McHenry County
Stormwater Management Ordinance Outreach

Land Developers, Consultants, and Contractors
April 28, 2015

Comprehensive SMO Revision

Goals

- Correct inconsistencies in terms, definitions and regulatory standards
- Streamline the permit submittal and review requirements
- Reduce the regulatory burden where feasible
- Update regulations

Comprehensive SMO Revision

Process

- Identify issues with the Stormwater Management Ordinance (SMO)
- Propose solutions to the issues
- Draft a revised SMO
- Public hearing and adopt the revised SMO
- Certified Community adoption

Agenda

- New Features of the Stormwater Management Ordinance (SMO)
- Regulated Development and Exempted Development
- General Permits
- Application Requirements
- Performance Standards

https://www.co.mchenry.il.us/county-government/departments-j-z/planning-development/ordinances

Additional Resources Coming Soon!

New Features

- Hyperlinks
- Notes to User
- Tables
- Figures
- Flowcharts

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Notes to User

The McHenry County Stormwater Management Ordinance (this Ordinance) regulates development and substantial improvements to buildings in the floodplain throughout McHenry County, within incorporated and unincorporated areas alike. As you read through this Ordinance, you will notice that certain terms are underlined and the Ordinance uses numerous acronyms. Underlined terms are defined in Appendix 12 and acronyms are defined in Appendix 13.

Not all development is regulated by this Ordinance, but development that is regulated requires a stormwater management permit before construction is allowed to commence. Some development is regulated because of its size, such as: development that hydrologically disturbs 5,000 square feet or more; development that hydrologically disturbs 50% or more of a parcel; and development that results in an additional 20,000 square feet of impervious area since the original effective date of this Ordinance. Other development is regulated because of its location, regardless of its size. Examples include development that is located partially or completely in a flood hazard area or wetland.

The basic steps used to determine whether a particular project requires a stormwater management permit are listed below. The Permitting Flow Charts in Appendix 1 provide additional guidance. If you have any questions about this Ordinance or its applicability to a specific project, please contact the McHenry County Department of Planning and Development.

1. Determine whether your project meets the definition of development (see Appendix 12). If it does, go on to Step 2.
2. Determine whether your project is regulated development (see Article II, Section B). If it is, go on to Step 3.
3. Determine whether your project is exempted development (see Article II, Section C). If it is not, go on to Step 4.
4. Determine whether your project qualifies for a General Permit, which waives certain requirements of this Ordinance in order to streamline the permit process for specific types of routine projects (see Article III). If it does, follow the process described for that General Permit. If it does not, go on to Step 5.
5. Determine how your project is classified (see Article IV, Section A) and then go on to Step 6.
6. Determine which Application Requirements apply (see Article V). Then go on to Step 7.
7. Determine which Performance Standards apply (see Article VI). Then go on to Step 8.
8. Submit a complete stormwater management permit application to a Certified Community or to the McHenry County Department of Planning and Development, along with the required submittals.
9. Await the issuance of a stormwater management permit prior to commencing your project.

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Article VI: Performance Standards, Section D.: Wetlands and '

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storm event; otherwise the IWMC shall be considered impacted and shall be subject to the Mitigation Requirements of this Ordinance.

5. Mitigation Requirements

The following requirements apply to all regulated development resulting in a IWMC impact, except regulated development authorized by a General Permit.

a. IWMC mitigation is required for regulated development resulting in IWMC impacts greater than or equal to 0.10 acre to IWMC. The Enforcement Officer may require mitigation for IWMC impacts less than 0.10 acre for reasons including, but not limited to:

(1) The proposed regulated development would result in a cumulative IWMC impact greater than or equal to 0.10 acre, due to a prior unmitigated impact to the same IWMC; or

(2) A prior unmitigated impact to another IWMC within the contiguous property.

Table 9. IWMC Mitigation Ratios

Cat	IWMC Quality	Impact Area	Regulated Development Type	D.5.a	D.5.c(1)	D.5.c(2)	D.5.c(3)	D.5.c(4)	D.5.c(5)
I	Any	≤ 0.10 ac	Any	Exempt					
I	Standard[a]	0.1- 1.0 ac	Any		1.5:1 or 1:1				
II	Standard[a]	1.0-2.0 ac	Any		1.5:1 or 1:1				
III	Standard[a]	> 2.0 ac	Any		1.5:1 or 1:1				
III	HFVW	Any	Any			3:1[b]			
III	HQAR or HQHS	Any	Any				5:1[b]		
Impacts Prior to Permit Issuance								5:1[b]	
IV	Any	Any	Restoration, Creation, and Enhancement						1:1
V	Any	Any	Temporary Impact						1:1

[a] Standard means any IWMC that is not a HFVW, HQAR, or HQHS.

[b] May be reduced to 1:1. Refer to D.5.c(6).

b. IWMC impacts shall be categorized as follows:

(1) Category I: IWMC impacts with a cumulative impact area less than or equal to 1 acre and not impacting HQAR, HFVW, or HQHS;

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Article VI: Performance Standards, Section C.: Flood Hazard A

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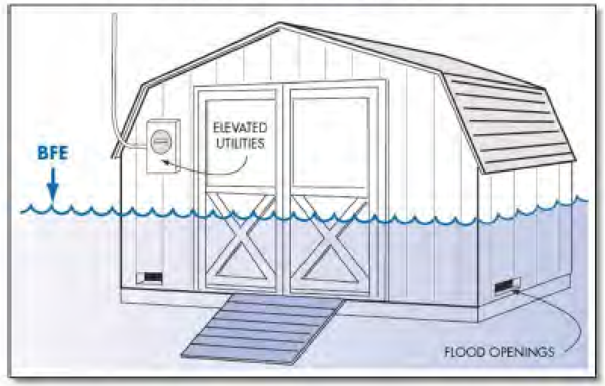
(c) Any louvers, screens, or other opening covers shall not block or impede the automatic flow of floodwaters into and out of the enclosed area; and

(d) The openings shall have a total net area of not less than 1 square inch for every 1 square foot of enclosed area subject to flooding below the BFE, unless the building is equipped with engineered openings meeting the FEMA guidelines for openings in foundation walls and walls of enclosures (FEMA Technical Bulletin 1-08, or current guidelines), except where the requirements of this Ordinance exceed FEMA guidelines.

FIGURE 3

Accessory Structures
(IDNR *Floodplain Management in Illinois Quick Guide*, 2001)



12. Substantial Improvement Standards

In addition to other applicable Flood Hazard Area Performance Standards, the following requirements apply to any repair, reconstruction, rehabilitation, addition, or other activity to a building within a floodplain.

a. Determining substantial improvement

The repair or improvement of a building shall be considered a substantial improvement if either of the following criteria is met:

(1) The cost of a single project or the value of damage caused by a single event equals or exceeds 50 percent of the market value of the building before the improvement or repair is started; or

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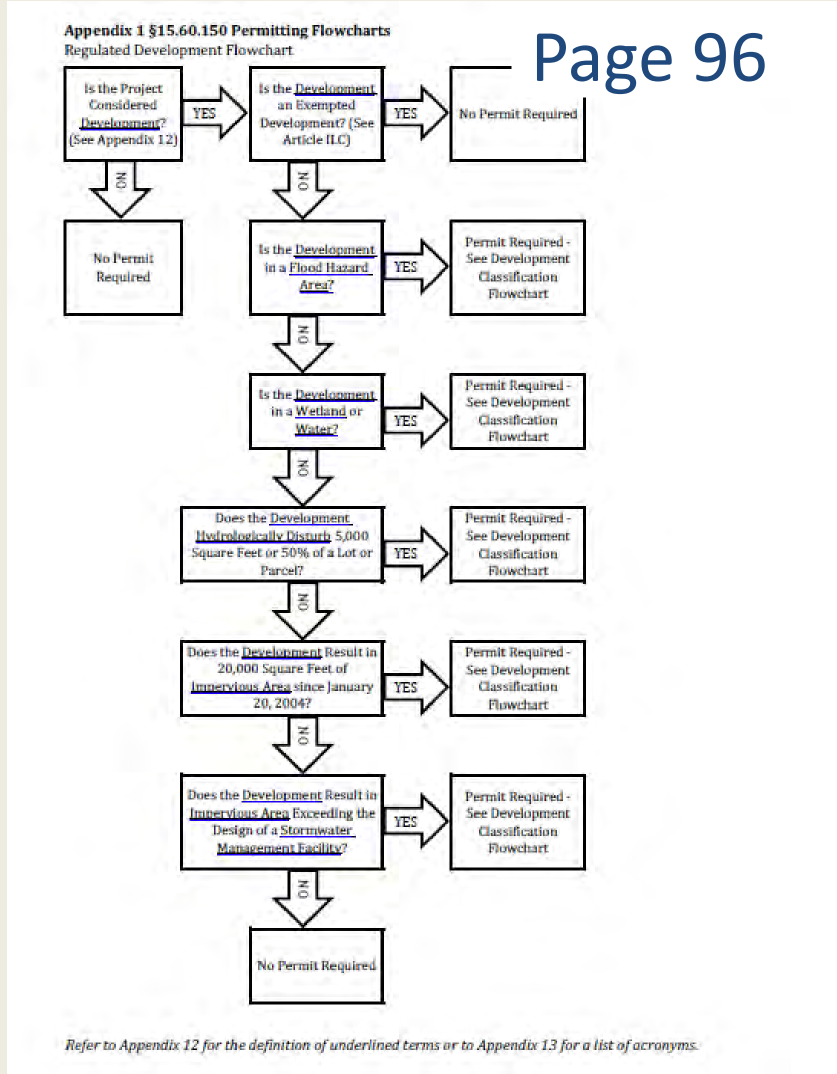

Expanded Appendices

- Rainfall Data
- Approved H&H Models & Techniques
- Detention Volume vs. Percent Impervious
- IDNR/OWR Dam Safety Permit Flowchart
- Watershed Map

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Appendix 4

§15.60.180 Rainfall Depth-Duration Frequency Tables for McHenry County

Bulletin 70 Rainfall Depths (ISWS, 1989)

Duration	Frequency						
	1-year	2-year	5-year	10-year	25-year	50-year	100-year
5 min	0.30	0.36	0.46	0.54	0.66	0.78	0.91
10 min	0.55	0.67	0.84	0.98	1.21	1.42	1.67
15 min	0.68	0.82	1.03	1.21	1.49	1.75	2.05
30 min	0.93	1.12	1.41	1.65	2.04	2.39	2.80
1 hour	1.18	1.43	1.79	2.10	2.59	3.04	3.56
2 hour	1.48	1.79	2.24	2.64	3.25	3.82	4.47
3 hour	1.60	1.94	2.43	2.86	3.53	4.14	4.85
6 hour	1.88	2.28	2.85	3.35	4.13	4.85	5.68
12 hour	2.18	2.64	3.31	3.89	4.79	5.62	6.59
18 hour	2.30	2.79	3.50	4.11	5.06	5.95	6.97
24 hour	2.51	3.04	3.80	4.47	5.51	6.46	7.58
48 hour	2.70	3.30	4.09	4.81	5.88	6.84	8.16
72 hour	2.93	3.55	4.44	5.18	6.32	7.41	8.78
120 hour	3.25	3.93	4.91	5.70	6.93	8.04	9.96
240 hour	4.12	4.95	6.04	6.89	8.18	9.38	11.14

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Appendix 5

§15.60.190 Hydrologic and Hydraulic Models and Techniques approved by MCSC

Hydrologic Models or Techniques Approved by MCSC				
Hydrologic Model or Technique	**Less than 10 ac 5.c.(1)**	**Less than 20 ac 5.c.(2)(a)**	**Between 20 and 100 ac 5.c.(2)(b)**	**Greater than 100 ac 5.c.(2)(c)**
Detention Volume vs. Percent Impervious Chart	X			
Rational Method	Runoff but not Storage	Runoff but not Storage		
TR-55	X	X	X	
USGS Regression Equations			X[16]	X[16]
StreamStats			X[16]	X[16]
HEC-1	X	X	X	X
TR-20	X	X	X	X
HEC-HMS	X	X	X	X

[16] Only allowed where all habitable buildings are above the BFE.

1. The hydrologic models or techniques approved by MCSC include, but are not limited to:
   a. HEC-HMS, TR-20, HEC-1, TR-55, and the Rational Method for tributary areas less than 20 acres;
   b. HEC-HMS, TR-20, HEC-1, TR-55, USGS Regression Equations, and StreamStats for tributary areas less than 100 acres but greater than or equal to 20 acres; or

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McHENRY 1837 COUNTY

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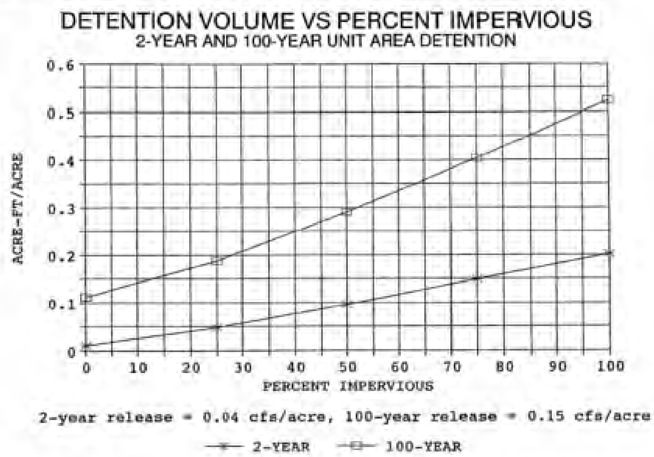
Appendix 6

§15.60.200 Detention Volume vs. Percent Impervious Chart for McHenry County

Unit Area Detention Volume (NIPC, 1991)



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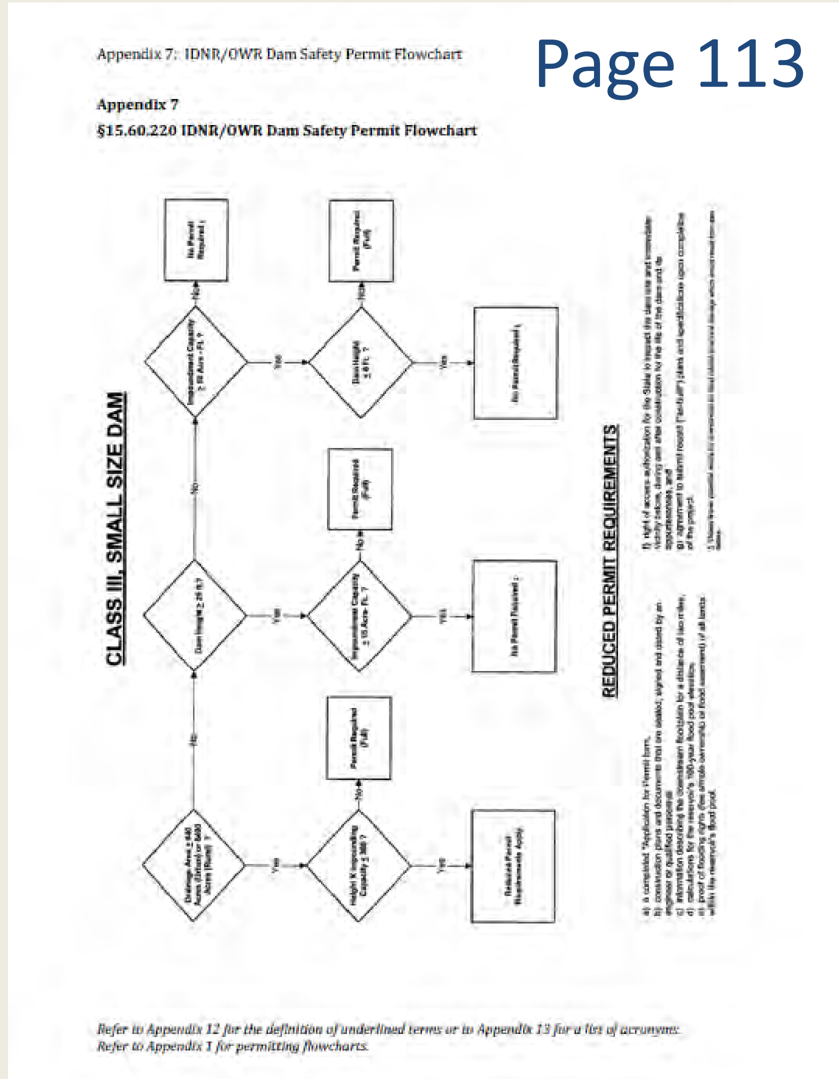
Appendix 7: IDNR/OWR Dam Safety Permit Flowchart

Appendix 7

§15.60.220 IDNR/OWR Dam Safety Permit Flowchart

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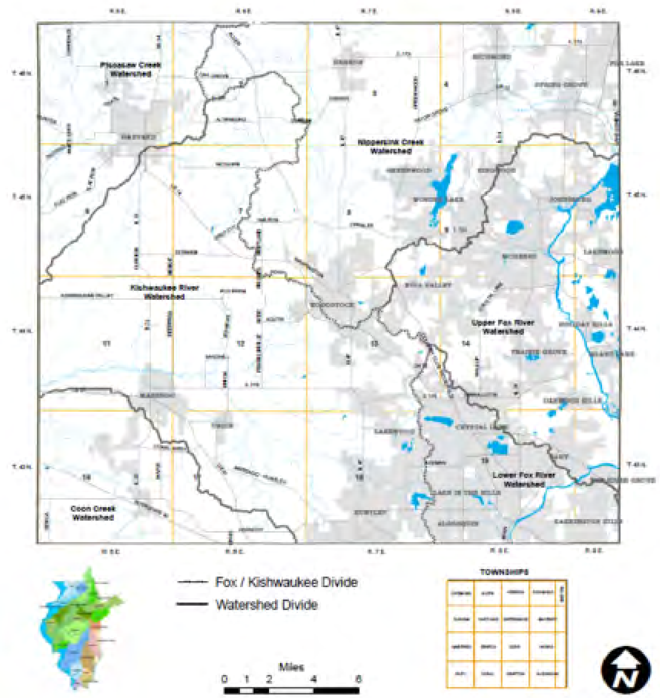
Appendix 9
§15.60.240 McHenry County Watersheds

McHenry County, Illinois
Watersheds



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Regulated Development

- Location of Development
- Size of Development
- Impervious Area Exceeding Design Parameters
- Part of a Larger Development

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Article II: Scope of Regulation, Section A.: Jurisdiction and Adn

Article II

§15.60.020 Scope of Regulation

A. Jurisdiction and Administration

1. This Ordinance applies throughout McHenry County, within incorporated and unincorporated areas.
2. The administration and enforcement of this Ordinance shall be performed by:

   Certified Communities, within their respective jurisdictions; and,

   The MCSC, its agents, employees and assignees in all other areas of McHenry County.
3. A list of Certified Communities may be obtained from the McHenry County Department of Planning and Development.

B. Regulated Development

1. Refer to the Regulated Development Flowchart in Appendix 1.
2. No person, firm, corporation or governmental agency, unless specifically exempted, shall commence any regulated development without first obtaining a stormwater management permit. Unless it is specifically exempted in Article II, Section C, any activity that meets any of the following criteria, is considered regulated development:
   a. Any development that is located partially or completely in a flood hazard area; or,
   b. Any development located partially or completely within the boundary of a wetland; or
   c. Any development that hydrologically disturbs 5,000 square feet or more; or,
   d. Any development that hydrologically disturbs 50% or more of a parcel; or
   e. Any development that results in an additional 20,000 square feet of impervious area since the effective date of this Ordinance; or,
   f. Any development on a lot or parcel of land platted after December 1, 2014 that results in impervious area exceeding the design parameters of an existing stormwater management facility; or,
   g. Any development that is part of a larger common plan of development that, as a whole, would constitute regulated development.

C. Exempted Development

1. Development that consists solely of the following activities shall be exempt from the requirements of this Ordinance, upon review and verification by the Enforcement Officer:
   a. Maintenance of existing buildings outside the floodplain;
   b. Maintenance of existing buildings within the floodplain that does not constitute a substantial improvement;
   c. Maintenance of existing roads and trails;
   d. Other maintenance activities;

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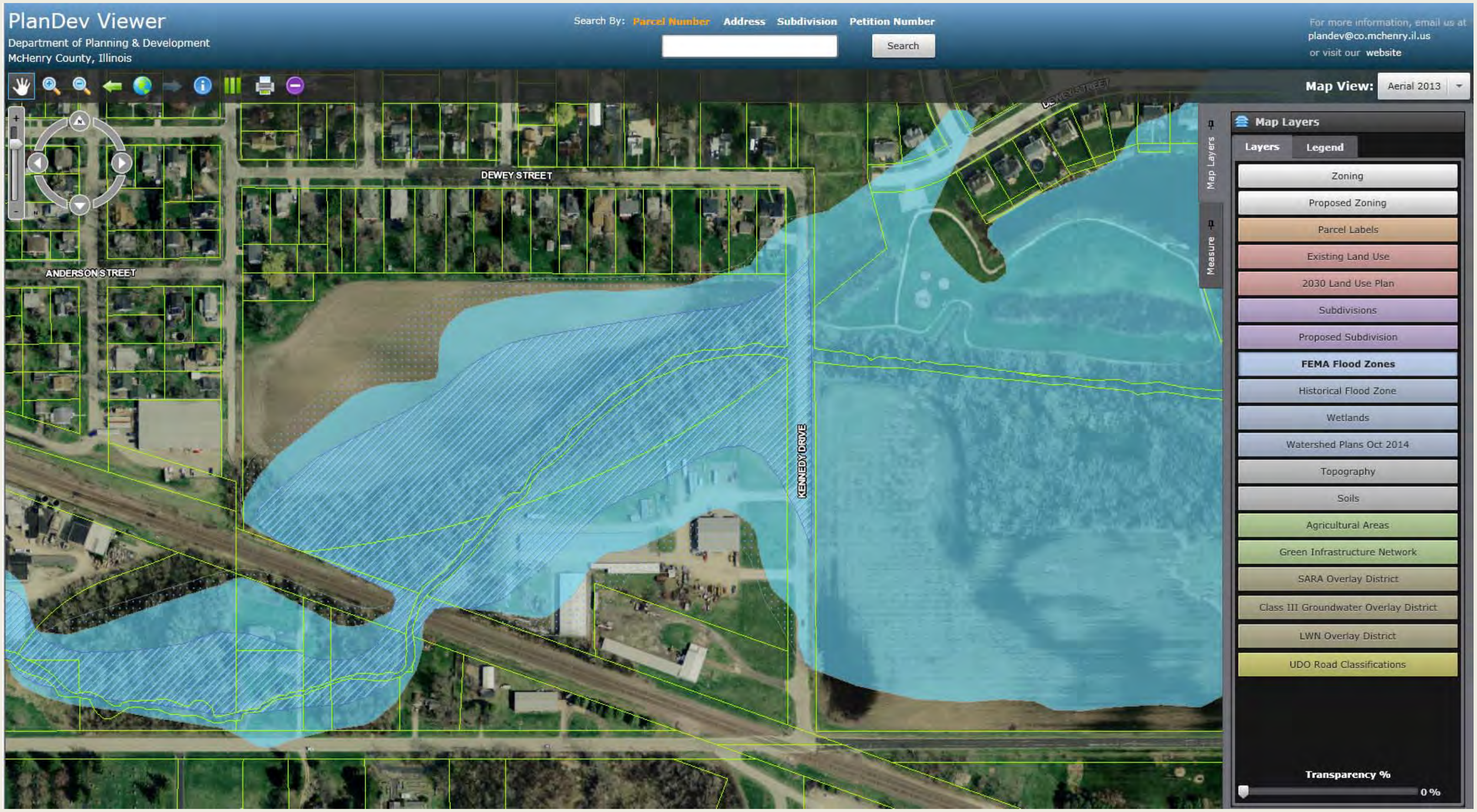
http://www.mchenrycountygis.org/planning/



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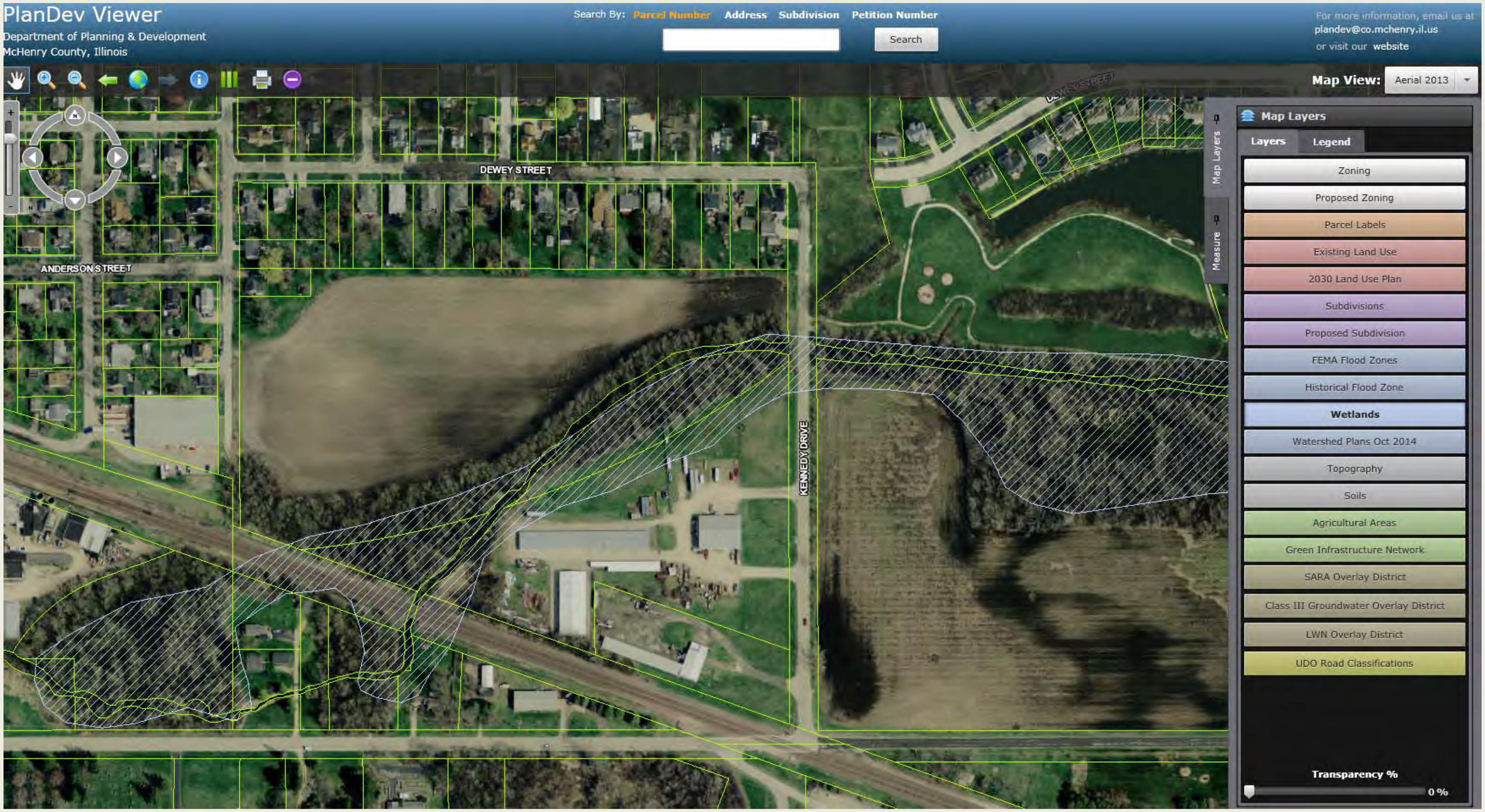

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McHENRY 1837 COUNTY

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McHENRY 1837 COUNTY

Regulated Development

- Eliminated
  - Change in Runoff Direction
  - Volume of Earthwork

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Exempted Development

- Maintenance of Existing Buildings
- Maintenance of Existing Roads and Trails
- Other Maintenance Activities

Article II: Scope of Regulation, Section A.: Jurisdiction and Adn

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maintenance of existing buildings: Re-roofing, replacement of windows, re-siding, carpeting, painting, installing a new water heater, installing a new electric service, and maintenance tasks that do not require a building permit.

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d. Any development that hydrologically disturbs 50% or more of a parcel; or

e. Any development that results in an additional 20,000 square feet of impervious area since the effective date of this Ordinance; or,

f. Any development on a lot or parcel of land platted after December 1, 2014 that results in impervious area exceeding the design parameters of an existing stormwater management facility; or,

g. Any development that is part of a larger common plan of development that, as a whole, would constitute regulated development.

C. Exempted Development

1. Development that consists solely of the following activities shall be exempt from the requirements of this Ordinance, upon review and verification by the Enforcement Officer:

   a. Maintenance of existing buildings outside the floodplain;

   b. Maintenance of existing buildings within the floodplain that does not constitute a substantial improvement;

   c. Maintenance of existing roads and trails;

   d. Other maintenance activities;

Refer to Appendix 12 for the definition of underlined terms or to Appendix 13 for a list of acronyms.
Refer to Appendix 1 for permitting flowcharts.

McHENRY 1837 COUNTY

Exempted Development

- Maintenance of Existing Buildings
- Maintenance of Existing Roads and Trails
- Other Maintenance Activities

Article II: Scope of Regulation, Section A.: Jurisdiction and Adn

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Article II

§15.60.020 Scope of Regulation

A. Jurisdiction and Administration

1. This Ordinance applies throughout McHenry County, within incorporated and unincorporated areas.

2. The administration and enforcement of this Ordinance shall be performed by:

   Certified Communities, within their respective jurisdictions; and,

   The MCSC, its agents, employees and assignees in all other areas of McHenry County.

3. A list of Certified Communities may be obtained from the McHenry County Department of Planning and Development.

B. Regulated Development

1. Refer to the Regulated Development Flowchart in Appendix 1.

2. No person, firm, corporation or governmental agency, unless specifically exempted,

maintenance of existing roads and trails: Rehabilitative maintenance, such as milling and overlaying, that does not increase the impervious area and does not increase the surface elevation. Maintenance of existing roads and trails also includes increasing the surface elevation with the following limitations:

A. Resurfacing outside flood hazard areas;
B. Resurfacing within flood prone areas;
C. Resurfacing within the flood fringe, provided the difference between the elevation of the road surface after resurfacing and the elevation of the road surface on the effective date of this Ordinance is not more than two inches.

area since the effective date of this Ordinance; or,

f. Any development on a lot or parcel of land platted after December 1, 2014 that results in impervious area exceeding the design parameters of an existing stormwater management facility; or,

g. Any development that is part of a larger common plan of development that, as a whole, would constitute regulated development.

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MCHENRY 1837 COUNTY

Exempted Development

- Maintenance of Existing Buildings
- Maintenance of Existing Roads and Trails
- **Other Maintenance Activities**

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Article II: Scope of Regulation, Section A.: Jurisdiction and Adn

Article II

§15.60.020 Scope of Regulation

other maintenance activity: Rehabilitative maintenance that is not maintenance of existing buildings or maintenance of existing roads and trails, including but not limited to:

A. Repair or replacement of existing driveways or parking lots within the same footprint and outside flood hazard areas;

B. Repair or replacement of existing driveways or parking lots within the same footprint and within flood prone areas;

C. Repair or replacement of existing driveways or parking lots within the same footprint and within the flood fringe, provided the difference between the elevation of the paved surface after repair or replacement and the elevation of the paved surface on the effective date of this Ordinance is not more than two inches;

D. Repair of existing underground and overhead utilities, provided the repair does not result in any IWMC impact;

E. Repair or in-kind replacement of existing culverts, storm sewers, or drain tiles, provided the culverts, storm sewers, or drain tiles are outside the designated floodway and have a cross-sectional area less than 12.6 square feet;

F. Repair, not including in-kind replacement, of an existing bridge outside the designated floodway;

G. Maintenance of drainage ditches (i.e. dredging and the removal of obstructive, invasive, dead, or dying vegetation), outside the designated floodway, provided that spoil materials: are removed from the flood hazard area and are spread thinly and incorporated into existing cultivated areas; or are hauled away from the development site; and provided that appropriate soil erosion and sediment control practices are utilized. Maintenance of drainage ditches does not include ditch straightening, ditch widening, flood hazard area fill, soil stockpiles or the construction of any new channel or water body;

H. Dredging of ponds, outside the designated floodway, provided that spoil materials: are removed from the flood hazard area and are spread thinly and incorporated into existing cultivated areas; or are hauled away from the development site; and provided that appropriate soil erosion and sediment control practices are utilized. Dredging of ponds does not include the construction of any new pond or water body;

I. Removal of any obstruction from a channel, culvert, or storm sewer to restore its original design or permitted condition. Removal of obstruction does not include

a. Maintenance of existing buildings outside the floodplain;

b. Maintenance of existing buildings within the floodplain that does not constitute a substantial improvement;

c. Maintenance of existing roads and trails;

d. Other maintenance activities;

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McHENRY 1837 COUNTY

Exempted Development

- Gardening and Landscaping
- Tillage and Agricultural Practices
- NRCS Conservation Plan
- Demolition
- Utility Service Lines

Article II: Scope of Regulation, Section C.: Exempted Develop

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e. Gardening and landscaping that does not involve filling, grading, or the construction of berms;

f. Tillage and similar agricultural practices that do not involve filling, grading or the construction of levees;

g. Improvements undertaken pursuant to a written NRCS Conservation Plan, when the improvements are not located within a flood hazard area, WOTUS, or IWMC;

h. Demolition and accompanying restoration, including the removal of bridges and culverts, provided that:

(1) Natural land contours are restored;

(2) The disturbed area is less than 1 acre; and

(3) Appropriate soil erosion and sediment control practices are utilized;

i. Installation, repair or replacement of an onsite waste disposal system, well, sewer or water service line, or other utility service line serving one existing building, provided that:

(1) The activity is not located partially or completely in a flood hazard area or a wetland;

(2) The disturbed area is less than 1 acre;

(3) The activity does not result in an increase in ground elevation; and

(4) Appropriate soil erosion and sediment control practices are utilized.

D. Reduced Standards for Specific Types of Development

1. Regulated development that received one or more of the approvals set forth in a through e below prior to June 1, 2004 shall be exempt from the Buffer Areas Performance Standards of this Ordinance and may be exempt from the Runoff Rate Reduction and Watershed Specific Requirements of this Ordinance, upon review and by the Enforcement Officer that the regulated development is consistent with the prior approval. An applicant's written exemption request shall itemize each Ordinance provision for which an exemption is requested.

a. Annexation agreement

b. Final plat of subdivision

c. Planned unit development

d. Replat of an industrial subdivision

e. Replat of a commercial subdivision

2. Mining Development that received a conditional use permit prior to June 1, 2004 shall be exempt from the Buffer Areas Performance Standards of this Ordinance and shall be exempt from the Compensatory Storage Requirements of this Ordinance for fill outside the floodway, upon review and authorization by the Enforcement Officer. The Enforcement Officer may give credit toward meeting the Compensatory Storage Requirements for excavation prior to June 1, 2004 and after September 30, 1981, which was the effective date of the first FIRM in McHenry County. An applicant's written exemption request shall itemize each Ordinance provision for which an exemption is requested.

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McHENRY COUNTY 1837

Exempted Development

- Gardening and Landscaping
- Tillage and Agricultural Practices
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Article II: Scope of Regulation, Section C.: Exempted Develop

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Exempted Development

- Gardening and Landscaping
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McHENRY 1837 COUNTY

Exempted Development

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Article II: Scope of Regulation, Section C.: Exempted Develop

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McHENRY 1837 COUNTY

Not Sure?

Ask P&D.

General Permit Number 1

- Specified Development
- Applicability
- Authorization
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Article III

§15.60.030 General Permits

General Permits waive certain requirements of this Ordinance in order to streamline the permit process for specific types of routine projects. The General Permits listed in this Article may be issued by MCSC or a Certified Community, provided that the regulated development meets the Applicability criteria, the Terms and Conditions for the specific type of project, and the Authorization requirements.

Table 2. Summary of General Permit 1

Type of Regulated Development	Applicability	Authorization	Terms and Conditions
Underground and Overhead Utilities	A.1	A.2	A.3.a, A.3.b
Storm Sewer Outfalls, Drain Tile Outfalls, and Outlet			
Replacement Onsite Waste Disposal Systems	A.1	A.2	A.3.a, A.3.n
Material Storage	A.1	A.2	A.3.a, A.3.o
Dredging	A.1	A.2	A.3.a, A.3.p
Wetland Restoration and Enhancement	A.1	A.2	A.3.a, A.3.q

Project Type	Exempt	General Permit	Individual Permit
Tillage and Similar Agricultural Practices	Refer to Article II, Section C: Exempted Development	N/A	All Other Development Regulated by Article II, Section B
Implementing a NRCS Conservation Plan	Refer to Article II, Section C: Exempted Development	N/A	All Other Development Regulated by Article II, Section B
Demolition	Refer to Article II, Section C: Exempted Development	N/A	All Other Development Regulated by Article II, Section B
Onsite Waste Disposal Systems and Wells	Refer to Article II, Section C: Exempted Development	Refer to Article III, Section A: General Permit 1	All Other Development Regulated by Article II, Section B
Sewer and Water Service Lines	Refer to Article II, Section C: Exempted Development	N/A	All Other Development Regulated by Article II, Section B

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McHENRY 1837 COUNTY

General Permit Number 1

- Specified Development
- Applicability
- Authorization
- Terms and Conditions

Page 13

A. **General Permit Number 1 – Authorizing Routine Pr**

1. Applicability

a. This General Permit Number 1 only applies to regulated developments identified in this Section, which result in less than 20,000 square feet of hydrologically disturbed area, except where the Terms and Conditions for Specified Development set forth in Paragraph 3 below explicitly state otherwise.

b. This General Permit Number 1 applies to regulated development within flood hazard areas, except where the Terms and Conditions for Specified Development set forth in Paragraph 3 below explicitly state otherwise.

c. This General Permit Number 1 applies to IWMC impacts less than or equal to 0.10 acre.

d. This General Permit Number 1 applies to regulated development within WOTUS when a permit or letter of no objection has been obtained from the USACE.

e. This General Permit Number 1 does not apply to regulated developments which would be required to meet the Stormwater Storage Requirements of this Ordinance.

f. This General Permit Number 1 does not apply to regulated developments which would adversely impact drainage patterns on adjoining property or increase flood heights on adjoining property.

2. Authorization

a. Applicants seeking authorization by General Permit Number 1 shall demonstrate an ownership interest in the subject property, or written authorization by the property owner to proceed with the development, and shall submit a stormwater management permit application with the required supporting information to the Enforcement Officer prior to commencing a proposed regulated development. The following information is required in support of the stormwater management permit application:

(1) A description and depiction of the proposed regulated development demonstrating that it meets the conditions of the General Permit;

(2) All applicable consultations, waivers, approvals, and permits from Federal, State, and local authorities shall be submitted; and

(3) Payment of the stormwater management permit fee.

b. If the Enforcement Officer determines that the proposed regulated development complies with the terms and conditions of General Permit Number 1, the Enforcement Officer shall notify the applicant in writing and shall schedule a meeting at the development site for photographic documentation of the site conditions. If the Enforcement Officer determines that the regulated development does not comply with the terms and conditions of General Permit Number 1, the Enforcement Officer shall notify the applicant in writing and provide instructions on the procedures to seek authorization under an individual permit.

Refer to Appendix 12 for the definition of underlined terms or to Appendix 13 for a list of acronyms.
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General Permit Number 1

- Specified Development
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- Authorization
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   b. If the Enforcement Officer determines that the proposed regulated development complies with the terms and conditions of General Permit Number 1, the Enforcement Officer shall notify the applicant in writing and shall schedule a meeting at the development site for photographic documentation of the site conditions. If the Enforcement Officer determines that the regulated development does not comply with the terms and conditions of General Permit Number 1, the Enforcement Officer shall notify the applicant in writing and provide instructions on the procedures to seek authorization under an individual permit.

General Permit Number 1

- Specified Development
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Article III: General Permits, Section A.: General Permit Numbe
Paragraph 2.

c. No part of a regulated development shall be authorized by a General Permit, unless the entire regulated development meets the terms and conditions of one or more General Permits.

d. Regulated development not specified in, or not meeting the terms and conditions of, a General Permit shall require an individual permit.

e. MCSC and certified communities may authorize regulated development under General Permit Number 1.

f. Any regulated development authorized by this General Permit Number 1 shall be completed within 2 years of the date of authorization.

3. Terms and Conditions for Specified Development

a. All specified regulated development

(1) Disturbance of vegetation shall be kept to a minimum during construction to prevent erosion and sedimentation. The Enforcement Officer may add requirements or conditions as necessary to control soil erosion and sedimentation.

(2) Any drain tile serving adjoining properties that is damaged as a part of regulated development authorized by this General Permit shall be repaired.

(3) This General Permit Number 1 does not authorize the operation of equipment within a channel. To the extent possible, all in-stream work shall be conducted during low-water conditions.

(4) This General Permit Number 1 authorizes temporary channel crossings, when necessary, provided that the temporary channel crossing meets the following requirements:

i. Temporary approach roads shall be 0.5 foot or less above existing grade;

ii. Fill within the channel shall be at or below existing grade and shall be composed of non-erosive material, such as rip-rap or gravel; and

iii. The temporary channel crossing, including temporary approach roads, shall be removed within 90 days after installation, unless the Enforcement Officer grants an extension of time.

(5) Except as specified in Paragraph 2 above and in these Terms and Conditions for Specified Development of this General Permit Number 1, the Application Requirements and Performance Standards of this Ordinance are waived for regulated development authorized by this General Permit Number 1.

b. Underground and overhead utilities - To be authorized by this General Permit Number 1, underground and overhead utilities installation shall meet the following criteria.

(1) The construction of the utility shall not result in any increase in ground elevations within a flood hazard area.

Refer to Appendix 12 for the definition of underlined terms or to Appendix 13 for a list of acronyms.
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General Permit Number 1

- Specified Development
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McHENRY 1837 COUNTY

General Permit Number 2

- Applicability
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Article III: General Permits, Section A.: General Permit Numbe
Paragraph 3.

(4) The abandonment or removal of dra
tile survey for any restoration and enhancement activities involving the abandonment or removal of drain tiles.

B. **General Permit Number 2 – Authorizing Single Family Homes**

1. Applicability

a. This General Permit Number 2 only applies to regulated developments involving the construction or reconstruction of a single family residence resulting in less than 1 acre of hydrologically disturbed area.

b. This General Permit Number 2 does not apply to regulated development within flood hazard areas.

c. This General Permit Number 2 does not apply to regulated development within IWMC or WOTUS.

d. This General Permit Number 2 does not apply to regulated developments which would be required to meet the Stormwater Storage Requirements of this Ordinance.

e. This General Permit Number 2 does not apply to regulated developments which would adversely impact drainage patterns on adjoining property or increase flood heights on adjoining property.

2. Authorization

Applicants seeking authorization by General Permit Number 2 shall demonstrate an ownership interest in the subject property, or written authorization by the property owner to proceed with the development, and shall submit a stormwater management permit application with the required supporting information to the Enforcement Officer prior to commencing the proposed regulated development. The following information is required for authorization by General Permit Number 2.

a. A development plan shall be submitted showing the proposed regulated development with all other relevant information, including but not limited to:

(1) Property lines;

(2) Buildings and other structures;

(3) Easements;

(4) Utility lines, culverts, onsite waste disposal systems, and wells;

(5) Existing and proposed ground elevations sufficient to depict the proposed work and how it ties into existing ground elevations;

(6) Existing and proposed impervious areas;

(7) Areas of temporary disturbance;

Refer to Appendix 12 for the definition of underlined terms or to Appendix 13 for a list of acronyms.
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- Applicability
- Authorization
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Article III: General Permits, Section A.: General Permit Numbe
Paragraph 3.

(4) The abandonment or removal of dra
tile survey for any restoration and enhancement activities involving the abandonment or removal of drain tiles.

B. **General Permit Number 2 – Authorizing Single Family Homes**

1. Applicability

a. This General Permit Number 2 only applies to regulated developments involving the construction or reconstruction of a single family residence resulting in less than 1 acre of hydrologically disturbed area.

b. This General Permit Number 2 does not apply to regulated development within flood hazard areas.

c. This General Permit Number 2 does not apply to regulated development within IWMC or WOTUS.

d. This General Permit Number 2 does not apply to regulated developments which would be required to meet the Stormwater Storage Requirements of this Ordinance.

e. This General Permit Number 2 does not apply to regulated developments which would adversely impact drainage patterns on adjoining property or increase flood heights on adjoining property.

2. Authorization

Applicants seeking authorization by General Permit Number 2 shall demonstrate an ownership interest in the subject property, or written authorization by the property owner to proceed with the development, and shall submit a stormwater management permit application with the required supporting information to the Enforcement Officer prior to commencing the proposed regulated development. The following information is required for authorization by General Permit Number 2.

a. A development plan shall be submitted showing the proposed regulated development with all other relevant information, including but not limited to:

(1) Property lines;

(2) Buildings and other structures;

(3) Easements;

(4) Utility lines, culverts, onsite waste disposal systems, and wells;

(5) Existing and proposed ground elevations sufficient to depict the proposed work and how it ties into existing ground elevations;

(6) Existing and proposed impervious areas;

(7) Areas of temporary disturbance;

Refer to Appendix 12 for the definition of underlined terms or to Appendix 13 for a list of acronyms.
Refer to Appendix 1 for permitting flowcharts.

McHENRY 1837 COUNTY

General Permit Number 2

- Applicability
- Authorization
- Terms and Conditions

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Article III: General Permits, Section B.: General Permit Numb
Homes, Paragraph 2.

k. Any regulated development authorizec
completed within 2 years of the date of authorization.

3. Terms and Conditions for Specified Development

a. All concentrated stormwater discharges from a regulated development shall be conveyed into an existing channel, storm sewer, or overland flow path and shall not result in flood damage at the development site or upstream of the development site.

b. The diversion of stormwater runoff shall be prohibited unless no reasonable alternative exists, as determined by the Enforcement Officer. The diversion of stormwater runoff shall not result in flood damage at the development site, upstream of the development site or on downstream adjoining properties.

c. Appropriate pre-treatment shall be provided for stormwater runoff directed to new or existing Class V injection well.

d. Appropriate pre-treatment shall be provided for stormwater runoff directed to infiltration based practices in areas designated as High or Moderately High Potential for Aquifer Recharge/Contamination on the McHenry County Sensitive Aquifer Recharge Areas Map.

C. **Letters of Understanding**

The McHenry County Board may enter into Letters of Understanding with various agencies that perform regulated development activities in McHenry County. The purpose of a Letter of Understanding is to streamline the stormwater management permit process for routine and minor projects related to the restoration or enhancement of natural areas or for regulated development that makes natural areas accessible to the public. A Letter of Understanding shall describe the terms and conditions for specific regulated development activities to ensure compliance with the purpose and intent of this Ordinance. A Letter of Understanding will be issued after notice and opportunity for public review and comment, and approval from IDNR/OWR and FEMA, if required by law. Once a Letter of Understanding has been issued, the Letter of Understanding shall authorize any regulated development by the named agency which meets the terms and conditions of the Letter of Understanding, until the Letter of Understanding expires or is terminated by action of the McHenry County Board. Certified Communities may adopt and enforce any Letter of Understanding issued by McHenry County within the community's jurisdiction. Non-compliance with the requirements and standards of a Letter of Understanding constitutes a violation of this Ordinance and is subject to the Violation and Penalty standards of this Ordinance.

Refer to Appendix 12 for the definition of underlined terms or to Appendix 13 for a list of acronyms.
Refer to Appendix 1 for permitting flowcharts.

McHENRY 1837 COUNTY

Questions?

Break

Development Classification

- Size and Type of Development
- Location of Development

Article IV: Stormwater Management Permit Provisions, Sectio
Paragraph 1.

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Article IV

§15.60.040 Stormwater Management Permit Provisions

A. Development Classification

1. Refer to the Development Classification Flowchart in Appendix 1.
2. The Enforcement Officer shall make the determination regarding the classification of a regulated development.
3. All regulated development requiring a stormwater management permit, except regulated development authorized by a General Permit, shall be classified as a Minor, Intermediate, Major, Public Road, or Mining Development.
4. Regulated development located partially or completely within a flood hazard area shall also be classified as a Flood Hazard Area Development.
5. Regulated development located partially or completely within WOTUS or IWMC shall also be classified as a Wetlands and Waters Development.
6. Regulated development located partially or completely within a watershed or sub-watershed, for which additional or more restrictive standards have been adopted by MCSC or a Certified Community, shall also be classified as a Watershed Specific Area Development.
7. To the extent that a regulated development fits multiple classifications, it shall comply with all applicable requirements for each classification.

B. Development Phasing

In order to preclude inappropriate phasing of development to circumvent the intent of this Ordinance, the requirements of this Ordinance shall apply all regulated development within the contiguous property, unless waived by the Enforcement Officer.

C. Approval Prior to Permitting

1. Prior to the issuance of stormwater management permit, the applicant may request conditional approval of: a BFE determination, floodway delineation, IWMC boundary determination, or any other component of a regulated development. A request for conditional approval shall include the information required for the component of regulated development by the Application Requirements of this Ordinance. The Enforcement Officer shall review the component of regulated development based on conformance with the Performance Standards of this Ordinance.
2. Earth change approval for a regulated development may be granted by the Enforcement Officer prior to the issuance of a stormwater management permit. The Earth change approval is subject to the following conditions:
    a. An Earth Change Plan shall be submitted demonstrating that the proposed grading would meet the applicable Performance Standards of this Ordinance;
    b. No impervious areas shall be created;
    c. No fill shall be placed in flood hazard areas;
    d. No regulated development may occur within IWMC or WOTUS;
    e. No regulated development may occur in areas for which Federal and/or State permits are required, unless the applicable permits have been obtained;

Refer to Appendix 12 for the definition of underlined terms or to Appendix 13 for a list of acronyms.
Refer to Appendix 1 for permitting flowcharts.

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Development Classification

- Size and Type of Development
- Location of Development

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Article IV

§15.60.040 Stormwater Management Permit Provisions

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   a. An Earth Change Plan shall be submitted demonstrating that the proposed grading would meet the applicable Performance Standards of this Ordinance;
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   c. No fill shall be placed in flood hazard areas;
   d. No regulated development may occur within IWMC or WOTUS;
   e. No regulated development may occur in areas for which Federal and/or State permits are required, unless the applicable permits have been obtained;

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Refer to Appendix 1 for permitting flowcharts.

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- Flood Hazard Area Submittal
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Article V

§15.60.050 Application Requirements

A. Enforcement Officer Authority

The Enforcement Officer shall make the determination as to whether the submitted documentation demonstrates compliance with this Ordinance.

B. Property Interest

The applicant shall demonstrate an ownership interest in the subject property, or written authorization by the property owner to proceed with the development.

C. Basic Submittal

The following requirements apply to all regulated development, except regulated development authorized by a General Permit.

1. A stormwater management permit application shall be submitted.
2. A development plan shall be submitted showing the proposed regulated development with all other relevant information, including but not limited to:
   a. Property lines;
   b. Buildings and other structures;
   c. Easements;
   d. Utility lines, culverts, onsite waste disposal systems, and wells;
   e. Existing and proposed ground elevations sufficient to depict the proposed work and how it ties into existing ground elevations;
   f. Existing and proposed impervious areas;
   g. Areas of temporary disturbance;
   h. Placement of spoil materials;
   i. Details of construction;
   j. Dimensions of the proposed regulated development;
   k. The location of any flood hazard area on the development site and extending 100 feet beyond the development site, based on available maps and studies, unless a BFE determination is required by this Ordinance; and
   l. The location of all WOTUS and IWMC, extending beyond the development site, based on available maps and studies, unless a Wetland Determination Report is required by this Ordinance.
3. For regulated development that does not include a new building and would not change existing ground elevations, the development plan may be sketched on an aerial photograph showing 2 foot contour interval topographic mapping and the applicant's written agreement that: "The finished ground elevations shall match existing ground elevations and all spoil material shall be removed from the development site" which shall be depicted on the aerial photograph as a note.

Refer to Appendix 12 for the definition of underlined terms or to Appendix 13 for a list of acronyms.
Refer to Appendix 1 for permitting flowcharts.

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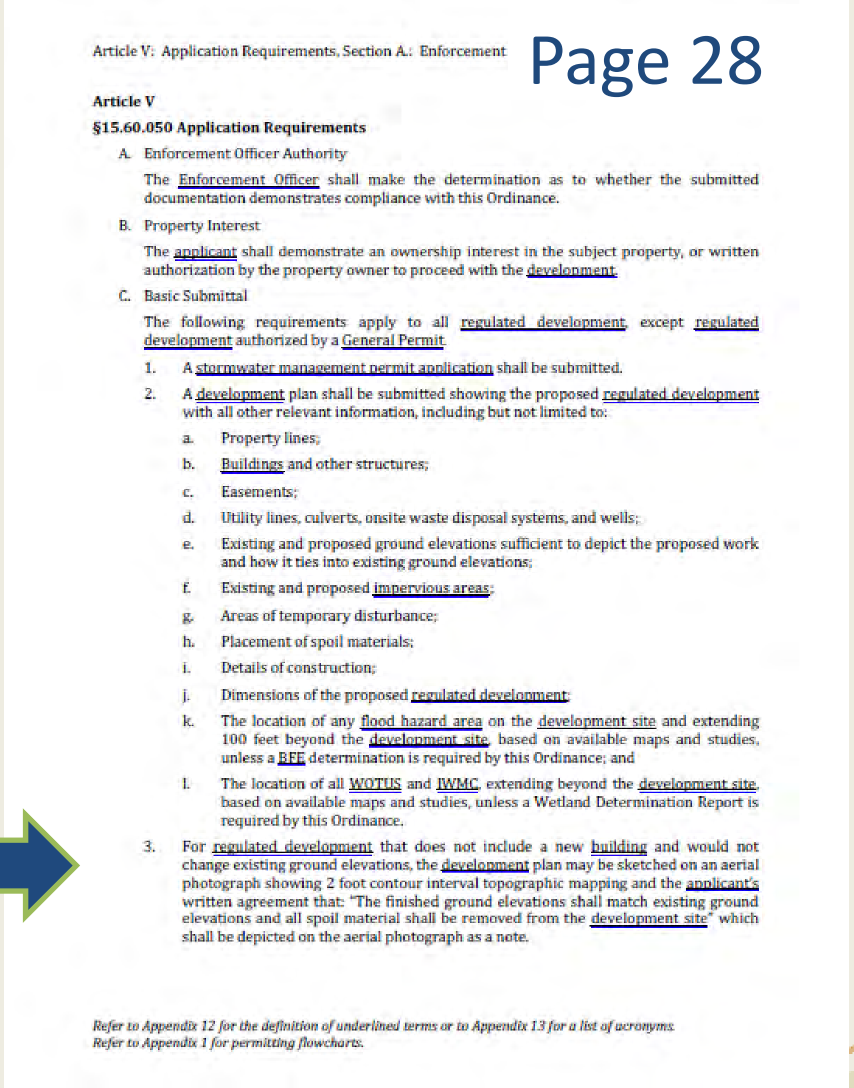
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Article V

§15.60.050 Application Requirements

A. Enforcement Officer Authority

The Enforcement Officer shall make the determination as to whether the submitted documentation demonstrates compliance with this Ordinance.

B. Property Interest

The applicant shall demonstrate an ownership interest in the subject property, or written authorization by the property owner to proceed with the development.

C. Basic Submittal

The following requirements apply to all regulated development, except regulated development authorized by a General Permit.

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   a. Property lines;
   b. Buildings and other structures;
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   d. Utility lines, culverts, onsite waste disposal systems, and wells;
   e. Existing and proposed ground elevations sufficient to depict the proposed work and how it ties into existing ground elevations;
   f. Existing and proposed impervious areas;
   g. Areas of temporary disturbance;
   h. Placement of spoil materials;
   i. Details of construction;
   j. Dimensions of the proposed regulated development;
   k. The location of any flood hazard area on the development site and extending 100 feet beyond the development site, based on available maps and studies, unless a BFE determination is required by this Ordinance; and
   l. The location of all WOTUS and IWMC, extending beyond the development site, based on available maps and studies, unless a Wetland Determination Report is required by this Ordinance.
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4. All applicable consultations, waivers, approvals, and permits from Federal, State, and local authorities shall be submitted.

5. Payment of the stormwater management permit fee.

D. Soil Erosion and Sediment Control Submittal

In addition to other applicable Application Requirements, the following requirements apply to all regulated development, except regulated development authorized by a General Permit.

1. A development plan shall be submitted demonstrating compliance with the Soil Erosion and Sediment Control Performance Standards of this Ordinance. The development plan shall include:

   a. The type and location of all soil erosion and sediment control measures. If the regulated development will be constructed in phases, the development plan shall specify all control measures necessary for each phase;

   b. Detail drawings for all soil erosion and sediment control measures;

   c. Specifications for seeding or other methods of stabilization; and

   d. The McHenry County *Standard Soil Erosion and Sediment Control Notes* in Appendix 2.

2. For regulated development disturbing 1 acre or more, the development plan shall be submitted with the following additional information:

   a. A narrative description of the existing land cover and soil survey data for the development site and adjacent areas;

   b. A narrative description of the proposed temporary and permanent soil erosion and sediment control practices, including a narrative describing how flood hazard areas, wetlands, waters and buffer areas will be protected from erosion and sedimentation;

   c. A schedule of construction activities including, but not limited to, clearing and grading, installation of stabilized construction entrances, disposal of construction waste, stockpiling, and inspection and maintenance of all soil erosion and sediment control practices;

   d. Data and calculations used to size, locate, design, and maintain all soil erosion and sediment control practices, where applicable, and for the design of temporary stream crossings; and

   e. Identification of person(s) or entity having legal responsibility for installation, maintenance, and removal of erosion and sediment control practices during construction and after regulated development is completed.

3. All applicable consultations, waivers, approvals, and permits from Federal, State, and local authorities shall be submitted including, but not limited to:

   a. Coverage by the IEPA under General NPDES Permit No. ILR10; and

   b. A permit from the road authority for development in a public right-of-way.

Refer to Appendix 12 for the definition of underlined terms or to Appendix 13 for a list of acronyms.
Refer to Appendix 1 for permitting flowcharts.

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1. A development plan shall be submitted demonstrating compliance with the Soil Erosion and Sediment Control Performance Standards of this Ordinance. The development plan shall include:

   a. The type and location of all soil erosion and sediment control measures. If the regulated development will be constructed in phases, the development plan shall specify all control measures necessary for each phase;

   b. Detail drawings for all soil erosion and sediment control measures;

   c. Specifications for seeding or other methods of stabilization; and

   d. The McHenry County *Standard Soil Erosion and Sediment Control Notes* in Appendix 2.

2. For regulated development disturbing 1 acre or more, the development plan shall be submitted with the following additional information:

   a. A narrative description of the existing land cover and soil survey data for the development site and adjacent areas;

   b. A narrative description of the proposed temporary and permanent soil erosion and sediment control practices, including a narrative describing how flood hazard areas, wetlands, waters and buffer areas will be protected from erosion and sedimentation;

   c. A schedule of construction activities including, but not limited to, clearing and grading, installation of stabilized construction entrances, disposal of construction waste, stockpiling, and inspection and maintenance of all soil erosion and sediment control practices;

   d. Data and calculations used to size, locate, design, and maintain all soil erosion and sediment control practices, where applicable, and for the design of temporary stream crossings; and

   e. Identification of person(s) or entity having legal responsibility for installation, maintenance, and removal of erosion and sediment control practices during construction and after regulated development is completed.

3. All applicable consultations, waivers, approvals, and permits from Federal, State, and local authorities shall be submitted including, but not limited to:

   a. Coverage by the IEPA under General NPDES Permit No. ILR10; and

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Refer to Appendix 1 for permitting flowcharts.

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Appendix 2

§15.60.160 Standard Soil Erosion and Sediment Control Notes

1. Control measures shall meet the minimum standards and specifications of the *Illinois Urban Manual* (www.aiswcd.org/IUM) unless stated otherwise.
2. Soil disturbance shall be conducted in such a manner as to minimize erosion. Areas of the development site that are not to be disturbed shall be protected from construction traffic or other disturbance until final stabilization is achieved.
3. Soil stabilization measures shall consider the time of year, development site conditions and the use of temporary or permanent measures.
4. Stabilization by seeding shall include topsoil placement and fertilization, as necessary.
5. Native seed mixtures shall include rapid-growing annual grasses or small grains to provide initial, temporary soil stabilization.
6. Offsite property shall be protected from erosion and sedimentation. Velocity dissipation devices shall be placed at concentrated discharge locations and along the length of any outfall channel, as necessary to prevent erosion.
7. Sediment control measures shall be installed prior to the disturbance of tributary areas.
8. Stabilization of disturbed areas shall be initiated immediately whenever any clearing, grading, excavating or other earth disturbing activities have permanently ceased on any portion of the development site, or temporarily ceased on any portion of the development site and will not resume for a period exceeding 14 calendar days. Stabilization of disturbed areas shall be initiated within 1 working day of permanent or temporary cessation of earth disturbing activities and shall be completed as soon as possible, but not later than 14 calendar days from the initiation of stabilization work in an area. Exceptions to these time frames are specified below:
   a. Where the initiation of stabilization measures is precluded by snow cover, stabilization measures shall be initiated as soon as practicable; and
   b. In areas where construction activity has temporarily ceased and will resume after 14 days, a temporary stabilization method may be used.
9. Disturbance of steep slopes shall be minimized. Areas or embankments having slopes steeper than 3:1 shall be stabilized with staked in place sod, erosion control blanket in combination with seeding, or an equivalent control measure.
10. Perimeter control measures shall be provided downslope and perpendicular to the flow of runoff from disturbed areas, where the tributary area is greater than 5,000 square feet, and where runoff will flow in a sheet flow manner. Perimeter erosion control shall also be provided at the base of soil stockpiles.
11. The stormwater management system shall be protected from erosion and sedimentation downslope from disturbed areas. Inlet protection that reduces sediment loading, while allowing runoff to enter the inlet shall be required for all storm sewers. Check dams, or an equivalent control measure, shall be required for all channels. Filter fabric inlet protection and straw bale ditch checks are not acceptable control measures.

Refer to Appendix 12 for the definition of underlined terms or to Appendix 13 for a list of acronyms.
Refer to Appendix 1 for permitting flowcharts.

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E. Runoff Control Submittal

In addition to other applicable Application Requirements, the following requirements apply to all regulated development, except regulated development authorized by a General Permit.

1. Refer to the Runoff Control Submittal Flowchart in Appendix 1.
2. For Minor Development the following documentation shall be submitted demonstrating compliance with the Runoff Control Performance Standards of this Ordinance.
   a. A development plan shall be submitted that depicts:
      (1) All applicable components of the stormwater management system, including the overland flow path, drain tiles, storm sewers, and water quality protection measures; and
      (2) Includes the McHenry County *Standard Drain Tile Notes* in Appendix 3.
   b. As applicable, design calculations prepared by a licensed professional engineer shall be submitted. When required, the design calculations shall demonstrate that the Runoff Control Performance Standards of this Ordinance have been met for the following components:
      (1) Overland flow paths;
      (2) Drain tiles; and
      (3) Storm sewers.
3. For Intermediate, Major, Public Road, or Mining Development, the development plans and supporting calculations shall be prepared by a licensed professional engineer and shall meet the Minor Development Runoff Control Submittal requirements set forth in Paragraph E.2 above and the following additional requirements:
   a. A statement shall be submitted, which is signed by the licensed professional engineer that prepared the development plans, rendering an opinion that the development plans meet the minimum requirements of this Ordinance;
   b. A development plan shall be submitted that depicts:
      (1) A benchmark referenced to NAVD88;
      (2) Existing utilities including sanitary sewer, water main, onsite waste disposal system, well, or any other utilities that exist on the site and 100 feet beyond the development site. On development sites where an infiltration facility is proposed, existing water supply wells shall be shown 200 feet beyond the development site. Information regarding the invert and rim elevations, pipe sizes, pipe lengths, and material type shall be provided;
      (3) Location and limits of all existing and proposed deed or plat restrictions;
      (4) Existing trees and vegetation areas on the development site;
      (5) Proposed contours throughout the development site with a maximum contour interval of 1 foot;

Refer to Appendix 12 for the definition of underlined terms or to Appendix 13 for a list of acronyms.
Refer to Appendix 1 for permitting flowcharts.

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2. For Minor Development the following documentation shall be submitted demonstrating compliance with the Runoff Control Performance Standards of this Ordinance.
   a. A development plan shall be submitted that depicts:
      (1) All applicable components of the stormwater management system, including the overland flow path, drain tiles, storm sewers, and water quality protection measures; and
      (2) Includes the McHenry County *Standard Drain Tile Notes* in Appendix 3.
   b. As applicable, design calculations prepared by a licensed professional engineer shall be submitted. When required, the design calculations shall demonstrate that the Runoff Control Performance Standards of this Ordinance have been met for the following components:
      (1) Overland flow paths;
      (2) Drain tiles; and
      (3) Storm sewers.
3. For Intermediate, Major, Public Road, or Mining Development, the development plans and supporting calculations shall be prepared by a licensed professional engineer and shall meet the Minor Development Runoff Control Submittal requirements set forth in Paragraph E.2 above and the following additional requirements:
   a. A statement shall be submitted, which is signed by the licensed professional engineer that prepared the development plans, rendering an opinion that the development plans meet the minimum requirements of this Ordinance;
   b. A development plan shall be submitted that depicts:
      (1) A benchmark referenced to NAVD88;
      (2) Existing utilities including sanitary sewer, water main, onsite waste disposal system, well, or any other utilities that exist on the site and 100 feet beyond the development site. On development sites where an infiltration facility is proposed, existing water supply wells shall be shown 200 feet beyond the development site. Information regarding the invert and rim elevations, pipe sizes, pipe lengths, and material type shall be provided;
      (3) Location and limits of all existing and proposed deed or plat restrictions;
      (4) Existing trees and vegetation areas on the development site;
      (5) Proposed contours throughout the development site with a maximum contour interval of 1 foot;

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Appendix 3

§15.60.170 Standard Drain Tile Notes

1. Drain tiles disturbed during regulated development shall be reconnected by those responsible for their disturbance, unless the development plans specify abandonment of the drain tiles.
2. All abandoned drain tiles within disturbed areas shall be removed in their entirety.
3. Drain tiles within the disturbed area of a development site shall be replaced, bypassed around the development site or intercepted and connected to the stormwater management system for the development site. The size of the replaced or bypassed drain tile shall be equivalent to the existing drain tile.

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4. For regulated development required to meet the Stormwater Storage Requirements of this Ordinance, as-built plans shall be submitted with a certificate stating that stormwater management facilities were constructed in substantial conformance with the approved development plans.
5. All applicable consultations, waivers, approvals, and permits from Federal, State, and local authorities shall be submitted including, but not limited to documentation of IEPA receipt of a Class V injection well inventory.

F. Flood Hazard Area Submittal

In addition to other applicable Application Requirements, the following requirements apply to all Flood Hazard Area Development, except regulated development authorized by a General Permit.

1. Refer to the Flood Hazard Area Submittal Flowchart in Appendix 1.
2. A statement shall be submitted, which is signed by the licensed professional engineer that prepared the development plans, rendering an opinion that the development plans meet the minimum requirements of this Ordinance;
3. A development plan and calculations shall be submitted demonstrating compliance with the Flood Hazard Areas Performance Standards of this Ordinance. The development plan shall include:
   a. A benchmark referenced to NAVD88;
   b. A delineation of the existing and proposed BFE on the development site with the source of the BFE noted;
   c. Mapped limits of the flood hazard area per the appropriate source;
   d. A delineation of the floodway on the development site;
   e. Identification of any public bodies of water;
   f. Top of foundation, lowest floor, low opening elevation, and floodproofing elevations of all proposed buildings within a flood hazard area;
   g. Details of floodproofing measures, such as material specifications, construction methods, and calculations; and
   h. Notes limiting the usage of enclosed areas below the BFE.
4. A BFE determination prepared by a licensed professional engineer, if necessary to meet the Flood Hazard Areas Performance Standards of this Ordinance. The BFE determination shall include the following:
   a. A narrative identifying the procedures, assumptions, and data used in the existing and proposed hydrologic and hydraulic calculations;
   b. A tabular summary of existing and proposed flows, flood elevations, and velocities for all storm events up to and including the base flood event;
   c. A schematic diagram of the existing and proposed hydrologic and hydraulic calculations;

Refer to Appendix 12 for the definition of underlined terms or to Appendix 13 for a list of acronyms.
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d. A calculation of the cumulative percent... reconstructions, rehabilitations, additions, improvements, and maintenance.

8. For buildings required to meet the Building Protection Requirements of this Ordinance, an Elevation Certificate, a Floodproofing Certificate, or a similar instrument shall be submitted demonstrating compliance with this Ordinance.

9. All applicable consultations, waivers, approvals, and permits from Federal, State, and local authorities shall be submitted including, but not limited to permits from IDNR/OWR for floodway construction, dam safety, or development within a public body of water.

G. Wetlands, Waters, and Buffer Area Submittal

In addition to other applicable Application Requirements, the following requirements apply to all Wetlands and Waters Development, except regulated development authorized by a General Permit.

1. Refer to the Wetlands, Waters and Buffer Area Submittal Flowchart in Appendix 1.
2. A development plan shall be submitted demonstrating compliance with the Wetlands and Waters Performance Standards and the Buffer Area Performance Standards of this Ordinance. The development plan shall include a delineation of all WOTUS, IWMC, and buffer areas on the development site.
3. A Letter of No Impact or a Wetland Determination Report, prepared by wetland specialist, shall be submitted for all WOTUS and IWMC on the development site, if applicable.
4. All applicable consultations, waivers, approvals, and permits from Federal, State, and local authorities shall be submitted including, but not limited to:
   a. A Jurisdictional Determination and a Letter of No Objection from the USACE;
   b. A permit from the USACE;
   c. Documentation that the regulated development is in compliance with the IDNR's Endangered Species Consultation Program [520 ILCS 10/11];
   d. Documentation that the regulated development is in compliance with the U.S. Fish and Wildlife Service's consultation program under the Endangered Species Act; and
   e. A Natural Resources Information (NRI) report or letter prepared by the McHenry-Lake County Soil and Water Conservation District.
5. For regulated development within the buffer area of WOTUS or IWMC, the following additional information shall be submitted:
   a. A narrative describing the current condition of the buffer area, including the existing plant community(s) present and a list of the plant species characterized individually as native or non-native;
   b. Calculations for determining the existing and proposed buffer area impacted by the development;
   c. The size, location, and design details for any BMPs proposed for mitigating buffer impacts; and

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b. Soil disturbance shall be conducted in suc
Areas of the development site that are not to be disturbed shall be protected from construction traffic or other disturbance until final stabilization is achieved.

c. Soil stabilization measures shall consider the time of year, development site conditions and the use of temporary or permanent measures.

d. Stabilization by seeding shall include topsoil placement and fertilization, as necessary.

e. Native seed mixtures shall include rapid-growing annual grasses or small grains to provide temporary soil stabilization.

f. Offsite property shall be protected from erosion and sedimentation. Velocity dissipation devices shall be placed at concentrated discharge locations and along the length of any outfall channel, as necessary to prevent erosion.

g. Sediment control measures shall be installed prior to the disturbance of tributary areas.

h. Stabilization of disturbed areas shall be initiated immediately whenever any clearing, grading, excavating or other earth disturbing activities have permanently ceased on any portion of the development site, or temporarily ceased on any portion of the development site and will not resume for a period exceeding 14 calendar days. Stabilization of disturbed areas shall be initiated within 1 working day of permanent or temporary cessation of earth disturbing activities and shall be completed as soon as possible, but not later than 14 calendar days from the initiation of stabilization work in an area. Exceptions to these time frames are specified below:

(1) Where the initiation of stabilization measures is precluded by snow cover, stabilization measures shall be initiated as soon as practicable; and

(2) In areas where construction activity has temporarily ceased and will resume after 14 days, a temporary stabilization method may be used.

i. Disturbance of steep slopes shall be minimized. Areas or embankments having slopes steeper than 3:1 shall be stabilized with staked in place sod, erosion control blanket in combination with seeding, or an equivalent control measure.

j. The interior side slopes of all stormwater management facilities shall be stabilized with staked in place sod, erosion control blanket in combination with seeding, or an equivalent control measure. The control measure shall be installed between the design high water level and the bottom of the facility in a dry bottom stormwater management facility, or between the design high water level and the normal water level for all other stormwater management facilities.

k. Perimeter control measures shall be provided downslope and perpendicular to the flow of runoff from disturbed areas, where the tributary area is greater than 5,000 square feet, and where runoff will flow in a sheet flow manner. Perimeter erosion control shall also be provided at the base of soil stockpiles. Acceptable perimeter control measures include:

(1) Silt fences meeting the standards and specifications of the *Illinois Urban Manual* (www.aiswcd.org/IUM) or *AASHTO Standard Specification 288-00*;

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significant impacts to receiving waters. Locations where vehicles enter or exit the development site shall be inspected for evidence of offsite sediment tracking. Such inspections shall be performed at the intervals stated in Paragraph 4.c below.

c. For regulated development disturbing 1 acre or more, a qualified inspector (provided by the applicant) shall inspect the development site at the following intervals:

(1) Upon completion of installation of soil erosion and sediment 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;

(6) After final stabilization and landscaping, prior to removal of sediment controls;

(7) At least once every 7 calendar days; and

(8) Within 24 hours of the end of a storm that is 0.5 inch or greater.

d. For regulated development disturbing less than 1 acre, an inspector (provided

qualified inspector: A person knowledgeable in the principles and practices of erosion and sediment control measures, such as a licensed professional engineer, a Certified Professional in Erosion an Sediment Control (CPESC), a Certified Erosion, Sediment and Storm Water Inspector (CESSWI) or other knowledgeable person who possesses the skills to assess conditions at the development site that could impact stormwater quality and to assess the effectiveness of any sediment and erosion control measures selected to control the quality of stormwater discharges from the construction activities.

duration of construction activities, and made available to the Enforcement Officer upon request. The reports shall include:

(1) The scope of the inspection;

(2) The name and signature of the inspector;

(3) Qualifications of the qualified inspector, if required;

(4) The date of the inspection;

(5) Observations relating to the conditions and effectiveness of control measures; and

(6) Corrective actions taken to address deficiencies.

g. All temporary and permanent erosion and sediment control measures shall be maintained in an effective working condition throughout the duration of construction activities. Deficiencies shall be identified through regular inspections, summarized in inspection reports, and repaired or replaced immediately. The Enforcement Officer shall be notified of any Incidence of

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(2) At least 1.0 foot above the BFE whe[illegible] and 100 acres; or

(3) At least 2.0 feet above the BFE where the tributary area is 100 acres or more.

f. Modification of an existing overland flow path shall not result in increased flood heights on upstream adjoining properties or flood damage at the development site.

3. Drain Tiles

In addition to other applicable Runoff Control Performance Standards, the following requirements apply to all regulated development, except regulated development authorized by a General Permit.

a. Drain tiles disturbed during regulated development shall be reconnected by those responsible for their disturbance, unless the development plans specify abandonment of the drain tiles.

b. All abandoned drain tiles within disturbed areas shall be removed in their entirety.

c. Drain tiles within the disturbed area of a development site shall be replaced, bypassed around the development site or intercepted and connected to the stormwater management system for the development site. The size of the replaced or bypassed drain tile shall be equivalent to the existing drain tile.

d. Existing drain tiles shall be protected from an adverse tailwater condition due to a new stormwater management system.

e. Observation wells, or similar structures for inspecting and maintaining drain tiles, shall be installed at any point where an existing drain tile flows into or out of a development site. Maintenance access shall be provided to the observation well through a deed or plat restriction for regulated development disturbing 5 acres or more.

f. Concentrated discharges from a development site shall be connected to an existing drain tile, where possible; however, the primary outlet from the development site shall be a surface discharge and the drain tile connection shall be designed as a secondary, low flow outlet. When no reasonable alternative exists, the Enforcement Officer may approve the connection of a concentrated discharge from a development site to an existing drain tile as the primary outlet, provided the existing drain tile is located within a deed or plat restriction to the point it discharges into a channel.

g. A drain tile survey shall locate existing farm and storm drain tiles by means of slit trenching or other appropriate methods performed by an experienced subsurface drainage consultant. A drain tile survey shall include the following as applicable on a topographic map:

(1) The location of each slit trench identified to correspond with the tile investigation report and field staked at no less than 50 foot intervals;

(2) The location of each drain tile with a flow direction arrow, tile size and any connection to adjoining properties;

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(3) A summary of the tile investigation [illegible] number, tile size, material and quality, percentage of the tile filled with water, percentage of restrictions caused by sediment; depth of ground cover and tile system classification; and

(4) The name, address and phone number of the person or consultant responsible for the drain tile survey.

h. The Enforcement Officer may accept a drain tile map prepared by a drainage district or other reliable source in lieu of a drain tile survey. The drain tile survey requirement shall be waived for any Minor Development and the Enforcement Officer may waive the drain tile survey requirement for an Intermediate Development, Major Development, Public Road Development or Mining Development, provided the applicant submits a narrative and supporting evidence indicating to the satisfaction of the Enforcement Officer that drain tiles are not likely to be present within the development site. This evidence may consist of:

(1) Soil maps;

(2) Historic aerial photographs;

(3) Historic topographic maps; and

(4) Wetland maps.

4. Storm Sewers

In addition to other applicable Runoff Control Performance Standards, the following requirements apply to all regulated development, except regulated development authorized by a General Permit.

a. Storm sewers shall not connect to sanitary sewers.

b. Energy dissipation devices shall be provided at the outlets of all storm sewer systems to minimize erosion.

c. New storm sewers serving new regulated development shall be designed by a licensed professional engineer for the 10 year critical duration storm as a minimum. The storm sewer design shall be based on full flow conditions, unless detailed calculations demonstrate the hydraulic grade line would not exceed the ground elevation. The Enforcement Officer may waive this requirement when storm sewers are not necessary for the development site to meet the requirements of this Ordinance.

d. New inlets shall be designed to prevent ponding in streets from exceeding 0.5 foot during the 100 year storm and to prevent ponding in parking lots from exceeding 1.0 foot during the 100 year storm. Ponding depth shall be measured at the inlet. The Enforcement Officer may waive this requirement when storm sewers are not necessary for the development site to meet the requirements of this Ordinance.

e. The minimum full flow velocity for new storm sewers serving new regulated development shall be 2.5 feet per second. The maximum full flow velocity for new storm sewers serving new regulated development shall be 8.0 feet per second. The Enforcement Officer may waive this requirement when storm

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http://maps.isgs.illinois.edu/ilhap/

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sewers are not necessary for the development site to meet the requirements of this Ordinance.

f. The minimum storm sewer size shall be 12 inches for storm sewers serving more than one property. The Enforcement Officer may waive this requirement when storm sewers are not necessary for the development site to meet the requirements of this Ordinance.

g. New storm sewers serving more than one property shall be located in a deed or plat restriction of sufficient size to maintain and re-construct the storm sewer. The Enforcement Officer may waive the requirement for a deed or plat restriction where an increase in flood heights on upstream adjoining properties is unlikely to result from the lack of maintenance of the storm sewer.

5. Runoff Rate Reduction

In addition to other applicable Runoff Control Performance Standards, the following requirements apply to all regulated development required to provide stormwater storage.

a. Stormwater Storage Requirements

(1) Stormwater storage shall be required for a regulated development that creates 20,000 square feet or more new impervious area, unless the conditions of i, ii, or iii are met:

i. 1.0 acre or less of new impervious area is created; and

(a) The total impervious area including the proposed development would not exceed 10% of the contiguous property; and

(b) The applicant demonstrates to the satisfaction of the Enforcement Officer that the development will not result in flood damage at the development site, upstream of the development site, or on downstream adjoining properties; or

ii. The total impervious area including the proposed development would not exceed 5% of the contiguous property; and

(a) An agricultural conservation easement or other conservation easement is recorded over sufficient undeveloped area that the total impervious area may not exceed 5% of the contiguous property. The easement shall be granted to McHenry County or a Certified Community. The easement may be temporary, but the term of the easement shall run until the stormwater storage waiver is no longer necessary, for reasons such as the removal of new impervious area or the installation of a stormwater management facility; and

(b) The applicant demonstrates to the satisfaction of the Enforcement Officer that the development will not result in flood damage at the development site, upstream of the development site, or on downstream adjoining properties; or

iii. The regulated development is a Public Road Development and less than 1.5 acres of new impervious area is created.

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i. Added to the required 2 year stormwater storage volume; or

ii. Replaced as a new depressional storage area.

(4) The Enforcement Officer may waive the requirement to add compensatory storage volume to the required detention storage volume if accessing the compensatory storage volume would:

i. Require a control structure with a diameter smaller than the minimum diameter; or

ii. Result in a dewatering time that exceeds the maximum dewatering time.

(5) Any regulated development that results in impervious area exceeding the design parameters of an existing detention or infiltration facility shall either expand the existing stormwater management facility, or include a control measure designed to reduce the additional volume of runoff from the regulated development, such as a rain garden or the replacement of existing impervious pavement with permeable pavement.

d. Stormwater Management Facilities

(1) Basic Requirements

The following requirements apply to the stormwater management facilities for all regulated development required to meet the Stormwater Storage Requirements of this Ordinance.

i. Offsite runoff may be bypassed around a proposed stormwater management facility.

ii. Stormwater management facilities shall be sized for the runoff from any public road improvements required as part of the regulated development.

iii. Stormwater management facilities shall be designed to dewater within 72 hours following the end of the design storm.

iv. A stable overflow shall be provided for each stormwater management facility. The overflow shall be capable of passing the unattenuated inflow from the 100 year critical duration storm from the entire tributary area without increasing flood heights on upstream adjoining properties or resulting in flood damage at the development site, based on runoff calculations meeting the Runoff Rates and Storage Volume Standards of this Ordinance. The overflow elevation shall be at or above the 100 year design high water elevation.

v. A minimum freeboard of one 1 foot shall be provided above the design high water surface elevation of the 100 year flow through the overflow.

vi. Stormwater management facilities serving more than one property shall be located in a deed or plat restriction with access to the stormwater management facility from the public right-of-way. The Enforcement Officer may waive the requirement for a deed or plat

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- Detention in Wetlands
- Runoff Volume Reduction
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- Watershed Specific Requirements

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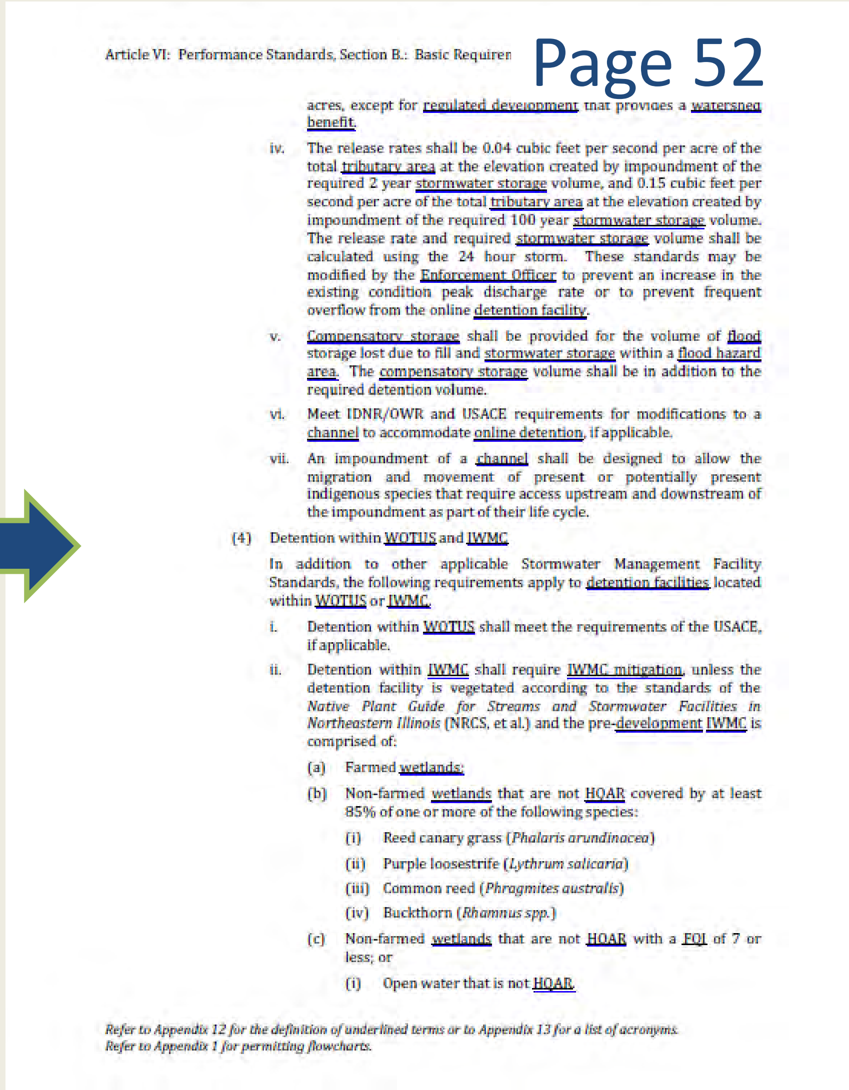

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acres, except for regulated development that provides a watershed benefit.

iv. The release rates shall be 0.04 cubic feet per second per acre of the total tributary area at the elevation created by impoundment of the required 2 year stormwater storage volume, and 0.15 cubic feet per second per acre of the total tributary area at the elevation created by impoundment of the required 100 year stormwater storage volume. The release rate and required stormwater storage volume shall be calculated using the 24 hour storm. These standards may be modified by the Enforcement Officer to prevent an increase in the existing condition peak discharge rate or to prevent frequent overflow from the online detention facility.

v. Compensatory storage shall be provided for the volume of flood storage lost due to fill and stormwater storage within a flood hazard area. The compensatory storage volume shall be in addition to the required detention volume.

vi. Meet IDNR/OWR and USACE requirements for modifications to a channel to accommodate online detention, if applicable.

vii. An impoundment of a channel shall be designed to allow the migration and movement of present or potentially present indigenous species that require access upstream and downstream of the impoundment as part of their life cycle.

(4) Detention within WOTUS and IWMC

In addition to other applicable Stormwater Management Facility Standards, the following requirements apply to detention facilities located within WOTUS or IWMC.

i. Detention within WOTUS shall meet the requirements of the USACE, if applicable.

ii. Detention within IWMC shall require IWMC mitigation, unless the detention facility is vegetated according to the standards of the *Native Plant Guide for Streams and Stormwater Facilities in Northeastern Illinois* (NRCS, et al.) and the pre-development IWMC is comprised of:

(a) Farmed wetlands;

(b) Non-farmed wetlands that are not HQAR covered by at least 85% of one or more of the following species:

(i) Reed canary grass (*Phalaris arundinacea*)

(ii) Purple loosestrife (*Lythrum salicaria*)

(iii) Common reed (*Phragmites australis*)

(iv) Buckthorn (*Rhamnus spp.*)

(c) Non-farmed wetlands that are not HQAR with a FQI of 7 or less; or

(i) Open water that is not HQAR.

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(5) Infiltration facilities

In addition to other applicable Stormwater Management Facility Standards, the following requirements apply to infiltration facilities for all regulated development required to meet the Stormwater Storage Requirements of this Ordinance.

i. The underlying soils shall have an infiltration rate of at least 0.5 inch per hour. The development site specific infiltration rate shall be determined by a qualified professional and approved by the Enforcement Officer.

ii. The bottom of the infiltration facility shall be at least 4 feet above the seasonal high groundwater elevation. The development site specific seasonal high groundwater elevation shall be determined by a qualified professional and approved by the Enforcement Officer.

iii. The design high water level of the facility shall be at least 200 feet from water supply wells and onsite waste disposal systems.

iv. The design high water level of the facility shall be at least 10 feet from any building foundation.

v. Pre-treatment shall be provided to prevent obstruction of the infiltration facility.

vi. Runoff from the following areas shall not be routed to an infiltration facility:

(a) Areas subject to frequent winter deicing; and

(b) Other areas where precipitation will be exposed to potential contaminants.

vii. The maximum side slope shall be 4:1.

6. Runoff Volume Reduction Hierarchy

In addition to other applicable Runoff Control Performance Standards, the following requirements apply to Major Development, Public Road Development and Mining Development disturbing 1 acre or more.

a. The applicant shall choose one or more strategy from the following hierarchy to minimize the increase in runoff volume from the development site:

(1) Preservation of natural features of the development site (e.g. natural storage and infiltration characteristics, floodplains, wetlands, prairies and woodlands);

(2) Preservation of the existing natural streams, channels and drainageways;

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(3) Minimization of impervious surfaces created at the development site (e.g. narrowing road width, minimizing driveway length and width, clustering homes and shared driveways);

(4) Conveyance of stormwater in open vegetated channels;

(5) Natural landscaping as an alternative to turf grass;

(6) Structural measures that provide water quality and quantity control;

(7) Structural measures that provide only quantity control.

7. Water Quality Protection

In addition to other applicable Runoff Control Performance Standards, the following requirements apply to all regulated development, except regulated development authorized by a General Permit.

a. Water quality treatment shall be provided for stormwater runoff from increased impervious areas.

(1) On highly impervious development sites, such as multi-family residential and non-residential developments, water quality treatment devices shall be designed to remove both floatable and settleable pollutants from as much of the stormwater runoff from increased impervious areas as possible. This requirement may be met by directing as much stormwater runoff from increased impervious areas as possible through a hydrodynamic separator, or into a catch basin fitted with a hooded outlet cover. Alternate treatment methods providing a similar or higher level of water quality treatment may be approved by the Enforcement Officer.

(2) In Public Road Developments, the stormwater management system shall be designed to direct as much stormwater runoff from increased impervious areas as possible through a vegetated swale, across a vegetated filter strip, or into a catch basin before being discharged from the development site. Alternate treatment methods providing a similar or higher level of water quality treatment may be approved by the Enforcement Officer.

b. Appropriate pre-treatment shall be provided for stormwater runoff directed to new or existing Class V injection well.

c. Appropriate pre-treatment shall be provided for stormwater runoff directed to infiltration based practices in areas designated as High or Moderately High Potential for Aquifer Recharge/Contamination on the McHenry County Sensitive Aquifer Recharge Areas Map.

8. Watershed Specific Requirements

In addition to other applicable Runoff Control Performance Standards, the following requirements apply to Watershed Specific Area Development, except regulated development authorized by a General Permit.

a. Crystal Lake Watershed Specific Requirements

(1) The boundary of the Crystal Lake Watershed is generally depicted in Appendix 9. Any area of land along the watershed boundary that can be shown to be outside of the Crystal Lake Watershed shall not be subject to the Crystal Lake Watershed Specific Requirements.

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Performance Standards

Flood Hazard Areas

- Flood Prone Areas
- Determining BFEs
- Floodway Standards
- Lower Standards for Flood Prone Areas
- Building Protection Methods

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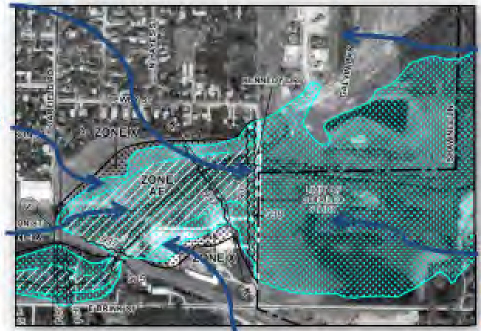
FIGURE 5

Flood Hazard Areas



Flood Hazard Area Development: Regulated development located partially or completely within a floodway, floodplain, or a flood prone area.

Flood Insurance Rate Map (FIRM): A map prepared by FEMA that depicts the floodplain, designated floodways, and flood insurance risk premium zones within McHenry County. The effective dates of the FIRMs in McHenry County are listed in Appendix 11. The effective FIRMs may be amended or revised by a LOMC.

Flood Insurance Study (FIS): A report published by FEMA for McHenry County in conjunction with the McHenry County's FIRMs. The effective date of the McHenry County FIS is shown in Appendix 11. The study contains such background data as the base flood discharges and water surface elevations that were used to prepare the FIRMs. The effective FIS may be revised by a LOMC.

flood prone area: Any area inundated by the base flood and located outside the limits of the floodplain that:

A. Has a tributary area greater than 100 acres,
B. Is a depressional storage area, or
C. Is mapped as a Flood of Record area on the USGS-Hydrologic Investigation Atlas Flood of Record Maps.

flood protection elevation (FPE): The BFE plus 2 feet of freeboard, except in the case of attached garages and small accessory buildings, where the FPE is the BFE plus 0.5 foot of freeboard.

Refer to Appendix 12 for the definition of underlined terms or to Appendix 13 for a list of acronyms.
Refer to Appendix 1 for permitting flowcharts.

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(2) Any regulated development that hydr... more than 20,000 square feet of land within the Crystal Lake Watershed shall comply with the following requirements in addition to the other applicable requirements of this Ordinance:

i. The regulated development shall incorporate runoff volume reduction practices to infiltrate, evaporate, or transpire at least 95% of the annual stormwater runoff volume from hydrologically disturbed areas.

ii. Perform an evaluation of the development site and field testing practices in accordance with Chapter 2.1 of the City of Crystal Lake - Crystal Lake Watershed Stormwater Management Design Manual.

iii. Design the development site in accordance with sections 3.4-3.7 and section 5.1 of the City of Crystal Lake - Crystal Lake Watershed Stormwater Management Design Manual (http://www.crystallake.org/home/showdocument?id=230).

b. McHenry County Watershed Plans are listed in Appendix 10 for reference only. Recommendations from these plans may be the basis for additional Watershed Specific Requirements upon amendment of this Ordinance by the McHenry County Board.

C. Flood Hazard Areas

1. A development is located in a flood hazard area if any of the following criteria are met:

a. If any portion of the development site is within a mapped Flood of Record area on the USGS-Hydrologic Investigation Atlas Flood of Record Map;

b. If any portion of the development site is within a closed contour of a depressional storage area;

c. If any portion of the development site is within a channel that has a tributary area greater than 100 acres;

d. If any portion of the development site is within a mapped Zone AE, A, AH or AO floodplain on the FEMA FIRM;

e. If any portion of the development site is outside a mapped Zone AE, but is below the BFE; or

f. If any portion of the development site is below the BFE determined by the simplified methods for estimating the BFE described in the FEMA publication *Managing Floodplain Development in Approximate Zone A Areas*.

2. Determining the BFE and Limits of a Flood Prone Area

a. The BFE shall be determined utilizing one of the following methodologies:

b. Adding 3 feet to the Flood of Record indicated on the USGS-Hydrologic Investigation Atlas;

c. Adding 0.5 foot to the surface overflow of a depressional storage area. Where a smaller depressional storage area exists within a larger depressional storage area, the BFE shall be based on the highest surface overflow; or

Refer to Appendix 12 for the definition of underlined terms or to Appendix 13 for a list of acronyms.
Refer to Appendix 1 for permitting flowcharts.

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iii. Not exceed 0.1 foot upstream fl... event.

(3) Any increase in average channel velocity shall:

i. Not exceed the scour velocity of the predominant soil type of the channel; or

ii. Provide stabilization measures to prevent increased scour and erosion.

b. Any regulated development involving a channel modification, fill, stream maintenance, or a levee, shall not decrease the flood carrying capacity of the flood hazard area.

c. All regulated development in a flood hazard area shall meet IDNR/OWR requirements for floodway construction, dam safety, and public bodies of water, if applicable.

d. A LOMC from FEMA shall be required, with concurrence from IDNR/OWR, for any regulated development that:

(1) Increases the water surface profile by 0.1 foot or more in a floodplain for the base flood event;

(2) Increases the water surface profile by more than 0.0 foot in a floodway for the base flood event;

(3) Revises the boundary of a floodplain for a future building by the placement of fill;

(4) Revises the boundary of a floodway; or

(5) Establishes the BFE for a regulated development equal to or exceeding 50 lots or 5 acres.

e. A CLOMR is required prior to issuance of a stormwater management permit when a regulated development within a floodplain would increase flood heights more than 0.1 foot, or when a regulated development within a floodway would increase flood heights more than 0.0 foot. Once a CLOMR has been issued by FEMA, with concurrence from IDNR/OWR, the Enforcement Officer may allow filling, the construction or reconstruction of bridges and culverts, and similar regulated development within the floodplain necessary to obtain the LOMR.

9. Standards for Designated Floodways

Any regulated development within a designated floodway shall meet the appropriate use standards as determined by IDNR/OWR.

10. Public Health Protection Standards

The following requirements apply to all regulated development in a flood hazard area, except regulated development authorized by a General Permit.

Refer to Appendix 12 for the definition of underlined terms or to Appendix 13 for a list of acronyms.
Refer to Appendix 1 for permitting flowcharts.

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(2) All building protection measures shall meet the Standards for Flood Protection Measures in this Ordinance.

(3) An elevation certificate or a floodproofing certificate shall be required for any building, building addition, or substantial improvements to a building within a floodplain. The elevation certificate or a floodproofing certificate shall be prepared on forms published by FEMA, except for small accessory buildings, the Enforcement Officer may allow alternate documentation that the constructed building complies with the Building Protection Standards for Flood Hazard Areas of this Ordinance.

Table 5. Building Protection Standards for Flood Hazard Areas

Type of Building	Type of Flood Hazard Area	Flood Protection Elevation (feet above BFE)	Lowest Floor Elevation (feet above BFE)[a]
Residential	Flood Prone Area	2	2
	Floodplain	2	2
Attached Garage	Flood Prone Area	0.5	0.5
	Floodplain	0.5	0.5
Accessory	Flood Prone Area	2	<BFE
	Floodplain	2	0.5
Small Accessory	Flood Prone Area	0.5	<BFE
	Floodplain	0.5	<BFE
Non-Residential	Flood Prone Area	2	2
	Floodplain	2	2
Agricultural	Flood Prone Area	2	<BFE
	Floodplain	2	<BFE

[a] This requirement does not apply to dry floodproofed buildings.

Table 6. Acceptable Measures for Flood Protection

Type of Building	Type of Flood Hazard Area	Construction on Permanent Fill C.11.b(1)	Elevation on Crawl Space, Stilts, Piles, Walls, etc. C.11.b(2)	Dry Floodproofing C.11.b(3)	Wet Floodproofing C.11.b(4)
Residential	Flood Prone Area	YES	YES	YES	NO
	Floodplain	YES	YES	NO	NO
Attached Garage	Flood Prone Area	YES	YES	YES	NO
	Floodplain	YES	YES	NO	NO
Accessory	Flood Prone Area	YES	YES	YES	YES
	Floodplain	YES	YES	YES	NO
Small Accessory	Flood Prone Area	YES	YES	YES	YES
	Floodplain	YES	YES	YES	YES
Non-Residential	Flood Prone Area	YES	YES	YES	NO
	Floodplain	YES	YES	YES	NO
Agricultural	Flood Prone Area	YES	YES	YES	YES
	Floodplain	YES	YES	YES	YES

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F. Channel modification;

G. Filling, dredging, grading, excavating, paving, or other alterations of the ground surface;

H. Storage of materials;

I. Extensive removal of vegetation; or

J. Any other activity of man that changes the direction, height, or velocity of flood or surface water.

development site: The portion of contiguous property that is hydrologically disturbed by the development.

drain tile: Sub-surface conduit used for drainage of land, typically for agricultural purposes. Drain tile does not include footing drains.

drain tile survey: An inventory of existing farm and storm drain tiles, typically based upon a field investigation utilizing the slit trench method to locate existing drain tiles.

dredging: The maintenance or restoration of a water body by removing accumulated silt, sediment, and other debris from its bed.

dry detention facility: A detention facility designed to drain completely after temporary storage of stormwater. A dry detention facility is normally dry over the majority of its bottom area.

dry floodproofing: Building protection measures designed according to current FEMA guidelines to keep water out of the building. Dry floodproofing measures are among the floodproofing measures described in the following FEMA publications: *Engineering Principles and Practices for Retrofitting Flood-Prone Residential Structures* (FEMA P-259), *Homeowner's Guide to Retrofitting* (FEMA P-312), *Selecting Appropriate Mitigation Measures for Floodprone Structures* (FEMA 551), *Protecting Building Utilities from Flood Damage* (FEMA 348), *Reducing Damage from Localized Flooding* (FEMA 511), *Non-Residential Floodproofing – Requirements and Certification* (FEMA TB 3), and *Floodproofing Non-Residential Structures* (FEMA 102).

earth change: Development in which the primary activity is a change in ground elevations affected by the movement of earth materials.

effective date of this Ordinance: January 20, 2004. Subsequent amendments shall be effective upon passage of an amending ordinance.

elevation certificates: A form published by FEMA that is used to certify the lowest floor (including the basement) elevation to which a building has been constructed.

emergency overflow: The structure in a stormwater management facility designed to protect the stormwater management system in the event of a malfunction of the control structure or a storm event greater than the design storm. The emergency overflow capacity initiates at the design high water level of the stormwater management facility.

Enforcement Officer: The MCSC Chief Engineer or the Certified Community's development regulations officer.

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d. Determining the cumulative percentage

(1) The percentage for each individual project shall be determined by dividing the cost of the project (at the time the project was completed, including the full cost of any damage, if applicable) by the value of the structure (at the time the project was completed, or prior to any damage, if applicable); and

(2) Adding the percentages of each individual project.

e. Substantial improvements to buildings shall meet the Building Protection Standards for Flood Hazard Areas of this Ordinance.

13. Compensatory Storage Volume Standards

The following requirements apply to all regulated development resulting in flood storage volume lost or displaced due to the placement of fill, materials, or structures in a flood hazard area, or due to draining a depressional storage area, except regulated development authorized by a General Permit or specifically exempted below.

Table 7. Compensatory Storage Exemptions

Type of Flood Hazard Area	Fill Less than 5 Cubic Yards C.13.a(1)	Replacement Septic Systems and Wells C.13.a(2)	Floodproofing Habitable Buildings C.13.a(3)	Artificially Created Storage C.13.a(4)	All Other Regulated Development C.13.b
Flood Prone Area	Exempt	Exempt	Exempt	Exempt	Not Exempt
Floodplain: Flood Fringe	Exempt	Exempt	Exempt	Exempt	Not Exempt
Floodplain: Designated or Non-Designated Floodway	Not Exempt	Not Exempt	Exempt	Exempt	Not Exempt

a. Compensatory storage exemptions

(1) Compensatory storage may be waived through a written waiver by the Enforcement Officer for up to 5 cubic yards of fill within the flood fringe or a flood prone area. This waiver may only be exercised one time per parcel. The Enforcement Officer may deny the waiver for reasons including, but not limited to:

i. A determination that the fill would create a damaging or potentially damaging increase in flood heights or velocity; or

ii. That a parcel has been subdivided to qualify for more than one waiver.

(2) Compensatory storage shall not be required for replacement onsite waste disposal systems within the flood fringe or a flood prone area. The

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Article VI: Performance Standards, Section C.: Flood Hazard A

applicant shall demonstrate to the s... that no reasonable alternative location exists outside of the flood hazard area and that the fill volume is the minimum necessary.

(3) Compensatory storage shall not be required for the floodproofing of existing lawful habitable residential or commercial buildings within 10 feet of the outside face of the building.

(4) Compensatory storage shall not be required to replace the loss of artificially created storage due to a reduction in upstream head loss caused by a bridge, culvert, storm sewer, or constructed embankment.

Table 8. Required Compensatory Storage Ratios

Type of Flood Hazard Area	Regulated Development without As-Builts[7]	Regulated Development with As-Builts	Public Road Development
Riverine Floodplain	1.5:1	1.2:1	Minimum 1:1
Riverine Flood Prone Area	1.5:1	1.2:1	Minimum 1:1
Non-Riverine Floodplain	1:1	1:1	1:1
Non-Riverine Flood Prone Area	1:1	1:1	1:1

7. As-built plans shall be required for any regulated development resulting in 100 cubic yards or more of fill in a flood hazard area.

b. Compensatory storage requirements

(1) Compensatory storage volume shall be provided below the BFE and above the normal water level.

(2) As-built plans shall be required for any regulated development resulting in 100 cubic yards or more of fill in a flood hazard area. The Enforcement Officer may require as-built plans for regulated development resulting in smaller amounts of fill in a flood hazard area based on development site specific considerations.

(3) For regulated development in a riverine flood hazard area:

i. Hydraulically equivalent compensatory storage volume shall be provided at ratios at least equal to:

(a) 1.5 times the flood storage volume lost or displaced; or

(b) 1.2 times the flood storage volume lost or displaced, provided that as-built plans are submitted.

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ii. For a Public Road Development that cannot reasonably provide the compensatory storage volume required by this Ordinance, the additional compensatory storage volume required beyond a 1:1 ratio may be waived by the Enforcement Officer. The waiver shall be the minimum necessary to afford relief.

iii. Any additional compensatory storage volume required beyond a 1:1 ratio may be provided above or below the 10 year flood elevation.

iv. The compensatory storage area shall be located in close proximity to the fill area and shall drain freely and openly to the channel.

(4) For regulated development in a non-riverine flood hazard area:

i. The compensatory storage volume shall be at least equal to the flood storage volume lost or displaced; and

ii. The compensatory storage volume lost by filling or draining a depressional storage area shall be based on the critical duration storm.

14. Public Flood Control Project Standards

The Flood Hazard Area Performance Standards of this Ordinance shall be considered met for any public flood control project that meets all the following criteria.

a. Flood heights shall not be increased outside a deed or plat restriction for all flood events up to and including the base flood event.

b. The improvements shall be owned and maintained by a public agency. A land stewardship corporation, or similar entity, may own and maintain the improvements, provided that a public agency executes an agreement with the corporation to take over ownership, operation, and maintenance if the corporation dissolves or fails to meet its obligations.

c. A CLOMR and a LOMC from FEMA shall be required, with approval from IDNR/OWR, for any regulated development that:

(1) Increases the water surface profile by 0.1 foot or more in a floodplain for any storm event up to and including the base flood event;

(2) Revises the boundary of a floodplain by the placement of fill; or

(3) Revises the boundary of a floodway.

D. Wetlands and Waters

1. Minimization of Impacts

All reasonable measures shall be taken to avoid and minimize impacts to wetlands, streams, ponds and lakes.

Refer to Appendix 12 for the definition of underlined terms or to Appendix 13 for a list of acronyms.
Refer to Appendix 1 for permitting flowcharts.

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2. Jurisdictional Determination

   a. The applicant shall obtain a Jurisdictional Determination from the USACE for any regulated development that impacts wetlands or waters or is adjacent to wetlands or waters. This requirement may be waived by the Enforcement Officer when the USACE issues a Letter of No Objection for the regulated development.

   b. Impacts to WOTUS shall be mitigated according to the requirements of the USACE.

   c. Impacts to IWMC shall be mitigated according to the requirements of this Ordinance. No IWMC impacts shall be allowed without a clear purpose and need for the regulated development and without demonstrating the measures taken to avoid and minimize IWMC impacts to the satisfaction of the Enforcement Officer.

3. Boundary Determination Requirements

   The following requirements apply to all regulated development within or adjacent to IWMC, except regulated development authorized by a General Permit.

   a. A Letter of No Impact prepared by a wetland specialist may be accepted by the Enforcement Officer, in lieu of a Wetland Determination Report, when a field investigation by the wetland specialist reveals the closest wetland or water to a regulated development is clearly beyond the limits of the required buffer. A Letter of No Impact shall include:

      (1) The date of the field investigation;

      (2) A written description of the development site closest to the IWMC;

      (3) Color photographs representative of the development site closest to the IWMC;

      (4) A grading plan showing the limits of development site and the approximate boundary of the IWMC closest to the development site; and

      (5) An aerial photograph showing the limits of development site and the approximate boundary of the IWMC closest to the development site.

   b. The presence and boundary of waters shall be determined by a wetland specialist. Waters shall include the entire area inundated at the ordinary high water mark.

   c. The presence and boundary of farmed wetlands within or adjacent to a development site shall be determined by the NRCS or a wetland specialist, in accordance with the current NRCS wetland delineation methodology.

   d. The presence, boundary, and quality of non-farmed wetlands within or adjacent to a development site shall be determined by a wetland delineation conducted in accordance with the current USACE wetland delineation methodology. The findings of this determination shall be documented in a Wetland Determination Report prepared by a wetland specialist.

Refer to Appendix 12 for the definition of underlined terms or to Appendix 13 for a list of acronyms.
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   c. Impacts to IWMC shall be mitigated according to the requirements of this Ordinance. No IWMC impacts shall be allowed without a clear purpose and need for the regulated development and without demonstrating the measures taken to avoid and minimize IWMC impacts to the satisfaction of the Enforcement Officer.

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      (1) The date of the field investigation;

      (2) A written description of the development site closest to the IWMC;

      (3) Color photographs representative of the development site closest to the IWMC;

      (4) A grading plan showing the limits of development site and the approximate boundary of the IWMC closest to the development site; and

      (5) An aerial photograph showing the limits of development site and the approximate boundary of the IWMC closest to the development site.

   b. The presence and boundary of waters shall be determined by a wetland specialist. Waters shall include the entire area inundated at the ordinary high water mark.

   c. The presence and boundary of farmed wetlands within or adjacent to a development site shall be determined by the NRCS or a wetland specialist, in accordance with the current NRCS wetland delineation methodology.

   d. The presence, boundary, and quality of non-farmed wetlands within or adjacent to a development site shall be determined by a wetland delineation conducted in accordance with the current USACE wetland delineation methodology. The findings of this determination shall be documented in a Wetland Determination Report prepared by a wetland specialist.

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storm event; otherwise the IWMC shall be considered impacted and shall be subject to the Mitigation Requirements of this Ordinance.

5. Mitigation Requirements

The following requirements apply to all regulated development resulting in a IWMC impact, except regulated development authorized by a General Permit.

a. IWMC mitigation is required for regulated development resulting in IWMC impacts greater than or equal to 0.10 acre to IWMC. The Enforcement Officer may require mitigation for IWMC impacts less than 0.10 acre for reasons including, but not limited to:

(1) The proposed regulated development would result in a cumulative IWMC impact greater than or equal to 0.10 acre, due to a prior unmitigated impact to the same IWMC; or

(2) A prior unmitigated impact to another IWMC within the contiguous property.

Table 9. IWMC Mitigation Ratios

Cat	IWMC Quality	Impact Area	Regulated Development Type	D.5.a	D.5.c.(1)	D.5.c.(2)	D.5.c.(3)	D.5.c.(4)	D.5.c.(5)
I	Any	≤ 0.10 ac	Any	Exempt					
I	Standard[a]	0.1- 1.0 ac	Any		1.5:1 or 1:1				
II	Standard[a]	1.0-2.0 ac	Any		1.5:1 or 1:1				
III	Standard[a]	> 2.0 ac	Any		1.5:1 or 1:1				
III	HFVW	Any	Any			3:1[b]			
III	HQAR or HQHS	Any	Any				5:1[b]		
Impacts Prior to Permit Issuance								5:1[b]	
IV	Any	Any	Restoration, Creation, and Enhancement						1:1
V	Any	Any	Temporary Impact						1:1

[a] Standard means any IWMC that is not a HFVW, HQAR, or HQHS.

[b] May be reduced to 1:1. Refer to D.5.c(6).

b. IWMC impacts shall be categorized as follows:

(1) Category I: IWMC impacts with a cumulative impact area less than or equal to 1 acre and not impacting HQAR, HFVW, or HQHS;

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6. Mitigation Options

The following requirements apply to all regulated development resulting in a IWMC impact requiring IWMC mitigation.

a. IWMC mitigation shall be designed to duplicate or improve the hydrologic, biologic, botanic, and wildlife features of the IWMC.

b. Onsite IWMC mitigation

(1) Onsite IWMC mitigation includes mitigation on a parcel adjacent to the development site, even if the adjacent parcel has a different owner.

(2) Onsite IWMC mitigation shall only be allowed for IWMC impacts in Categories IV and V, or if the mitigation area is 1.5 acres or larger and:

i. The IWMC mitigation area is located within a conservation easement managed by a conservation agency; or

ii. The applicant establishes performance standards approved by the Enforcement Officer, and provides a performance guarantee payable to the MCSC Wetland Restoration Fund in the event the performance standards are not met.

(3) Temporary IWMC impacts shall be restored in place. The disturbed area shall be:

i. Returned to its original contour and general soil profile;

ii. Restored to a comparable IWMC community type; and

iii. Exhibit an FQI no lower than that of the IWMC prior to disturbance.

(4) The Buffer Area Performance Standards of this Ordinance shall apply to IWMC mitigation areas, except mitigation for IWMC impacts in Categories IV and V.

(5) The area of wetland restoration shall not be less than the area of IWMC impact. The additional mitigation area may consist of wetland enhancement; however, only 0.25 acre of mitigation shall be credited for each acre of wetland enhancement.

(6) Wetland creation shall not be credited for mitigation of IWMC impacts.

c. Wetland mitigation banking

(1) Wetland mitigation banking shall be required if the IWMC mitigation area is less than 1.5 acres.

(2) Mitigation credit may be obtained by payment into a Wetland Bank or the MCSC Wetland Restoration Fund. A receipt for payment into a Wetland Bank or the MCSC Wetland Restoration Fund shall be provided prior to issuance of a stormwater management permit.

(3) To provide credit for mitigation, a Wetland Bank must be certified by the USACE and comply with the *Interagency Coordination Agreement on Wetland Mitigation Banking within the Regulatory Boundaries of Chicago District*, dated January, 1997, or current version.

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- Buffer Use Standards
- Deed or Plat Restriction

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requirements are minimum standards and may be superseded by more restrictive USACE requirements.

Table 10. Buffer Widths

Buffer Type	Criteria	E.1.b.(1)	E.1.b.(2)	E.1.c.(1)	E.1.c.(2)	E.1.c.(3)
Linear	Tributary Area > 20 ac	50 ft				
Linear	HFVW, HQHS, or HQAR		100 ft			
Non-Linear	0.25 ac ≤ Surface Area < 0.50 ac			30 ft		
Non-Linear	0.50 ac ≤ Surface Area				50 ft	
Non-Linear	HFVW, HQHS, or HQAR					100 ft

a. Roadside drainage ditches, detention facilities, borrow pits, quarries, and improvements to public roads shall be exempt from these Buffer Requirements.

b. Buffers shall be designated along both sides of linear WOTUS and IWMC using the following widths:

(1) 50 feet on each side of linear WOTUS and IWMC having a tributary area greater than 20 acres; or

(2) 100 feet on each side of linear WOTUS and IWMC that are HFVW, HQHS, or HQAR.

c. Buffers shall encompass all non-linear WOTUS and IWMC using the following widths:

(1) 30 feet for all non-linear WOTUS and IWMC with a surface area of at least 0.25 acre but less than 0.50 acre;

(2) 50 feet for all non-linear WOTUS and IWMC with a surface area of at least 0.50 acres; or

(3) 100 feet for all non-linear WOTUS and IWMC that are HFVW, HQHS, or HQAR.

d. Buffer areas for wetlands shall extend landward from the wetland boundary.

e. Buffer areas for water bodies which are WOTUS or IWMC shall extend landward from the ordinary high water mark.

f. A property may contain a buffer area originating from WOTUS or IWMC on another property.

Refer to Appendix 12 for the definition of underlined terms or to Appendix 13 for a list of acronyms
Refer to Appendix 1 for permitting flowcharts.

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Performance Standards

Wetlands and Waters

- Buffer Widths
- Buffer Use Standards
- Deed or Plat Restriction

Article VI: Performance Standards, Section E.: Buffer Areas, Pa

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g. Buffer widths may be increased by the Enforcement Officer where State or Federal threatened and endangered species may be present or for Illinois Natural Area Inventory sites following consultation with IDNR and USFWS.

h. Buffer areas within subdivisions, Planned Unit Developments, and manufactured home parks with 5 or more parcels platted after December 1, 2014 shall be located within an outlot with adjacent stormwater management facilities, WOTUS, and/or IWMC.

i. Buffer areas within regulated development disturbing 5 acres or more shall be located within a deed or plat restriction with adjacent stormwater management facilities, WOTUS, and/or IWMC.

j. A maintenance plan shall be prepared for the buffer areas. The Enforcement Officer may waive this requirement for Minor and Intermediate Development.

k. Filling WOTUS or IWMC to meet these Buffer Requirements or any other regulatory program shall not be allowed.

2. Buffer Use

The following requirements apply to all regulated development within buffer areas for WOTUS or IWMC, except regulated development authorized by a General Permit. These requirements may be superseded by more restrictive USACE requirements.

a. Buffer areas shall be maintained free from development including disturbance of the soil, dumping or filling, erection of buildings and placement of impervious areas except as follows:

(1) Buildings, trails, water dependent facilities, other new impervious areas occupying a maximum of 20% of the buffer area, provided that the stormwater runoff from the new impervious areas is not concentrated;

(2) Grading or filling, provided the that the hydrologically disturbed area is revegetated according to the *Native Plant Guide for Streams and Stormwater Facilities in Northeastern Illinois*, NRCS, et al., (as amended);

(3) Redevelopment within the footprint of legal non-conforming development in existence within a buffer area prior to the effective date of this Ordinance;

(4) BMPs;

(5) Stormwater management facilities; and

(6) Utilities, including wastewater wetlands, but not including septic leach fields.

b. Regulated development within buffer areas which does not conform to the allowable uses shall be mitigated by:

(1) Varying the buffer width to a minimum of ½ the prescribed buffer width, provided that the total area of the buffer adjacent to WOTUS or IWMC is

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McHENRY COUNTY 1837

Questions?

BAXTER & WOODMAN
Consulting Engineers