, State or local unit of government can assure the proposed conditions will be maintained or the land cover is changing from a vegetative to a nonvegetative land cover.
- (3) Transition sections shall be provided and used in calculations of effective regulatory floodway conveyance. The following expansion and contraction ratios shall be used unless an applicant's engineer can prove to DNR through engineering calculations or model tests that more abrupt transitions may be used with the same efficiency:
- (A) When water is flowing from a narrow section to a wider section, the water should be assumed to expand no faster than at a rate of one foot (1') horizontal for every

four feet (4') of the flooded stream's length.

(B) When water is flowing from a wide section to a narrow section, the water should be assumed to contract no faster than at a rate of one foot (1') horizontal for every one foot (1') of the flooded stream's length.

(C) When expanding or contracting flows in a vertical direction, a minimum of one foot (1') vertical transition for every ten feet (10') of stream length shall be used.

(D) Transition sections shall be provided between cross sections with rapid expansions and contractions and when meeting the regulatory floodway delineation on adjacent properties.

(E) All cross sections used in the calculations shall be located perpendicular to flood flows.

- b. Preservation Of Floodway Storage So As Not To Increase Downstream Flooding: Compensatory storage shall be provided for any regulatory floodway storage lost due to the proposed work from the volume of fill or structures placed and the impact of any related flood control projects. Compensatory storage for fill or structures shall be equal to at least one and five-tenths (1.5) times the volume of flood plain storage lost. Artificially created storage lost due to a reduction in head loss behind a bridge shall not be required to be replaced. The compensatory regulatory floodway storage shall be placed between the proposed normal water elevation and the proposed 100-year flood elevation. All regulatory floodway storage lost below the existing 10-year flood elevation shall be replaced below the existing 10-year flood elevation. All regulatory flood elevation storage lost above the existing 10-year flood elevation shall be replaced above the 10-year flood elevation. All such excavations shall be constructed to drain freely and openly to the watercourse. If the compensatory storage will not be placed at the location of the proposed construction, the applicant's engineer shall demonstrate to DNR through a determination of flood discharges and water surface elevations that the compensatory storage is hydraulically equivalent. Finally, there shall be no reduction in floodway surface area as a result of a floodway modification, unless such modification is necessary to reduce flooding at existing structure.
- c. Preservation Of Floodway Velocities So As Not To Increase Stream Erosion Or Flood Heights: For all appropriate uses, except bridges or culverts or on-stream structures, the proposed work will not result in an increase in the average channel or regulatory floodway velocities or stage, for all flood events up to and including the 100-year frequency event. However, in the case of bridges or culverts or on-stream structures built for the purpose of backing up water in the stream during normal or flood flows, velocities may be increased at the structure site if scour, erosion and sedimentation will be avoided by the use of rip-rap or other design measures.
- d. Construction Of New Bridges Or Culvert Crossings And Roadway Approaches: The proposed structure shall not result in an increase of upstream flood stages greater than one-tenth foot (0.1') when compared to the existing conditions for all flood events up to and including the 100-year frequency event, or the upstream flood stage increases will be contained within the channel banks (or within existing vertical extensions of the channel banks) such as within the design protection grade of existing levees or flood walls or within recorded flood easements. If the proposed construction will increase

upstream flood stages greater than one-tenth foot (0.1'), the developer must contact DNR, Dam Safety Section for a dam safety permit or waiver.

- (1) The engineering analysis of upstream flood stages must be calculated using the flood study flows and corresponding flood elevations for tailwater conditions for the flood study specified in Section [4-7-5](#) of this Chapter. Culverts must be analyzed using the U.S. DOT/FHWA Hydraulic Chart for the Selection of Highway Culverts. Bridges must be analyzed using the U.S. DOT/Federal Highway Administration Hydraulics of Bridge Waterways calculation procedures.
 - (2) Lost floodway storage must be compensated for per subsection B2b of this Section.
 - (3) Velocity increases must be mitigated per subsection B2c above.
 - (4) If the crossing is proposed over a public water that is used for recreational or commercial navigation, a Department of Transportation permit must be received.
 - (5) The hydraulic analysis for the backwater caused by the bridge showing the existing condition and proposed regulatory profile must be submitted to DNR for concurrence that a CLOMR is not required by subsection B of this Section.
 - (6) All excavations for the construction of the crossing shall be designed per subsection B2h of this Section.
- e. Reconstruction Or Modification Of Existing Bridges, Culverts And Approach Roads:
- (1) The bridge or culvert and roadway approach reconstruction or modification shall be constructed within no more than one-tenth foot (0.1') increase in backwater over the existing flood profile for all flood frequencies up to and including the 100-year event, if the existing structure is not a source of flood damage.
 - (2) If the existing bridge or culvert and roadway approach is a source of flood damage to buildings or structures in the upstream flood plain, the applicant's engineer shall evaluate the feasibility of redesigning the structure to reduce the existing backwater, taking into consideration the effects on flood stages on upstream and downstream properties.
 - (3) The determination as to whether or not the existing crossing is a source of flood damage and should be redesigned must be prepared in accordance with the Department of Transportation Rules 92 Illinois Administrative Code 708 (Floodway Construction in Northeastern Illinois) and submitted to the Office of Water Resources for review and concurrence before a permit is issued.
- f. On-Stream Structures Built For The Purpose Of Backing Up Water: Any increase in upstream flood stages greater than zero foot (0.0') when compared to the existing conditions, for all flood events up to and including the 100-year frequency event shall be contained within the channel banks (or within existing vertical extensions of the channel banks) such as within the design protection grade of existing levees or flood walls or within recorded flood easements. A permit or letter indicating a permit is not required must be obtained from DNR, Dam Safety Section for a dam safety permit or waiver for any structure built for the purpose of backing up water in the stream during normal or flood flow. All "dams" and impoundment "structures" as defined in Section [4-](#)

7-2 shall meet the permitting requirements of 92 Illinois Administrative Code 702 (Construction and Maintenance of Dams). If the proposed activity involves a modification of the channel or floodway to accommodate an impoundment, it shall be demonstrated that:

- (1) The impoundment is determined to be in the public interest by providing flood control, public recreation or regional storm water detention.
 - (2) The impoundment will not prevent the migration of indigenous fish species, which require access to upstream areas as part of their life cycle, such as for spawning.
 - (3) The impoundment will not cause or contribute to degraded water quality or habitat conditions. Impoundment design should include gradual bank slopes, appropriate bank stabilization measures and a presedimentation basin.
 - (4) A nonpoint 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. If there is more than one municipality in the upstream watershed, the municipality in which the impoundment is constructed should coordinate with upstream municipalities to ensure comprehensive watershed control.
 - (5) The project otherwise complies with the requirements of this Section.
- g. Floodproofing Of Existing Habitable, Residential And Commercial Structures: If construction is required beyond the outside dimensions of the existing building, the outside perimeter of the floodproofing construction shall be placed no further than ten feet (10') from the outside of the building. Compensation of lost storage and conveyance will not be required for floodproofing activities.
- h. Excavation In The Floodway: When excavation is proposed in the design of bridges and culvert openings, including the modifications to and replacement of existing bridge and culvert structures, or to compensate for lost conveyance for other appropriate uses, transition sections shall be provided for the excavation. The following expansion and contraction ratios shall be used unless an applicant's engineer can prove to DNR through engineering calculations or model tests that more abrupt transitions may be used with the same efficiency:
- (1) When water is flowing from a narrow section to a wider section, the water should be assumed to expand no faster than at a rate of one foot (1') horizontal for every four feet (4') of the flooded stream's length;
 - (2) When water is flowing from a wide section to a narrow section, the water should be assumed to contract no faster than at a rate of one foot (1') horizontal for every one foot (1') of the flooded stream's length; and
 - (3) When expanding or contracting flows in a vertical direction, a minimum of one foot (1') vertical transition for every ten feet (10') of stream length shall be used.
 - (4) Erosion/scour protection shall be provided inland upstream and downstream of the transition sections.

- i. If the proposed activity involves a channel modification, it shall be demonstrated that:
- (1) There are no practicable alternatives to the activity which would accomplish its purpose with less impact to the natural conditions of the body of water affected. Possible alternatives include levees, bank stabilization, floodproofing of existing structures, removal of structures from the flood plain, clearing the channel, high flow channel, or the establishment of a stream side buffer strip or green belt. Channel modification is acceptable if the purpose is to restore natural conditions and improve water quality and fish and wildlife habitat.
 - (2) Water quality, habitat and other natural functions would be significantly improved by the modification and no significant habitat area may be destroyed, or the impacts are offset by the replacement of an equivalent degree of natural resource values.
 - (3) The activity has been planned and designed and will be constructed in a way which will minimize its adverse impacts on the natural conditions of the body of water affected, consistent with the following criteria:
 - (A) The physical characteristics of the modified channel shall match as closely as possible those of the existing channel in length, cross-section, slope and sinuosity. If the existing channel has been previously modified, restoration of more natural physical conditions should be incorporated into channel modification design, where practical.
 - (B) Hydraulically effective transitions shall be provided at both the upstream and downstream ends of the project, designed such that they will prevent erosion.
 - (C) One-sided construction of a channel shall be used when feasible. Removal of streamside (riparian) vegetation should be limited to one side of the channel, where possible, to preserve the shading and stabilization effects of the vegetation.
 - (D) Clearing of vegetation shall be limited to that which is essential for construction of the channel.
 - (E) Channel banks shall be constructed with a side slope no steeper than three to one (3:1) horizontal to vertical, wherever practicable. Natural vegetation and gradual side slopes are the preferred methods for bank stabilization. Where high velocities or sharp bends necessitate the use of alternative stabilization measures, natural rock or rip-rap are preferred materials. Artificial materials such as concrete, gabions or construction rubble should be avoided unless there are no practicable alternatives.
 - (F) All disturbed areas associated with the modification shall be seeded or otherwise stabilized as soon as possible upon completion of construction. Erosion blanket or an equivalent material shall be required to stabilize disturbed channel banks prior to establishment of the vegetative cover.
 - (G) If the existing channel contains considerable bottom diversity such as deep pools, riffles and other similar features, such features shall be provided in the new channel. Spawning and nesting areas and flow characteristics compatible with fish habitat shall also be established, where appropriate.

- (H) A sediment basin shall be installed at the downstream end of the modification to reduce sedimentation and degradation of downstream water quality.
- (I) New or relocated channels should be built in the dry and all items of construction, including vegetation, should be completed prior to diversion of water into the new channel.
- (J) There shall be no increases in stage or velocity as the channel enters or leaves the project site for any frequency flood unless necessitated by a public flood control project or unless such an increase is justified as part of a habitat improvement or erosion control project.
- (K) Unless the modification is for a public flood control project, there shall be no reduction in the volume of floodwater storage outside the floodway as a result of the modification; and
- (4) The project otherwise complies with the requirements of Section [4-7-7](#).
- j. Seeding And Stabilization Plan: For all activities located in a floodway, a seeding and stabilization plan shall be submitted by the applicant.
- k. Soil Erosion And Sedimentation Measures: For all activities in the floodway, including grading, filling and excavation, in which there is potential for erosion of exposed soil, soil erosion and sedimentation control measures shall be employed consistent with the following criteria:
- (1) The construction areas shall be minimized to preserve the maximum vegetation possible. Construction shall be scheduled to minimize 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 the initiation of improvements.
 - (2) Temporary and/or permanent soil stabilization shall be applied to denuded areas as soon as possible. As a minimum, soil stabilization shall be provided within fifteen (15) days after final grade is reached on any portion of the site, and within fifteen (15) days to denuded areas which may not be at final grade but will remain undisturbed for longer than sixty (60) days.
 - (3) Sedimentation control measures shall be installed before any significant grading or filling is initiated on the site to prevent the movement of eroded sediments off site or into the channel. Potential sediment control devices include filter fences, straw bale, fences, check dams, diversion ditches and sediment basins.
 - (4) A vegetated buffer strip of at least twenty five feet (25') in width shall be preserved and/or re-established, where possible, along existing channels (see subsection B2p of this Section). Construction vehicle use of channels shall be minimized. Temporary stream crossings shall be constructed, where necessary, to minimize erosion. Necessary construction in or along channels shall be restabilized immediately.
 - (5) Soil erosion and sedimentation control measures shall be designed and implemented consistent with Procedures and Standards for Urban Soil Erosion and Sedimentation Control in Illinois (1988), also known as the Green Book and Standards and Specifications for Soil Erosion and Sediment Control (IEPA, 1987).

- I. Public Flood Control Projects: For public flood control projects, the permitting requirements of this Section will be considered met if the applicant can demonstrate to DNR through hydraulic and hydrologic calculations that the proposed project will not singularly or cumulatively result in increased flood heights outside the project right of way or easements for all flood events up to and including the 100-year frequency event.
- m. General Criteria For Analysis Of Flood Elevations:
- (1) The flood profiles, flows and floodway data in the regulatory floodway study, referenced in Section [4-7-5](#) must be used for analysis of the base conditions. If the study data appears to be in error or conditions have changed, DNR shall be contacted for approval and concurrence on the appropriate base conditions data to use.
 - (2) If the 100-year regulatory floodway elevation at the site of the proposed construction is affected by backwater from a downstream receiving stream with a larger drainage area, the proposed construction shall be shown to meet the requirements of this Section for the 100-year frequency flood elevations of the regulatory floodway conditions and conditions with the receiving stream at normal water elevations.
 - (3) If the applicant learns from DNR, local governments or a private owner that a downstream restrictive bridge or culvert is scheduled to be removed, reconstructed, modified or a regional flood control project is scheduled to be built, removed, constructed or modified within the next five (5) years, the proposed construction shall be analyzed and shown to meet the requirements of this Section for both the existing conditions and the expected flood profile conditions when the bridge, culvert or flood control project is built.
- n. Conditional Letter Of Map Revision: If the appropriate use would result in a change in the regulatory floodway location or the 100-year frequency flood elevation, the applicant shall submit to DNR and to FEMA all the information, calculations and documents necessary to be issued a conditional regulatory floodway map revision and receive from DNR a conditional approval of the regulatory floodway change before a permit is issued. However, the final regulatory floodway map will not be changed by DNR until as-built plans or record drawings are submitted and accepted by FEMA and DNR. In the case of nongovernment projects, the Municipality in incorporated areas and the County in unincorporated areas shall concur with the proposed conditional regulatory floodway map revision before DNR approval can be given. No filling, grading, dredging or excavating shall take place until a conditional approval is issued. No further development activities shall take place until a final letter of map revision (LOMR) is issued by FEMA and DNR.
- o. Professional Engineer's Supervision: All engineering analyses shall be performed by or under the supervision of a registered professional engineer.
- p. For all activities in the floodway involving construction within twenty five feet (25') of the channel, the following criteria shall be met:
- (1) A natural vegetation buffer strip shall be preserved within at least twenty five feet (25') of the ordinary high water mark of the channel.

- (2) Where it is impossible to protect this buffer strip during the construction of an appropriate use, a vegetated buffer strip shall be established upon completion of construction.
- (3) The use of native riparian vegetation is preferred in the buffer strip. Access through this buffer strip shall be provided, when necessary, for stream maintenance purposes.

After receipt of conditional approval of the regulatory floodway change and issuance of a permit and a conditional letter of map revision, construction as necessary to change the regulatory floodway designation may proceed but no buildings or structures or other construction that is not an appropriate use may be placed in that area until the Regulatory Floodway Map is changed and a final letter of map revision is received. The Regulatory Floodway Map will be revised upon acceptance and concurrence by DNR and FEMA of the "as built" plans.

3. State Review: For those projects listed below located in a regulatory floodway, the following criteria shall be submitted to DNR for their review and concurrence prior to the issuance of a permit:
 - a. The DNR will review an engineer's analysis of the flood profile due to a proposed bridge pursuant to subsection B2d of this Section.
 - b. The DNR will review an engineer's determination that an existing bridge or culvert crossing is not a source of flood damage and the analysis indicating the proposed flood profile, pursuant to subsection B2e of this Section.
 - c. The DNR will review alternative transition sections and hydraulically equivalent storage pursuant to subsection B2a, 2b and 2h of this Section.
 - d. The DNR will review and approve prior to the start of construction any Department projects, dams (as defined in Section [4-7-2](#) of this Chapter) and all other State, Federal or local units of government projects, including projects of the Municipality or County.
4. Other Permits: In addition to the other requirements of this Chapter, a development permit for a site located in a floodway shall not be issued unless the applicant first obtains a permit or written documentation that a permit is not required from DNR, issued pursuant to 615 Illinois Compiled Statutes 5/5 et seq. No permit from DNR shall be required if the Office of Water Resources has delegated this responsibility to the Village.
5. Dam Safety Permits: Any work involving the construction, modification or removal of a "dam" as defined in Section [4-7-2](#) of this Chapter per 92 Illinois Administrative Code 702 (Rules for Construction of Dams) shall obtain an Illinois Office of Water Resources dam safety permit prior to the start of construction of a dam. If the Building Officer and Inspector finds a dam that does not have a DNR permit, the Building Officer and Inspector shall immediately notify the Dam Safety Section of the Office of Water Resources. If the Building Officer and Inspector finds a dam which is believed to be in unsafe condition, the Building Officer and Inspector shall immediately notify the owner of the dam, DNR, Dam Safety Section in Springfield and the Illinois Emergency Management Agency (EMA).
6. Activities That Do Not Require A Registered Professional Engineer's Review: The

following activities may be permitted without a registered professional engineer's review. Such activities shall still meet the other requirements of this Chapter, including the mitigation requirements.

a. Underground and overhead utilities that:

- (1) Do not result in any increase in existing ground elevations, or
- (2) Do not require the placement of aboveground structures in the floodway, or
- (3) In the case of underground stream crossings, the top of the pipe or encasement is buried a minimum of three feet (3') below the existing stream bed, and
- (4) In the case of overhead utilities, no supporting towers are placed in the watercourse and are designed in such a fashion as not to catch debris.

b. Storm and sanitary sewer outfalls that:

- (1) Do not extend riverward or lakeward of the existing adjacent natural bank slope, and
- (2) Do not result in an increase in ground elevation, and
- (3) Are designed so as not to cause stream erosion at the outfall location.

c. Construction of sidewalks, athletic fields (excluding fences), properly anchored playground equipment and patios at grade.

d. Construction of shoreline and streambank protection that:

- (1) Does not exceed one thousand feet (1,000') in length.
- (2) Materials are not placed higher than the existing top of bank.
- (3) Materials are placed so as not to reduce the cross-sectional area of the stream channel or bank of the lake.
- (4) Vegetative stabilization and gradual side slopes are the preferred mitigation methods for existing erosion problems. Where high channel velocities, sharp bends or wave action necessitate the use of alternative stabilization measures, natural rock or rip-rap are preferred materials. Artificial materials such as concrete, construction rubble and gabions should be avoided unless there are no practicable alternatives.

e. Temporary stream crossings in which:

- (1) The approach roads will be five-tenths foot (0.5') ($1/2$ foot) or less above natural grade.
- (2) The crossing will allow stream flow to pass without backing up the water above the stream bank vegetation line or above any drainage tile or outfall invert.
- (3) The top of the roadway fill in the channel will be at least two feet (2') below the top of the lowest bank. Any fill in the channel shall be nonerosive material, such as rip-

rap or gravel.

- (4) All disturbed stream banks will be seeded or otherwise stabilized as soon as possible upon installation and again upon removal of construction.
- (5) The access road and temporary crossings will be removed within one year after authorization. (Ord. 1995-28, 8-8-1995)

4-7-8: OCCUPATION AND USE OF SPECIAL FLOOD HAZARD AREAS WHERE FLOODWAYS ARE NOT IDENTIFIED:

A. Development: In SFHA or floodplains (including AO zones, AH zones or unnumbered A zones), where no floodways have been identified and no base flood or 100-year frequency flood elevations have been established by FEMA, and draining more than a square mile, no development shall be permitted unless the cumulative effect of the proposals, when combined with all other existing and anticipated uses and structures, shall not significantly impede or increase the flow and passage of the floodwaters nor significantly increase the base flood or 100-year frequency flood elevation.

1. Development Permit: No person, firm, corporation or governmental body not exempted by state law, shall commence any development in an SFHA or floodplain without first obtaining a development permit from the building officer and inspector. Application for a development permit shall be made on a form provided by the building officer and inspector. The application shall be accompanied by drawings of the site, drawn to scale showing property line dimensions; and existing grade elevations and all changes in grade resulting from excavation or filling, sealed by a licensed engineer, architect or surveyor; the location and dimensions of all buildings and additions to buildings; and the elevation of the lowest floor (including basement) of all proposed buildings subject to the requirements of section [4-7-9](#) of this chapter.

The application for a development permit shall also include the following information:

- a. A detailed description of the proposed activity, its purpose, and intended use;
- b. Site location (including legal description) of the property, drawn to scale, on the regulatory floodway maps, indicating whether it is proposed to be in an incorporated or unincorporated area;
- c. Anticipated dates of initiation and completion of activity.
- d. Plans of the proposed activity shall be provided which include as a minimum:
 - (1) A vicinity map showing the site of the activity, name of the waterway, boundary lines, names of roads in the vicinity of the site, graphic or numerical scale and north arrow;
 - (2) A plan view of the project and engineering study reach showing existing and proposed conditions including principal dimensions of the structure or work,

elevations in mean sea level (1929 adjustment) datum or NGVD, adjacent property lines and ownership, drainage and flood control easements, distance between proposed activity and navigation channel (when the proposed construction is near a commercially navigable body of water), floodplain limit, location and orientation of cross sections, north arrow, and a graphical or numerical scale;

(3) Cross sectional views of the project and engineering study reach showing existing and proposed conditions including principal dimensions of the work as shown in plan view, existing and proposed elevations, normal water elevation, 10-year frequency flood elevation, 100-year frequency flood elevation, and graphical or numerical scales (horizontal and vertical); and

(4) A soil erosion and sedimentation control plan for disturbed areas. This plan shall include a description of the sequence of grading activities and the temporary sediment and erosion control measures to be implemented to mitigate their effects. This plan shall also include a description of final stabilization and revegetation measures, and the identification of a responsible party to ensure postconstruction maintenance.

e. Engineering calculations and supporting data shall be submitted showing that the proposed work will meet the criteria of subsection B of this section.

f. Any and all other local, state and federal permits or approvals that may be required for this type of development. (Ord. 1995-28, 8-8-1995)

2. Calculation And Documentation: Based on the best available existing data according to federal, state or other sources, the building officer and inspector shall compare the elevation of the site to the base flood or 100-year frequency flood elevation. Should no elevation information exist for the site, the developer's engineer shall calculate the elevation according to subsection [4-7-5D](#) of this chapter. Any development located on land that can be shown to have been higher than the base flood elevation as of the site's first flood insurance rate map identification is not in the SFHA and, therefore, not subject to the requirements of this chapter. The building officer and inspector shall maintain documentation of the existing ground elevation at the development site and certification that this ground elevation existed prior to the date of the site's first flood insurance rate map identification. (Ord. 2012-34, 12-18-2012)

3. Permits: The building officer and inspector shall be responsible for obtaining from the applicant copies of all other local, state and federal permits, approvals or permit not required letters that may be required for this type of activity. The building officer and inspector shall not issue the development permit unless all required local, state and federal permits have been obtained.

B. Preventing Increased Damages: No development in the SFHA, where a floodway has not been determined shall create a damaging or potentially damaging increase in flood heights or velocity or threat to public health, safety and welfare or impair the natural hydrologic and hydraulic functions of the floodway or channel or impair existing water quality or aquatic habitat. Construction impacts shall be minimized by appropriate mitigation methods as called for in this chapter.

1. Standards: Within all riverine SFHAs where the floodway has not been determined, the following standards shall apply:
 - a. The developer shall have a registered professional engineer state in writing and show through supporting plans, calculations and data that the project meets the engineering requirements of subsection [4-7-7B2a](#) through B2l of this chapter, for the entire floodplain as calculated under the provisions of subsection [4-7-5D](#) of this chapter. As an alternative, the developer should have an engineering study performed to determine a floodway and submit that engineering study to DNR for acceptance as a regulatory floodway. Upon acceptance of the floodway by the department, the developer shall then demonstrate that the project meets the requirements of section [4-7-7](#) of this chapter for the regulatory floodway. The floodway shall be defined according to the definition of "regulatory floodway" in section [4-7-2](#) of this chapter.
 - b. A development permit shall not be issued unless the applicant first obtains a permit from DNR or written documentation that a permit is not required from DNR.
 - c. No permit from DNR shall be required if the office has delegated permit responsibility to the village per 92 Illinois administrative code, part 708 for regulatory floodways, per DNR statewide permit entitled "Construction In Floodplains With No Designated Floodways In Northeastern Illinois".
 - d. Any work involving the construction, modification or removal of a dam or an on stream "structure" to impound water as defined in section [4-7-2](#) of this chapter, shall obtain an Illinois office of water resources dam safety permit or letter indicating a permit is not required prior to the start of construction of a dam. If the building officer and inspector finds a dam that does not have a DNR permit, the building officer and inspector shall immediately notify the dam safety section of the office of water resources. If the building officer and inspector finds a dam which is believed to be in unsafe condition, the building officer and inspector shall immediately notify the owner of the dam and the Illinois emergency management agency (EMA), and the DNR, dam safety section in Springfield.
 - e. The following activities may be permitted without a registered professional engineer's review or calculation of a base flood elevation and regulatory floodway. Such activities shall still meet the other requirements of this chapter:
 - (1) Underground and overhead utilities that:
 - (A) Do not result in any increase in existing ground elevations, or
 - (B) Do not require the placement of aboveground structures in the floodway, or
 - (C) In the case of underground stream crossings, the top of the pipe or encasement is buried a minimum of three feet (3') below the existing streambed, and
 - (D) In the case of overhead utilities, no supporting towers are placed in the watercourse and are designed in such a fashion as not to catch debris.
 - (2) Storm and sanitary sewer outfalls that:

- (A) Do not extend riverward or lakeward of the existing adjacent natural bank slope, and
 - (B) Do not result in an increase in ground elevation, and
 - (C) Are designed so as not to cause stream erosion at the outfall location.
- (3) Construction of shoreline and stream bank protection that:
- (A) Does not exceed one thousand feet (1,000') in length or two (2) cubic yards per lineal foot of stream bed.
 - (B) Materials are not placed higher than the existing top of bank.
 - (C) Materials are placed so as not to reduce the cross-sectional area of the stream channel by more than ten percent (10%).
 - (D) Vegetative stabilization and gradual side slopes are the preferred mitigation methods for existing erosion problems. Where high channel velocities, sharp bends or wave action necessitate the use of alternative stabilization measures, natural rock or rip-rap are preferred materials. Artificial materials such as concrete, construction rubble, and gabions should be avoided unless there are not practicable alternatives.
- (4) Temporary stream crossings in which:
- (A) The approach roads will be five-tenths foot (0.5') ($\frac{1}{2}$ foot) or less above natural grade.
 - (B) The crossing will allow stream flow to pass without backing up the water above the stream bank vegetation line or above any drainage tile or outfall invert.
 - (C) The top of the roadway fill in the channel will be at least two feet (2') below the top of the lowest bank. Any fill in the channel shall be nonerosive material, such as rip-rap or gravel.
 - (D) All disturbed stream banks will be seeded or otherwise stabilized as soon as possible upon installation and again upon removal of construction.
 - (E) The access road and temporary crossings will be removed within one year after authorization.
- (5) The construction of light poles, sign posts and similar structures;
- (6) The construction of sidewalks, driveways, athletic fields (excluding fences), patios and similar surfaces which are built at grade;
- (7) The construction of properly anchored, unwallled, open structures such as playground equipment, pavilions and carports built at or below existing grade that would not obstruct the flow of flood waters;
- (8) The placement of properly anchored buildings not exceeding seventy (70) square

feet in size, nor ten feet (10') in any one dimension (e.g., animal shelters and tool sheds);

(9) The construction of additions to existing buildings which do not increase the first floor area by more than twenty percent (20%), which are located on the upstream or downstream side of the existing building, and which do not extend beyond the sides of the existing building that are parallel to the flow of flood waters;

(10) Minor maintenance dredging of a stream channel where:

(A) The affected length of stream is less than one thousand feet (1,000');

(B) The work is confined to reestablishing flows in natural stream channels; or

(C) The cross-sectional area of the dredged channel conforms to that of the natural channel upstream and downstream of the site.

f. The flood carrying capacity within any altered or relocated watercourse shall be maintained.

2. **Compensatory Storage:** Whenever any portion of a flood plain is authorized for use, the volume of space which will be occupied by the authorized fill or structure below the base flood or 100-year frequency flood elevation shall be compensated for and balanced by a hydraulically equivalent volume of excavation taken from below the base flood or 100-year frequency flood elevation. The excavation volume shall be at least equal one and five-tenths (1.5) times to the volume of storage lost due to the fill or structure. In the case of streams and watercourses, such excavation shall be made opposite or adjacent to the areas so filled or occupied. All flood plain storage lost below the existing 10-year flood elevation shall be replaced below the proposed 10-year flood elevation. All flood plain storage lost above the existing 10-year flood elevation shall be replaced above the proposed 10-year flood elevation. All such excavations shall be constructed to drain freely and openly to the watercourse. (Ord. 1995-28, 8-8-1995)

4-7-9: PERMITTING REQUIREMENTS APPLICABLE TO ALL FLOOD PLAIN AREAS AND PROTECTION OF BUILDINGS⁴:

In addition to the requirements found in Sections [4-7-6](#), [4-7-7](#) and [4-7-8](#) of this Chapter, for development in flood fringes, regulatory floodways and SFHA or flood plains where no floodways have been identified (Zones A, AO, AH, AE, A1-30, A99, VO, V-30, VE, V, M or E), the following requirements shall be met:

A. Public Health Standards:

1. No developments in the SFHA shall include locating or storing chemicals, explosives, buoyant materials, animal wastes, fertilizers, flammable liquids, pollutants or other

hazardous or toxic materials below the FPE.

2. New and replacement water supply systems, wells, sanitary sewer lines and on-site waste disposal systems may be permitted providing all manholes or other aboveground openings located below the FPE are watertight.

B. Carrying Capacity And Notification: For all projects involving channel modification, fill or stream maintenance (including levees), the flood carrying capacity of the watercourse shall be maintained. In addition, the Village shall notify adjacent communities in writing thirty (30) days prior to the issuance of a permit for the alteration or relocation of the watercourse.

C. Protecting Buildings:

1. All buildings located within a 100-year flood plain also known as a SFHA, shall be protected from flood damage below the flood protection elevation. However, existing buildings located within a regulatory floodway shall also meet the more restrictive appropriate use standards included in Section [4-7-7](#) of this Chapter. This building protection criteria applies to the following situations:
 - a. Construction or placement of a new building;
 - b. A structural alteration to an existing building that either increases the first floor area by more than twenty percent (20%) or the building's market value by more than fifty percent (50%);
 - c. Installing a manufactured home on a new site or a new manufactured home on an existing site. This building protection requirement does not apply to returning a mobile home to the same site it lawfully occupied before it was removed to avoid flood damage; and
 - d. Installing a travel trailer on a site for more than one hundred eighty (180) days.
2. This building protection requirement may be met by one of the following methods:
 - a. A residential or nonresidential building, when allowed, may be constructed on permanent land fill in accordance with the following:
 - (1) The lowest floor (including basement) shall be at or above the flood protection elevation.
 - (2) The fill shall be placed in layers no greater than one foot (1') deep before compaction and should extend at least ten feet (10') beyond the foundation of the building before sloping below the flood protection elevation. The top of the fill shall be above the flood protection elevation. However, the ten foot (10') minimum may be waived if a structural engineer certifies an alternative method to protect the building from damages due to hydrostatic pressures. The fill shall be protected against erosion and scour. The fill shall not adversely affect the flow or surface drainage from or onto neighboring properties.

- b. A residential or nonresidential building may be elevated in accordance with the following:
- (1) The building or improvements shall be elevated on crawl spaces, stilts, piles, walls or other foundation that is permanently open to flood waters and not subject to damage by hydrostatic pressures of the base flood or 100-year frequency flood. The permanent openings shall be no more than one foot (1') above grade and consists of a minimum of two (2) openings. The openings must have a total net area of not less than one square inch for every one square foot of enclosed area subject to flooding below the base flood elevation.
 - (2) The foundation and supporting members shall be anchored and aligned in relation to flood flows and adjoining structures so as to minimize exposure to known hydrodynamic forces such as current, waves, ice and floating debris.
 - (3) All areas below the flood protection elevation shall be constructed of materials resistant to flood damage. The lowest floor (including basement) and all electrical, heating, ventilating, plumbing and air conditioning equipment and utility meters shall be located at or above the flood protection elevation. Water and sewer pipes, electrical and telephone lines, submersible pumps and other waterproofed service facilities may be located below the flood protection elevation.
 - (4) No area below the flood protection elevation shall be used for storage of items or materials.
 - (5) Manufactured homes and travel trailers to be installed on a site for more than one hundred eighty (180) days, shall be elevated to or above the flood protection elevation; and, shall be anchored to resist flotation, collapse or lateral movement by being tied down in accordance with the Rules and Regulations for the Illinois Mobile Home Tie-Down Act issued pursuant to 77 Illinois Administrative Code 870.
- c. Only a nonresidential building may be structurally dry floodproofed (in lieu of elevation) provided that a registered professional engineer shall certify that the building has been structurally dry floodproofed below the flood protection elevation, the structure and attendant utility facilities are watertight and capable of resisting the effects of the base flood or 100-year frequency flood. The building design shall take into account flood velocities, duration, rate of rise, hydrostatic and hydrodynamic forces, the effects of buoyancy, and impacts from debris or ice. Floodproofing measures shall be operable without human intervention and without an outside source of electricity (levees, berms, floodwalls and similar works are not considered floodproofing for the purpose of this subsection).
- d. Nonconforming structures located in a regulatory floodway may remain in use, but may not be enlarged, replaced or structurally altered. A nonconforming structure damaged by flood, fire, wind or other natural or manmade disaster may be restored unless the damage exceeds fifty percent (50%) of its market value before it was damaged, in which case it shall conform to this Chapter.

D. Filing Fee And Engineer's Services:

1. A filing fee of one hundred dollars (\$100.00) shall be paid to the Village Clerk at the time of filing of any application under this Chapter.
2. The cost incurred by the Village for the review of applications, plans and specifications, and for inspection of any development, by the Village Engineer, or by a registered professional engineer under the employ or contract of the Village, shall be paid by the applicant. Such costs shall be paid to the Village Clerk at the time of issuance or denial of any permit under this Chapter, or at the time of the issuance or denial of any variance under this Chapter. (Ord. 1995-28, 8-8-1995)

4-7-10: OTHER DEVELOPMENT REQUIREMENTS:

The Board of Trustees shall take into account flood hazards, to the extent that they are known in all official actions related to land management, use and development.

- A. New subdivisions, manufactured home parks, annexation agreements and planned unit developments (PUDs) within the SFHA shall be reviewed to assure that the proposed developments are consistent with sections [4-7-6](#), [4-7-7](#), [4-7-8](#) and [4-7-9](#) of this chapter and the need to minimize flood damage. Plats or plans for new subdivisions, manufactured home parks and planned unit developments (PUDs) shall include a signed statement by a registered professional engineer that the plat or plans account for changes in the drainage of surface waters in accordance with the plat act⁵. (Ord. 1995-28, 8-8-1995)
- B. Proposals for new subdivisions, manufactured home parks, travel trailer parks, planned unit developments (PUDs) and additions to manufactured home parks and additions to subdivisions shall include base flood or 100-year frequency flood elevation data and floodway delineations. Where this information is not available from an existing study filed with the federal, state or other sources, the applicant's engineer shall be responsible for calculating the base flood or 100-year frequency flood elevation per subsection [4-7-5D](#) of this chapter and the floodway delineation per the definition of "regulatory floodway" in section [4-7-2](#) of this chapter and submitting it for review and approval as best available regulatory data. (Ord. 2012-34, 12-18-2012)
- C. Streets, blocks, lots, parks and other public grounds shall be located and laid out in such a manner as to preserve and utilize natural streams and channels. Wherever possible, the floodplains shall be included within parks or other public grounds.
- D. The board of trustees shall not approve any planned unit development (PUD) or plat of subdivision located outside the corporate limits unless such agreement or plat is in accordance with the provisions of this chapter. (Ord. 1995-28, 8-8-1995)

4-7-11: VARIANCES:

No variances shall be granted to any development located in "regulatory floodway", as defined in section [4-7-2](#) of this chapter. However, when a development proposal is located outside of a regulatory floodway, and whenever the standards of this chapter place undue hardship on a specific development proposal, the applicant may apply to the village for a variance. The plan commission shall review the applicant's request for a variance and shall submit its recommendation to the board of trustees.

A. No variance shall be granted unless the applicant demonstrates that:

1. The development activity cannot be located outside the SFHA;
2. An exceptional hardship would result if the variance were not granted;
3. The relief requested is the minimum necessary;
4. There will be no additional threat to public health, safety, beneficial stream uses and functions, especially aquatic habitat or creation of a nuisance;
5. There will be no additional public expense for flood protection, lost environmental stream uses and functions, rescue or relief operations, policing, or repairs to streambeds and banks, roads, utilities or other public facilities;
6. The provisions of subsections [4-7-6B](#) and [4-7-8B](#) of this chapter shall still be met;
7. The activity is not in a regulatory floodway;
8. The applicant's circumstances are unique and do not represent a general problem; and
9. The granting of the variance will not alter the essential character of the area involved including existing stream uses.

B. The building officer and inspector shall notify an applicant in writing that a variance from the requirements of section [4-7-9](#) of this chapter, that would lessen the degree of protection to a building will:

1. Result in increased premium rates for flood insurance up to amounts as high as twenty five dollars (\$25.00) for one hundred dollars (\$100.00) of insurance coverage;
2. Increase the risks to life and property; and
3. Require that the applicant proceed with knowledge of these risks and that he will acknowledge in writing that he assumes the risk and liability.

- C. Variances requested in connection with restoration of a site or building listed on the national register of historical places or documented as worthy of preservation by the Illinois historic preservation agency may be granted using criteria more permissive than the requirements of subsections A and B of this section. (Ord. 1995-28, 8-8-1995)

4-7-12: DISCLAIMER OF LIABILITY:

The degree of flood protection required by this chapter is considered reasonable for regulatory purposes and is based on available information derived from engineering and scientific methods of study. Larger floods may occur or flood heights may be increased by manmade or natural causes. This chapter does not imply that development, either inside or outside of the SFHA, will be free from flooding or damage. This chapter does not create liability on the part of the village or any officer or employee thereof for any flood damage that results from reliance on this chapter or any administrative decision made lawfully thereunder. (Ord. 1995-28, 8-8-1995)

4-7-13: PENALTY:

Failure to comply with the requirements of a permit or conditions of a variance resolution shall be deemed to be a violation of this chapter. Upon due investigation, the building officer and inspector may determine that a violation of the minimum standards of this chapter exist. The building officer and inspector shall notify the owner in writing of such violation.

A. If such owner fails after ten (10) days' notice to correct the violation:

1. The village may make application to the circuit court for an injunction requiring conformance with this chapter or make such other order as the court deems necessary to secure compliance with this chapter.
2. Any person who violates this chapter shall, upon conviction thereof, be fined not less than fifty dollars (\$50.00) or more than one thousand dollars (\$1,000.00) for each offense.
3. A separate offense shall be deemed committed upon each day during or on which a violation occurs or continues.
4. The village may record a notice of violation on the title to the property.

B. The building officer and inspector shall inform the owner that any such violation is considered a wilful act to increase flood damages and, therefore, may cause coverage by a standard flood insurance policy to be suspended.

C. Nothing herein shall prevent the village from taking such other lawful action to prevent or remedy any violations. All costs connected therewith shall accrue to the person or persons responsible. (Ord. 1995-28, 8-8-1995)

4-7-14: ABROGATION AND GREATER RESTRICTIONS:

This chapter is not intended to repeal, abrogate or impair any existing easements, covenants or deed restrictions. Where this chapter and other ordinances, easements, covenants or deed restrictions conflict or overlap, whichever imposes the more stringent restrictions shall prevail. This chapter is intended to repeal the original ordinance or resolution which was adopted to meet the national flood insurance program regulations, but is not intended to repeal the resolution which the village passed in order to establish initial eligibility for the program. (Ord. 1995-28, 8-8-1995)

CHAPTER 8

STORMWATER DRAINAGE AND DETENTION

SECTION:

4-8-1 Authority And Purpose

4-8-2 Definitions

4-8-3 Applicability

4-8-4 Drainage Plan Submittal Requirements

4-8-4-1: Basic Drainage Plan

4-8-4-2: Advanced Drainage Plan

4-8-5 Minimization Of Increases In Runoff Volumes And Rates

4-8-6 Water Quality And Multiple Uses

4-8-7 Design Criteria, Standards And Methods

4-8-8 Accommodating Flows From Upstream Tributary Areas

4-8-9 Early Completion Of Detention Facilities

4-8-10 Reserved

4-8-11 Maintenance Responsibility

4-8-12 Administration

4-8-13 Severability

4-8-14 Penalties

4-8-1: AUTHORITY AND PURPOSE:

A. Purpose:

1. This Chapter is enacted pursuant to the police powers granted to the Village by the Illinois Compiled Statutes.

2. The purpose of this Chapter is to diminish threats to public health, safety and welfare caused by runoff of excessive stormwater from new development and redevelopment. This excessive stormwater could result in the inundation of damageable properties, the erosion and destabilization of downstream channels, and the pollution of valuable stream and lake resources. The cause of increases in stormwater runoff quantity and rate and impairment of quality is the development and improvement of land and as such this Chapter regulates these activities to prevent adverse impacts.

B. Objectives: This Chapter is adopted to accomplish the following objectives:

1. To assure that new development does not increase the drainage or flood hazards to others, or create unstable conditions susceptible to erosion;

2. To protect new buildings and major improvements to buildings from flood damage due to increased stormwater runoff;

3. To protect human life and health from the hazards of increased flooding on a watershed basis;

4. To lessen the burden on the taxpayer for flood control projects, repairs to flood-damaged public facilities and utilities, correction of channel erosion problems, and flood rescue and relief operations caused by increased stormwater runoff quantities from new development;

5. To protect, conserve and promote the orderly development of land and water resources;

6. To preserve the natural hydrologic and hydraulic functions of watercourses and floodplains and to protect water quality and aquatic habitats:

7. To preserve the natural characteristics of stream corridors in order to moderate flood and stormwater impacts, improve water quality, reduce soil erosion, protect aquatic and riparian habitat, provide recreational opportunities, provide aesthetic benefits and enhance community and economic development.

C. Incorporation and Adoption of the Will County Stormwater Management Ordinance: The Will County Stormwater Management Ordinance found in Title V, Chapter 55 of the Will County Ordinances is hereby adopted by the Village and incorporated as if fully set forth herein. In the event of a conflict between the Village Ordinances and the Will County Stormwater Management Ordinance, the more stringent of the two requirements shall apply. (Ord. 1994-6, 4-12-1994; amd. Ord. 2020-17, 6-23-2020)

4-8-2: DEFINITIONS:

ADVERSE IMPACTS: Any deleterious impact on water resources or wetlands affecting their beneficial uses including recreation, aesthetics, aquatic habitat, quality and quantity.

APPLICANT: Any person, firm or governmental agency who executes the necessary forms to procure official approval of a development or permit to carry out construction of a development from the Village of Minooka.

BASE FLOOD ELEVATION: The elevation at all locations delineating the level of flooding resulting from the 100-year frequency flood event.

BYPASS FLOWS: Stormwater runoff from upstream properties tributary to a property's drainage system but not under its control.

CHANNEL: Any river, stream, creek, brook, branch, natural or artificial depression, ponded area, flowage, slough, ditch, conduit, culvert, gully, ravine, wash or natural or manmade drainageway, which has a definite bed and bank or shoreline, in or into which surface or groundwater flows, either perennial or intermittently.

CHANNEL MODIFICATION: Alteration of a channel by changing the physical dimensions or materials of its bed or banks. Channel modification includes damming, riprapping (or other armoring), widening, deepening, straightening, relocating, lining and significant removal of bottom or woody rooted vegetation. Channel modification does not include the clearing of debris or removal of trash.

COMPENSATORY STORAGE: An artificially excavated, hydraulically equivalent volume of storage within the floodplain used to balance the loss of natural flood storage capacity when fill or structures are placed within the floodplain.

CONDUIT: Any channel, pipe, sewer or culvert used for the conveyance or movement of water, whether open or closed.

DETENTION BASIN: A facility constructed or modified to provide for the temporary storage of stormwater runoff and the controlled release by gravity of this runoff at a prescribed rate during and after a flood or storm.

DETENTION TIME: The mean residence time of stormwater in a detention basin.

DEVELOPMENT: Any manmade change to real estate, including:

- A. Preparation of a plot of subdivision;
- B. Construction, reconstruction or placement of a building or any addition to a building;
- C. Installation of a manufactured home on a site, preparing a site for a manufactured home, or installing a travel trailer on a site for more than one hundred eighty (180) days;
- D. Construction of roads, bridges or similar projects;
- E. Redevelopment of a site;
- F. Filling, dredging, grading, clearing, excavating, paving or other nonagricultural alterations of the ground surface;
- G. Storage of materials or deposit of solid or liquid waste;
- H. Any other activity that might alter the magnitude, frequency, deviation, direction or velocity of stormwater flows from a property.

DRAINAGE PLAN: A plan, including engineering drawings and supporting calculations, which describes the existing stormwater drainage system and environmental features, as well as the drainage system and environmental features which are proposed after development of a property.

DRY BASIN: A detention basin designed to drain completely after temporary storage of stormwater flows and to normally be dry over the majority of its bottom area.

EROSION: The general process whereby earth is removed by flowing water or wave action.

EXCESS STORMWATER RUNOFF: The volume and rate of flow of stormwater discharged from an urbanized drainage area which is or will be in excess of that volume and rate which pertained before urbanization.

FLOOD FRINGE: That portion of the floodplain outside of the regulatory floodway.

FLOODPLAIN: That land adjacent to a body of water with ground surface elevations at or below the base flood or the 100-year frequency flood elevation. The floodplain is also known as the special flood hazard area (SFHA).

FLOODWAY: The channel and that portion of the floodplain adjacent to a stream or watercourse which is needed to store and convey the anticipated existing and future 100-year frequency flood discharge with no more than a 0.1 foot increase in stage due to any loss of flood conveyance or storage and no more than a ten percent (10%) increase in velocities.

HYDROGRAPH: A graph showing for a given location on a stream or conduit, the flow-rate with respect to time.

INFILTRATION: The passage or movement of water into the soil surfaces.

MAJOR DRAINAGE SYSTEM: That portion of a drainage system needed to store and convey flows beyond the capacity of the minor drainage system.

MINOR DRAINAGE SYSTEM: That portion of a drainage system designed for the convenience of the public. It consists of street gutters, storm sewers, small open channels, and swales and, where manmade, is usually designed to handle the 10-year runoff event or less.

MITIGATION: Mitigation includes those measures necessary to minimize the negative effects which stormwater drainage and development activities might have on the public health, safety and welfare. Examples of mitigation include compensatory storage, soil erosion and sedimentation control and channel restoration.

NATURAL: Conditions resulting from physical, chemical and biological processes without intervention by man.

100-YEAR EVENT: A rainfall, runoff or flood event having a one percent (1%) chance of occurring in any given year.

PEAK FLOW: The maximum rate of flow of water at a given point in a channel or conduit.

POSITIVE DRAINAGE: Provision for overland paths for all areas of a property including depressional areas that may also be drained by storm sewer.

PROPERTY: A parcel of real estate.

REGULATORY FLOODWAY: The channel, including on-stream lakes, and that portion of the flood plain adjacent to a stream or watercourse as designated by the IDNR/OWR and generally depicted on the FEMA FIRM map, which is needed to store and convey the existing and anticipated future 100-year frequency flood discharge with no more than a 0.1 foot increase in stage due to the loss of flood conveyance or storage, and no more than a ten percent (10%) increase in velocities. Refer to Title 4, Chapter 7, Section 4-7-2 "Definitions" for information on designated floodways within the Village limits within Will County, Grundy County and Kendall County.

RETENTION BASIN: A facility designed to completely retain a specified amount of stormwater runoff without release except by means of evaporation, infiltration, emergency bypass or pumping.

SEDIMENTATION: The process that deposits soils, debris and other materials either on other ground surfaces or in bodies of water or stormwater drainage systems.

STORM SEWER: A closed conduit for conveying collected stormwater.

STORMWATER DRAINAGE SYSTEM: All means, natural or manmade, used for conducting stormwater to, through or from a drainage area to the point of final outlet from a property. The stormwater drainage system includes but is not limited to any of the following: conduits and appurtenance features, canals, channels, ditches, streams, culverts, streets, storm sewers, detention basins, swales and pumping stations.

STORMWATER RUNOFF: The waters derived from melting snow or rain falling within a tributary drainage basin which are in excess of the infiltration capacity of the soils of that basin, which flow over the surface of the ground or are collected in channels or conduits.

TIME OF CONCENTRATION: The elapsed time for stormwater to flow from the most hydraulically remote point in a drainage basin to a particular point of interest in that watershed.

TRIBUTARY WATERSHED: All of the land surface area that contributes runoff to a given point.

2-YEAR EVENT: A runoff, rainfall or flood event having a fifty percent (50%) chance of occurring in any given year.

WET BASIN: A detention basin designed to maintain a permanent pool of water after the temporary storage of stormwater runoff. (Ord. 1994-6, 4-12-1994; amd. Ord. 2020-17, 6-23-2020)

4-8-3: APPLICABILITY:

This Chapter shall apply to all development in the Village. (Ord. 1994-6, 4-12-1994)

4-8-4: DRAINAGE PLAN SUBMITTAL REQUIREMENTS:

A. Each applicant shall submit the following information, depending on development size, to ensure that the provisions of this Chapter are met. The submittal shall include sufficient information to evaluate the environmental characteristics of the property, the potential adverse impacts of the development on water resources both on-site and downstream, and the effectiveness of the proposed drainage plan in managing stormwater runoff. The applicant shall certify on the drawings that all clearing, grading, drainage and construction shall be accomplished in strict conformance with the drainage plan. The following information shall be submitted for both existing and proposed property conditions.

B. Properties smaller than ten (10) acres shall submit only the basic drainage plan called for in Section 4-8-4-1. Properties larger than ten (10) acres shall comply with the submittal requirements of both the basic drainage plan and the advanced drainage plan of Section 4-8-4-2. (Ord. 1994-6, 4-12-1994)

4-8-4-1: BASIC DRAINAGE PLAN:

A. Topographic Map: A topographic survey of the property at one foot (1') contours under existing and proposed conditions, and area upstream and downstream, necessary to determine off-site impacts of the proposed drainage plan. The map shall be keyed to a consistent datum specified by the Village.

B. Drainage System: Mapping and descriptions, where relevant, of existing and proposed drainage system features of the property and immediate vicinity including:

1. The banks and center line of streams and channels;
2. Shoreline of lakes, ponds and detention basins;
3. Farm drains and tiles;
4. Sub-watershed boundaries within the property;
5. Watershed soils classifications;
6. The property's location within the large watershed;
7. Location, size and slope of stormwater conduits and drainage swales;
8. Sanitary or combined sewers;

9. Depressional storage areas;
 10. Delineation of upstream and downstream drainage features and watersheds which might be affected by the development;
 11. Detention facilities;
 12. Roads and streets and associated stormwater inlets;
 13. Base flood elevation, and regulatory floodway where identified for the property; and
 14. Basis of design for the final drainage network components.
- C. Environmental Features: A depiction of environmental features of the property and immediate vicinity including the following:
1. The limits of wetland areas;
 2. Any designated natural areas; and
 3. Any proposed environmental mitigation features. (Ord. 1994-6, 4-12-1994)

4-8-4-2: ADVANCED DRAINAGE PLAN:

The same information as required in Section 4-8-4-1 is required for properties larger than ten (10) acres along with the following additional information for the minor drainage system's design runoff event and the 100-year runoff event of critical duration:

- A. Elevations and maps of 100-year flooding;
- B. Cross section data for open channel flow paths and designated overland flow paths;
- C. Direction of stormflows;
- D. Flow rates and velocities at representative points in the drainage system; and
- E. A statement by the design engineer of the drainage system's provisions for handling events greater than the 100-year's runoff. (Ord. 1994-6, 4-12-1994)

4-8-5: MINIMIZATION OF INCREASES IN RUNOFF VOLUMES AND RATES:

In the selection of a drainage plan for a development, the applicant shall evaluate and implement, where practicable, site design features which minimize the increase in runoff volumes and rates from the site. The applicant's drainage plan submittal shall include evaluations of site design features which are consisted with the following hierarchy:

- A. Minimize impervious surfaces on the property, consistent with the needs of the project;
- B. Attenuate flows by use of open vegetated swales and natural depressions and preserve existing natural stream channels;
- C. Infiltrate runoff on-site;
- D. Provide stormwater retention structures;
- E. Provide stormwater detention structures; and
- F. Construct storm sewers. (Ord. 1994-6, 4-12-1994)

4-8-6: WATER QUALITY AND MULTIPLE USES:

A. The drainage system should be designed to minimize adverse water quality impacts downstream and on the property itself. Detention basins shall incorporate design features to capture stormwater runoff pollutants. Retention and infiltration of stormwater shall be promoted throughout the property's drainage system to reduce the volume of stormwater runoff and to reduce the quantity of runoff pollutants.

B. The drainage system should incorporate multiple uses where practicable. Uses considered compatible with stormwater management include open space, aesthetics, aquatic habitat, recreation (boating, trails, playing fields), wetlands and water quality mitigation. The applicant should avoid using portions of the property exclusively for stormwater management. (Ord. 1994-6, 4-12-1994)

4-8-7: DESIGN CRITERIA, STANDARDS AND METHODS:

A. Release Rates: The drainage system for a property shall be designed to control the peak rate of discharge from the property for the 2-year, twenty four (24) hour and 100-year, twenty four (24) hour rainfall events to levels which will not cause an increase in flooding or channel instability downstream when considered in aggregate with other developed properties and downstream drainage capacities. The peak discharge from events less than or equal to the 2-year event shall not be greater than 0.04 cfs per acre of property drained. The peak 100-year discharge shall not be greater than 0.15 cfs per acre of property drained.

B. Detention Basin Outlet Design: Backwater on the outlet structure from the downstream drainage system shall be evaluated when designing the outlet.

C. Detention Storage Requirements: The design maximum storage to be provided in a detention basin shall be based on the runoff from the 100-year, twenty four (24) hour rainfall event and reservoir (also called modified puls or level pool) routing or equal. Detention storage shall be computed using hydrograph methods as described in this Section.

D. Drainage System Design And Evaluation: The following criteria should be used in evaluating and designing the drainage system. The underlying objective is to provide capacity to pass the 10-year peak flow in the minor drainage system and an overload flow path for flows in excess of the design capacity.

1. Design Methodologies: Major and minor conveyance systems for areas up to ten (10) acres may be designed using the

rational formula. The rational formula may also be used in sizing the minor drainage system for larger sites. Runoff hydrograph methods as described in subsection E of this Section must be used for major drainage system design for all systems with greater than ten (10) acres of drainage area and for the design of all detention basins.

2. Positive Drainage: Whenever practicable, all areas of the property must be provided an overland flow path that will pass the 100-year flow at a stage at least one foot (1') below the lowest foundation grade in the vicinity of the flow path. Overland flow paths designed to handle flows in excess of the minor drainage system capacity shall be provided drainage easements. Street ponding and flow depths shall not exceed six inches (6") at the crown of the street inclusive of any required overland conveyance.

E. Methods For Generating Runoff Hydrographs: Runoff hydrographs shall be developed incorporating the following assumptions of rainfall amounts and antecedent moisture.

1. Rainfall: Under a continuous simulation approach to drainage system hydrology is used, all design rainfall events shall be based on the Illinois State Water Survey's Bulletin 70. The first quartile point rainfall distribution shall be used for the design and analysis of conveyance systems with critical durations less than or equal to twelve (12) hours. The third quartile point rainfall distribution shall be used for the design and analysis of detention basins and conveyance system with critical durations greater than twelve (12) and less than or equal to twenty four (24) hours. The fourth quartile distribution shall be used in the design and analysis of systems with durations greater than twenty four (24) hours. The first, third and fourth quartile distributions described by Huff are presented in table 37 of Bulletin 70. The SCS Type II distribution may be used as an alternate to the Huff distributions.

2. Antecedent Moisture: Computations of runoff hydrographs which do not rely on a continuous accounting of antecedent moisture conditions shall assume a conservative wet antecedent moisture condition as a minimum.

F. Wet Detention Basin Design: Wet detention basins shall be designed to remove stormwater pollutants, to be safe, to be aesthetically pleasing and as much as feasible to be available for recreational use.

1. Wet Basin Depths: Wet basins shall be at least three feet (3') deep, excluding nearshore banks and safety ledges. If fish habitat is to be provided they shall be at least ten feet (10') deep over twenty five percent (25%) of the bottom area to prevent winter freeze-out.

2. Wet Basin Shoreline Slopes: The side slopes of wet basins at the normal pool elevation shall not be steeper than five to one (5:1) (horizontal to vertical).

3. Permanent Pool Volume: The permanent pool volume in a wet basin at normal depth shall be equal to the runoff volume from its watershed for the 2-year event.

4. Inlet And Outlet Orientation: To the extent feasible, the distance between detention inlets and outlets shall be maximized. If possible, they should be at opposite ends of the basin.

G. Dry Detention Basin Design: In addition to the other requirements of this Chapter, dry basins shall be designed to remove stormwater pollutants, to be safe, to be aesthetically pleasing and as much as feasible to be available to multiple uses.

1. Dry Basin Drainage: Dry basins shall be designed so that eighty percent (80%) of their bottom area shall have standing water no longer than seventy two (72) hours for any runoff event less than the 100-year event. Underdrains directed to the outlet control shall be used if necessary to accomplish this requirement.

2. Velocity Dissipation: Velocity dissipation measures shall be incorporated into dry basin designs to minimize erosion at inlets and outlets and to minimize the resuspension of pollutants.

3. Inlet And Outlet Orientation: To the extent feasible, the distance between detention inlets and outlets shall be maximized. If possible, they should be at opposite ends of the basin.

H. Minimum Detention Outlet Size: Where a single pipe outlet or orifice plate is to be used to control discharge, it shall have a minimum diameter of four inches (4"). If this minimum orifice size permits release rates greater than those specified in this Section, and regional detention is not a practical alternative, alternative outlet designs shall be utilized which incorporate self cleaning flow restrictors.

I. Detention In Floodplains: The placement of detention basins within the floodplain is strongly discouraged because of questions about their reliable operation during flood events. However, the stormwater detention requirements of this Chapter may be fulfilled by providing detention storage within flood fringe areas on the project site provided the following provisions are met.

1. Detention In Flood Fringe Areas: The placement of a detention basin in a flood fringe area shall require compensatory storage for 1.5 times the volume below the base flood elevation occupied by the detention basin including any berms. The release from the detention storage provided shall still be controlled consistent with the requirements of this Section. The applicant shall demonstrate its operation for all streamflow and floodplain backwater conditions. Excavations for compensatory storage along watercourses shall be opposite or adjacent to the area occupied by detention. All floodplain storage lost below the 10-year flood elevation shall be replaced below the ten-year flood elevation. All floodplain storage lost above the existing 10-year flood elevation shall be replaced above the proposed 10-year flood elevation. All compensatory storage excavations shall be constructed to drain freely and openly to the watercourse.

2. Detention In Floodways: Detention basins shall be placed in the floodway only in accordance with subsection I3 of this Section.

3. On-Stream Detention: On-stream detention basins are discouraged but allowable if they provide regional public benefits and if they meet the other provisions of this Chapter with respect to water quality and control of the 2-year and 100-year, twenty four (24) hour events from the property. Further criteria are presented in Section 4-8-8 of this Chapter. If on-stream detention is used for watersheds larger than one square mile, it is recommended that the applicant use dynamic modeling to demonstrate that the design will not increase stage for any properties upstream of downstream of the property. Also, impoundment of the stream as part of on-

stream detention:

- a. Shall not prevent the migration of indigenous fish species, which require access to upstream areas as part of their life cycle, such as for spawning,
- b. Shall not cause or contribute to the degradation of water quality or stream aquatic habitat,
- c. Shall not include a design calling for gradual bank slopes, appropriate bank stabilization measures and a pre-sedimentation basin,
- d. Shall not involve any stream channelization or the filling of wetlands,
- e. Shall require the implementation of an effective nonpoint source management program throughout the upstream watershed,
- f. Shall not occur downstream of a wastewater discharge, and
- g. Shall comply with 92 Illinois Administrative Code parts 702 and 708 and the floodplain chapter of the Village.

J. Drainage Into Wetlands: Wetlands shall be protected from damaging modifications and adverse changes in runoff quality and quantity associated with land developments. In addition to the other requirements of this Chapter, the following requirements shall be met for all developments whose drainage flows into wetlands:

1. Detention In Wetlands: Existing wetlands shall not be modified for the purposes of stormwater detention unless it is demonstrated that the existing wetland is low in quality and the proposed modifications will maintain or improve its habitat and ability to perform beneficial functions. Existing depressional storage in wetlands shall be maintained and the volume of detention storage provided to meet the requirements of this Section shall be in addition to this existing storage.
2. Sediment Control: The existing wetland shall be protected during construction by appropriate soil erosion and sediment control measures and shall not be filled.
3. Alteration Of Drainage Patterns: Site drainage patterns shall not be altered to substantially decrease or increase the existing area tributary to the wetland.
4. Detention/Sedimentation: All runoff from the development shall be routed through a preliminary detention/sedimentation basin designed to capture the 2-year, twenty four (24) hour event and hold it for at least twenty four (24) hours, before being discharged to the wetland. This basin shall be constructed before property grading begins. In addition, the drainage hierarchy defined in Section 4-8-5 should be followed to minimize runoff volumes and rates being discharged to the wetland.
5. Vegetated Buffer Strip: A buffer strip of at least twenty five feet (25') in width, preferably vegetated with native plant species, shall be maintained or restored around the periphery of the wetland.

K. Street, Parking Lot And Culvert Drainage:

1. Streets: If streets are to be used as part of the minor or major drainage system, ponding depths shall not exceed more than six inches (6") at the crown of the street inclusive of any required overland conveyance and shall not remain flooded for more than eight (8) hours for any event less than or equal to the 100-year event.
2. Parking Lots: The maximum stormwater ponding depth in any parking area shall not exceed six inches (6") for more than four (4) hours.
3. Culvert Road And Driveway Crossings: Sizing of culvert crossings shall consider entrance and exit losses as well as tailwater conditions on the culvert.

L. Infiltration Practices: To effectively reduce runoff volumes, infiltration practices including basins, trenches and porous pavement should be located on soils in hydrological soil groups "A" or "B" as designated by the U.S. Soil Conservation Service. Infiltration basins and trenches designed to recharge ground water shall not be located within seventy five feet (75') of a water supply well or a building foundation. A sediment settling basin shall be provided to remove coarse sediment from stormwater flows before they reach infiltration basins or trenches. Stormwater shall not be allowed to stand more than seventy two (72) hours over eighty percent (80%) of a dry basin's bottom area for the maximum design event to be ex-filtrated. The bottom of infiltration facilities shall be a minimum of four feet (4') above seasonally high ground water and bedrock.

M. Safety Considerations: The drainage system components, especially all detention basins, shall be designed to protect the safety of any children or adults coming in contact with the system during runoff events.

1. Side Slopes: The side slopes of all detention basins at 100-year capacity shall be as level as practicable to prevent accidental falls into the basin and for stability and ease of maintenance. Side slopes of detention basins and open channels shall not be steeper than three to one (3:1) (horizontal to vertical).
2. Safety Ledge: All wet detention basins shall have a level safety ledge at least four feet (4') in width two and one-half feet to three feet (2¹/₂' to 3') below the normal water depth.
3. Velocity: Velocities throughout the surface drainage system shall be controlled to safe levels taking into consideration rates and depths of flow.
4. Overflow Structures: All stormwater detention basins shall be provided with an overflow structure capable of safely passing excess flows at a stage of at least one foot (1') below the lowest foundation grade in the vicinity of the detention basin. The design flow rate of the overflow structure shall be equivalent to the 100-year inflow rate.

N. Maintenance Considerations: The stormwater drainage system shall be designed to minimize and facilitate maintenance.

Turfed slideslopes shall be designed to allow lawnmowing equipment to easily negotiate them. Wet basins shall be provided with alternate outflows which can be used to completely drain the pool for sediment removal. (Pumping may be considered if drainage by gravity is not feasible.) Pre-sedimentation basins shall be included, where feasible, for localizing sediment deposition and removal. Access for heavy equipment shall be provided. (Ord. 1994-6, 4-12-1994; amd. Ord. 2020-17, 6-23-2020)

4-8-8: ACCOMMODATING FLOWS FROM UPSTREAM TRIBUTARY AREAS:

Stormwater runoff from areas tributary to the property shall be considered in the design of the property's drainage system. Whenever practicable, flows from upstream areas that are not to be detained should be routed around the basin being provided for the site being developed.

A. Upstream Areas Not Meeting Chapter Requirements: When there are areas not meeting the storage and release rates of this Chapter, tributary to the applicant's property, regionalized detention on the applicant's property shall be explored by the applicant. The following steps shall be followed:

1. The applicant shall compute the storage volume needed for his property using the release rates of Section 4-8-6, the applicant's property area, and the procedures described in Section 4-8-7.

2. Areas tributary to the applicant's property, not meeting the storage and release rate requirements of this Chapter, shall be identified.

3. Using the areas determined in subsection A2 above, plus the applicant's property area, total storage needed for the combined properties shall be computed.

a. Allowable release rates shall be computed using the combined property areas. Storage shall be computed as described in Section 4-8-7. If tributary areas are not developed, a reasonable fully developed land cover, based on local zoning, shall be assumed for the purposes of computing storage.

b. Once the necessary combined storage is computed the Village may choose to pay for oversizing the applicant's detention basin to accommodate the regional flows. The applicant's responsibility will be limited to the storage for his property as computed in subsection A1 above. If regional storage is selected by the Village, then the design produced in this subsection A3 shall be implemented. If regional storage is rejected by the Village, the applicant shall bypass all tributary area flows around the applicant's basin whenever practicable. If the applicant must route upstream flows through his basin and the upstream areas exceed one square mile in size, the applicant must meet the provisions of this subsection for on-stream basins.

B. Upstream Areas Meeting Chapter Requirements: When there are areas which meet the storage and release rate requirements of this Chapter, tributary to the applicant's property, the upstream flows shall be bypassed around the applicant's detention basin, or be routed through the applicant's detention basin if this is the only practicable alternative. Storage needed for the applicant's property shall still be computed as described in subsection A1 of this Section. However, if the Village decides to route tributary area flows through an applicant's basin, the final design stormwater releases shall be based on the combined total of the applicant's property plus tributary areas. It must be shown that at no time will the runoff rate from the applicant's property exceed the allowable release rate for his/her property alone. (Ord. 1994-6, 4-12-1994)

4-8-9: EARLY COMPLETION OF DETENTION FACILITIES:

Where detention, retention or depressional storage areas are to be used as part of the drainage system for a property, they shall be constructed as the first element of the initial earthwork program. Any eroded sediment captured in these facilities shall be removed by the applicant before project completion in order to maintain the design volume of the facilities. (Ord. 1994-6, 4-12-1994)

4-8-10: RESERVED:

(Ord. 1994-6, 4-12-1994)

4-8-11: MAINTENANCE RESPONSIBILITY:

A. Definitions:

MAINTENANCE OR MAINTAIN: Shall mean the inspection, cleaning out, mowing, repairing, and removing of any and all accumulated sediment, leaves, nuisance, noxious weeds, invasive or non-native plants debris and obstructions from all detention ponds, leach basins, pollution control devices or similar appurtenances of the stormwater drainage system such that a failure to maintain would be likely to result in an impairment or impeding of the functioning of the stormwater drainage system. For wet bottom ponds, maintenance shall also include necessary services that promote a healthy pond ecosystem and prevent invasive vegetation, algae blooms, or fish kills. All stormwater and drainage systems or stormwater management facilities shall be continually stabilized to prevent soil erosion.

STORMWATER AND DRAINAGE SYSTEM OR STORMWATER MANAGEMENT FACILITY: Shall be defined to include all stormwater systems, catch basins, storage structures, drains, leaching basins, ponds, detention ponds, sediment basins, swales, overflow weirs and/or structure restrictor manholes, ditches, pipes and appurtenances located in the Village. This includes, but is not limited to, any and all pollution control devices utilized as a part of the stormwater and drainage system.

B. Maintenance Requirements: Maintenance of stormwater drainage systems located on private property shall be the responsibility of the owner of that property and all future owners of the property. All maintenance of stormwater and drainage systems shall be the sole financial responsibility of the property owner. However, representatives of the Village shall be authorized to enter onto the property at reasonable times for the purpose of inspecting and determining the need for maintenance of any stormwater drainage system.

C. Maintenance Schedule: The design plans for any stormwater drainage system shall include a written schedule for regular maintenance of each aspect of the property's stormwater drainage system. Following the completion of any stormwater drainage system, and after final approvals by the Village, the property owner shall maintain the stormwater drainage system located on the property on not less than an annual basis. The annual regular maintenance schedule, as required by this section, shall be made available to the Village upon reasonable written request by the Superintendent of Public Works (SPW). If the SPW makes the

determination that specific maintenance problems exist or issues that require correction, the property owner shall complete the required maintenance and correct any issues within thirty (30) calendar days of such written notification. If the maintenance and/or correction of issues is not made within the time period, the Village may, pursuant to the easement required by section 4-14-9 of this title enter upon the property and either complete the maintenance itself and assess all costs to the property owner, or contract with other contractors for the completion of the maintenance work and assess those costs to the property owner.

D. Bond: The Village also may, at its discretion, request a bond to be provided by the property owner for maintenance of the stormwater drainage system in an amount to be determined in the sole discretion of the Village. (Ord. 2017-26, 10-24-2017)

4-8-12: ADMINISTRATION:

A. Inspections:

1. Inspections During Construction: General site grading shall not begin until the Superintendent of Public Works has determined that any necessary detention facilities are in place and operational. The Superintendent of Public Works (SPW) or his representative will also conduct periodic inspections of the work in progress to be certain that the drainage system is being built as designed. If any violations of the provisions or requirements of this chapter are noted during such inspections, the SPW shall notify the property owner in writing of the items needing correction. The property owner shall have ten (10) calendar days to make such corrections unless given a specific extension of time in writing by the SPW. Failure to complete such corrections within the specified time period shall constitute a violation of this chapter.

2. Final Inspection: Upon notification by the applicant that the drainage system is completed, the SPW or his representative shall conduct a final inspection. If the drainage system is found to contain deficiencies which require correction the SPW or his representative shall notify the property owner of the necessary conditions. The property owner shall correct such deficiencies within ten (10) calendar days unless given a specific extension of time in writing by the SPW. Failure to make necessary corrections within the specified time period shall constitute a violation of this chapter.

3. Routine Inspections: All privately owned drainage systems shall be inspected by representatives of the Village not less often than once per year. A written report shall be filed of the results of any inspection and a copy sent to the property owner detailing any problems which need correction.

B. Enforcement: The administration and enforcement of this chapter shall be the responsibility of the Superintendent of Public Works (SPW) or his representatives.

C. Appeals: All appeals to the Superintendent of Public Works decisions regarding the interpretation of this chapter shall be heard by the Village Board of the Village. (Ord. 1994-6, 4-12-1994)

4-8-13: SEVERABILITY:

If any section, clause, provision or portion of this chapter is judged unconstitutional or invalid by a court of competent jurisdiction, the remainder of this chapter shall remain in force and not be affected by such judgment. (Ord. 1994-6, 4-12-1994)

4-8-14: PENALTIES:

Any person convicted of violating any of the provisions or requirements of this chapter shall be guilty of a misdemeanor and shall be subject to a fine of not more than one thousand dollars (\$1,000.00) or be imprisoned for not more than six (6) months. Each day the violation continues shall be considered a separate offense. (Ord. 1994-6, 4-12-1994)

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